Scottish & Southern Electricity Networks
TRANSMISSION

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Environmental

Biodiversity Net Gain Assessment Report

Knocknagael Substation Extension

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EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) (the Applicant) has a business commitment to ensure all projects gaining consent result in a 10% Biodiversity Net Gain (BNG). This is aligned to the Scottish Government's National Planning Framework 4 (NPF4) Policy 3 aim for proposed developments to contribute to the enhancement of biodiversity.

This report sets out the results of the Biodiversity Net Gain (BNG) calculations and the approach to delivering on SSEN Transmission's BNG commitments for the Project. The SSEN Transmission Biodiversity Project Toolkit Excel Sheet (hereafter referred to as 'the Toolkit') was used to produce the BNG calculations for the project site.

This report details the BNG assessment undertaken for the proposed Knocknagael Substation Extension to facilitate the proposed Loch na Cathrach Pumped Hydro Storage Scheme 275 kV Grid Connection – (hereafter referred to as "the Proposed Development").

This report includes:

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

The baseline for the Red Line Boundary (RLB) is calculated to be 32.51 Biodiversity Units (BU) and 0.42 Linear (Watercourse) Units (LWU).

BNG cannot be delivered within the RLB for BUs. A total 27.09 BU are estimated to be required off-site to deliver a 10% Net Gain (NG).

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

The LWU designed in by the works associated with the drain diversion are 2.17 LWU. This is sufficient to achieve a 420% net gain for LWU.

The Proposed Development does not impact on irreplaceable habitats.

1. INTRODUCTION

1.1 Background of the Project

1.1.1 Scottish and Southern Electricity Networks Transmission (SSEN Transmission) (the Applicant) has a business commitment to ensure all projects gaining consent result in a 10% BNG. This is aligned to the Scottish Government's National Planning Framework 4 (NPF4)[1] Policy 3 aim for proposed developments to contribute to biodiversity enhancement.

1.1.2 The Applicant, operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates, and develops the high voltage electricity transmission system in the north of Scotland and remote islands and has a statutory duty under Schedule 9 of the Electricity Act[2] to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence areas.

1.1.3 The Applicant proposes to construct a new extension to the existing Knocknagael substation, in order to facilitate the proposed Loch na Cathrach Pumped Hydro Storage Scheme 275 kV Grid Connection (hereafter referred to as "the Proposed Development").

1.1.4 The Applicant is seeking planning permission under the provisions of the Town and Country Planning (Scotland) Act 1997 (as amended) ('the 1997 Act')[3] for consent from The Highland Council (THC) for the Proposed Development. The application will be supported by an Environmental Appraisal (EA).

1.1.5 The Applicant commissioned Environmental Resources Management Ltd (ERM) to undertake a Biodiversity Net Gain (BNG) assessment for the Proposed Development using the SSEN Transmission Biodiversity Project Toolkit ("the Toolkit") to assess the biodiversity net gains or losses resulting from the impacts of the Proposed Development.

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

1.2 Site Description

1.2.1 The Proposed Development is located approximately 6 km south of Inverness near Essich. Local habitats include scattered trees, woodland, scrub, grassland and agricultural fields. There is a burn to the east of the Proposed Development and the River Ness runs approximately 2 km to the north-west. The location of the Proposed Development (hereafter also referred to as "the Site") is shown on **Appendix A, Figure 1**. For the purpose of this report, the Site includes all habitats within the red line boundary (RLB). No Irreplaceable habitats were recorded on-site.

1.2.2 There are six Ancient Woodland Inventory Sites (AWIS) within 2 km of the Proposed Development, as illustrated on **Appendix A, Figure 2**. The nearest AWIS is approximately 500 m to the north-east of the Proposed Development. There are no statutory or non-statutory designated sites within 2 km of the Proposed Development. The nearest designated site is Torvean Landforms SSSI (designated for its geological features), which lies approximately 2.5 km to the north-west of the Proposed Development. This SSSI is designated for its geological interest and will not be affected at this distance.

[1] National Planning Framework 4 (2023) Available online at: https://www.gov.scot/publications/national-planning-framework-4/.
[2] Electricity Act 1989. Available at: https://www.legislation.gov.uk/ukpga/1989/29/schedule/9
[3] Town and Country Planning (Scotland) Act 1997. Available online at: https://www.legislation.gov.uk/ukpga/1997/8/section/46 (Accessed: February 2024)

1.3 Proposed Development Description

1.3.1 The Proposed Development would consist of:

- Temporary site compound and construction laydown area;
- Extension of the existing Knocknagael 275 kV External Air Insulated Switchgear (AIS) double busbar to create a new 275 kV AIS bay to connect the new circuit from the Loch na Cathrach 275 kV Switching Station. The maximum height of which would be approximately the same as existing electrical equipment at the substation and no higher than 11.7 m;
- Platform size of approximately 90 m x 110 m along with associated earthworks;
- Upgrade of existing access tracks and drainage, in addition to construction of new access tracks and drainage, as required. The main access road within the substation and the temporary bell mouth from the public road will be tarmac, any other accesses to plant and apparatus will be stone;
- Existing 275 kV cable circuit re-route to allow sufficient room for the extension works;
- A new temporary construction entrance to the Proposed Development from the public road, located to the south of the existing substation main entrance. The temporary entrance will be reinstated upon completion of construction of the Proposed Development;
- Landscaping and biodiversity requirements; and
- Palisade perimeter fence of approximate maximum height of 2.4 m.

1.4 Scope of Study

1.4.1 This report sets out the results of the BNG assessment and the approach to delivering on SSEN Transmission's BNG commitments for the Proposed Development. This report identifies the baseline biodiversity measured in Biodiversity Units (BU), and the predicted post development BU, to demonstrate that the enhancement is in line with SSEN Transmission's 10% net gain commitment to achieve positive effects for biodiversity.

1.5 Policy and Legislation

1.5.1 NPF4 requires significant biodiversity enhancements be provided in addition to any proposed mitigation stating that for national or major development "*Development proposals for national or major development that require an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks, so that they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used.*"

1.5.2 Whilst the Proposed development does not require a formal Environmental Impact Assessment (EIA), in accordance with the EIA Regulations, an EA was prepared.

1.5.3 A biodiversity site assessment was undertaken early in the Proposed Development design to inform the site selection process based on the habitats identified through this assessment. The mitigation hierarchy has been applied to avoid impacts to biodiversity, where avoidance is not possible, these impacts have been minimised.

1.5.4 The Proposed Development was selected and developed via an iterative design process. The site selection stage process included;

- Stage 0: Strategic Options assessment;
- Stage 1: Initial site screening; and

- Stage 2: Detailed site selection.

1.5.5 The Applicant followed its own site selection process which included consideration of reasonable alternatives:. Following the site selection process, the Proposed Development was deemed to be appropriate for progression to further design based on predominately engineering and technical reasons, as from an environmental perspective all the considered options were similar in terms of environmental constraints.

The Landscape Mitigation Plan (shown in **Appendix A, Figure 4**) has been developed in response to pre-application consultation (22/04161/PREMAJ) with The Highland Council which requested a Landscape Plan and Landscape Maintenance Plan be provided as part of the planning application to show how it is proposed to soften views onto the Proposed Development. The Landscape Mitigation Plan includes the Proposed Development's works to enhance the biodiversity on site (including native species woodland planting on the bund with a scrub edge facing the road) demonstrating the Proposed Development's commitment to contribute to biodiversity enhancement. This is aligned to the Scottish Government's NPF4[4] Policy 3 for proposed developments to contribute to biodiversity enhancement.

