Scottish & Southern Electricity Networks

TRANSMISSION

SSEN Transmission

Cambushinnie 400kV Substation

(Substation and OHL)

Landscape and Habitat Management Plan

April 2025

Scottish & Southern Electricity Networks
TRANSMISSION

CONTENTS

LIST OF ABBREVIATIONS

ACoW	Archaeological Clerk of Works
AOD	Above Ordnance Datum
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BPP	Badger Protection Plan
BSI	British Standards Institution
BTO	British Trust for Ornithology
CAA	Civil Aviation Authority
CAR	Controlled Activity Regulation
CBD	Convention on Biological Diversity
CDM	Construction Design and Management
CEMD	Construction Environmental Management Document
CIEEM	Chartered Institute of Ecology and Environmental Management
CRA	Collision Risk Assessment
DECC	Department of Energy and Climate Change
DMP	Drainage Management Plan
DTM	Digital Terrain Model
EcIA	Ecological Impact Assessment
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
EMP	Environmental Management Plan
EPS	European Protected Species
EIA Report	Environmental Impact Assessment Report
FCS	Forestry Commission Scotland
GDL	Gardens and Designed Landscapes
GIS	Geographic Information System
GVLIA 3	Guidelines for Landscape and Visual Impact Assessment 3rd Edition
GWDTE	Groundwater Dependent Terrestrial Ecosystems
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HLAMap	Historic Land-Use Assessment Data for Scotland
HES	Historic Environment Scotland
ICNRIP	International Commission on Non-Ionising Radiation Protection

LCA	Landscape Character Assessment
LCC	Land Capability Classification
LCT	Landscape Character Type
LEC	Local Energy Consents
LNR	Local Nature Reserve
LVIA	Landscape and Visual Impact Assessment
NBN	National Biodiversity Network
NCN	National Cycle Network
NNR	National Nature Reserve
NPF3	National Planning Framework 3 (Scotland)
NSR	Noise sensitive receptors
NTS	Non-Technical Summary
NVC	National Vegetation Classification
OHL	Overhead Line
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SEC	Sealing End Compound
SEPA	Scottish Environment Protection Agency
SHEP	Scottish Historic Environment Policy
SLA	Special Landscape Area
SNH	Scottish Natural Heritage
SPAD	The Scottish Palaeoecological Database
SPP	Scottish Planning Policy
SPP	Species Protection Plan
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage Systems
VP	Vantage Point
WEWS	Water Environment and Water
WFD	Water Framework Directive
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility

1. INTRODUCTION

1.1.1 The Landscape and Habitat Management Plan (LHMP) is an operational guide to the maintenance and management of the landscape and habitat creation works at the proposed Cambushinnie substation and proposed overhead line (OHL) tie-in. It combines the landscape and ecology mitigation measures and wider biodiversity enhancement.

1.1.2 Landscape mitigation measures comprise of new planting to provide a degree of visual screening and help to integrate the Proposed Development (as defined in C**hapter 2, Section 2.4** of the **Environmental Appraisal (EA) Report**) into the surrounding landscape. Such measures would also seek to provide habitat biodiversity and opportunities for enhancement.

1.1.3 This LHMP sets out the details of habitat creation, maintenance and management actions required for the five-year period from completion of construction, a detailed summary of the management requirements for the following five years, and an overview of the longer-term management requirements. As part of this it sets out requirements both for operational works and for monitoring and reporting.

1.1.4 It has been designed to provide Scottish Hydro Electric Transmission PLC, operating and known as Scottish and Southern Electricity Networks Transmission (SSEN Transmission), a clear picture of its soft landscape estate and to be used by their appointed contractor and advisors as an operational manual for undertaking management and maintenance works, including monitoring, and reporting.

1.1.5 This LHMP accompanies the following Environmental Assessments for:

- Cambushinnie 400 kV substation; and
- Cambushinnie Overhead line (OHL) tie-in.

1.2 Document Structure

1.2.1 This report comprises of the following sections:

- Site Context - a brief description of the site, its location context and history, including a site location plan.
- Landscape and Ecology condition - describes the key aspects of the environmental baseline relevant to the maintenance and management of the works at the Site.
- Restoration and Design Principles - sets out the design principles followed to develop the scheme and sets out the function of each habitat type / landscape element.
- Maintenance and Management - including establishment of a maintenance and long-term management strategy.

