

Denny to Wishaw Network Upgrade BNG Assessment – Substations (Excluding Cumbernauld)

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Denny to Wishaw Network Upgrade: BNG
Assessment Substations (Excluding
Cumbernauld)



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Introduction

AECOM was commissioned by SP Energy Networks (hereafter referred to as 'SPEN') to undertake a Biodiversity Net Gain (BNG) assessment for the Denny to Wishaw Network Upgrade (DWNO) (hereafter referred to as the 'Project'). The Project would facilitate a 400 kV overhead line between the existing Denny (Central Ordnance Survey National Grid Reference NS 82386 84539) and Wishaw (Central Ordnance Survey National Grid Reference NS 79077 54000) Substations. The Project comprises a new-build overhead line, uprating of existing overhead lines, and proposed works / extensions within five existing substations:

- Denny North Substation Works;
- Bonnybridge Substation Extension;
- Easterhouse Substation (internal works ONLY);
- Newarthill Substation (internal works ONLY); and
- Wishaw Substation Extension.

This Appendix details the BNG assessment undertaken for the substations. For this assessment only habitats that would be permanently impacted (i.e. that would not return to target condition within two years of initial impact) are included within this BNG assessment.

This assessment compares baseline habitat value with the predicted post-development habitat value (where applicable, see Section 1.1), following the mitigation hierarchy (avoid–minimise–restore–offset). Biodiversity units have been quantified using the Scottish and Southern Electricity Networks (SSEN) 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 aims to deliver measurable biodiversity improvements; the assessment is undertaken against the Client's internal 10% BNG target as set out in the Environmental Action Plan⁴. This report will quantify the baseline habitat value and identify the biodiversity units required to achieve 10% net gain. For the purpose of this report, all impacted habitats (with a return to target condition of more than 2 years) are assumed lost.

1.1 Substation Inclusions / Exclusions

Any substations where all habitat impacts were determined to be temporary (i.e. all habitats are predicted to returned to original condition within 2 years) have been excluded from this BNG assessment. The rational for these exclusions are documented within this report and include the Substations Denny North (see Section 3) and Easterhouse (see Section 5).

This report includes the results from three BNG assessments for the following Substations:

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

⁴ SP Energy Networks (2024). *Environmental Action Plan – RIIO-T3 Business Plan (Redacted)*.

- Bonnybridge Substation (see Section 4);
- Newarthill Substation (see Section 6); and
- Wishaw Substation (see Section 7).

A BNG assessment of the Overhead Line is reported separately.

Post-construction landscaping is not proposed for Newarthill and Wishaw Substations, given the minor nature of the work. Any habitats within Site Compound boundaries will be reinstated as the baseline habitat type in 'Poor' Condition.

Post-development habitats have been assigned for Bonnybridge Substation using the Outline Landscape Mitigation Plan⁵. As it is understood that the Site will not be actively managed and potential future access may be required, all created habitats have been assigned 'Poor' condition as a precaution.

1.2 Policy and Legislation

Policy 3b of National Planning Framework 4⁶ (NPF4) requires biodiversity enhancements be provided in addition to any proposed mitigation stating that:

“Development proposals for national or major development that require an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks, so that they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used”.

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

⁵ AECOM (2026) Outline Landscape Mitigation Plan – Bonnybridge Substation.

⁶ Scottish Government (2023). National Planning Framework 4

2. Methods

2.1 Biodiversity Toolkit

The biodiversity baseline and post-development habitat value (where applicable) has been quantified using the SSEN Biodiversity Toolkit¹ and SSEN Toolkit User Guide⁷. 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 survey⁸ and Natural England’s Biodiversity Metric 3.1⁹ surveys undertaken in August, September and October 2024 and June 2025. For this assessment, the Biodiversity Toolkit has been completed in Phase 1⁸ habitat classification system.

2.2 Strategic Significance

Strategic Significance 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*”⁷.

2.3 Connectivity

A connectivity rating has been assigned to all baseline habitats as per the Toolkit User Guide⁷ with all ‘High’ and ‘Very high’ distinctiveness habitats assigned a ‘Moderate’ connectivity rating, and all other habitats assigned a ‘Low’ connectivity rating.

2.4 Constraints and Limitations

To produce this assessment, the following limitations and assumptions have been made:

- All baseline habitat areas / lengths have been calculated in ESRI ArcGIS from the digitised features of the baseline habitat map. Where habitat boundaries coincided with discernible boundaries on aerial imagery available at the time of survey, accuracy is as

⁷ Scottish and Southern Energy (SSE) Renewables, 2024. *Biodiversity Net Gain Toolkit User Guide v2.2*.

⁸ Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 habitat survey. Available Online at: <https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf>.