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

2. METHODOLOGY

2.1 Area and Surveys

2.1.1 **Desk based Assessment** - The following datasets were reviewed to inform this assessment:

- The NatureScot SiteLink[5] and Scottish Government open-source data sets[6] to obtain information regarding statutory designated sites;
- Ancient Woodland Inventory (AWI) (Scotland)[7] to identify areas of ancient woodland;
- Carbon and Peatland 2016 map[8] to identify areas of carbon-rich soils, deep peat, and priority peatland;
- Habitat Map of Scotland (HabMoS)[9] was consulted to identify any priority habitats listed under Scottish Biodiversity List[10];
- The Highland Forest and Woodland Strategy[10], Highland Council's local biodiversity action plan[11] and the Scottish Biodiversity List were reviewed to identify any locally important priority habitats; and
- The Scottish Government's National Planning Framework 4 (NPF4).

2.1.2 **Field Assessment** - A habitat survey of the site was undertaken in April and June 2022. The survey was based on the methods described in the UK Habitat Classification (UKHab) User Manual[12]. During the habitat survey, a habitat condition assessment was undertaken for the habitats within the Site based on the Farm Environment Plans[13]. Each habitat parcel was assigned a condition score (Good, Fairly Good, Moderate, Fairly Poor, Poor, or N/A).The latest user guide which states that FEP should only be used for phase 1 surveys was released after the surveys were undertaken, therefore FEP categories including the intermediate 'Fairly' condition scores were used to assess the habitats.

For further detail refer to **Technical Appendix 3.D: Habitat and Protected Species Survey Report**. It is noted that majority of surveys were completed in 2022. Good practice guidance recommends that surveys between 18 months and three years old may require further survey and update of the desk study information by a suitably qualified ecologist[14]. Aerial imagery dating from May 2023 (available via Google Earth) was reviewed in June 2024 to confirm any significant changes in habitat, or land management, since the surveys were undertaken. No

[5] NatureScot: Site Link. Available online at: https://sitelink.nature.scot/home (Accessed June 2024)

[6] SpatialData.gov.scot Metadata Portal. Available online at: https://spatialdata.gov.scot/geonetwork/srv/eng/catalog.search#/home (Accessed June 2024)

[7] Scottish Government (2010). Ancient Woodland Inventory (Scotland). Available online at: https://spatialdata.gov.scot/geonetwork/srv/api/records/A091F945-F744-4C8F-95B3-A09E6EF6AE33 (Accessed June 2024)

[8] Scotland's Environment (2016). Carbon and Peatland 2016 map. Available online at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ (Accessed June 2024)

[9] Scotland's Environment (2023). Habitat Map of Scotland. Available online at: Habitat Map of Scotland | Scotland's environment web (Accessed June 2024).

[10] NatureScot (2010). Scottish Biodiversity List. Available online at: https://www.nature.scot/doc/scottish-biodiversity-list (Accessed June 2024)

[11] Highland Council (2024). Biodiversity Action Plan 2021-2026. Available online at: Highland_Nature_Biodiversity_Action_Plan_2021_____2026.pdf (Accessed June 2024)

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

[13] Natural England. 2010. Higher Level Stewardship: Farm Environment Plan (FEP) Manual (NE264)

[14] CIEEM (2017) Guidelines for Ecological Reporting. Available online at: https://cieem.net/wp-content/uploads/2019/02/Ecological-Report-Writing-Dec2017.pdf

significant habitat changes were identified in the survey area. Additionally, a visit to the existing Knocknagael Substation in May 2023 did not identify any significant changes to habitats within the survey area in the immediate surrounds of the substation. A survey visit will be undertaken prior to construction to confirm that there have been no significant changes to habitats which will be impacted by the Proposed Development.

2.1.3 **Evidence of Technical Competence -** The survey in April 2022 was undertaken by ERM Principal Ecologist Amelia Hodnett Associate of the Chartered Institute of Ecology and Environmental Management (ACIEEM) who has 11 years' experience and supported by ERM Ecologist Aaron Nugent who has 4 years' experience. Surveys conducted in June 2022 were conducted by Amelia Hodnett and ERM Managing Technical Consultant Callum Gilhooley ACIEEM who has 11 years' experience.

2.2 Approach to Biodiversity Net Gain

2.2.1 A full BNG Assessment was undertaken for the Site. The BNG assessment was completed within the Toolkit following the Toolkit user guide (2022)[15] (hereafter referred to as "The Toolkit User Guide").

2.2.2 Data were collected on type, area, and condition of the habitat of the Proposed Development, indicating the biodiversity present on-site before the work begins. The same Toolkit was used to calculate the biodiversity losses and the units resulting from the proposed habitat creation after works. The outcomes have been used to ensure the biodiversity targets are being met for the Proposed Development.

2.2.3 The Toolkit assesses losses of area and linear habitat separately. The Toolkit produces a Unit score for three categories of habitat: Biodiversity Units, Linear Hedgerow Units (LHU) and Linear Watercourse Units (LWU). These biodiversity units are not interchangeable.

2.2.4 An impact to a habitat which is reversible and can return to same extent and ecological condition or better within two years of the initial impact, can be considered a temporary impact. Temporary impacts have not been included in the Toolkit calculations as there are no permanent adverse impacts.

2.2.5 Retained habitat are also excluded from the Toolkit as there is no recordable impact.

2.2.6 The BNG assessment involves assessing any impacts on irreplaceable habitats separately from non-irreplaceable habitats. If irreplaceable habitats are present on site, the impact of development on irreplaceable habitats will not be calculated using the SSEN Transmission BNG toolkit as bespoke compensation must be provided for these impacts. SSEN Transmission consider irreplaceable habitats within their network to be Ancient Woodland (categories 1a & 2a of the Ancient Woodland Inventory (AWI)), ancient or veteran trees, blanket bog or raised bog in good or moderate condition. The Proposed Development does not impact on any irreplaceable habitat.

2.2.7 Time to target condition (TTTC) is the number of years it is estimated to take before the enhancement or creation of a habitat reaches the desired result. This assessment referred to the time to target condition outlined within the Biodiversity Metric 3.1 Technical Supplement[16]. Any further delay in habitat creation due to the construction of the Proposed Development were added to the TTTC values within the Toolkit. A precautionary three-year delay in habitat creation was applied to reflect the Proposed Development's construction programme.

2.2.8 Strategic significance gives extra value to habitats that are located in optimum locations for biodiversity and / or that are important for other environmental objectives, such as areas that are designated for their biodiversity

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

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

importance or listed in local biodiversity plans. The Scottish Biodiversity List, Highland Nature: Biodiversity Action Plan (BAP) and Highland Forest and Woodland Strategy informed Strategic Significance.

2.3 Limitations and Assumptions

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

- It is anticipated that construction of the Proposed Development would take place over an approximately 32-month period. A 3-year delay has been applied to all creation and enhancement time to target conditions to the proposed habitats.
- Habitats where no specific infrastructure or landscape planting is proposed were assumed to be retained and as such were not included in the BNG calculations; and
- Areas used for the temporary access track earthworks and temporary haul road were included in the BNG assessment as a permanent impact as it was assumed that due to the work schedule it would not be possible to return them to their original condition within two years given the 32-month construction schedule.
- The length of watercourses within the RLB were calculated from OS mapping. The watercourses comprised unnamed drainage ditches. Ditches were not mapped during the field survey and as such an assumed Low habitat distinctiveness and Poor condition[17] was assigned based on professional judgement using digital imagery and site photographs (photographs presented in Plate 8.1 of **Chapter 8: Hydrology, Hydrogeology, Geology and Soils**).

[17] SSEN Transmission advised approach for watercourse condition assessment to apply SSE Renewables guidance as advised in the SSEN Transmission - EIA Framework -BNG representatives online meeting (30 January 2025).

3. RESULTS

3.1.1 Habitats recorded on site during the UKHab survey are shown on **Appendix A, Figure 3**. For further details, on the habitats found on the Site, refer to **Appendix I** of the EA.

3.2 Biodiversity Baseline

3.2.1 The baseline habitats impacted by Proposed Development shown in the baseline habitat plan (**Appendix A, Figure 3**) and detailed in the Toolkit (**Appendix C**) are summarised in **Table 1**. **Table 2** describes the strategic significance assigned to each habitat and provides the justification for that assignment.