2. PROPOSED DEVELOPMENT AND SITE CONTEXT

2.1 Site Location Plan

2.1.1 The Proposed Development Site (hereafter referred to as 'the Site') is illustrated in **Figure 1** below. In the context of this LHMP the Proposed Development encompasses the project elements listed below; these are described in further detail in **Section 2.2**. :

- Cambushinnie 400kV substation
- Cambushinnie OHL tie-in

The Proposed Development will require the construction and operation of a haul road to the south of Braco village which connects the A822 and B8033. The haul road will be subject to its own LHMP, therefore is not discussed further in this report.

2.1.2 The landscape context of the Site is provided in **Section 2.3** below.

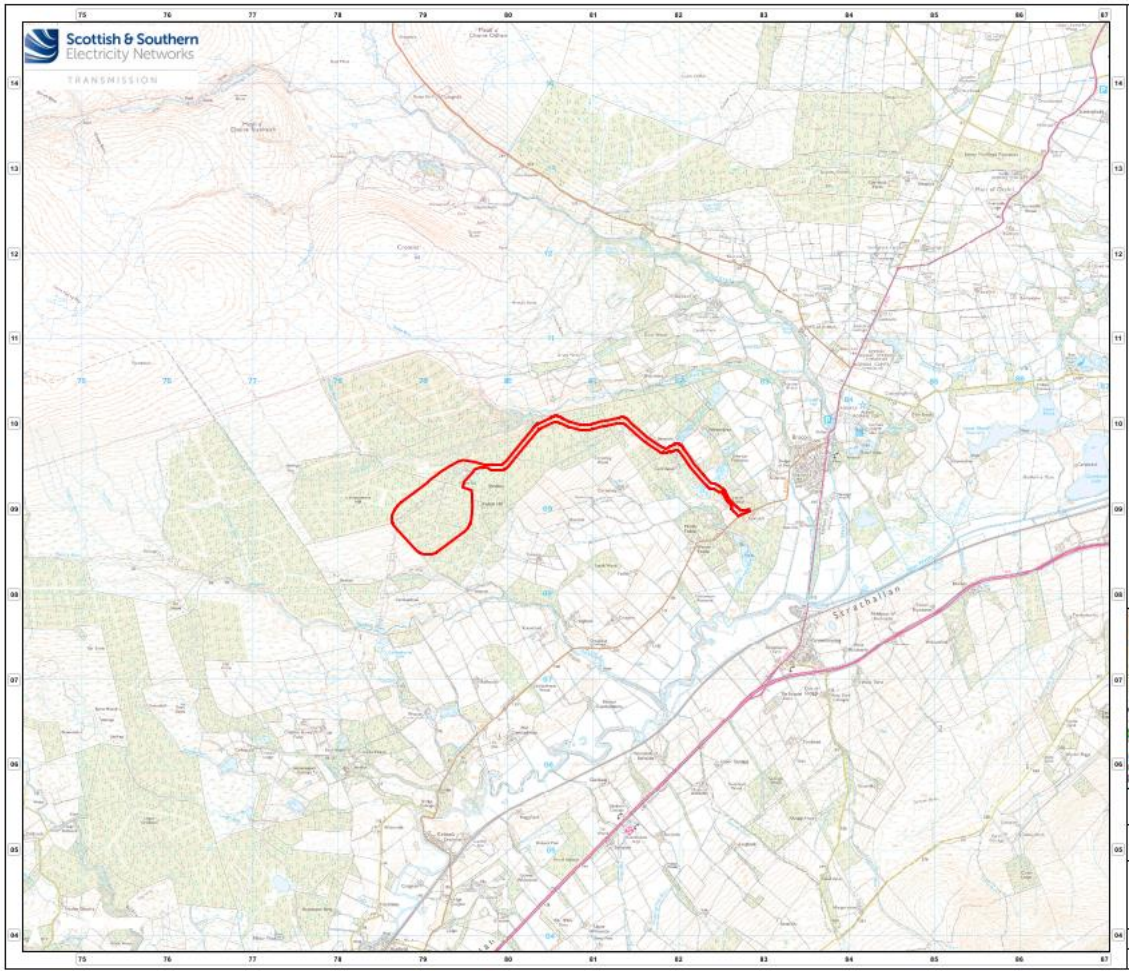


Figure 1 Site Location Plan

2.2 Proposed Development Components

2.2.1 A description of the individual Proposed Development elements included within this LHMP is provided below:

Cambushinnie 400 kV substation

- Temporary construction compound (including a temporary borehole for welfare during construction, expected volume extracted of less than 10m^3 per day) and laydown area;
- Substation platform of approximately 410 m x 220 m with associated earthworks;