⁹ Natural England (2022). *Biodiversity Metric 3.1: Habitat Condition Assessment Sheets*.

determined by the accuracy and clarity of the aerial imagery. Otherwise, habitat boundaries are as estimated in the field. Note also that habitats often grade into each other without a sharp boundary, and in these cases best placement of the boundary has been estimated. For these reasons, baseline habitat areas / lengths are approximations only; and

- Baseline habitats and conditions may change with further elapsed time since the field surveys informing this BNG assessment were completed. However, significant changes are not very likely in the vicinity of the Project in the short-term.

3. Denny North Substation Works

The Denny North Substation is located approximately 1.7km north of Denny (centered at Ordnance Survey (OS) National Grid Reference (NGR) NS 82386 84539. Denny North Substation Works would include the replacement of existing equipment to facilitate overhead line uprating (hereafter referred to as the 'Proposed Works' within Section 3, full details of the works are provided in EIAR Volume 1, Chapter 4).

Impacted habitats within the Proposed Works comprise a small area of A2.1 : Scrub : Dense / continuous in 'Poor' condition. This habitat will be subject to temporary removal during the construction period. This habitat can be reinstated (it is considered that this habitat will naturally recolonise the area from the surrounding scrub habitat) and returned to original condition within 2 years. The time to target condition for poor condition scrub is 1 year, so accounting for the 10-month construction period, this habitat is considered retained as per the SSEN Toolkit User Guide⁷. In the absence of any permanent change in habitat, Denny North Substation has therefore been excluded from this BNG assessment.

4. Bonnybridge Substation Works

4.1 Site Description

The existing Bonnybridge Substation is located approximately 450m east of Bonnybridge, Scotland (centered at OS NGR NS 83987 80955) (hereafter referred to as the 'Site' within Section 4). The Bonnybridge Substation Extension includes replacing existing equipment to enable overhead line uprating and construction of a new overhead line (hereafter referred to as 'Proposed Works' within Section 4), full details of the works are provided in EIAR Volume 1, Chapter 4.

The Substation is located within the Falkirk Local Authority Area. Baseline habitats include an arable field to the west of the Site with neutral grassland, scattered trees and a linear woodland strip present in the east of the Site. A hedgerow is present within the south of the Site. No watercourse habitats are present within the Site boundary.

The Site is bordered by arable land to the north, south and west with hardstanding and neutral grassland to the east. The A803 road runs parallel to the south of the Site.

Post-development habitats have been assigned for Bonnybridge Substation using the ¹⁰[\[2\]](#). As it is understood that the Site will not be actively managed and potential future access may be required, all created habitats have been assigned 'Poor' condition.

4.2 Assumptions

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

- Temporary impacts restored to target condition within ≤2 years are excluded from the calculation; all other temporary and all permanent changes to vegetation within the Site are included;
- It is confirmed that areas of scaffolding works would avoid habitat loss and therefore have been excluded from the calculation;
- All habitat loss would be limited to the Bonnybridge Proposed Layout, Substation and Site Compounds boundaries;
- As it is understood that the Site will not be actively managed and future access may be required, all created habitats have been assigned 'Poor' condition.
- A construction programme of 2 years and 2 months has been assumed. This has been rounded to 2 years within the Toolkit and applied to the 'Time to target condition';
- The habitat code J3.6 : Built-up areas : Buildings has been used to account for any area of post-development hardstanding within the Substation Extension;
- Habitats within the Site Compound boundary will be reinstated to the baseline habitat type in 'Poor' condition. Due to time to target condition being over 2 years, these habitats are considered lost and created; and

¹⁰ AECOM (2026) Outline Landscape Mitigation Plan – Bonnybridge Substation.

- Three trees (recorded as A3.1 : Parkland / scattered trees : Broadleaved (Medium)) adjacent to the BNG assessment boundary would be permanently lost during construction due to their proximity to the Proposed Works. This loss is in addition to two trees located within the BNG assessment boundary.

4.3 Results

Baseline Habitats – Strategic Significance

A Strategic Significance rating has been assigned to all baseline habitats as per the Toolkit User Guide⁷. Information was obtained from the Falkirk Council Local Biodiversity Action Plan (LBAP)¹¹ and Falkirk Council Local Plan¹² to assess the SS rating. Table 4-1 summarises the SS rating assigned to each habitat type.

Table 4-1: Baseline Strategic Significance Justification

Strategic Significance	Justification Reasoning
High	The following habitats have been identified within the Falkirk LBAP as local priority habitats¹¹: • J1.1 : Cultivated / disturbed land : Arable (Low) • B2.2 : Neutral grassland : semi-improved • A1.1.2 : Woodland : Broadleaved - plantation (Medium) • A3.1 : Parkland / scattered trees : Broadleaved (Medium) • J2.1.2 : Boundaries : Hedges - Intact - species-poor
Medium	The following habitat has not been formally identified as a local priority habitat but is considered ecologically desirable • A2.1 : Scrub : Dense/continuous

Baseline Habitats Units

An overview of the baseline biodiversity units for the Project is summarised in Table 4-2 and Table 4-3, and the Baseline Habitat Plan is provided in Figure 1, Appendix A.