Table 1 Baseline Habitats within the Site

Habitat	Distinctiveness	Condition	Area/Length	BU/LWU
Grassland - Other neutral grassland	High	Fairly Poor	1.17	12.74
Grassland - Other neutral grassland	High	Poor	2.14	15.53
Heathland and shrub - Gorse scrub	Low	Moderate	0.85	3.40
Urban - Artificial unvegetated, unsealed surface	Low	N/A	0.14	0
Urban - Built linear features	Low	N/A	0.03	0
Urban - Developed land; sealed surface	Low	N/A	0.05	0
Woodland and forest - Other woodland; broadleaved (semi-natural)	Medium	Poor	0.18	0.83
Total			**21.48 ha**	**32.51 BU**
Rivers and Lakes - Other rivers and streams (Low)	Low	Poor	0.19 km	0.42
Total			**0.19 km**	**0.42 LWU**

Table 2 Baseline Habitat Strategic Significance

Habitat	Strategic Significance	Justification
Grassland - Modified grassland	Low	Habitat of limited ecological value
Grassland - Other neutral grassland	Medium	Not formally identified but serves to maintain connectivity between other higher values habitats
Heathland and shrub - Gorse scrub	Low	Habitat of limited ecological value
Urban - Artificial unvegetated, unsealed surface	Low	Habitat of no ecological value
Urban - Built linear features	Low	Habitat of no ecological value
Urban - Developed land; sealed surface	Low	Habitat of no ecological value
Woodland and forest - Other coniferous woodland (Plantation)	High	The area is preferred / has potential for woodland creation following a review of the Highland Forest and Woodland Strategy

Habitat	Strategic Significance	Justification
Woodland and forest - Other coniferous woodland (Semi-Natural)	High	The area is preferred / has potential for woodland creation following a review of the Highland Forest and Woodland Strategy
Rivers and Lakes - Other rivers and streams (Low)	Medium	Not formally identified but serves to maintain connectivity between other higher values habitats

3.2.2 The baseline BU for habitats within the Site is 32.51 BU.

3.2.3 The baseline LWU for habitats within the Site is 0.42 LWU.

3.2.4 No hedgerows were recorded on-site during the 2022 surveys, as such no LHU have been calculated.

3.3 Temporary Impacts

Impacts to habitats which are reversible and can return to the same extent and ecological condition within two years of the initial impact can be considered temporary and removed from the relevant Toolkit. Due to the timeline for the Proposed Development, no habitats are predicted to return to their original condition within two years, thus there are no temporary impacts on site. No impacts have been excluded from the Toolkit.

3.4 Retained Habitats

3.4.1 Retained habitats have not been included in the Toolkit calculations as there are no predicted permanent adverse impacts. Habitats within the Proposed Development's RLB are considered to be retained if they are not subject to any expected change in habitat type or condition due to direct or indirect impacts (for example changes to hydrology across the wider site resulting in impacts to the habitat).

3.4.2 The retained habitats are summarised on **Table 3** below.

Table 3 Retained Habitats

BNG Habitats	Condition	Area /Length	BU/LWU
Grassland - Modified grassland	Poor	0.05 ha	0.10 BU
Grassland - Other neutral grassland	Fairly Poor	2.48 ha	45.01 BU
	Poor	2.51 ha	18.22 BU
Heathland and shrub - Gorse scrub	Moderate	0.63 ha	2.52 BU
	Poor	0.34 ha	0.68 BU
Urban - Artificial unvegetated, unsealed surface	N/A - No biodiversity value	0.46 ha	0 BU
Urban - Built linear features	N/A - No biodiversity value	0.53 ha	0 BU
Urban - Developed land; sealed surface	N/A - No biodiversity value	5.51 ha	0 BU

BNG Habitats	Condition	Area /Length	BU/LWU
Woodland and forest - Other woodland; broadleaved (plantation)	Poor	4.39 ha	17.56 BU
Total		**16.09 ha**	**84.09 BU**
Rivers and Lakes - Other rivers and streams (Low)	Poor	0.47 km	1.03 LWU

3.5 Post-development Biodiversity Units

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

3.5.2 The post-development BU for habitats within the Site is predicted to be 8.67 BU.

3.5.3 The post-development LWU is 2.17 LWU.

3.6 Habitat Creation (Within the Site Boundary)

3.6.1 Opportunities for habitat creation and enhancement on-site have been identified and presented within the proposed Landscape Mitigation Plan[18] (shown in **Appendix A, Figure 4**) and are summarised in **Table 4**.

The diversion of a field drain (a watercourse not visible on 1:50,000 scale OS mapping) will be required as part of the temporary access tracks and earthworks (see **Chapter 8: Hydrology, Hydrogeology, Geology and Soils** for further detail). The drain subject to diversion flows through the proposed cut-and-fill (earthworks) area to the east with the diversion from NGR NH 65447 38899 to NH 65379 39068, with a small extension of the drain also being diverted. The watercourse diversion will be designed on a like-for-like basis which includes No Net Loss in the total watercourse length within a water body. The designs will incorporate measures which enhance the in-channel and riparian habitat quality, through the provision of a multistage channel and marginal planting, using natural routing (see **Chapter 8: Hydrology, Hydrogeology, Geology and Soils** for further detail).. The drain distinctiveness is proposed to change from low to medium distinctiveness following the meandering and planting of riparian vegetation. These actions are considered to deliver a watercourse which would represent a stream habitat, rather than a drainage ditch therefore reflecting an increase of distinctiveness.

[18] Landscape Mitigation Plan (DRAWING NO.: 0631293-DR-LAN-101. Revision A dated 20/11/2024).

Table 4 Proposed post-development Habitats and Target Conditions

Habitat Type for Toolkit Input	Target Condition	Notes	Area (Ha)
Grassland - Modified grassland	Poor	Proposed native species low maintenance meadow mix on the proposed bund adjacent to the public road. Management will be outlined in an Landscape and Ecological Management Plan (LEMP) .	0.30
Grassland - Modified l grassland	Poor	Proposed native species low maintenance meadow mix. Management will be outlined in an LEMP.	1.89
Grassland - Modified grassland	Poor	Proposed native species low maintenance meadow mix for the Sustainable Urban Drainage System (SuDS) basin. The basin is not expected to hold water year-round so the proposed habitat will occasionally be inundated with water and considered to be classified as an modified grassland. Management will be outlined in an LEMP.	0.20
Woodland and forest - Other woodland; broadleaved	Moderate	Proposed native species woodland planting on bund with scrub edge facing the public road. The tree planting should include; at least five native species; tree of different ages (e.g. saplings and immature trees); a mixture of species suitable for understory. To be planted with transplants 60-80 cm high using locally native species such as rowan (*Sorbus aucuparia*), field maple (*Acer campestre*), willow (*Salix caprea*), blackthorn (*Prunus spinosa*), holly (*Ilex aquifolium*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), and bird cherry (*Prunus padus*). Suitable ground flora should also be planted using a diverse species mix such as Scotia's Woodland Meadow Mix[19] or similar. Management will be outlined in an LEMP.	0.80
Grassland - Modified grassland	Poor	Temporary access track earthworks reinstated to grassland. It is expected that the seed bank already present in the soil will start to regrow once use of the temporary access track ceases. This will be supplemented by the planting of a native species low maintenance meadow mix.	0.20
Grassland - Modified grassland	Poor	Temporary haul road reinstated to its original habitat. It is expected that the seed bank already present in the soil will start to regrow once use of the temporary access track ceases. This will be supplemented by the planting of a native species low maintenance meadow mix.	0.11

