

TRANSMISSION

# Environmental Impact Assessment (EIA) Report

# LT383 Alyth to Tealing Overhead Line (OHL) 400kV Upgrade

November 2024





# Volume 4: Appendix 7.6 – Biodiversity Net Gain Assessment Report

Project Name – Alyth to Tealing Overhead Line (OHL) 400kV Upgrade Project Code – LT383 (60719633)

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#### **Executive Summary**

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 Proposed Development.

This report details the BNG assessment undertaken for the LT383 Alyth to Tealing Overhead Line (OHL) 400 kV Upgrade (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.
- A prediction of the post development on-Site BU following successful implementation of a Landscape & Habitat Management Plan.
- A qualitative assessment against the Biodiversity Net Gain Good Practice Principles; and
- Details of the required habitat creation or enhancements required to achieve biodiversity enhancements. The BNG calculation, subject to the assumptions and limitations set out in this Report, indicates that the Proposed Development will result in an overall -48% loss in area-based BU, for which off-Site measures (the most appropriate being woodland or other tree planting, since losses affect trees in particular) are required to achieve +10% net gain. There will be a loss of 6.72 Linear Hedgerow BU to facilitate permanent tracks. Watercourses will be largely unaffected, however there will be a small loss of 0.85 linear Watercourse BU to small streams where permanent tracks directly cross them. As unaffected watercourses and hedgerows have not been included within the Toolkit, this amounts to -100% loss in Linear Watercourse and Hedgerow BU. Creation of Native Species-rich Hedgerows and enhancement of existing small watercourse(s) within the surveyed area (potentially off-Site) is recommended. However, it should be noted that the calculated loss in BU for area habitats is very likely to be an over-estimation owing to assumptions that were necessarily made and are explained in this Report.

The Proposed Development does not impact on any irreplaceable habitats (regarded by SSEN Transmission to be Ancient Woodland (categories 1a & 2a of the Ancient Woodland Inventory (AWI)), ancient or veteran trees, and blanket bog or raised bog in Good or Moderate condition). Therefore, it has not been necessary to produce a separate Toolkit for irreplaceable habitat, which SSEN Transmission require when such habitat is impacted.



#### 1 Introduction

#### 1.1 Background of the Proposed Development

- 1.1.1 Scottish and Southern Electricity Networks (hereafter referred to as SSEN Transmission), operating under licence held by Scottish Hydro Electric Transmission plc, to operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands, commissioned AECOM to undertake a Biodiversity Net Gain (BNG) assessment for LT383 Alyth to Tealing Overhead Line (OHL) 400 kilovolt (kV) Upgrade using the SSEN Transmission Biodiversity Project Toolkit (hereafter referred to as the Toolkit). SSEN Transmission, hereafter referred to as "the Applicant", proposes to upgrade the existing Alyth to Tealing OHL. The purpose of this report is to assess the impact of the Proposed Development and the associated changes to biodiversity. This report also includes a qualitative assessment against the BNG principles in Appendix A.
- 1.1.2 The Applicant seeks consent under Section 37 of the 1989 Act to upgrade approximately 14.2 kilometres (km) of an existing 16 km 275 kV OHL between Alyth Substation and Tower 685 north west of Tealing substation, to enable operation at 400 kV. The applicant is also seeking permission under Section 57(2) of the Town and County Planning (Scotland) Act 1997<sup>1</sup> for certain elements of the Proposed Development, or ancillary works required to facilitate its construction and operation. The application will be supported by an Environmental Impact Assessment (EIA).

#### 1.2 Site Description

- 1.2.1 For the purposes of this report (for ease and clarity of reference), the 'Site' refers to the baseline habitats within the BNG Buffer (as shown on the Baseline habitat plan in Appendix B). The BNG Buffer comprises all habitats which will be impacted (i.e., permanently lost or not recoverable within two years of works) by the Proposed Development. Habitats assumed to be impacted by the Proposed Development (and therefore within the BNG buffer and herein the Site) are associated with the following elements of the Proposed Development (with exceptions described within Section 2.3.1):
  - Habitats within the 45 m wayleave corridor;
  - Habitats within a 5 m buffer on either side of proposed linear tracks; and
  - Habitats within the Tower Works Areas (TWA) and Equipotential Zones (EPZ).



<sup>&</sup>lt;sup>1</sup>The Town and County Planning (Scotland) Act 1997. Available at: https://www.legislation.gov.uk/ukpga/1997/8/contents

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- 1.2.2 The field survey extended beyond the Site (i.e., the BNG buffer), and encompassed habitats within 50 m of the existing OHL. Habitats present within 50 m of the existing OHL are shown in Figure 8.1 (Volume 3), and described below.
- 1.2.3 The Proposed Development is located within the council areas of Perth & Kinross Council and Angus Council. The area surrounding the Proposed Development is characterised largely by arable and agriculturally improved fields, with patches of broadleaved woodland, in low lying areas in the River Isla valley, with the town of Alyth to the north-west and the foot of Craigowl Hill, near Tealing, to the south-west. The route of the existing OHL ascends to a height of 290m above sea level (ASL), east of Newtyle and north-east of Auchterhouse. This upland fringe area is dominated by rough grazing pasture with continuous bracken *Pteridium aquilinum*, dense gorse *Ulex europaeus* scrub, acid grassland and heathland, coniferous plantation woodland, marshy grassland, scree and valley mire.
- 1.2.4 There is a central 4 km stretch of upland fringe habitat extending to an elevation of 290 m ASL. Patches of ecologically important habitats (Annex I<sup>2</sup> and/or Scottish Biodiversity List<sup>3</sup> (SBL) priority habitats) are concentrated within the upland fringe section.
- 1.2.5 North of the Dean Water there are patches of Lowland Fens SBL priority habitat (UKHab = f2a). There are two spring flushes on the northern slopes of the hill north-east of Newtyle. These habitats are considered to be Groundwater Dependent Terrestrial Ecosystems (GWDTE), and constitute both Lowland Fens SBL priority habitats and Wetlands Tayside local priority habitat (LPH). GWDTE are displayed in Figure 8.1c (Volume 3). Standing water within 50 m of the existing OHL comprises of seven ponds, the locations of which are shown in Figure 8.1a (Volume 3). Four of these are within woodland adjacent to Kirkinch and are thought to be ephemeral (not permanently wet). The remaining ponds are also thought to be ephemeral apart from one that is likely to be permanently wet, located east of Kirkton of Auchterhouse. The criteria for Ponds SBL priority habitat are demanding and intended to highlight very well-established ponds of special importance. These ponds do not qualify as Ponds SBL priority habitat as they do not meet the criteria (e.g. for supporting fully protected species). However, all constitute Ponds and Pools or Lochs and Standing Water Tayside LPH.
- 1.2.6 Areas of broadleaved woodland are found intermittently along the Proposed Development, with a dense cluster at Balkello Woodland in the south. In the north, a single strip of seminatural woodland, situated along the banks of the River Isla, qualifies as Lowland Mixed Deciduous Woodland SBL priority Habitat (LMDW) (UKHab=w1f7). An area of dense scrub (near Kirkinch) is categorised as long-established woodland in the AWI and native woodland in the NWSS, and comprises <u>Wet Woodland</u> SBL priority Habitat (UKHab = w1d). In addition to these priority woodland habitats, an area of Scots pine dominated plantation was identified with semi-natural flora within the upland fringe section, although it should be noted that Scots pine is not considered native to this region. The following larger watercourses occur within 50 m of the existing OHL: River Isla (Glencally Burn to Dean Water Confluences), Dean Water (Kerbet to River Isla Confluence) and Commerton Burn (near Kirkinch). Some of the watercourses qualify as <u>Rivers</u> SBL priority habitat by meeting at least one of the criteria listed on the SBL habitat description. Several smaller burns are also present.