¹¹ Falkirk Council, 2019. Biodiversity Action Plan for the Falkirk Council Area. Available Online at: <https://fcwebsites.blob.core.windows.net/www/media/cc12cee9-df25-46f7-9f8b-8ec2e2287edf/Second%20Nature%20-%20A%20Biodiversity%20Action%20Plan%20for%20the%20Falkirk%20Council%20Area.pdf>.

¹² Falkirk Council (2020) Falkirk Local Development Plan 2. Available Online at: <https://fcwebsites.blob.core.windows.net/www/media/6f222088-edcb-4906-908d-635bcb0fb757/LDP2.pdf>.

Table 4-2: Baseline area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
A1.1.2 : Woodland : Broadleaved - plantation (Medium)	0.02	Medium	Poor	High	0.09
A1.1.2 : Woodland : Broadleaved - plantation (Medium)	0.29	Medium	Poor	High	1.33
A2.1 : Scrub : Dense/continuous	0.04	Medium	Poor	Medium	0.18
B2.2 : Neutral grassland : semi- improved	0.03	Medium	Moderate	High	0.28
B2.2 : Neutral grassland : semi- improved	0.15	Medium	Moderate	High	1.38
B2.2 : Neutral grassland : semi- improved	1.15	Medium	Moderate	High	10.58
B2.2 : Neutral grassland : semi- improved	0.18	Medium	Moderate	High	1.66
J1.1 : Cultivated/disturbed land : Arable (Low)	0.03	Low	N/A - Agriculture	High	0.07
J1.1 : Cultivated/disturbed land : Arable (Low)	0.04	Low	N/A - Agriculture	High	0.09
J1.1 : Cultivated/disturbed land : Arable (Low)	1.26	Low	N/A - Agriculture	High	2.90

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
J1.1 : Cultivated/disturbed land : Arable (Low)	1.14	Low	N/A - Agriculture	High	2.62
A3.1 : Parkland/scattered trees : Broadleaved (Medium)	0.15	Medium	Moderate	High	1.38
A3.1 : Parkland/scattered trees : Broadleaved (Medium)	0.08	Medium	Moderate	High	0.74
TOTAL	4.33*	-	-	-	23.29

* A3.1 : Parkland / scattered trees : Broadleaved (Medium) areas are excluded from total Area (ha) to prevent double counting of area; however, the unit contributions are included within the Habitat Unit total

Table 4-3: Baseline linear habitat units

Habitat Type	Length (km)	Distinctiveness	Condition	Connectivity	SS	Habitat Units
J2.1.2 : Boundaries : Hedges - Intact - species-poor	0.03	High	Good	Moderate	High	0.68
TOTAL	0.03					0.68

Post-Development Habitats – Strategic Significance

A SS rating has been assigned to all post-development habitats as per the Toolkit User Guide⁷.

Table 4-4: Post-Development Strategic Significance Justification

Strategic Significance	Justification Reasoning
High	The following habitats have been identified within the Falkirk LBAP as local priority habitats¹¹: • B2.2 : Neutral grassland : semi-improved • J2.1.2 : Boundaries : Hedges - Intact - species-poor • A1.1.2 : Woodland : Broadleaved - plantation (Medium)
Medium	The following habitat has not been formally identified as a local priority habitat but is considered ecologically desirable: • A2.1 : Scrub : Dense/continuous
Low	The following habitats are not considered local priority habitats or ecologically desirable: • J3.6 : Built-up areas : Buildings

Post-Development Habitats Units

All baseline linear habitats within the BNG Assessment boundary will be permanently lost. Post-development habitats include the creation of hardstanding associated with substation platform extension and creation of woodland, scrub and hedgerow landscaping with wider neutral grassland creation in the wider site.

Post-development habitat creation is detailed in Table 4-5, and the Post-Development Habitat Plan is provided in Figure 2, Appendix B.

Table 4-5: Created Area Habitats

Habitat Type	Area (Ha)	Distinctiveness	Target Condition	Time to Target Condition (yrs)	SS	Habitat Units
B2.2 : Neutral grassland : semi-improved	0.02	Medium	Poor	4	High	0.08
J3.6 : Built-up areas : Buildings	0.29	N/A	N/A - No biodiversity value	2	Low	0.00
B2.2 : Neutral grassland : semi-improved	0.04	Medium	Poor	4	High	0.16
A1.1.2 : Woodland : Broadleaved - plantation (Medium)	0.03	Medium	Poor	7	High	0.11
A2.1 : Scrub : Dense/continu ous	0.15	Medium	Poor	3	Medium	0.59
B2.2 : Neutral grassland : semi-improved	1.15	Medium	Poor	4	High	4.59
J3.6 : Built-up areas : Buildings	0.18	N/A	N/A - No biodiversity value	2	Low	0.00
A1.1.2 : Woodland : Broadleaved - plantation (Medium)	0.03	Medium	Poor	7	High	0.18
A2.1 : Scrub : Dense/continu ous	0.04	Medium	Poor	3	Medium	0.25