[19] https://www.scotiaseeds.co.uk/shop/woodland-mix/

Habitat Type for Toolkit Input	Target Condition	Notes	Area (Ha)
Grassland - Modified grassland	Poor	Temporary access track earthworks (included as it would take over two years to return to condition). It is expected that the seed bank already present in the soil will start to regrow once use of the temporary access track ceases. This will be supplemented by the planting of a native species low maintenance meadow mix.	0.01
Grassland - Modified grassland	Poor	Temporary haul road (included as it would take over two years to return to condition). Reinstated to previous condition. It is expected that the seed bank already present in the soil will start to regrow once use of the temporary access track ceases. This will be supplemented by the planting of a native species low maintenance meadow mix.	0.17
Urban - Artificial unvegetated, unsealed surface	N/A - No biodiversity value	Temporary Haul Road. No landscape works necessary.	0.02
Urban - Built linear features	N/A - No biodiversity value	Temporary Haul Road. No landscape works necessary.	0.03
Urban - Developed land; sealed surface	N/A - No biodiversity value	Temporary Haul Road. Reinstated to previous condition. No landscape works necessary.	0.01

3.6.2 The proposed Landscape Mitigation Plan focusses on delivering the required screening for the Proposed Development whilst optimising the BUs on-site through the creation of the following proposed habitats:

- Grassland - Modified grassland (g4) - Modified grassland was considered to optimise BUs delivered on-site whilst providing a habitat that would be suitable for planting underneath or above future infrastructure such as OHL / UGC and meeting future operational management measures;
- Woodland and forest - Other woodland; broadleaved (w1g) - to aid with the visual screening and partially replace the woodland lost as result of the Proposed Development; and,
- Grassland – Modified grassland (g4) – proposed as part of the SuDS components of the Site.

3.6.3 The overall post-development units are 8.67BU; which is a net loss of -23.84 BU from the baseline. This is insufficient to achieve a biodiversity gain on site and results in --73% net loss. As such, offsite habitat creation is required to deliver a 10% net gain for the Proposed Development.

The LWU designed in by the works associated with the drain diversion are 2.17 LWU. This is sufficient to achieve a 420% net gain for LWU.

4. SUMMARY

4.1.1 The results of the assessment are summarised in **Table 5** below. The overall post-development units are 8.67 BU; which is a net loss of -23.84 BU from the baseline. This is insufficient to achieve a biodiversity gain on site and results in -73% net loss. As such, offsite habitat creation is required to deliver a 10% net gain for the Proposed Development.

4.1.2 The post-development LWU is 2.17, meaning that the project will achieve 420% net gain.

4.1.3 The habitat creation has been designed to be achieved within a reasonable timeframe and with reasonable certainty as the outcomes from the Toolkit have been informed by the Natural England Biodiversity Metric 3.1.

4.1.4 Summary of Results

Table 5 Summary of Biodiversity Units

Habitat Type	Baseline	Post-Development	Difference in BU/LWU	Difference in BU/LWU (%)	Off-Site BU/LU required to achieve 10% NG
Area	32.51 BU	8.67 BU	-23.84 BU	-73%	27.09 BU
Linear (Watercourses)	0.42 LWU	2.17 LWU	1.76 LWU	420 %	N/A

4.2 Biodiversity Outcomes

4.2.1 The Ecology and Ornithology chapter of the EA (Chapter 6) summarised that, with embedded mitigation in place, there will be no significant effects on designated sites, habitats or protected species as a result of the Proposed Development. Pre-construction surveys will provide updated information on the presence of protected species around the Proposed Development and SSEN Transmission's Species Protection Plans (SPPs) will be followed throughout construction and operation of the scheme. As no significant impacts are predicted, no additional mitigation measures are required and are therefore not detailed here.

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

- Native woodland planting; and
- The creation of Poor condition modified grassland.

4.2.3 Proposed planting species mixes will be detailed in the LEMP and will include suitable native species.

4.3 Implementing and Monitoring

4.3.1 Biodiversity enhancements will be achieved within the following timeframe (included the predicted 3-year delay in habitat creation)[20].

- Grassland - Modified grassland re-instatement (Poor): 4 years;
- Woodland and forest – Other woodland broadleaved creation (Moderate): 18 years and:

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

- Rivers and lakes – Other rivers and streams (Medium) creation (Moderate): 4 Years.

4.3.2 A LEMP and will be implemented and managed by the Applicant.

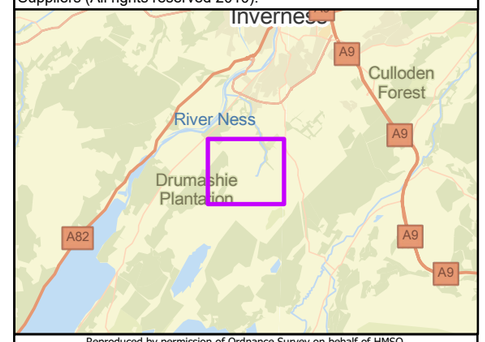
APPENDIX A FIGURES

Scottish & Southern Electricity Networks
TRANSMISSION

Legend

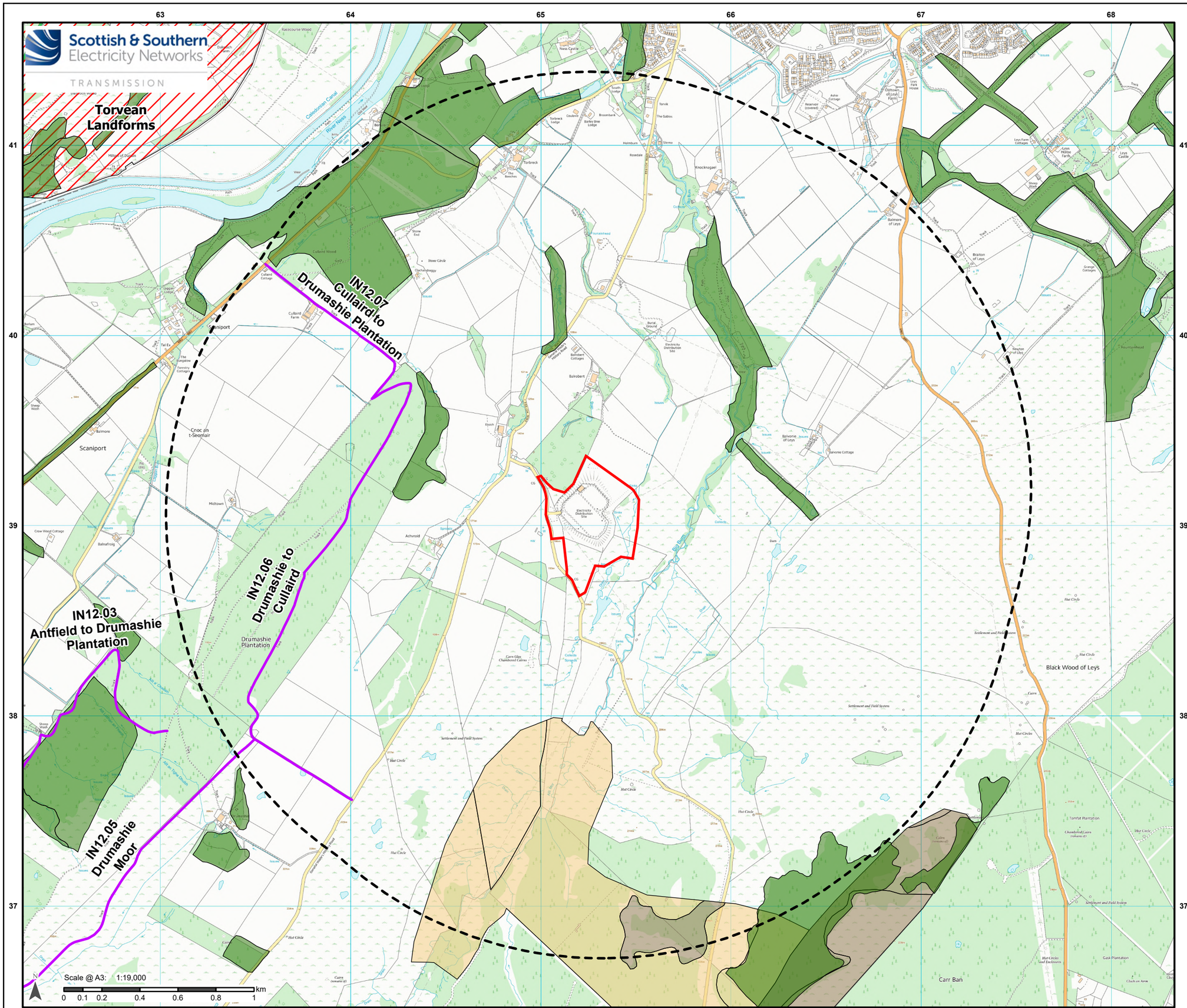
Site Boundary

Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri; © Landmark Information Group Limited and/or its Data Suppliers (All rights reserved 2010).