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1.2.7 Within the upland fringe section, the following important habitats were identified. A very small patch of degraded bog was identified north of Kirkton of Auchterhouse. This habitat constitutes Annex I degraded Blanket bog (H7130) (a non-priority form of the broader H7130 Annex I type) and Blanket bog SBL priority habitat. Dry heath (UKHab=h1a5) and dry heath / acid grassland mosaics also occur southwest of Auchterhouse Hill Site of Special Scientific Interest (SSSI)<sup>4</sup>. All dry heath falls under European dry heaths (H4030) Annex I habitat, and the dry heath (alone and in mosaic with acid grassland) is Lowland Heathland SBL priority habitat. Two small flushes considered to be groundwater dependent terrestrial ecosystems (GWDTE) were noted - these are Lowland Fens SBL priority habitats (UKHab=f2a); two further localised areas of flush below Auchterhouse Hill SSSI constitute Upland Flushes, Fens and Swamps SBL priority habitat (UKHab=f2c). There are three patches of marsh corresponding to Purple Moor Grass and Rush Pasture (PMRP) SBL priority habitat (UKHab=f2b). One further marshy patch is considered GWDTE but is not considered to qualify as any SBL priority habitats. There are also sections of unimproved acid grassland, considered to be Upland Acid Grassland in the Sidlaw Hills, and Lowland Dry Acid Grassland SBL priority habitat in a lowland wayleave.

#### 1.3 Proposed Development Description

- 1.3.1 The Applicant is proposing to upgrade approximately 14.2 km of an existing 16km 275kV OHL, between Alyth Substation and Tower 685 north west of Tealing substation, to enable operation at 400 kV.
- 1.3.2 The Proposed Development would include the following elements, for which Section 37 consent and deemed planning consent under Section 57 (2) of the Town and Country Planning (Scotland) Act 1997<sup>1</sup>, as amended, is sought:
  - replacement of conductors, insulators and fittings on the existing steel lattice towers;
  - where required, tower condition works including steelwork and tower leg foundation work to strengthen the existing steel lattice towers;
  - the sag of new proposed phase conductor will be matched with sag of existing Optical Ground Wire (OPGW); and
  - subject to further engineering and design checks, some modifications to the existing towers may be required, such as the inverting of cross arms to improve clearances, and changes to the insulator set configurations.



<sup>&</sup>lt;sup>2</sup> Habitats listed on Annex I of the European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, the 'Habitats Directive'.

<sup>&</sup>lt;sup>3</sup> <u>NatureScot (2022) Scottish Biodiversity List (online) Available at: https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-andcop15/scottish-biodiversity-list [Accessed: September 2024]</u>

<sup>&</sup>lt;sup>4</sup> NatureScot (2024). Auchterhouse Hill Site of Scientific Interest Citation (online). Available at: <u>https://sitelink.nature.scot/site/103</u> [Accessed: September 2024]

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- 1.3.3 The Applicant is also seeking deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997<sup>1</sup> for certain elements of the Proposed Development, or ancillary works required to facilitate its construction and operation. These ancillary works will include:
  - vegetation clearance;
  - access track construction and access track upgrades;
  - temporary site compounds;
  - laydown areas;
  - crane pads;
  - equipotential zones (EPZs)<sup>5</sup> and temporary measures to protect road, rail and water crossings; and
  - the increase in operating voltage of the OHL requires a slightly wider wayleave corridor of 45 m either side (rather than the existing 40 m), therefore some tree felling will be required where there are infringements to this corridor.

#### 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 BU, to achieve positive effects for biodiversity.



<sup>&</sup>lt;sup>5</sup> Equipotential Zones (EPZs) protect workers from potential electric shock and typically consist of metal trackway panels.

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#### 1.5 Policy and Legislation

1.5.1 National Planning Framework 4 (NPF4)<sup>6</sup> requires significant biodiversity enhancements be provided in addition to any proposed mitigation stating "*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 carrying out a BNG Assessment and implementing measures to achieve net gain, the Proposed Development will achieve compliance with this aspect of NPF4.* 

1.5.2 The Scottish Government published Draft Planning Guidance on Biodiversity<sup>7</sup> to clarify understanding of NPF4 Policy 3. It is stated in Section 4.12 of the guidance that "*The absence of a universally adopted Scottish Methodology/tool should not be used to frustrate or delay decision making, and a flexible approach will be required. Wherever relevant and applicable, and as indicated above, information and evidence gathered for statutory and other assessment obligations, such as EIA, can be utilised to demonstrate those ways in which the policy tests set out in NPF4 have been met. Equally, where a developer wishes to use an established metric or tool, the planning submission should demonstrate how Scotland's habitats and environmental conditions have been taken into account. Where an established metric or tool has been modified, the changes made and the reasons for this should be clearly set out*". The SSEN Toolkit used for this BNG assessment is based on Defra Metric 3.1 (since superseded by further iterations culminating in the Defra Statutory Metric published in 2023, but with only minor changes to habitat parameters). The Toolkit is therefore considered suitable for decision makers to use.

1.5.3 There currently does not appear to be any specific guidance from Perth & Kinross Council or Angus Council as to what they expect in terms of BNG. There is no reference to BNG to in the Tayside LBAP<sup>Error! Bookmark not defined</sup>.



<sup>&</sup>lt;sup>6</sup> Scottish Government (2023). National Planning Framework 4 (online). Available at:

https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf [Accessed: September 2024]

<sup>&</sup>lt;sup>7</sup> Scottish Government (2023). Scottish Government Draft Planning Guidance: Biodiversity. (online) Available at: <u>https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-enhancing-biodiversity</u> [Accessed: September 2024]

#### 2 Methodology

#### 2.1 Area and Surveys

Desk Based Assessment

- 2.1.1 A desk study to help establish baseline conditions was completed. The desk study sought to identify ecological features within the Site that may be affected by its construction and operation. Ecological features searched for included:
  - any designated nature conservation sites, including locally-designated sites listed in the Local Development Plan (LDP) or Local Biodiversity Action Plan (LBAP);
  - priority habitats listed in the LBAP or SBL that might reasonably occur within the Site;
  - woodland included on the Ancient Woodland Inventory (AWI); and
  - records of protected and/or notable habitats and species.
- 2.1.2 The following sources were used for the desk study:
  - Angus LDP<sup>8</sup>;
  - Angus Local Nature Conservation Sites<sup>9,10</sup>;
  - Lowland Raised Bog Inventory<sup>11</sup>;
  - Perth and Kinross Council (PKC) website<sup>12</sup>;
  - Perth and Kinross LDP2<sup>13</sup>;
  - National Biodiversity Network (NBN) Atlas Scotland<sup>14</sup>;
  - NatureScot SiteLink webpage<sup>15</sup>;
  - Ordnance Survey (OS) 1:25,000 maps and aerial photography<sup>16</sup>;
  - Scotland's Environment Map<sup>17</sup>;
  - Scottish Environment Protection Agency (SEPA) Water Classification Hub18; and
  - Tayside LBAPError! Bookmark not defined.