- Two 400/132kV transformers, a new 400kV double busbar and ancillary equipment;
- A new control building (approximately 24 m x 49 m) with a maximum height of 7 m above the finished surface level;
- Removal and replacement of some of the equipment from the existing 275kV Braco West Substation, including the transformers, with the substation to continue operating at 132kV;
- Proposed existing access track upgrades;
  - Existing access track upgrades between the B8033 and existing Braco West Substation.
- Track extension and upgrades;
- Construction of new access track from the existing Braco West Substation to the proposed Cambushinnie substation platform;
  - Upgrades to the existing Cambushinnie Hill track;
- Construction of new access track from the northwestern edge of the proposed Cambushinnie substation platform to the sustainable urban drainage system (SUDS) basin;
- Permanent drainage systems;
- One permanent borehole for site water supply located on approach to the main access gate of the proposed substation (expected volume extracted of less than 10m^3 per day)
- Landscaping and biodiversity enhancements; and
- Palisade perimeter fence of maximum height of 4 m above the finished surface level.

Cambushinnie OHL tie-in

- Implementation of two temporary towers 380T and 379T to allow for short term OHL diversions during the construction of the new terminal tower 380R;
- One new permanent terminal tower 380R;
- Dismantling of redundant tower T380; and
- Temporary access routes to permanent and temporary towers except at T378.

2.3 Landscape Context

Location

2.3.1 The Site is located approximately 680 m southwest of Braco village in Perth and Kinross. It is largely characterised by an area of plantation forestry, some of which has been recently felled, located on sloping ground at the transition from a broad lowland valley in the south to low undulating hills in the north. The Site is accessed via an existing track connecting the B8033 to the southeast and the proposed substation would be located approximately 400 m west of the existing Braco West Substation.

2.4 Ecology Context

2.4.1 Ecological appraisals have been completed to inform the EAs for the Proposed Development. The ecological appraisals are contained in the following chapters of the EA reports outlined in **Section 1.1.5**:

- Cambushinnie 400 kV substation – Chapter 5; and
- Cambushinnie OHL tie-in – Chapter 5.

2.4.2 The Ecological Appraisals recommended mitigation and enhancement measures pertaining to habitats, including completion of a Biodiversity Net Gain (BNG) Assessment to ensure that the Proposed Development meets the requirement of National Planning Framework 4

(NPF4), which includes the following statements of policy intent: "*To protect, restore and enhance natural assets making best use of nature-based solutions*" and "*To protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks.*" NPF4 also states that national developments will only be supported where nature networks "*are in a demonstrably better state than without intervention*" using best practice and including future monitoring and management where appropriate. By carrying out a BNG Assessment and implementing habitat mitigation measures to achieve net gain, the Proposed Development will achieve compliance with this aspect of NPF4.

2.4.3 SSEN Transmission have committed to delivering a 10% biodiversity net gain on all projects that are granted consent. A Biodiversity Net Gain Report has been produced for the Proposed Development and will accompany the EAs for the substation and OHL.

2.4.4 Requirements for peat management are also necessary to ensure construction operations adhere to the mitigation hierarchy set out in the NPF4 and it is therefore concluded in the EA chapters outlined in **Section 2.4.1** that the Proposed Development should prioritise avoiding loss of, or other impacts on, peatlands (e.g. bog habitats) and that consideration should be given to minimising the impacts on these habitats and compensation by on- or off-Site enhancement of peatland habitats to achieve an overall biodiversity net gain.