Project No:	LT325
Project:	Knocknagael Substation Extension
Title:	Figure 1 Development Location
Drawn by:	MW
Date:	3/24/2025
Drawing:	LT0631293_Fig2.1_01

Scale @ A3: 1:10,000
0 0.05 0.1 0.2 0.3 0.4 0.5 km

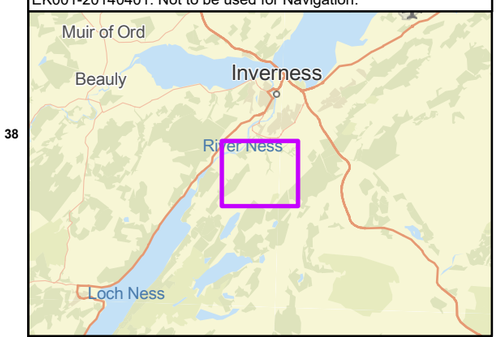


Legend

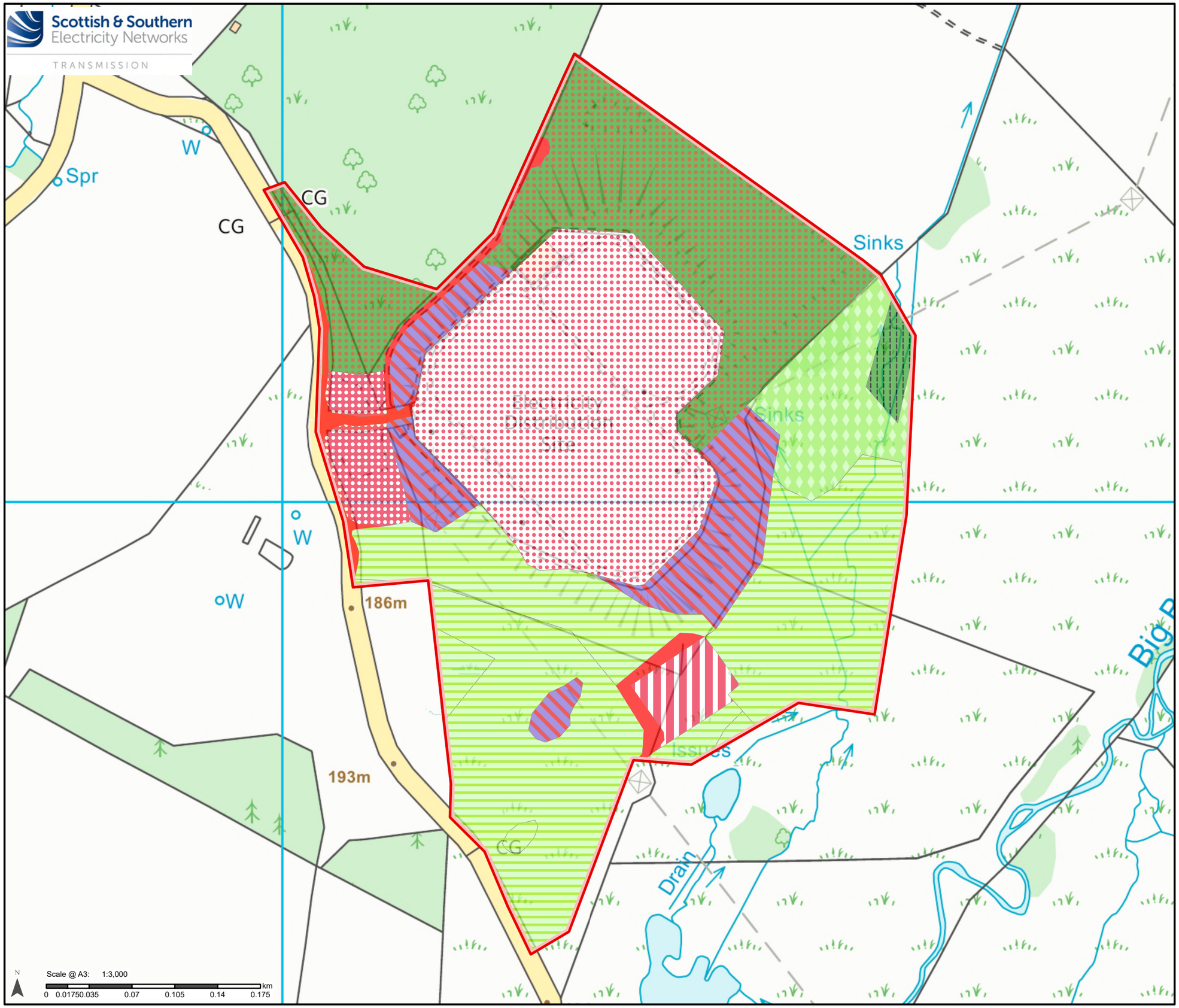
- Site Boundary
- 2km Buffer
- Core Path
- Ancient Woodland
- Site of Special Scientific Interest

Carbon And Peatland

- Class 1 Carbon and Peatland
- Class 2 Carbon and Peatland



Project No:	LT325
Project:	Knocknagael Substation Extension
Title:	Figure 2 Ecological Designated Sites & Ancient Woodland Inventory
Drawn by:	MW
Date:	3/24/2025
Drawing:	LT0631293_Fig6.1_01



Legend

- Site Boundary

UK Habitat Classification:

- g3c - other neutral grassland
- g3c6 - Lolium-Cynosurus neutral grassland
- g4 - modified grassland
- h3e - gorse scrub
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unvegetated unsealed surface
- u1e - built linear features
- w1g - other woodland, broadleaved
- w1g6 - line of trees

Project No: LT325

Project: Knocknagael Substation Extension

Title: Figure 3
UK Habitat Classification Within Substation Boundary

Drawn by: MW Date: 3/24/2025

Drawing: LT00631293_Fig6.3_01

N

Platform Extension

PLANTING SCHEDULE

Woodland area 7,030m²

Woodland planted at 1.5m (1 plant per 2.25m2/) centres in groups of three and five same species per group.

Species	Common Name	Specification cm height	Nos
Alnus glutinosa	Alder	60-80	520
Betula pubescens	Downy Birch	60-80	520
Corylus avellan	Hazel	60-80	520
Sorbus aucuparia	Rowan	60-80	520
Prunus padus	Bird cherry	60-80	520
Salix caprea	Goat Willow	60-80	520

Scrub Edge Mix. 922m²

Scrub edge mix planted at 3 plants per m2 in groups of five and seven same species. Hazel planted closest to woodland.

Viburnum opulus	Guelder Rose	45-60	553
Rosa rubiginosa	Sweet Briar	40-60	553
Corylus avellana	Hazel	60-80	553
Rosa canina	Dog Rose	45-60	553
Sambucus nigra	Elder	60-80	553

Low Maintenance Meadow Mix 19,062m². Wet Meadow Mix 1,141m²

Grass seeding to be carried out using MG5 Meadow Mix (SCM8) with Wet Meadow Mix (SCM2) for the areas designated as SuDs Pond, all as supplied by Scotia Seeds.