B2.2 : Neutral grassland : semi-improved	1.26	Medium	Poor	4	High	7.92
J3.6 : Built-up areas : Buildings	1.14	N/A	N/A - No biodiversity value	2	Low	2.62
Total	4.33	-	-	-	-	16.50

Table 4-6: Created Hedgerow Habitats

Habitat Type	Area (Ha)	Distinctiveness	Target Condition	Time to Target Condition (yrs)	SS	Habitat Units
J2.1.1 : Boundaries : Hedges - Intact - native species-rich	0.15	High	Poor	3	High	1.02
Total	0.15	-	-	-	-	1.02

4.4 Summary of Results - Bonnybridge

The Project is predicted to result in a net loss of 6.79 area habitat units and net gain of 0.34 linear habitat units as detailed in Table 4-7. A copy of the associated Toolkit will be provided alongside this report, summary outputs are provided within Appendix C.

Table 4-7: Summary of Results - Bonnybridge

Habitat Type	Baseline BUs	Post- Development BUs	Total Net Unit Change	Number of BUs required to achieve a 10% Gain
Area Units	23.29	16.50	-6.79	9.12
Linear Units	0.68	1.02	+0.34	Achieved

4.5 Conclusion

The Project (at Bonnybridge substation) is predicted to result in a net loss of 6.79 units for area habitats and net gain of 0.34 units for linear habitats. To achieve a 10% net gain for area habitats, an additional 9.12 area units are required. No additional hedgerow units are required.

SPEN commits to seeking these units off-site to ensure a 10% net gain is delivered. It is recommended that the off-site units target woodland and individual tree habitats, to mirror the habitats that will be lost to the Proposed Works.

5. Easterhouse Substation Works

Easterhouse Substation is located approximately 1.00km southeast of Gartcosh, Scotland (Centered at OS NGR NS 70321 67056). The Easterhouse Substation Works will include the replacement of existing equipment within the existing substation to facilitate overhead line uprating; full details of the works are provided in Chapter 4.

These works will be located within the existing substation on hardstanding with no permanent changes to habitats. To facilitate the works, two compound areas will be located within the adjacent agricultural land, which comprises B4 : Improved grassland in 'Poor' condition. The compound area will be reinstated following construction to the baseline habitat type and condition. The time to target condition for poor condition improved grassland is 1 year, so accounting for the 10-month construction period, this habitat it is considered retained as per the SSEN Toolkit User Guide⁷. Given this, there will be no permanent change to the habitats present, and Easterhouse Substation has been excluded from this BNG assessment.

6. Newarthill Substation Works

6.1 Site Description

The existing Newarthill Substation is located approximately 750m north of Newarthill, Scotland (centered at OS NGR NS 78194 60742) (hereafter referred to as the 'Site' within Section 6). Newarthill Substation Works would include the replacement of existing equipment to facilitate overhead line uprating (hereafter referred to as 'Proposed Works' within Section 6), full details of the works are provided in EIAR Volume 1, Chapter 4.

Baseline habitats within the Site include an improved grassland field north of and neutral grassland adjacent to the existing hardstanding substation. A hedgerow to the east of the southern Site compound would not be impacted by the Proposed Works and has therefore been excluded from this BNG assessment. No watercourse habitats are present within the Site boundary.

The Site is bordered by grassland and wetlands to the east and grassland to the north and south. Commercial buildings and Legbrannock road border the Site to the west.

Due to potential future access requirements within the Newarthill Substation Site, no habitat landscaping has been proposed.

6.2 Assumptions

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

- It is assumed that all habitat loss would be limited to the Newarthill Site Compound and Proposed Substation Layout boundaries;
- Temporary impacts restored to target condition within ≤ 2 years are excluded from the calculation; all other temporary and all permanent changes to vegetation within the boundary are included;
- The habitat code J3.6 : Built-up areas : Buildings has been used to account for any area of post-development hardstanding within the Substation Extension;
- It is assumed that the programme of construction for Newarthill Substation would be approximately 1 year and 8 months; and
- Habitats within the Site Compound boundary will be reinstated to the baseline habitat type in 'Poor' condition. Due to time to target condition being over 2 years, these habitats are considered lost and created;

6.3 Results

Baseline Habitats – Strategic Significance

A SS rating has been assigned to all baseline habitats as per the Toolkit User Guide⁷. Information was obtained from the North Lanarkshire LBAP¹³ to assess the SS rating. Table 6-1 summarises the SS rating assigned to each habitat type.

Table 6-1: Strategic Significance Justification

Strategic Significance	Justification Reasoning
Medium	The following habitat has not been formally identified as a local priority habitat but is considered ecologically desirable: B2.2 : Neutral grassland : semi-improved
Low	The following habitat has not been formally identified as a local priority habitat and is not considered ecologically desirable: B4 : Improved grassland

Baseline Habitats Units

An overview of the baseline biodiversity for the Project is summarised in Table 6-2, and the Baseline Habitat Plan is provided on Figure 3, Appendix A.