3. LANDSCAPE AND ECOLOGY CONDITION

3.1 Landscape and Visual Condition

3.1.1 The Site is located primarily within the Lowland Hills - Tayside Landscape Character Type (LCT), with a short section of the proposed existing access track upgrades located within the Broad Valley Lowlands – Tayside LCT. The Lowland Hills LCT covers a series of low ridges and hills between Strathallan and Strath Tay, separating the valleys and adjoining nearby uplands. This is a transitional landscape, with pastures on lower slopes, woodland and coniferous plantation on mid slopes and open moorlands higher up. Modern settlements with scattered farmsteads, prehistoric standing stones and Roman forts provide an indication of the historical and cultural associations. The adjacent Broad Valley Lowlands LCT extends across Strathallan to the south and is defined be a pattern of medium to large scale fields divided and interspersed by hedgerows, tree belts and woodlands. Transport infrastructure, including the A roads and railway line, follow the line of the valley and connecting to small settlements.

3.1.2 Most of the Site and its immediate context is comprised of plantation forest and not fully representative of the wider characteristics of this LCT. The Site landscape elements comprise of recently felled forestry and pockets of productive forestry at various stages of establishment and maturity. It is anticipated localised areas of forestry would be felled to accommodate the Proposed Development, related to the proposed substation and OHL works.

3.1.3 Visual receptors, including users of Core Paths and local residents potentially affected by the Proposed Development are largely concentrated to the south and at lower elevation relative to the Site. Existing forestry forms the backcloth and skyline of views interspersed with open moorland and electrical infrastructure including wind turbines, OHLs and the existing Braco West Substation.

3.2 Ecology Condition

3.2.1 The majority of the habitats within the area of the proposed substation platform are mature, felled or recently re-stocked Other Coniferous Woodland, dominated by Sitka spruce *Picea sitchensis*. In the north-western area of the proposed substation platform, under the operational corridor to the existing Beauly-Denny 400 kV OHL, is Degraded Blanket Bog. Southern compartments and those to the extreme north-west of the Site, within the boundary of the Site and beyond, appear to be planted over a degraded bog-type habitat on deep peat. The land around the existing Braco West Substation is Other Upland Acid Grassland, dominated by soft-rush *Juncus effusus*, developed from disturbed peatland. Upland heathland is present in a forestry ride in the central southern part of the proposed substation platform, dominated by heather *Calluna vulgaris*. In the south-west of the proposed substation platform are priority minor watercourses, three very small tributaries that are headwaters of a notable watercourse.

3.2.2 The proposed existing access track upgrades are approximately 3.4 km in length and lead from the B8033 road to the existing Braco West Substation. A large proportion of the land adjacent to the proposed existing access track upgrades is used for commercial forestry, which is other coniferous woodland dominated by Sitka spruce in the north and central areas. The land adjacent to the proposed existing access track upgrades in lower and eastern sections are used for the production of Christmas trees, (e.g. Nordmann fir *Abies nordmanniana* and Norway spruce *Picea abies*), to rear game birds and cultivate cereal crops. Here the track is also bordered by Mixed and other broadleaved woodland, Species-poor hedges, Standing open water (artificial waterbodies) and minor watercourses/artificial

drainage ditches (including priority habitat), Other neutral grassland, Buildings (private residences), Arable land and grazing pasture, (for horses).

3.2.3 **Table 3-1** below summarises the baseline (existing condition) of the Site. Priority habitats present (i.e. those on the Scottish Biodiversity list) are highlighted in bold.