Sowing rates 3g/m²

MG5 Meadow Mix – *'This general meadow mix for well-drained, loamy soils in open sites uses wild origin grasses as well as the wildflowers that are used in all our mixes. It is based on British Plant Communities Mesotrophic Grassland 5 (Cynosurus cristatus – Centaurea nigra grassland). There are 19 wildflower & 7 grass species in this mix.'*

H&S Note. Ensure UG cables and pipes are identified and marked on site by main contractor prior to carrying out any planting works in the vicinity.

KEY

- Site Boundary
- Existing Vegetation to be Retained — Indicative extent, to be confirmed on site
- 15 m Buffer from Overhead Power Line
- Proposed Native Species Low Maintenance Meadow Mix
- Proposed Native Species Woodland Planting on bund with Scrub Edge facing road
- Wet Meadow Mix — Seed mix to area surrounding SUDs pond

Note: Existing vegetation disturbed during construction to be made good and seeded with meadow mix. All planting to be protected from deer incursion/attack by deer-proof fencing with access gates for maintenance.

0 10 20 30 40 50 60 70 80 90 100m

SCALE 1:1000

REVISION SCHEDULE

Rev	Date	Description
A	20.11.24	General revisions.
B	18.02.25	Planting schedule added (WM)
C	19.05.25	Electrical infrastructure in existing substation and compound removed (WM)

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
2. ALL DIMENSIONS , CHANGES, LEVELS AND COORDINATES ARE IN METERS UNLESS DEFINED OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS.
4. THE DRAWING IS THE COPYRIGHT OF ERM AND CANNOT BE REPRODUCED IN ANY FORM WITHOUT THE EXPRESS CONSENT OF THE COMPANY.
5. WRITTEN AND SCALED DIMENSIONS TO BE CHECKED ON SITE, AND ANY DISCREPANCIES SHOULD BE REPORTED TO ERM PRIOR TO WORK COMMENCING ON SITE.

STATUS: **FOR PLANNING**

GRID REFERENCE: NH 652390

PROJECT: Red John Substation Extension

TITLE: Figure 4 Landscape Mitigation Plan

CLIENT: SSE

DATE: 20.11.24 SCALE: 1:1000@A1

DRAWN: YC DRAWING NO.: 0631293-DR-LAN-101

CHECKED: JF REVISION: C

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https://www.erm.com/

APPENDIX B GOOD PRACTICE PRINCIPLES FOR BNG

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

Principle	Summary of Project Actions
Apply the mitigation hierarchy	Chapter 3 of the EA outlines the site selection process and consideration of reasonable alternatives studied by the Applicant, in accordance with Regulation 5(2)(d) and schedule 4, paragraph 2 of the EIA Regulations. It discusses the main reasons for selecting the site for the Proposed Development, and the design and layout options that have been considered.
Avoid losing biodiversity that cannot be offset elsewhere	The site boundary does not include any irreplaceable habitats. Where possible higher value habitat were excluded from the site boundary. Additionally, 16.09 ha will be retained as part of the works.
Be inclusive and equitable	At Initial Site Selection (Stage 1) a Report on Consultation (RoC) was developed for the Proposed Development. Following this, stakeholder engagement was undertaken at Detailed Site Selection (Stage 2) and a Pre-Application Consultation (PAC) report will be developed to support the Application.
Address risk	Revision 1.0 of the Toolkit user guide informed this assessment along with the completion of Version 3 of the Toolkit. The assessment applied the FEP Condition Assessment sheets. The Creation / Enhancement risks and Time to Target Condition from Biodiversity Metric 3.1 Technical Supplement informed the assessment. Due to the construction schedule and additional 3 years were also added to the time to target.
Make a measurable net gain contribution	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began
Achieve the best outcomes for biodiversity	The proposed Landscape Mitigation Plan was developed to provide screening in the form of Woodlands and to optimise the BNG return through the creation of grassland of poor condition which would be suitable on the soil base established post development. The SuDS were designed to maximise biodiversity through habitat creation of seasonally wet grassland.
Be additional	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began
Create a net gain legacy	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began
Optimise sustainability	The Proposed Development will help strengthen the renewable capability of the national grid, aiding SSEN Transmission to transmit sustainably generated electricity.
Be transparent	To demonstrate SSEN Transmission's transparency in meeting targets to the regulator, SSEN Transmission publish annual reports containing data on biodiversity enhancements for every project gaining consent.

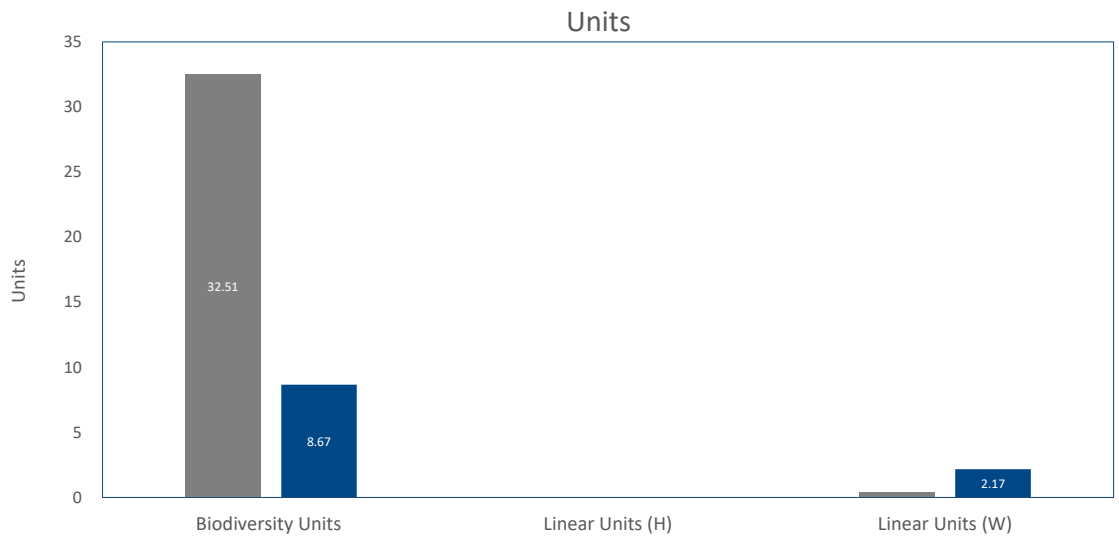
APPENDIX C PROJECT BIODIVERSITY TOOLKIT

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)	-73%
Linear Units (H)	-
Linear Units (W)	420%

Before Works	Units
Biodiversity (Area)	32.51
Linear Units (H)	0.00
Linear Units (W)	0.42

Post Development	Units
Biodiversity (Area)	8.67
Linear Units (H)	0.00
Linear Units (W)	2.17

Net Change	Units
Biodiversity (Area)	-23.84
Linear Units (H)	0.00
Linear Units (W)	1.76

WSP

Biodiversity Project Toolkit

Scottish & Southern Electricity Networks

Biodiversity Unit Calculation

Calculate biodiversity and linear (hedgerow (H) and watercourses (W)) units of your site by: (1) establishing the habitat; (2) identifying the condition, connectivity and strategic significance of that habitat, and; (3) entering the hectares (ha) or linear metres (m).