Table 6-2: Baseline area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
B2.2 : Neutral grassland : semi-improved	0.21	Medium	Poor	Medium	0.92
B4 : Improved grassland	0.25	Low	Poor	Low	0.50
TOTAL	0.46	-	-	-	1.42

Post-Development Units

An overview of the post-development habitats are summarised in Table 6-3, and the Post-development Habitat Plan is provided on Figure 4, Appendix A.

¹³ North Lanarkshire Council (2023) North Lanarkshire Biodiversity Action Plan 2023 – 2027. Available Online at: https://www.northlanarkshire.gov.uk/sites/default/files/2023-11/biodiversity%20action%20plan%202023-2027%20V2%20pages%20%28Accessible%29_0.pdf.

Table 6-3: Post-development area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Target Condition	Time to Target Condition	SS	Habitat Units
B2.2 : Neutral grassland : semi-improved	0.21	Medium	Poor	3	Medium	0.83
B4 : Improved grassland	0.25	Low	Poor	3	Low	0.45
TOTAL	0.46	-	-	-	-	1.28

Summary of Results

The Project is predicted to result in a net loss of 0.14 biodiversity units for area habitats as detailed in Table 6-4. A copy of the associated Toolkit will be provided alongside this report, see Appendix C for the summary outputs.

Table 6-4: Summary of Results - Newarthill

Habitat Type	Baseline BUs	Post-Development BUs	Total Net Unit Change	Number of BUs required to achieve a 10% Gain
Area Units	1.42	1.28	-0.14	0.28

6.4 Conclusion

The Proposed Works (at Newarthill Substation) are predicted to result in a net loss of 0.14 units for area habitats. To achieve a net gain for area habitats, an additional 0.28 area units are required.

SPEN commits to providing these units offsite to ensure a 10% gain is delivered. It is recommended that the off-site units target grassland habitats, to mirror habitats lost during the Proposed Works.

7. Wishaw Substation Works

7.1 Site Description

The existing Wishaw Substation is located approximately 0.5km south of Wishaw, Scotland (at OS NGR NS 79077 54000) (hereafter referred to as the 'Site' within this Section). The Wishaw Substation Extension would include the replacement of existing equipment to facilitate overhead line uprating (hereafter referred to as 'Proposed Works' within Section 7), full details of the works are provided in EIAR Volume 1, Chapter 4.

Baseline habitats include neutral grassland with a small area of scrub. No hedgerow or watercourse habitats are present within the Site boundary.

The Site is bordered by grassland to the east, woodland to the north and urban buildings to the south and west. A railway line is present to the north of the Site and Castlehill Road is present to the west.

7.2 Assumptions

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

- It is assumed that all habitat loss will be limited to the Wishaw Platform Extension, Proposed Substation Layout and Site Compound boundaries; and
- Temporary impacts restored to target condition within ≤ 2 years are excluded from the calculation; all other temporary and all permanent changes to vegetation within the boundary are included.
- Habitats within the Wishaw Platform Extension and Proposed Substation Layout will be permanently lost and replaced with hardstanding (J3.6 : Built-up areas : Buildings).
- Habitats within the Site Compound boundary will be reinstated to the baseline habitat type in 'Poor' condition. Due to time to target condition being over 2 years, these habitats are considered lost and created.
- An area of Site Compound layout will be situated on artificial unvegetated, unsealed surface with no permanent habitat changes anticipated. This area has therefore been excluded from this BNG assessment.

7.3 Results

Baseline Habitats – Strategic Significance

A SS rating has been assigned to all baseline habitats as per the Toolkit User Guide⁷. Information was obtained from the North Lanarkshire LBAP¹³ to assess the SS rating. Table 7-1 summarises the SS rating assigned to each habitat type.

Table 7-1: Strategic Significance Justification

Strategic Significance	Justification Reasoning
---------------------------	-------------------------

Medium

The following habitat has not been formally identified as a local priority habitat but is considered ecologically desirable:

- B2.2 : Neutral grassland : semi-improved
- A2.1 : Scrub : Dense / continuous

Baseline Habitats Units

An overview of the baseline biodiversity for the Project is summarised in Table 7-2, and the Baseline Habitat Plan is provided on Figure 5, Appendix A.

Table 7-2: Baseline area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
B2.2 : Neutral grassland : semi-improved	0.14	Medium	Moderate	Medium	1.23
B2.2 : Neutral grassland : semi-improved	0.80	Medium	Poor	Medium	3.52
A2.1 : Scrub : Dense / continuous	0.02	Medium	Poor	Medium	0.09
TOTAL	0.96	-	-	-	4.84

Post-Development Habitats Units

An overview of the reinstated habitats that fall under the Compound Areas is summarised in Table 7-3, and the Post-Development Plan is provided on Figure 6, Appendix B.