3.2.4 Full details of the baseline present on-site can be found in the EA chapters outlined in **Section 2.4.1**.

Table 3-1: Existing Condition

Subject	Existing Condition
Habitats	The following habitats are present within the Site: • Broadleaved, mixed and yew woodland (UKHab Level 4: w1h Other woodland; mixed) • Coniferous woodland (w2c Other coniferous woodland and w2c 206 Other coniferous woodland – Felled) • Dense scrub (h3 523 Dense scrub - non-native) • Hedgerows (h2a Native hedgerow) • Bog (f1a Blanket bog) • Dwarf shrub heath (h1b Upland heathland) • Fen, marsh and swamp (f2c Upland flushes fens and swamps and f2b Purple moor grass and rush pastures) • Acid grassland (g1b Upland acid grassland) • Neutral grassland (g3c Other neutral grassland) • Modified grassland (g4 Modified grassland) • Arable and horticulture (c1c Cereal crops) • Built-up areas and gardens (u1b5 Buildings, u1b6 Other developed land, u1c Artificial unvegetated, unsealed surface) • Standing open water and canals (r1 48 Standing open water and canals - freshwater; heavily modified and r1 49 Standing open water and canals - freshwater; artificial) • Rivers & streams (r2a Rivers (priority habitat)) Two potentially highly ground water dependent terrestrial ecosystem (GWDTE), of the National Vegetation Classification (NVC) types M23b and M6c, are present to the north of the Site. Of those habitats present (including GWDTE), the following are considered to be of Local (at most) Importance: • Degraded Blanket Bog (on deep peat) • Upland Heathland • Other Broadleaved Woodland • Species-poor Hedgerows • GWDTE • Priority Rivers/Streams
Protected / Notable Species	The following protected/notable species may be present on-site: • Bats - low habitat suitability for activity such as commuting and foraging, no roosting potential; • Otter – single otter refuge (layup) located on a small watercourse outside of the Site on the southern edge of the proposed substation platform, some other evidence of presence (spraints/feeding remains) on-site but no refuges present; • Water vole – no evidence on-site but sub-optimal habitat present; • Pine marten - no evidence on-site but sub-optimal habitat present; • Red squirrel - no evidence on-site but sub-optimal habitat present;

Subject	Existing Condition
	• Badger - no evidence on-site but sub-optimal habitat present; • Reptiles - one common lizard sighted incidentally during surveys but habitat suboptimal; and, • Fish and aquatic invertebrates - likely that notable fish occur in the Keir Burn and it is possible for notable fish to occur within the small watercourses and/or artificial drainage ditches that cross the proposed existing access track upgrades. All protected / notable species listed above are considered to be of Local or Site Importance.
Ornithology	Currently only common and widespread ornithological features of Local importance are present on-site. These include common breeding birds (including important/notable birds listed on the SBL and Birds of Conservation Concern (BoCC) Red and Amber lists).
Invasive non-native species of plant	Giant hogweed *Heracleum mantegazzianum*, dogwood *Cornus* sp. and snowberry *Symphoricarpos alba* were all recorded in the southern area of the proposed existing access track upgrades only. These are all non-native species and their spread must be controlled. The location of these species is shown in **Figure 2, Appendix A – Figures.**

4. RESTORATION AND DESIGN PRINCIPLES

4.1 Introduction

4.1.1 The landscape mitigation measures have been designed to integrate landscape, ecology, and biodiversity net gain (BNG) requirements arising from site survey and analysis, the findings of the EAs and the environmental commitments made by SSEN Transmission. The primary focus of the LHMP is to best assimilate the Proposed Development into the host landscape and habitats.

4.1.2 The landscape and habitat vision is to integrate the Proposed Development into the landscape, while seeking to maximise biodiversity and avoid undue consequences to the wider environmental fabric. **Table 4-1** below sets out the specific restoration and design objectives.

Table 4-1: Schedule of Mitigation

Objective	Restoration Objective
Landscape and Visual Integration	The Site is located in an area within which existing plantation provides a degree of screening and visual integration into the landscape setting. Landscape restoration should seek to protect the impression of natural character and take advantage of a transition from plantation forest to native woodland and peatland restoration. Visual integration opportunities are focussed on screening or filtering view of the substation and lower sections of the OHL towers from visual receptors to the south and from the core path to the north, where possible. The most pertinent areas to maintain and enhance visual integration include: • Reducing visibility from residential properties and core paths to the south and southeast of the Site. • Introduction of woodland, wet woodland, grassland and peatland planting and seeding to help integrate the proposed substation and other elements into the broad landscape context beyond the existing forestry plantations. The native woodland planting will also help to locally improve the balance of native deciduous woodland relative to the concentration of plantation forestry. • Integration of the track extension and upgrades to the substation and SUDS basin and associated earthworks elements.
Biodiversity Net Gain	As noted above, the Ecological Appraisal recommended mitigation and enhancement measures pertaining to habitats in order to meet requirements of NPF4. This included completion of a BNG Assessment to ensure that the Proposed Development meets certain biodiversity objectives. SSEN Transmission have committed to delivering a 10% biodiversity net gain on all projects gaining consent and this is the target value for BNG for the Proposed Development.
Habitats	In addition to achieving a 10% net gain in biodiversity on-site, the following further embedded and specific mitigation measures are detailed in the EA in relation to habitats. These are key objectives when considering restoration and design principles: • Prioritise avoiding loss or other impacts on peatlands (e.g. bog and heathland habitats). Consideration should be given to a) minimising the impacts on these habitats; and b) compensation by on or off-Site enhancement of other bog and heathland habitats to achieve an overall biodiversity net gain; • Where there is availability to microsite works, avoid peat depths of 0.5 m or more as far as possible (such peat depths generally support blanket bog); • All soil stripping/peat excavation and storage to follow a process of soil management to ensure the protection of turfs and soil horizons, allowing for successful reinstatement and re-vegetation;