Before works *(Baseline)*

Ref	Calculation Units (Area / Linear (H/W))	UK Habitats	Area or Length of Habitat (ha /km)	Distinctiveness Band	Condition Rating	Connectivity Rating	Strategic significance Rating	Units: Biodiversity (Area)	Units: Linear (H)	Units: Linear (W)
Project Total								32.51	0.00	0.42
1	UKHab_Area	Grassland - Other neutral grassland	0.02	High	Fairly Poor	Moderate	Medium	0.22	-	-
2	UKHab_Area	Grassland - Other neutral grassland	0.11	High	Fairly Poor	Moderate	Medium	1.20	-	-
3	UKHab_Area	Grassland - Other neutral grassland	0.11	High	Fairly Poor	Moderate	Medium	1.20	-	-
4	UKHab_Area	Grassland - Other neutral grassland	0.06	High	Fairly Poor	Moderate	Medium	0.65	-	-
5	UKHab_Area	Grassland - Other neutral grassland	0.04	High	Fairly Poor	Moderate	Medium	0.44	-	-
6	UKHab_Area	Grassland - Other neutral grassland	0.38	High	Fairly Poor	Moderate	Medium	4.14	-	-
7	UKHab_Area	Grassland - Other neutral grassland	0.03	High	Fairly Poor	Moderate	Medium	0.33	-	-
8	UKHab_Area	Grassland - Other neutral grassland	0.05	High	Fairly Poor	Moderate	Medium	0.54	-	-
9	UKHab_Area	Grassland - Other neutral grassland	0.08	High	Fairly Poor	Moderate	Medium	0.87	-	-
10	UKHab_Area	Grassland - Other neutral grassland	0.01	High	Fairly Poor	Moderate	Medium	0.11	-	-
11	UKHab_Area	Grassland - Other neutral grassland	0.06	High	Fairly Poor	Moderate	Medium	0.65	-	-
12	UKHab_Area	Grassland - Other neutral grassland	0.05	High	Fairly Poor	Moderate	Medium	0.54	-	-
13	UKHab_Area	Grassland - Other neutral grassland	0.15	High	Fairly Poor	Moderate	Medium	1.63	-	-
14	UKHab_Area	Grassland - Other neutral grassland	0.02	High	Fairly Poor	Moderate	Medium	0.22	-	-
15	UKHab_Area	Grassland - Other neutral grassland	1.15	High	Poor	Moderate	Medium	8.35	-	-
16	UKHab_Area	Grassland - Other neutral grassland	0.01	High	Poor	Moderate	Medium	0.07	-	-
17	UKHab_Area	Grassland - Other neutral grassland	0.03	High	Poor	Moderate	Medium	0.22	-	-
18	UKHab_Area	Grassland - Other neutral grassland	0.01	High	Poor	Moderate	Medium	0.07	-	-
19	UKHab_Area	Grassland - Other neutral grassland	0.01	High	Poor	Moderate	Medium	0.07	-	-
20	UKHab_Area	Grassland - Other neutral grassland	0.03	High	Poor	Moderate	Medium	0.22	-	-
21	UKHab_Area	Grassland - Other neutral grassland	0.01	High	Poor	Moderate	Medium	0.07	-	-
22	UKHab_Area	Grassland - Other neutral grassland	0.12	High	Poor	Moderate	Medium	0.87	-	-
23	UKHab_Area	Grassland - Other neutral grassland	0.67	High	Poor	Moderate	Medium	4.86	-	-
24	UKHab_Area	Grassland - Other neutral grassland	0.10	High	Poor	Moderate	Medium	0.73	-	-
25	UKHab_Area	Heathland and shrub - Gorse scrub	0.16	Low	Moderate	Low	Low	0.64	-	-
26	UKHab_Area	Heathland and shrub - Gorse scrub	0.08	Low	Moderate	Low	Low	0.32	-	-
27	UKHab_Area	Heathland and shrub - Gorse scrub	0.25	Low	Moderate	Low	Low	1.00	-	-
28	UKHab_Area	Heathland and shrub - Gorse scrub	0.07	Low	Moderate	Low	Low	0.28	-	-
29	UKHab_Area	Heathland and shrub - Gorse scrub	0.21	Low	Moderate	Low	Low	0.84	-	-
30	UKHab_Area	Heathland and shrub - Gorse scrub	0.08	Low	Moderate	Low	Low	0.32	-	-
31	UKHab_Area	Urban - Artificial unvegetated, unsealed surface	0.12	Very Low	N/A - No biodiversity value	Low	Low	0.00	-	-
32	UKHab_Area	Urban - Artificial unvegetated, unsealed surface	0.02	Very Low	N/A - No biodiversity value	Low	Low	0.00	-	-
33	UKHab_Area	Urban - Built linear features	0.03	Very Low	N/A - No biodiversity value	Low	Low	0.00	-	-
34	UKHab_Area	Urban - Developed land; sealed surface	0.05	Very Low	N/A - No biodiversity value	Low	Low	0.00	-	-
35	UKHab_Area	Woodland and forest - Other woodland: broadleaved	0.18	Medium	Poor	Low	High	0.83	-	-
36	UKHab_Linear_W	Rivers and lakes – Other rivers and streams (Low)	0.19	Low	Poor	Low	Medium	-	-	0.42
37								TBC	TBC	TBC
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80								TBC	TBC	TBC

Action *(During Works)*

Ref	Area or Length of Habitat: Retained	Area or Length of Habitat: Removed	Biodiversity Units: Retained	Biodiversity Units: Removed	Linear Units (H): Retained	Linear Units (H): Removed	Linear Units (W): Retained	Linear Units (W): Removed
Project Total	0.00	4.75	0.00	32.51	0.00	0.00	0.00	0.42
1	0.00	0.02	0.00	0.22	-	-	-	-
2	0.00	0.11	0.00	1.20	-	-	-	-
3	0.00	0.11	0.00	1.20	-	-	-	-
4	0.00	0.06	0.00	0.65	-	-	-	-
5	0.00	0.04	0.00	0.44	-	-	-	-
6	0.00	0.38	0.00	4.14	-	-	-	-
7	0.00	0.03	0.00	0.33	-	-	-	-
8	0.00	0.05	0.00	0.54	-	-	-	-
9	0.00	0.08	0.00	0.87	-	-	-	-
10	0.00	0.01	0.00	0.11	-	-	-	-
11	0.00	0.06	0.00	0.65	-	-	-	-
12	0.00	0.05	0.00	0.54	-	-	-	-
13	0.00	0.15	0.00	1.63	-	-	-	-
14	0.00	0.02	0.00	0.22	-	-	-	-
15	0.00	1.15	0.00	8.35	-	-	-	-
16	0.00	0.01	0.00	0.07	-	-	-	-
17	0.00	0.03	0.00	0.22	-	-	-	-
18	0.00	0.01	0.00	0.07	-	-	-	-
19	0.00	0.01	0.00	0.07	-	-	-	-
20	0.00	0.03	0.00	0.22	-	-	-	-
21	0.00	0.01	0.00	0.07	-	-	-	-
22	0.00	0.12	0.00	0.87	-	-	-	-
23	0.00	0.67	0.00	4.86	-	-	-	-
24	0.00	0.10	0.00	0.73	-	-	-	-
25	0.00	0.16	0.00	0.64	-	-	-	-
26	0.00	0.08	0.00	0.32	-	-	-	-
27	0.00	0.25	0.00	1.00	-	-	-	-
28	0.00	0.07	0.00	0.28	-	-	-	-
29	0.00	0.21	0.00	0.84	-	-	-	-
30	0.00	0.08	0.00	0.32	-	-	-	-
31	0.00	0.12	0.00	0.00	-	-	-	-
32	0.00	0.02	0.00	0.00	-	-	-	-
33	0.00	0.03	0.00	0.00	-	-	-	-
34	0.00	0.05	0.00	0.00	-	-	-	-
35	0.00	0.18	0.00	0.83	-	-	-	-
36	0.00	0.19	-	-	-	-	0.00	0.42
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77		TBC	TBC	TBC	TBC	TBC	TBC	TBC
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79		TBC	TBC	TBC	TBC	TBC	TBC	TBC
80		TBC	TBC	TBC	TBC	TBC	TBC	TBC