Table 7-3: Created area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Target Condition	Time to Target Condition (yrs)	SS	Habitat Units
B2.2 : Neutral grassland : semi-improved	0.32	Medium	Poor	4	Medium	1.11
J3.6 : Built-up areas : Buildings	0.64	N/A	N/A - No biodiversity value	3	Low	0.00
TOTAL	0.96	-	-	-	-	1.11

7.4 Summary of Results - Wishaw

The Project is predicted to result in a net loss of 3.73 units for area habitats as detailed in Table 7-4. A copy of the associated Toolkit will be provided alongside this report, see Appendix C for the summary outputs.

Table 7-4: Summary of Results - Wishaw

Habitat Type	Baseline BUs	Post-Development BUs	Total Net Unit Change	Number of BUs required to achieve a 10% Gain
Area Units	4.84	1.11	-3.73	4.21

7.5 Conclusion

The Project (Wishaw Substation) is predicted to result in a net loss of 3.73 units for area habitats. To achieve a net gain for area habitats, an additional 4.21 area units are required.

SPEN commits to providing these units offsite to ensure a 10% gain is delivered. It is recommended that the off-site units target neutral grassland and scrub, to mirror habitats lost during the Proposed Works.

8. Overall Biodiversity Net Gain Summary

Denny and Easterhouse Substations have been excluded from this BNG assessment as all baseline habitats can be returned to target condition within 2 years and therefore are considered retained.

The Bonnybridge Substation Works are anticipated to result in a net loss of 6.79 units for area habitats and net gain of 0.34 units for linear habitats. To achieve a 10% net gain for area habitats, an additional **9.12** area units are required. No additional hedgerow units are required.

The Newarthill Substation Works are anticipated to result in a net loss of 0.14 biodiversity units for area habitats. A total of **0.28** units would be required to achieve a 10% net gain.

The Wishaw Substation Works are anticipated to result in a net loss of 3.73 units for area habitat. A total of **4.21** units would be required to achieve a 10% net gain.

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. Combined a total of 13.61 units are required to achieve a 10% net gain. This 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 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 Bonnybridge Substation
- A.2 Newarthill Substation
- A.3 Wishaw Substation





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LEGEND

BNG Assessment Boundary

Baseline Phase 1 Habitat Type

SI B2.2 - Neutral grassland - semi-improved

I B4 - Improved grassland

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ISSUE PURPOSE
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FIGURE TITLE
Biodiversity Net Gain Assessment -
Newarthill Baseline
Phase 1 Habitats Plan

FIGURE NUMBER
Figure 3



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LEGEND

 BNG Assessment Boundary

Baseline Phase 1 Habitat Type

 A2.1 - Scrub - dense/continuous

 B2.2 - Neutral grassland - semi-improved

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FIGURE TITLE
Biodiversity Net Gain Assessment - Wishaw Baseline Phase 1 Habitats Plan

FIGURE NUMBER
Figure 5

Appendix B Post-Development Habitat Plan

- B.1 Bonnybridge Substation
- B.2 Newarthill Substation
- B.3 Wishaw 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
- J3.6 - Buildings

The rural trees displayed on the baseline figure will be removed, both within and outside of the BNG Assessment Boundary, and therefore are not shown on this post-development figure.

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BNG Assessment

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FIGURE TITLE

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

FIGURE NUMBER

Figure 2

1:1,500 @ A3



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LEGEND

BNG Assessment Boundary

Post Development Phase 1 Habitat Type

SI B2.2 - Neutral grassland - semi-improved

I B4 - Improved grassland

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BNG Assessment

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FIGURE TITLE
Biodiversity Net Gain Assessment -
Newarthill Post-Development
Phase 1 Habitats Plan