- <sup>12</sup> Perth and Kinross Council (2024). Planning & Biodiversity Local Nature Conservation Sites. Available at: <u>https://www.pkc.gov.uk/ldp2naturesites</u>
- <sup>13</sup> Perth and Kinross Council (2019). Perth and Kinross Local Development Plan 2. (online) Available at: <u>https://www.pkc.gov.uk/media/45242/Adopted-Local-Development-Plan-2019/pdf/LDP\_2\_2019\_Adopted\_Interactive.pdf?m=1576667143577 [Accessed July 2024]</u>



<sup>&</sup>lt;sup>8</sup> Angus Council (2016). Angus Local Development Plan. (online) Available at: <u>https://www.angus.gov.uk/directories/document\_category/development\_plan</u> [Accessed: July 2024].

 <sup>&</sup>lt;sup>9</sup> Angus Council (2023). Report No 319/23 - Local Nature Conservation Sites in Angus - Initial Phase of Local Biodiversity Sites – App 1. (online) Available
 at: https://www.angus.gov.uk/committees/communities\_committee/communities\_committee\_21\_november\_2023 [Accessed: July 2024]
 10 Smith, A. (2023) Report No 319/23 - Local Nature Conservation Sites in Angus - Initial Phase of Local Biodiversity Sites - App 2. Communities

<sup>10</sup> Smith, A. (2023) Report No 319/23 - Local Nature Conservation Sites in Angus - Initial Phase of Local Biodiversity Sites - App 2. Communities Committee – 21 November 2023. Available at:

https://www.angus.gov.uk/committees/communities\_committee/communities\_committee\_21\_november\_2023 [Accessed July 2024]

<sup>&</sup>lt;sup>11</sup> Lindsay, R and Immirzi, P. (1996). An inventory of lowland raised bogs in Great Britain. Scottish Natural Heritage.

<sup>&</sup>lt;sup>14</sup> NBN Atlas Scotland. Commercially available records of protected species. (online) Available at: <u>https://scotland.nbnatlas.org/ [</u>Accessed: July 2024]

<sup>&</sup>lt;sup>15</sup> Nature Scot. SAC, RAMSAR and SSSIs. [Online] available from: <u>https://sitelink.nature.scot/home [</u>Accessed: July 2024]

<sup>&</sup>lt;sup>16</sup>Bing Maps. OS 1:25,000 maps and aerial photography. (online) Available at:: <u>https://www.bing.com/maps/</u>[Accessed: July 2024]

<sup>&</sup>lt;sup>17</sup> Scotland's Environment Map (online). Available at: <u>https://map.environment.gov.scot/sewebmap/</u> [Accessed: July 2024]

<sup>&</sup>lt;sup>18</sup> SEPA Water Classification Hub. Watercourse classification data. (online) Available at: <u>https://www.sepa.org.uk/data-visualisation/water-classification-hub/</u>. [Accessed: July 2024]

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Field Assessment

- 2.1.3 Baseline habitat data were recorded using UK Habitat Classification (UKHab) categories<sup>19</sup>. However, Phase 1 categories<sup>20</sup> and relevant habitat details (including dominant, characteristic, and notable flora and ecological characteristics, particularly those pertaining to condition), as well as National Vegetation Classification<sup>21</sup> (NVC) types for more notable habitats (e.g. SBL habitats), were also recorded. Condition of baseline habitats was assessed in the field by the field surveyor using the condition criteria set out for Defra Biodiversity Metric 3.1<sup>22</sup>, with exceptions as noted in the Limitations below. The UKHab survey was completed within 50 m of the existing OHL route.
- 2.1.4 Collection of habitat data was carried out between 15 March and 20 March 2023 by suitably experienced ecologists, using a GPS-enabled tablets running ESRI FieldMaps loaded with recent aerial photography. The habitat data were refined as necessary using desktop ESRI ArcGIS and recent aerial photography, to maximise habitat mapping accuracy.
- 2.1.5 Relevant attribute data were extracted from ESRI ArcGIS, including area/length, habitat category and habitat condition, and entered into the Toolkit. Connectivity and strategic significance were added (see 2.2 below), to enable the SSEN Transmission Toolkit to calculate baseline biodiversity units.

Evidence of technical competence

2.1.6 More complex or notable habitat areas were surveyed by an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) with over 16 years' professional experience as an ecologist with specialism in habitats. Other areas of limited interest were surveyed by appropriately-experienced personnel with various levels of CIEEM membership. The report was authored by an Associate member of CIEEM with over 4 years' professional experience as an ecologist. The report was checked and verified by a full member of CIEEM also specialising in habitats, with over 20 years' professional experience.



<sup>&</sup>lt;sup>19</sup> Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification V1.1 (online) Available at: <u>http://ukhab.org</u> [Accessed: July 2024]

<sup>&</sup>lt;sup>20</sup> Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

<sup>&</sup>lt;sup>21</sup> Averis et al (2004) An Illustrated Guide to British Upland Vegetation; Averis, B. and Averis A., (2015) Plant Communities Found In Surveys By Ben And Alison Averis But Not Described In The UK National Vegetation Classification. Unpublished document; British Plant Communities Volume 3 Grassland and Montane Communities. Cambridge University Press, Cambridge.; Rodwell, J.S. (ed.). (1991a). British Plant Communities Volume 1 Woodlands and Scrub. Cambridge University Press, Cambridge.; Rodwell, J.S. (ed.) (1991b). British Plant Communities Volume 2 Mires and Heaths. Cambridge University Press, Cambridge.

<sup>&</sup>lt;sup>22</sup> Natural England (2022) Habitat Condition Assessment Sheets (online) Available at:

https://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed: July 2024]

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#### 2.2 Approach to Biodiversity Net Gain

2.2.1 A full BNG Assessment was undertaken for the Proposed Development. The BNG assessment was completed within the Toolkit following the User Guide (2023). This method has been revised to align with Natural England Biodiversity Metric 3.1<sup>23</sup>, adapted to reflect the requirements of Scottish habitats, to quantify losses and gains of biodiversity (whilst the Statutory Metric has superseded Metric 3.1 in England/Wales, there were only minor changes to habitat parameters). 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 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.

The Toolkit assesses area and linear habitat separately. The Toolkit produces a Unit score for three categories of habitat: Biodiversity Units, Linear Hedgerow (H) Units and Linear Watercourse (W) Units. Area-based habitats are necessarily impacted by the footprint of the Proposed Development, where works are either permanent or temporary but resulting in vegetation changes that are not recoverable within two years of works commencing. Linear Hedgerow and Linear Watercourse Units are relevant where loss will occur or has had to be assumed (see Section 2.3.1 below).