Objective	Restoration Objective
	• Loss of woodland and native trees will be minimised, or losses compensated for by planting. Retained native trees and their root zones should be avoided and protected during the works in accordance with standard guidance in British Standard 5837:2012; • If works will be carried out that directly affect trees or woodland, or will take place within 50 m of any trees or woodland, and in accordance with NatureScot guidance, then carry out red squirrel pre-construction surveys (within 5 m of Site in the non-breeding season (March to August, inclusive) or 50 m of Site in the breeding season), for red squirrel dreys in suitable woodland; and • Mitigation must be employed for individual GWDTE (where required) to ensure that hydrological connectivity from upstream groundwater supplies to the downstream GWDTE is maintained (to maintain existing hydrological regimes). For full details of proposed embedded mitigation refer to the following EA Chapters as outlined in **Section 2.4.1:** • Cambushinnie 400 kV substation; • Cambushinnie OHL tie-in.
Protected / Notable species	As noted in **Table 3-1**, important species such as bats, otter, pine marten, red squirrel, badger and fish may be present within the Site and therefore the following embedded and specific mitigation measures are detailed in the EAs for the substation and OHL relating to Protected / Notable species. These are key objectives when considering restoration and design principles: • If otter refuges, water vole burrows, pine marten dens, red squirrel dreys (or other protected breeding/resting sites) are found that would be subject to disturbance or damage, there would be a constraint to the Proposed Development. If this becomes the case, obtain an appropriate license from NatureScot, which will require proportionate mitigation; • It is advisable to carry out removal of trees with potential for squirrel dreys or actual squirrel dreys outside of the breeding season. In the case that red squirrel dreys are found to be present, note that licensing through NatureScot is more difficult in the breeding season, and it is not normally permitted to destroy likely breeding dreys in the breeding season. The red squirrel breeding season is February to September, inclusive; and, Fish will be safeguarded by minimising works in or beside all watercourses and open water, and adoption of measures to ensure waterbodies are protected from pollution (by adhering to SEPA Guidance on Pollution Prevention). Water crossings must be constructed in accordance with authorisations and Method Statements granted/accepted by SEPA. For full details of proposed embedded mitigation refer to the following EA Chapters as outlined in **Section 2.4.1:** • Cambushinnie 400 kV substation; • Cambushinnie OHL tie-in;
Ornithology	There are no specific objectives regarding ornithological features, habitat compensation and enhancement measures incorporated to benefit habitats and protected / notable species will also likely benefit the common bird assemblage present. Note however that if possible, any vegetation removal / certain habitat management actions will be carried out outside the nesting bird season (March to August, inclusive) to avoid impacts upon nesting birds.
Invasive non-native species	Appropriate actions (such as avoidance, specific treatment and/or standard best practice) require to be integrated into any works which may affect invasive non-native plant species to manage the risks and avoid potential breaches of legislation. Such actions should be compiled in a Biosecurity Management Plan (BMP) or, at minimum, a Method Statement (MS). These actions would include avoiding disturbance of invasive non-native plants as far as possible, cleaning of heavy plant, machinery and PPE used in the vicinity of these species, and careful management of any arisings (including potentially contaminated substrate) should they need to be removed.

Objective	Restoration Objective
	The above must be considered when assessing restoration and design principles and all works for landscape and habitat management must be subject to control within the BMP or MS.