FIGURE NUMBER
Figure 4



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LEGEND

 BNG Assessment Boundary

Post Development Phase 1 Habitat Type

 B2.2 - Neutral grassland - semi-improved

 J3.6 - Buildings

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FIGURE TITLE

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

FIGURE NUMBER

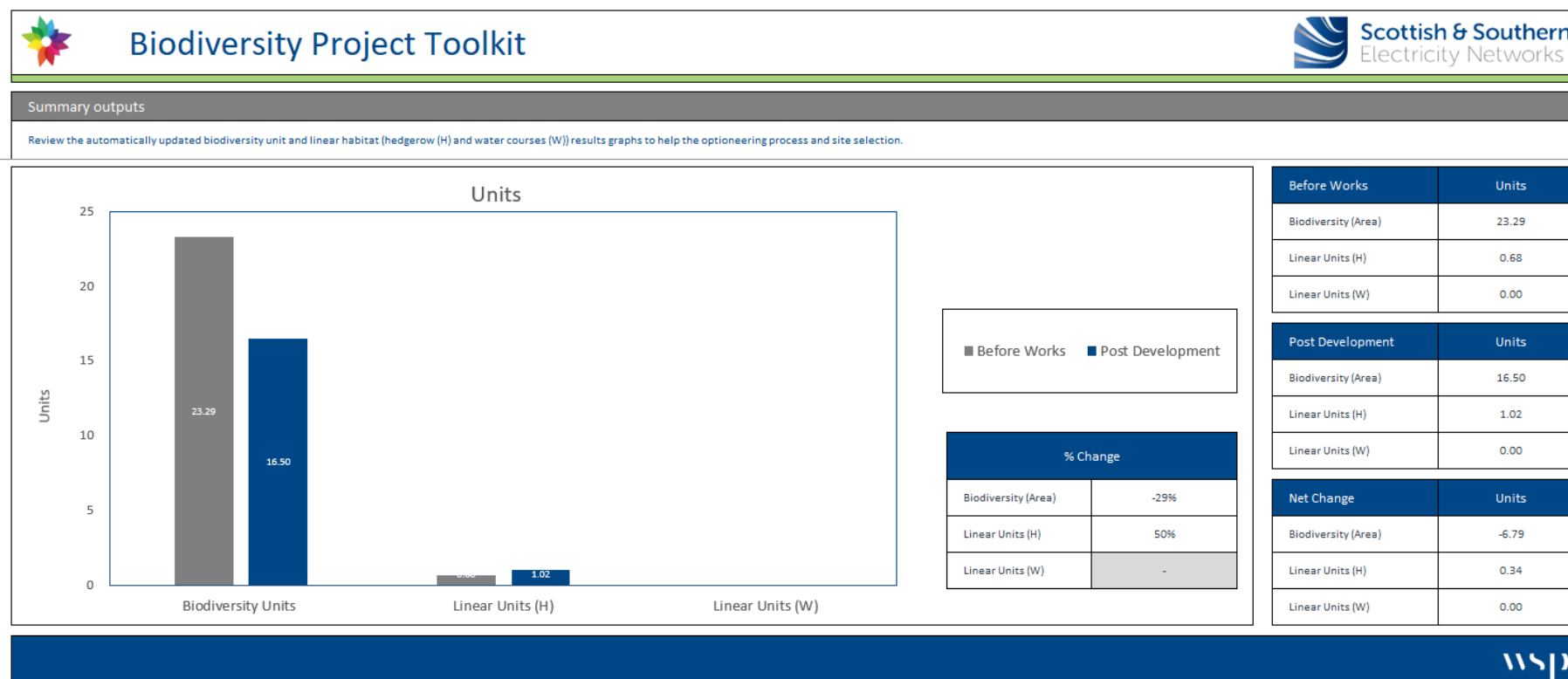
Figure 6

Denny to Wishaw Network Upgrade: BNG
Assessment Substations (Excluding
Cumbernauld)