#### 2.3 Limitations and Assumptions

- 2.3.1 To produce this assessment, certain assumptions have been made:
  - within the wayleave, TWA and EPZ -
    - it has been assumed that all woodland/trees would be felled this is clearly necessary for the wayleave, but likely to be an over-estimation for the (generally small) parts of TWA and EPZ beyond the wayleave (where works may be able to avoid some or all tree felling, but for which sufficient information was lacking to individually assess each TWA and EPZ);
    - it has been assumed for all other area habitats that damage will be temporary, minor and recoverable within two years of works commencing at each location; in line with SSEN BNG guidance these habitats have thus been excluded from the BNG calculation;
  - where woodland clearance is required for the wayleave, TWA or EPZ, it has been assumed that the same woodland type will regrow in Poor condition (and be subject to repeated periodic felling within the wayleave), with the exception of conifer plantation where it has been assumed that mixed scrub will naturally regenerate (to Moderate condition after ten years) following removal of the conifers;



<sup>&</sup>lt;sup>23</sup> Natural England (2022). <u>Biodiversity Metric 3.1.</u>

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- where scrub clearance is required for the wayleave, TWA or EPZ, it has been assumed that the same scrub type and condition will develop within five years following clearance;
- for those parts of the Site that are wayleave only, it has been assumed that all linear features (hedgerows and watercourses) will be unaffected, and these have not been included in the calculation;
- permanent tracks are considered to comprise bespoke tracks, upgrades to existing tracks and new temporary stone roads (although the later are termed 'temporary', and based upon SSEN Transmission advice, they are taken to potentially exist for more than two years);
- all-terrain vehicle (ATV) access tracks and track panel tracks are considered temporary and the affected habitats recoverable to the same state within two years, and habitats within ATV and track panel tracks have therefore been excluded from the BNG calculation;
- for sections of permanent track upgrade, it has been assumed that all area-based habitats within a 5 m buffer either side of the provided linear track features will be lost. In reality, this is likely to have resulted in an overestimation of BU loss, because:

   a) the track may not always require the full 10 m width, and b) the 5 m buffer extends rigidly either side of the provided line track features, whereas the track in reality may in places be constructed more to one side than the other (e.g. where one side is arable and the other woodland, it would clearly be more cost-effective, and beneficial ecologically, to build on the arable side); however, sufficient information was not available to individually bias the track buffers;
- it has been assumed that there will be no impacts to linear-based hedgerow habitat within the TWA or EPZ; in line with SSEN Transmission BNG guidance these habitats have thus been excluded from the BNG calculation. However, if loss of any hedgerows is later required to facilitate TWA or EPZ, SSEN Transmission will commit to their replacement, where possible, with like for like planting of Native Species-Rich Hedgerows;
- for sections of permanent track upgrade, it has been assumed that all linear-based hedgerow habitats (including tree lines) will be lost;
- for sections of bespoke track that are bespoke track only and do not overlap with other works areas, it has been assumed that all habitats will be lost, with the exception of woodland and tree lines. This is because it has been stipulated that bespoke tracks will not incur loss of trees (with lopping at most required);
- for sections of new temporary stone road, it has been assumed that all habitats within a 5 m buffer either side of the provided linear track will be lost. In reality, the majority of new temporary roads are likely to be removed post-works, with habitats reinstated. It is currently unknown which sections of new temporary stone road are likely to become permanent. Therefore, on a precautionary basis, it has been assumed that all habitats within the new temporary stone road buffer will be



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permanently lost. In reality, this is likely to have resulted in an overestimation of BU loss;

- it has been assumed that where permanent tracks result in loss of hedgerows, they will be compensated by replacement planting of native species-rich hedgerows adjacent to the permanent tracks;
- the majority of watercourses overlapping the permanent track buffers will not be directly impacted because they are at the periphery of the buffer such that that it is very clear that the proposed track would not be constructed over the top of a long length of narrow watercourse (requiring long lengths of culverting). Thus, as acknowledged elsewhere in the EIAR, impacts to these watercourses will be none to negligible. However, a few small streams (sufficiently small that they have not been previously identified as requiring culverts) will be directly crossed by the permanent tracks, and these very short sections are assumed to be lost; and
- a small section of bespoke track (77 m<sup>2</sup>) overlaps with Auchterhouse Hill SSSI<sup>4</sup>, the sole notified feature of which is dry heath. However, this part of the bespoke track within the Site is dense bracken, which is prevalent on these slopes including within the SSSI and is acknowledged by NatureScot to be problematic, such that any reduction in bracken would be beneficial. As such, strategic significance for this bracken habitat has been left as Low;
- SSEN Transmission will endeavour to avoid loss of hedgerows where possible. Where hedgerows are lost, SSEN Transmission will commit to their replacement, where possible, with like for like Native Species-Rich Hedgerows. Confirmation of hedgerow removal / replacement will be confirmed once detailed design has progressed; and
- the BNG assessment will be revisited in future, post-planning, once the detailed design of the Proposed Development is known. However, the current BNG assessment is considered to be sufficiently conservative that the results are unlikely to change significantly.
- 2.3.2 The following minor limitations apply:
  - UKHab survey took place at a sub-optimal time (early spring) for survey of habitat and plants. As a result, the floristic diversity of habitats may have occasionally been underestimated (in particular in semi-natural woodlands). However, given the nature of the vast majority of surveyed habitats (primarily arable and agriculturally improved fields of limited interest), and the additional NVC survey of interesting habitats (e.g., Annex I, SBL habitats, GWDTE) being carried out within the growing season (an optimal time to survey), it is very unlikely that habitats have been undervalued. As such, this is not a significant limitation and does not impact the conclusions of this assessment;
  - the aim of the desk study was to help characterise the baseline context of the Proposed Development and provide valuable background information that may not be captured by field survey alone. Information obtained during the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not



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necessarily mean they do not occur in the study area. Likewise, the presence of records for a particular species does not automatically mean that these still occur within the area of interest or are relevant to the Proposed Development;

- due to its size, it was not feasible to closely inspect every small part of the habitat within 50 m of the existing OHL during UKHab survey. Most areas mapped as buildings or hardstanding were not surveyed in detail and were mapped from a distance, which is all that is necessary given their negligible value as habitats for BNG purposes. In addition, areas categorised as 'Urban Suburban/mosaic of developed/natural surface' comprise private residential grounds or industrial areas and could not be surveyed in detail or in some cases directly seen during the survey. Given the small minority of instances in which full survey was not carried out, that most areas could be at least partially seen from adjacent accessible land, the small areas concerned, and that few of the habitat features in these cases are likely to be of any note, it is unlikely that this would have significantly affected this BNG assessment;
- field surveys were carried out within a suitable buffer of proposed works as understood at the time. Subsequent updates to the Proposed Development resulted in surveys of some areas within the Zone of Influence (ZOI) of the Proposed Development not being carried out. The most notable differences relate to access routes which generally follow existing tracks or are within agricultural fields. Owing to the nature of works in these locations and their negligible value as habitats for BNG purposes, this limitation does not affect conclusions made within this assessment;
- 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 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;
- areas of Willow Scrub are very locally present at baseline. However, there is no specific category within the Toolkit for Willow Scrub. The nearest habitat type, which has been used, is 'Mixed Scrub';
- calculations involving habitat areas/lengths are rounded to two decimal places in the Toolkit, therefore the calculations are to that level of accuracy; and
- baseline habitats and conditions may change with further elapsed time since the field surveys informing this BNG assessment were completed. However, it is unlikely given the current ownership and management of the Site, and the nature of habitats, that there would be significant changes to baseline habitats for several years at least.