4.2 Landscape and Habitat Proposals

4.2.1 **Figure 3, sheets 1 and 2a/b, Appendix A Figures** illustrates the spatial arrangement of the LHMP, providing details of the different planting and seeding types and restoration proposals. Key landscape elements and areas are detailed in the **Table 4-2** below.

Table 4-2 LHMP Elements

Proposed Element	Area/m²
Woodland Planting	28,035
Wet Woodland Planting	2,310
Peatland Seeding with Dwarf Shrub Planting	13,925
Peatland Seeding	472,395
Wet Meadow (SUDS basin)	6,965
Compensatory open water habitat	66

4.2.2 Each habitat type which will be created as part of the LHMP must meet specific attributes to achieve the required 'condition' as set out in the BNG assessment. The table in **Appendix B – Post-Habitat intervention rationale** sets out the rationale for condition of each additional post-intervention area-based habitat that will be created.

4.2.3 The planting schedules detailed below, and included on **Figure 3, Sheet 1 Appendix A – Figures**, have been designed to meet the necessary species compositions, and this combined with specific management requirements (see **Section 5**) will allow the proposed BNG conditions to be met.

Woodland Planting

4.2.4 Woodland Planting will comprise of a mix of native deciduous trees species commonly found within the area, helping integration with the existing landscape context. It is anticipated that trees would be planted as transplants/ whips at a density of approximately 1.5 m centres as these are likely to achieve the greatest success of establishment.

4.2.5 **Function**: Native tree mixture planting is proposed to provide a degree of visual screening from visual receptors to the north and south of the Site and to help integrate the proposed substation and OHL towers into the existing landscape, while also providing habitat connectivity. The planting schedule with details of the species and planting specification for the woodland planting is shown in **Table 4-3**.

Table 4-3 Woodland Planting Schedule

Scientific Name	Common Name	Size	Root Type	Height (CM)	Average Planting Centres/ Density	Quantity	Mix
Betula pubescens	Downy Birch	1+1	Bare Root	60-90	1.5 m centres	4,675	25%
Betula pendula	Silver Birch	1+1	Bare Root	60-90	1.5 m centres	3,740	20%
Crataegus monogyna	Common Hawthorn	1+1	Bare Root	40-60	1.5 m centres	1,870	10%

Sorbus aucuparia	Rowan	1+1	Bare Root	60-90	1.5 m centres	2,805	15%
Pinus sylvestris	Scots Pine	1+1	Bare Root	60-90	1.5m centres	2,805	15%
Quercus petraea	Sessile Oak	1+1	Bare Root	60-90	1.5 m centres	2,805	15%
Woodland Planting to be under sown with Peatland Seeding mix							

Wet Woodland Planting

4.2.6 Wet Woodland provides an additional woodland planting mix, comprising of species which tolerate and thrive in wetter soils. As with the standard woodland, trees in this mix would be planted as transplants/ whips at a density of approximately 1.5 m centres.

4.2.7 **Function**: Wet woodland planting is provided to help integrate the SuDS basin into the landscape and provide an additional habitat feature . It will also combine with other planting and seeding to enhance landscape integration and habitat creation.

Table 4-4, below, provides a planting schedule with details of the species and planting specification for the wet woodland planting.

Table 4-4 Wet Woodland Planting Schedule

Scientific Name	Common Name	Size	Root Type	Height (CM)	Average Planting Centres/ Density	Quantity	Mix
Alnus glutinosa	Common Alder	1+1	Bare Root	60-90	1.5 m centres	155	10%
Betula pubescens	Downy Birch	1+1	Bare Root	60-90	1.5 m centres	465	30%
Populus tremula	Aspen	1+1	Bare Root	60-90	1.5m centres	155	10%
Salix cinerea	Grey Willow	1+1	Bare Root	60-90	1.5 m centres	385	25%
Salix caprea	Goat Willow	1+1	Bare Root	60-90	1.5 m centres	385	25%
Wet Woodland/Scrub Planting to be under sown with Peatland Seeding mix							

Peatland Seeding with Dwarf Shrub Planting

4.2.8 A combination of peatland seeding and pockets of dwarf shrub planting as detailed in **Section 4.2.9** below are proposed alongside the track upgrades and extension. The planting is also an option for blanket bog re-vegetation. A combination of seeding and shrub planting will accelerate establishment of peatland vegetation and (importantly for the condition of heathland) provide variation in height.