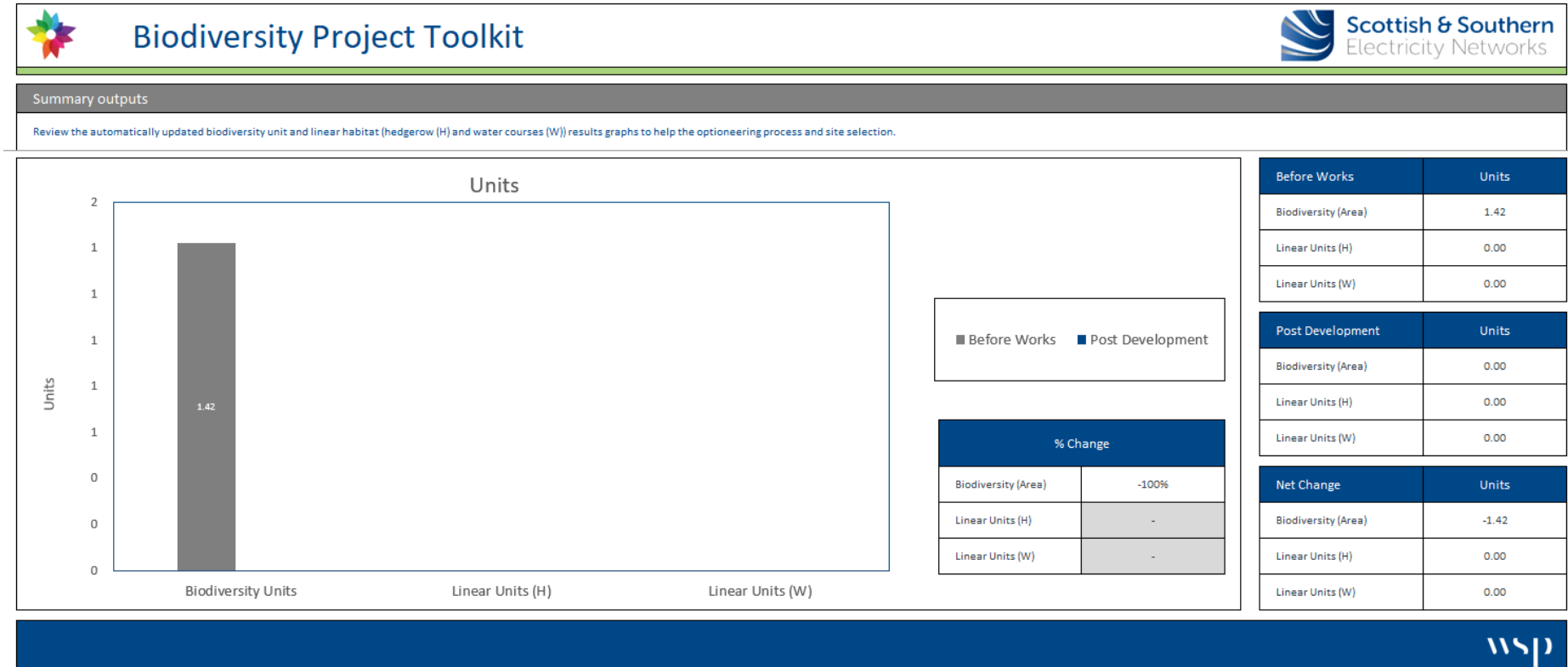
Appendix C Biodiversity Toolkit

Biodiversity Toolkit to be included as an attachment.

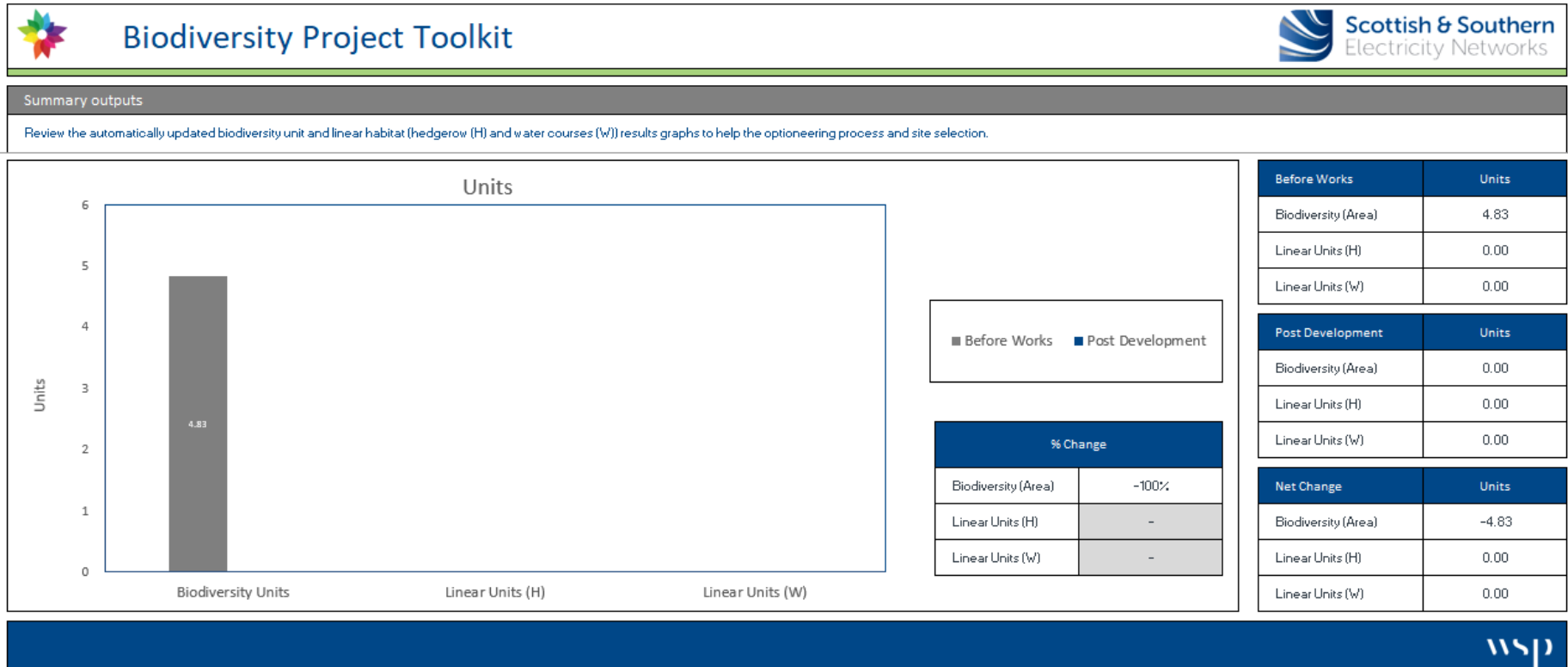
C.1 Bonnybridge Substation



C.2 Newharthill Substation




C.3 Wishaw Substation



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