#### 3 Results

#### 3.1 Biodiversity Baseline

- 3.1.1 The baseline habitats impacted by development are shown in the Baseline Habitat Plan (see Appendix B) and detailed in the Toolkit (see Appendix C) and are summarised here:
  - 45 m wayleave:
    - o Gorse Scrub 5.68 ha
    - o Mixed Scrub 0.69 ha
    - o Willow Scrub 0.06 ha
    - o Wet Woodland 0.13 ha
    - o Lowland Mixed Deciduous Woodland 0.08 ha
    - o Other Woodland; Broadleaved 5.03 ha
    - o Other Woodland; Mixed, Mainly Broadleaved 0.32 ha
    - o Other Woodland; Mixed, Mainly Conifer 0.05 ha
    - o Other Scots Pine Woodland 1.47 ha
    - o Other Coniferous Woodland 0.22 ha
  - TWA and EPZ:
    - o Gorse Scrub 1.50 ha
    - Mixed Scrub < 0.01 ha
    - o Other Woodland; Broadleaved 1.99 ha
    - o Other Woodland; Mixed, Mainly Broadleaved 0.02 ha
    - o Other Woodland; Mixed, Mainly Conifer 0.05 ha
    - o Other Scots Pine Woodland 0.54 ha
    - o Other Coniferous Woodland 0.30 ha
  - Permanent track type (upgrade):
    - o Arable and Horticulture 0.52 ha
    - o Cereal Crops 0.22 ha
    - o Purple Moor Grass and Rush Pastures 0.03 ha
    - o Upland Acid Grassland 0.11 ha
    - o Bracken < 0.01 ha
    - o Other Lowland Acid Grassland 0.14 ha
    - o Other Neutral Grassland 0.42 ha
    - o Modified Grassland 1.11 ha
    - o Gorse Scrub 0.02 ha
    - o Mixed Scrub 0.03 ha
    - o Private Lands (Private Houses / Industrial Areas) 0.22 ha
    - o Developed Land; Sealed Surface 0.79 ha
    - o Buildings 0.10 ha
    - o Artificial Unvegetated; Unsealed Surface 1.27 ha
    - o Other Woodland; Broadleaved 0.04 ha
    - o Other Woodland; Mixed, Mainly Broadleaved 0.06 ha



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- o Other Woodland; Mixed, Mainly Conifer 0.06 ha
- o Other Coniferous Woodland 0.08 ha
- o Line of Trees (Ecologically Valuable) 0.73 km
- Native Hedgerow < 0.01 km
- o Non-native and Ornamental Hedgerow 0.19 km
- o Other Rivers and Streams 0.02 km
- Permanent track type (bespoke track):
  - o Arable and Horticulture 0.36 ha
  - o Bracken 0.28 ha
  - o Other Lowland Acid Grassland 0.14 ha
  - o Other Neutral Grassland 0.85 ha
  - o Modified Grassland 0.01 ha
  - o Upland Heathland 0.68 ha
  - o Private Lands (Private Houses / Industrial Areas) 0.17 ha
  - o Developed Land; Sealed Surface 0.38 ha
  - o Artificial Unvegetated; Unsealed Surface 0.27 ha
- Permanent track type (new temporary stone road):
  - o Arable and Horticulture 1.78 ha
  - o Purple Moor Grass and Rush Pastures 0.12 ha
  - o Upland Acid Grassland 1.28 ha
  - o Bracken 1.93 ha
  - o Other Lowland Acid Grassland 0.14 ha
  - o Other Neutral Grassland 0.85 ha
  - o Modified Grassland 2.58 ha
  - o Upland Heathland 0.93 ha
  - o Gorse Scrub 0.60 ha
  - o Mixed Scrub 0.47 ha
  - o Private Lands (Private Houses / Industrial Areas) 1.97 ha
  - o Other Inland Rock and Scree 0.03 ha
  - o Developed Land; Sealed Surface 0.04 ha
  - o Artificial Unvegetated; Unsealed Surface 0.05 ha
  - o Wet Woodland 0.02 ha
  - o Other Broadleaved Woodland 0.52 ha
  - o Other Scots Pine Woodland 0.01 ha
  - o Other Coniferous Woodland 0.01 ha
  - o Other Rivers and Streams 0.11 ha



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- 3.1.2 The baseline area Biodiversity Units are 284.54.
- 3.1.3 The baseline Linear Hedgerow Biodiversity Units are 6.72.
- 3.1.4 The baseline Linear Watercourse Biodiversity Units are 0.85.
- 3.1.5 There are no irreplaceable area-based habitats within the footprint of the Proposed Development.

#### 3.2 Temporary Impacts

- 3.2.1 Impacts to habitats which are reversible and can return to same extent and ecological condition within two years of the initial impact, can be considered temporary. Temporary impacts have not been included in the toolkit calculations as there are no permanent adverse impacts. The following temporary impacts relating to the Proposed Development have been identified:
  - where there will be damage to area-based habitats for wayleaves, EPZ and TWA, it
    has been assumed that all damage will be temporary, minor and recoverable within
    two years, except for removal of woodland and scrub; and
  - ATV access tracks and track panel tracks are regarded as temporary and recoverable within two years and have therefore been excluded from the Toolkit.

#### 3.3 Post-development Biodiversity Units

- 3.3.1 The post-development Biodiversity Units (i.e., the Biodiversity Units resulting from the Proposed Development) have been calculated using the difference between the baseline and the impact on the habitat.
- 3.3.2 The post-development area-based Biodiversity Units are 59.28.
- 3.3.3 The post-development Linear Hedgerow Units are 0.00.
- 3.3.4 The post-development Linear Watercourse Units are 0.00.

#### 3.4 Habitat Creation (Within the Development Boundary)

- 3.4.1 Opportunities for habitat creation and enhancement on-Site have been identified, and are discussed below:
  - within the wayleave, TWA and EPZ, the only area-habitat impacts not regarded as temporary and recoverable within two years are clearance of woodland and scrub. With the exception of conifer plantation (for which see next point), where woodland is removed in the wayleave, TWA or EPZ it is assumed that the same type of woodland will develop but in Poor condition (in particular because it will be periodically cut back within the wayleave), and where scrub is removed it is assumed that the same scrub type will develop by natural regeneration within five years;
  - where conifer plantation (Other Scots Pine Woodland and Other Coniferous Woodland) is removed within the wayleave, TWA or EPZ, there is assumed to be natural regeneration of Mixed Scrub;



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- to compensate for the loss of hedgerows to permanent tracks, replacement hedgerow
  planting is recommended, in the same place or adjacent to the permanent track.
  Creation of native Species-rich Hedgerows (or Native Species-rich Hedgerows with
  Trees, if the hedgerows had trees at baseline) is recommended. Since the baseline
  hedgerows are invariably species-poor, this will result in net gain for the affected
  hedgerows regardless of the extent of hedgerows that is in reality removed and
  replaced; and
- enhancement of a short stretch of viable on-Site (or nearby off-Site) watercourse that lacks riparian shrubs/trees is recommended, by riparian shrub/tree planting, to compensate for the very small loss of Other Rivers and Streams to permanent tracks.