After work actions *(Following Actions)*

Ref	After work action	UK Habitats	Area or Length of Habitat (ha /km)	Distinctiveness Band	Target Condition Rating	Connectivity Rating	Strategic significance Rating	Difficulty	Time to target condition (Years)	Spatial
Project Total										
1	Creation	Grassland - Modified grassland	0.02	Low	Poor	Low	Low	Low	4	Inside
2	Creation	Grassland - Modified grassland	0.11	Low	Poor	Low	Low	Low	4	Inside
3	Creation	Grassland - Modified grassland	0.11	Low	Poor	Low	Low	Low	4	Inside
4	Creation	Grassland - Modified grassland	0.06	Low	Poor	Low	Low	Low	4	Inside
5	Creation	Grassland - Modified grassland	0.04	Low	Poor	Low	Low	Low	4	Inside
6	Creation	Grassland - Modified grassland	0.38	Low	Poor	Low	Low	Low	4	Inside
7	Creation	Grassland - Modified grassland	0.03	Low	Poor	Low	Low	Low	4	Inside
8	Creation	Grassland - Modified grassland	0.05	Low	Poor	Low	Low	Low	4	Inside
9	Creation	Grassland - Modified grassland	0.08	Low	Poor	Low	Low	Low	4	Inside
10	Creation	Urban - Developed land; sealed surface	0.01	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
11	Creation	Urban - Developed land; sealed surface	0.06	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
12	Creation	Urban - Developed land; sealed surface	0.05	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
13	Creation	Urban - Developed land; sealed surface	0.15	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
14	Creation	Woodland and forest - Other woodland; broadleaved	0.02	Medium	Moderate	Low	High	Low	18	Inside
15	Creation	Grassland - Modified grassland	1.15	Low	Poor	Low	Low	Low	4	Inside
16	Creation	Grassland - Modified grassland	0.01	Low	Poor	Low	Low	Low	4	Inside
17	Creation	Grassland - Modified grassland	0.03	Low	Poor	Low	Low	Low	4	Inside
18	Creation	Grassland - Modified grassland	0.01	Low	Poor	Low	Low	Low	4	Inside
19	Creation	Grassland - Modified grassland	0.01	Low	Poor	Low	Low	Low	4	Inside
20	Creation	Grassland - Modified grassland	0.03	Low	Poor	Low	Low	Low	4	Inside
21	Creation	Grassland - Modified grassland	0.01	Low	Poor	Low	Low	Low	4	Inside
22	Creation	Grassland - Modified grassland	0.12	Low	Poor	Low	Low	Low	4	Inside
23	Creation	Woodland and forest - Other woodland; broadleaved	0.67	Medium	Moderate	Low	High	Low	18	Inside
24	Creation	Woodland and forest - Other woodland; broadleaved	0.10	Medium	Moderate	Low	High	Low	18	Inside
25	Creation	Grassland - Modified grassland	0.16	Low	Poor	Low	Low	Low	4	Inside
26	Creation	Grassland - Modified grassland	0.08	Low	Poor	Low	Low	Low	4	Inside
27	Creation	Urban - Developed land; sealed surface	0.25	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
28	Creation	Urban - Developed land; sealed surface	0.07	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
29	Creation	Urban - Developed land; sealed surface	0.21	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
30	Creation	Urban - Developed land; sealed surface	0.08	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
31	Creation	Grassland - Modified grassland	0.12	Low	Poor	Low	Low	Low	4	Inside
32	Creation	Urban - Artificial unvegetated, unsealed surface	0.02	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
33	Creation	Urban - Built linear features	0.03	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
34	Creation	Urban - Developed land; sealed surface	0.05	Very Low	N/A - No biodiversity value	Low	Low	Low	0	Inside
35	Creation	Grassland - Modified grassland	0.18	Low	Poor	Low	Low	Low	4	Inside
36	Creation	Rivers and lakes – Other rivers and streams (Medium)	0.19	Medium	Moderate	Low	Medium	Low	4	Inside
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Post development / **Net change**

Ref	Post development units: Biodiversity (Area)	Post development units: Linear (H)	Post development units: Linear (W)	Net change in units: Biodiversity (Area)	Net change in units: Linear (H)	Net change in units: Linear (W)	Notes
Project Total	8.67	0.00	2.17	-23.84	0.00	1.76	
1	0.03	-	-	-0.18	-	-	ID28 Temporary Access Track Earthworks (included as it would take over two year to return to condition)
2	0.19	-	-	-1.01	-	-	ID43 Temporary Haul Gravel Road (included as it would take over two year to return to condition)
3	0.19	-	-	-1.01	-	-	ID45 Temporary Access Track Earthworks (included as it would take over two year to return to condition)
4	0.10	-	-	-0.55	-	-	ID46 Temporary Access Track Earthworks (included as it would take over two year to return to condition)
5	0.07	-	-	-0.37	-	-	ID27 Proposed Native Species Low Maintenance Meadow Mix
6	0.66	-	-	-3.48	-	-	ID44 Proposed Native Species Low Maintenance Meadow Mix
7	0.05	-	-	-0.27	-	-	ID60 Proposed Native Species Low Maintenance Meadow Mix
8	0.09	-	-	-0.46	-	-	ID39 Permeable Surface Platform
9	0.14	-	-	-0.73	-	-	ID40 Permeable Surface Platform
10	0.00	-	-	-0.11	-	-	ID41 Permeable Surface Platform
11	0.00	-	-	-0.65	-	-	ID42 New Tarmac Surface Road
12	0.00	-	-	-0.54	-	-	ID29 SUDs Pond
13	0.00	-	-	-1.63	-	-	ID30 area surrounding SUDs Pond
14	0.10	-	-	-0.12	-	-	ID61 Proposed Native Species Woodland Planting on Bund with Scrub Edge Facing Road
15	1.99	-	-	-6.35	-	-	ID57 Proposed Native Species Low Maintenance Meadow Mix
16	0.02	-	-	-0.06	-	-	ID62 Proposed Native Species Low Maintenance Meadow Mix
17	0.05	-	-	-0.17	-	-	ID65 Proposed Native Species Low Maintenance Meadow Mix
18	0.02	-	-	-0.06	-	-	ID66 Proposed Native Species Low Maintenance Meadow Mix
19	0.02	-	-	-0.06	-	-	ID50 Temporary Haul Gravel Road (included as it would take over two year to return to condition)
20	0.05	-	-	-0.17	-	-	ID53 Temporary Haul Gravel Road (included as it would take over two year to return to condition)
21	0.02	-	-	-0.06	-	-	ID56 Temporary Haul Gravel Road (included as it would take over two year to return to condition)
22	0.21	-	-	-0.66	-	-	ID64 Temporary Haul Gravel Road (included as it would take over two year to return to condition)
23	3.25	-	-	-1.62	-	-	ID58 Proposed Native Species Woodland Planting on Bund with Scrub Edge Facing Road
24	0.48	-	-	-0.24	-	-	ID63 Proposed Native Species Woodland Planting on Bund with Scrub Edge Facing Road
25	0.28	-	-	-0.36	-	-	ID36 Proposed Native Species Low Maintenance Meadow Mix
26	0.14	-	-	-0.18	-	-	ID59 Proposed Native Species Low Maintenance Meadow Mix
27	0.00	-	-	-1.00	-	-	ID32 Permeable Surface Platform
28	0.00	-	-	-0.28	-	-	ID33 Permeable Surface Platform
29	0.00	-	-	-0.84	-	-	ID34 Permeable Surface Platform
30	0.00	-	-	-0.32	-	-	ID35 New Tarmac Surface Road
31	0.21	-	-	0.21	-	-	ID68 Proposed Bund
32	0.00	-	-	0.00	-	-	ID55 Temporary Haul Gravel Road
33	0.00	-	-	0.00	-	-	ID69 Temporary Haul Gravel Road
34	0.00	-	-	0.00	-	-	ID24 New Tarmac Surface Road
35	0.31	-	-	-0.52	-	-	ID23 Proposed Bund
36	-	-	2.17	-	-	1.76	Drainage Ditch diversion
37	TBC	TBC	TBC	TBC	TBC	TBC	
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