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- 3.4.2 The Biodiversity Units through these on-Site habitat measures result in -79% loss in areabased units, -100% loss in Linear Hedgerow Units, and -100% loss in Linear Watercourse Units.
- 3.4.3 The loss in area-based units is substantial, as it is assumed that where woodland is removed in the wayleave, TWA or EPZ it will regenerate to the same type but in Poor condition, coupled with the assumed loss of all area-based habitats within permanent track buffers. As noted above, the extent of loss of woodland within those (small) parts of TWA and EPZ that are beyond the wayleave is likely to be overestimated (since the works may not necessarily need to fell all woodland within the TWA or EPZ); and BU loss for permanent tracks may also be overestimated (because permanent tracks may not always require the full 10 m width, and in places may be able to avoid more valuable habitat within the 5 m buffer by, in reality, being constructed more to one side of the provided linear track feature than the other).
- 3.4.4 There is -100% loss in Linear Hedgerow Units. Only affected hedgerows have been include within the Toolkit, and in realty, the majority of hedgerows within the Site will be unimpacted, with 6.72 Linear Hedgerow Units lost to facilitate permanent track upgrades. Again, as noted above, the loss of hedgerow units may in reality be less than the amount assumed here, since permanent tracks may in places be able to avoid hedgerow loss by, in reality, constructing more to one side of the provided linear track feature than the other. However, there will always be a substantial net gain for hedgerows if the recommended replacement planting of species-rich hedges is followed, given that the baseline hedgerows are species-poor. 7.39 Linear Hedgerow Units are required to achieve a 10% net gain, which could be achieved through creation of 0.96 km of Native Species-Rich Hedgerow.
- 3.4.5 There is -100% loss in Linear Watercourse Units. Only affected watercourses have been included within the Toolkit, and in reality, only a small number of small streams (0.85 Linear Watercourse Units) will be directly crossed for permanent tracks, and only at these small crossing points will there be loss. Enhancement of a viable on-Site (or nearby off-Site) watercourse is recommended to compensate for the loss of Other Rivers and Streams to permanent tracks. For example, enhancement of approximately 0.84 km of low distinctiveness Other Rivers and Streams from Moderate to Good condition would result in a 10% net gain. In the absence of agreed guidance, it is the opinion of AECOM that the condition of suitable small streams in the surrounds of the Proposed Development could potentially be enhanced through small-scale planting of riparian shrubs or trees alongside the watercourse (the existing watercourses in this location generally lacking riparian shrub/trees this is a common negative factor for watercourses in general).



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#### 3.5 Habitat Creation (Off-Site)

- 3.5.1 Off-Site habitat creation is only required when all options for on-Site biodiversity enhancement provision has been explored. If no on-Site opportunities can be identified, off-Site habitat creation will be undertaken but kept within the locale of the Proposed Development. Compensation is targeted at delivering net gains that are ecologically equivalent in type and condition to the habitats lost, following the 'like for like or better' principle. The off-Site identified has been assessed using the biodiversity metric to take into consideration the existing biodiversity present and aims to maximise benefits for biodiversity in accordance with local and national biodiversity strategies.
- 3.5.2 The amount of area-based Biodiversity Units required from off-Site habitat creation to achieve a 10% gain is 253.71.
- 3.5.3 The amount of Linear Watercourse Biodiversity Units required from off-Site habitat creation to achieve a 10% gain is 0.94.
- 3.5.4 BNG will be provided at locations remote from the Alyth-Tealing OHL project area and several offsite projects have been identified with discussions ongoing with potential partners. These locations are likely to be located within Perth and Kinross and Angus Council areas to ensure an appropriate geographical spread of BNG across the s37 consents and affected Councils. It is not possible at this stage to provide specific detail on the type of enhancement and/or creation measures available to achieve a +10% gain. However, woodland creation is recommended to compensate for the loss of woodland Biodiversity Units arising primarily from the enlarged wayleave and (although in reality the extent of loss may be less for the reasons given in the previous section) to permanent tracks.
- 3.5.5 The amount of Linear Watercourse Units required to achieve a 10% gain is 0.94. It is possible that such enhancement could be carried out on-Site, discussed previously at Section 3.4.5. However, no location has currently been selected, and it is possible that these enhancements would be delivered off-Site within the Sidlaw Hills outside Auchterhouse Hill SSSI<sup>4</sup>. Without knowing the nature of watercourses at possible off-Site enhancement sites, it is not possible to provide specific detail on the type of enhancement measures available to achieve a +10% gain, although it is the opinion of AECOM that an easily achievable measure would be planting of riparian shrubs or trees alongside stretches of watercourse that lack these (which could be achieved on-Site as well as off-Site).



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#### 4 Summary

- 4.1.1 The post-development area Biodiversity Units are 59.28, meaning that the Proposed Development will result in a -79% net loss in area-based Biodiversity Units.
- 4.1.2 The post-development Linear Hedgerow Units are 0.00, meaning that the Proposed Development will result in -100% net loss in Linear Hedgerow Units.
- 4.1.3 The post-development Linear Watercourse Units are 0.00, meaning that the Proposed Development will result in a -100% net loss in Linear Watercourse Units.
- 4.1.4 Off-Site habitat creation will be required to achieve a 10% gain in area-based habitat units. The amount of area-based Biodiversity Units from off-Site habitat creation to achieve a 10% net gain are 253.71. Woodland planting is in particular recommended to compensate for the reduction in woodland Biodiversity Units, which is the main cause of the net loss (other habitats in the wayleave, TWA and EPZ being expected to suffer temporary local damage only that is considered recoverable within two years).
- 4.1.5 Creation of Species-rich Native Hedgerow (or Native Species-rich Hedgerow with Trees, if the hedgerows had trees at baseline) is recommended to compensate for the loss of 6.72 Linear Hedgerow Units, ideally in the same place or adjacent to the permanent track. The amount of Linear Hedgerow Units required to achieve a 10% net gain are 7.39.
- 4.1.6 Enhancement of a viable on-Site or off-Site watercourse is recommended to achieve a 10% net gain in Linear Watercourse Units. The amount of Linear Watercourse Units required to achieve a 10% net gain are 0.94.
- 4.1.7 However, no location has currently been selected for compensatory watercourse enhancement. Without knowing the nature of watercourses at possible enhancement sites, it is not possible to provide specific detail on the type of enhancement measures available to achieve a +10% gain, although it is the opinion of AECOM that small-scale planting of riparian shrubs and trees along watercourses (lacking riparian shrubs/trees) would be a suitable enhancement measure.
- 4.1.8 The habitat creation measures have 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, and are in accordance with local and national guidance. We believe these measures are appropriate to the nature and scale of development. However, it is acknowledged that significant off-Site measures are required to achieve net gain, which remain to be specified.
- 4.1.9 The Proposed Development will achieve positive effects for biodiversity if sufficient off-Site habitat measures are identified and implemented, and if this is ensured then the Proposed Development will leave the natural environment in a demonstrably better state than before development work began.



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### 4.2 Summary of Results

Table 1. Summary of Biodiversity Units

Habitat Type	Base Line Biodiversity Units	Post- Development Biodiversity Units	Change in Biodiversity Units	Change in Biodiversity Units %	Biodiversity Units Required Off- Site to achieve 10% Net Gain
- Area	284.54	59.28	-225.26	-79%	253.71.
Linear (Hedgerows)	6.72	0.00	-6.72	-100%	7.39 (only if recommended like-for-like hedgerow creation cannot be carried out on- Site).
Linear (Watercourses)	0.85	0.00	-0.85	-100%	0.94



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#### 4.3 Biodiversity Outcomes

4.3.1 The outcomes of the proposed habitat works will include the natural regeneration of Mixed Scrub of Moderate condition within felled areas of poor quality conifer plantation. There will also be natural regeneration of woodland and scrub habitat within the wayleave, although the regenerated woodland within the wayleave will necessarily be in Poor condition given that it will be periodically felled. Off-Site, it is recommended that woodland creation is carried out to compensate for the loss of woodland Biodiversity Units within the Site, which is the primary factor causing loss of Biodiversity Units. It is recommended that creation of Species-rich Native Hedgerow (or Species-rich Native Hedgerow with trees) is carried out to compensate for the loss of Linear Hedgerow Units, ideally on-Site in the same place or adjacent to the permanent track (or nearby off-Site). Enhancing the condition of a viable on-Site or off-Site watercourse is recommended to compensate for the loss of Linear Watercourse Units.

#### 4.4 Implementing and Monitoring

- 4.4.1 Biodiversity enhancements will be achieved within the following timeframe. All habitat creation measures will be initiated during construction of the Proposed Development, and then managed for a minimum of five years after completion until establishment is ensured.
- 4.4.2 To ensure positive enhancements are achieved long term, monitoring and maintenance procedures will be implemented by the SSEN Transmission, and generally involve:
  - all planting required for habitat creation will be carried out according to appropriate standards, including following the instructions provided by the tree or seed supplier; and
  - created habitats will be monitored to ensure correct establishment, and remedial action taken if growth fails.



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## Appendix A Good Practice Principles for Biodiversity Net Gain

The Proposed Development 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 Proposed Development actions
Apply the mitigation hierarchy	The mitigation hierarchy has been applied during this assessment by finding the best ecological solutions for the Proposed Development. However, it has been determined through field surveyor and desk study that habitats within the majority of the Proposed Development are neither irreplaceable nor otherwise notable, as a result of their low quality and/or ubiquity. Woodland/tree loss is as minimal as possible and is primarily incurred by the necessity of maintaining a slightly enlarged wayleave for the upgraded OHL.
Avoid losing biodiversity that cannot be offset elsewhere	There are no irreplaceable habitats within the footprint of the Proposed Development.
Be inclusive and equitable	Wider stakeholder engagement was not necessary for the Proposed Development, however SSEN and other consultancy disciplines have been liaised with as necessary.
Address risk	Risk in achieving net gain has been mitigated by selecting created habitats and target conditions that are reasonable to attain in the light of guidance and professional judgement.
Make a measurable net gain contribution	At this stage, off-Site measures are acknowledged to be necessary to achieve net gain for area-based habitats, linear hedgerow and watercourses and are to be investigated further. Provided these measures are implemented, a measurable net gain contribution will be achieved.
Achieve the best outcomes for biodiversity	The Proposed Development will involve the creation of species-rich hedgerows to replace species-poor lost hedgerows. Mixed scrub is anticipated to naturally regenerate where there is loss of low-value conifer plantation. Off-Site



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	habitat woodland creation measures (to be specified at a later stage) will ensure loss of woodland biodiversity units is compensated for. Hedgerow creation measures are also recommended to compensate for the loss of Hedgerow Biodiversity Units.
Be additional	If a greater than +10% net gain is desired, only a small increase in the area (or length) of the recommended created habitats will be required.
Create a net gain legacy	The proposed created habitats can be expected to persist in the long-term and thus represent a net gain legacy.
Optimise sustainability	The Proposed Development uses existing tracks as far as possible, uses an existing OHL rather than create a new OHL, and produces (considering its great length) a limited impact on habitats with only small areas of permanent change (largely from slight widening of the existing wayleave).
Be transparent	Particular effort has been made to adopt a precautionary and transparent approach when assessing the impacts of the Proposed Development upon the baseline. An example of this is how it has been assumed that all habitats within the permanent track buffers (5 m either side of proposed permanent track routes) will be lost. In reality, this is likely an overestimation of the extent of habitat loss required to facilitate construction of the permanent tracks.



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Appendix B Baseline Habitat Plan











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Project No: Project:Alyt	60703541 h-Tealing Overhead Line (O	HL) 400kV Upgrade
Title:		
	Baseline Habitats	
Drawn by:	CD	Date: 18/10/2024
Drawing:	Appendix B	Page 1 of 12





Project:Alyth-Tealing Overhead Line (OHL) 400kV Upgrade

Appendix B

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		Lege	end		
	45		Tower		
			Route Alignment		
			BNG Buffer (45 m way	leave, TWA, EPZ and 5 m	í .
		Baseline	e Habitats	)	
			Target Note		
		×	Scrub - scattered		
		•	Broadleaved parkland	scattered trees	
		•	Coniferous parkland/se	cattered trees	
2			r1g Other standing wa	ter (ditch)	
25			r2b Other rivers/stream	ns (very small or ditch-like	)
Burn			h2b Other hedge - Orr	amental non-native	
			h2a Priority hedge - N	ative hedgerow	
			Private		
			c1 Arable and horticult	ure	
			f2b Purple moor grass	and rush pasture	
			g1d Other lowland acid	d grassland	
			g3c Other neutral gras	sland	
			g3c5 Arrhenatherum n	eutral grassland	
			h3h Mixed scrub		
			h3j Willow scrub		
			u1b Developed land; s	ealed surface	
$\langle \rangle \rangle$			u1b5 Buildings		
/			u1c Artificial unvegetat	ed, unsealed surface	
/			w1g Other broadleave	d woodland	
			w1g7 Other broadleav	ed woodland	
			w1h5 Other woodland	mixed; mainly broadleave	èd
		ALYTH	Ruthven	A A928	lean Water A94 A
		Balhary	House	Eassie Sione Castle Glamis	Douglasto
			A94	Castleton	Kirkton
-		Kinloch	Meigh	Balkeerie	Gateside
1		Arthurst	ste	Wester Denoon Ark Nether	
1		Ard	er Newbigging 34	L S	Gallowfauld
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	Tower
—	Route Alignment
	BNG Buffer (45 m wayleave, TWA, EPZ and 5 m permanent track buffer)
Baseline	Habitats
$\bullet$	Target Note
×	Scrub - scattered
•	Broadleaved parkland/scattered trees
•	Coniferous parkland/scattered trees
• •	Line of trees (broadleaved, ecologically-valuable)
	r1g Other standing water (ditch)
	r2b Other rivers/streams (very small or ditch-like)
_	h2b Other hedge - Ornamental non-native
	u1e Built linear (stone wall)
	Private
 1001	c1 Arable and norticulture
	f2b Purple moor grass and rush pasture
	ald Other lowland acid grassland
	a3c Other neutral grassland
~ ~ ~	g3c8 Holcus-Juncus neutral grassland
МТ	g4 Modified grassland
$\overline{\mathbf{x}}$	h3e Gorse scrub
$\mathbf{x}$	h3h Mixed scrub
	h3j Willow scrub
	r1g Other standing water
	u1b Developed land; sealed surface
	u1b5 Buildings
	u1c Artificial unvegetated, unsealed surface
	w1d Wet woodland
	w1g Other broadleaved woodland
	wins Other woodland; mixed; mainly broadleaved
	Ruthven
ALYTH	Ruthen Fassie Sculptural Pear War A94
Balhary	House Stone Glamis Douglasto
XX	A94 Castleton A Castleton Kirkton
Leitfie	Charleston Foffarty Balkeerie
Gnloch	mont Wester Milton Gateside
Arthur	stone And the Ark Nether Handwick Gallowfauld
Aucht	dier Kinney L L S Gallow- A928
Keillor	T I HEH
ns	Long N Bonnyton 455 Coldstream Todhills
House	T. A Firsteen of Kirkton of Tealing
10	Auchterhouse Auchterhouse Leoch Soutiernatin Inveraldie
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	Baseline Habitats
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Drawing: Appendix B

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Lege	end
	Tower
—	Route Alignment
	BNG Buffer (45 m wayleave, TWA, EPZ and 5 m
Baselin	e Habitats
	Target Note
×	Scrub - scattered
	Broadleaved parkland/scattered trees
	r2b Other rivers/streams (very small or ditch-like)
	u1e Built linear (stone wall)
	f2b Purple moor grass and rush pasture
	g1b6 Other upland acid grassland
	g1c Bracken
	g3c Other neutral grassland
	g3c6 Lolium-Cynosurus neutral grassland
	g3c8 Holcus-Juncus neutral grassland
MM	q4 Modified grassland
	h1b5 Dry heaths; upland (H4030)
$\mathbf{x}$	h3e Gorse scrub
	r1g Other standing water
	s1d Other inland rock and scree
	u1b Developed land; sealed surface
	u1c Artificial unvegetated, unsealed surface
	w1g Other broadleaved woodland
	w1q7 Other broadleaved woodland
	w1h5 Other woodland; mixed; mainly broadleaved
	w1h6 Other woodland; mixed; mainly conifer
	w2b Other Scot's Pine woodland
	w2c Other coniferous woodland
ALYTH Balhary Leiffe Ginloch Be Arthurs Keillor Ns Halhurton	Ruthven Hut
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Contair Project Project Title:	Auchterhouse Kirkton of Baling Lundie Auchterhouse Kirkton of Baling Lundie Ins Ordnance Survey Data © Crown copyright and database rights 2024 Ordnance Survey 0100031673. Maxar, Microsoft t No: 60703541 t:Alyth-Tealing Overhead Line (OHL) 400kV Upgrade Baseline Habitats
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			Decelu	nous parkiand/scattered trees	
			Brack	en - scallered	(i))
			120 01	with linears (stears well)	iike)
			ule B	uiit linear (stone wall)	
(			11a6 L	Jegraded blanket bog (H7130)	
A MAR			T2C Up	mand flushes, tens and swamps	
1.50			g1b6 (	Other upland acid grassland	
1282			g1c Bi	racken	
i the			g3c O	ther neutral grassland	
111			g3c5 /	Arrhenatherum neutral grassland	
			g3c6 l	_olium-Cynosurus neutral grassland	
///			g3c7 [	Deschampsia neutral grassland	
XX		M N	g4 Mo	dified grassland	
			h1b5 l	Dry heaths; upland (H4030)	
			h1b5 l acid g	Dry heaths; upland (H4030) / g1b6 Oth rassland	er upland
1 1			h3e G	orse scrub	
			s1d O	ther inland rock and scree	
///			u1b D	eveloped land; sealed surface	
			u1b5 l	Buildings	
			u1c Ai	tificial unvegetated, unsealed surface	
			w2b C	ther Scot's Pine woodland	
			w2b C	ther Scot's-pine woodland	
		ALYTH	R		28 Hu Dean Water A94 A
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		Leitfie		Balkeerie Charlesto	Foffarty
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11		Arthurst	one	Howbinging	her dwick Gallowfauld
X		Ard	ler tyre	Newtyle Kindumey	L S A928
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		ns	Long	Bonnyton	5 Coldstream
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inn		Baseline	e Habita	ats		
			Target	Note		
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			Broadl	eaved parkland/so	attered trees	
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Contra Contra			gibe C	Diner upland acid (	grassiand	
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( )			g3c5 A	irmenainerum neu	itrai grassiand	
		p1 19	g3c6 L	olium-Cynosurus	neutral grassiand	
			g4 Moo	dified grassland	(14000)	
			h1b5 E	)ry heaths; upland	(H4030)	rupland
			acid gr	assland	(14030)/ g100 Otile	rupianu
u			h3e Go	orse scrub		
See.		XX	h3h Mi	xed scrub		
			r1g Otł	her standing water		
230			s1d Ot	her inland rock an	d scree	
			u1b De	eveloped land; sea	aled surface	
and a			u1c Art	tificial unvegetated	d, unsealed surface	
and the second			w1g Ot	ther broadleaved v	woodland	
RAME.			w1g7 (	Other broadleaved	woodland	
1423			w2b Ot	ther Scot's-pine w	oodland	
			w2c Ot	ther coniferous wo	odland	0000000
100		ALYTH	Bi	ithen S	A A92	8 Hu Dean Water A94 A
Same.		0		House	Eassie Stone	Glamis Douglaston
1000		Salliary	A	A94	Castleton	Thornton
1		Leitfie	Y A		Balkeerie Charleston	Foffarty
1.200		Kinloch	mont 1	Meigie Kirkinsi	Wester Milton	Gateside
2		Arthurs	tone	Newbigging	340 T Ark Neth Hill Hand	er wick Gallowfauld
3		Auchte	dler	Newtyle Kingur	ney L	Sallow - A928
del.		Keillor	2	1 and 1	1 TI	HEIL A
South		ns	Long Loch	W BO	nnyton 45	Coldstream Tealing
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		Drawin	ıg:	Appendix B		Page 10 of 12





Project No: 60703541
Project:Alyth-Tealing Overhead Line (OHL) 400kV Upgrade
Title:
Baseline Habitats
Drown by: 0D Dete: 10/10/2024

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#### Appendix C SSEN Transmission Toolkit Calculation

Shown below for the Proposed Development is the final output of the SSEN Transmission Toolkit. This output accounts for the proposed on-Site habitat measures set out in this Report.

3	💠 Biodiversity Project Toolkit				Scottish & Southern Electricity Networks			
Su	Summary outputs							
Rev	view the auton	natically updated biodiversity unit and linear habitat (hedgerov	(H) and water courses (W)) results graphs to h	elp the optioneering process and site selection.				
			Units				Before Works	Units
	300	_					Biodiversity (Area)	284.54
	250						Linear Units (H)	6.72
	250						Linear Units (W)	0.85
	200				Before Works	Post Development	Post Development	Units
	\$1 150						Biodiversity (Area)	59.28
	Unit 120	284.54					Linear Units (H)	0.00
	100				% CI	hange	Linear Units (W)	0.00
					Biodiversity (Area)	-79%	Net Change	Units
	50	59.28			Linear Units (H)	-100%	Biodiversity (Area)	-225.26
	n				Linear Units (W)	-100%	Linear Units (H)	-6.72
	0	Biodiversity Units	Linear Units (H)	Linear Units (W)			Linear Units (W)	-0.85

Appendix D Post-development Habitat Plan







#### Legend



652



#### Legend

44



Where area-based habitats are not shown, there is anticipated to be no impact to that habitat as a result of the Proposed Development. Individual trees within the 45 m wayleave are assumed to be lost, and the extent of these within the Site is shown on the Baseline Habitat Plan. Linear habitat features will only be impacted to a very limited extent, and the extent of these is shown on the Baseline Habitat Plan.

nuulveil		Water
ALYTH	Sculotured Dean	A94 A
House	Eassie Stone Castle	Douglasto
Balhary	12 June 12	ornton
	Castletion T DO	Kirkton
Leitfie	Charleston Fof	arty
Kinloch Meig	Balkeerie	Gateside
Caste	Wester Denoon Marking	~ /
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Project:Alyth-Tealing Overhead Line (OHL) 400kV Upgrade				
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Post-Development Habitats		itats		
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