4.2.9 **Function**: The peatland with dwarf shrub planting mix is proposed to aid landscape integration of the access track upgrades and extension, and associated embankments, relating to existing vegetation types within the broader landscape context. The measure can also be employed to accelerate blanket bog re-vegetation.

Table 4-5, below, provides a planting schedule with details of the species and specification for the pockets of dwarf shrub planting.

Table 4-5: Peatland Dwarf Shrub Planting Schedule

Scientific Name	Common Name	Planting Method	Sowing Rate/ Quantity	Mix
Seeding				
Calluna vulgaris	Heather	Hydro-seeded and/ or hand sown .	3g/m^2	20%
Empetrum nigrum	Crowberry			10%
Erica cinerea	Bell heather			10%
Erica tetralix	Cross-leaved heath			10%
Eriophorum angustifolium	Common cottongrass			10%
Eriophorum vaginatum	Hare's-tail cottongrass			10%
Juncus squarrosus	Heath rush			10%
Vaccinium myrtillus	Bilberry			10%
Vaccinium vitis-idaea	Cowberry			10%
Dwarf Shrubs (to cover 15% of total area)				
Erica cinerea	Bell heather	1L container planted at density of up to 1 m centres	1 m centres	40%
Erica tetralix	Cross-leaved heath			30%
Vaccinium myrtillus	Bilberry			30%
Dwarf shrubs to be planted in random pockets throughout area in groups of between 11 and 19 plants.				

Peatland Seeding

4.2.10 Heathland creation and blanket bog restoration is proposed across large swathes of land within the Site. This is proposed as a bespoke seed mix informed by site conditions and specialist ecologists.

4.2.11 **Function**: Establishing a diverse sward of heathland surrounding the substation, access track extension and upgrades to restore and enhance areas affected by construction. The use of seeding will help to speed up landscape integration and could also be used to accelerate blanket bog re-vegetation and habitat compensation.

4.2.12 The seeding schedule shown in **Table 4-6**, below, provides details of the proposed species included in the Peatland Seeding mix.

Table 4-6: Peatland Seeding Schedule

Scientific Name	Common Name	Planting Method	Sowing Rate	Mix
Calluna vulgaris	Heather	Hydro-seeded and/ or hand sown.	3g/m2	20%
Empetrum nigrum	Crowberry			10%
Erica cinerea	Bell heather			10%
Erica tetralix	Cross-leaved heath			10%
Eriophorum angustifolium	Common cottongrass			10%
Eriophorum vaginatum	Hare's-tail cottongrass			10%
Juncus squarrosus	Heath rush			10%
Vaccinium myrtillus	Bilberry			10%
Vaccinium vitis-idaea	Cowberry			10%

Wet Meadow Seeding

4.2.13 Wet Meadow Seeding is proposed for the SuDS basin and includes a range of grass species (80%) and wildflowers (20%) tailored to areas of wet or damp ground.

4.2.14 **Function:** Wet meadow seeding within the SuDS basin increases species biodiversity and creates a buffer zone improving water quality whilst building a defined character around the basin.

4.2.15 **Table 4-7**, below, provides a seeding schedule with details of the species included in the wet meadow seeding mix.

Table 4-7: Wet Meadow Seeding Schedule

Scientific Name	Common Name	Planting Method	Sowing Rate	Mix
WILDFLOWERS (20% of mix)				
Achillea ptarmica	Sneezewort	Hydro-seeded and/ or hand sown.	3g/m2	2%
Centaurea nigra	Common Knapweed			2.25%
Cirsium palustre	Marsh Thistle			0.1%
Filipendula ulmaria	Meadowsweet			2.5%
Geranium pratense	Meadow Cranesbill			0.5%
Geum rivale	Water Avens			0.5%
Hypericum tetrapterum	Square-stemmed St John's Wort			0.5%
Hypochaeris radicata	Cat's Ear			0.5%
Iris pseudacorus	Yellow Flag Iris			1%
Leucanthemum vulgare	Ox-eye Daisy			1.5%
Lotus uliginosus	Greater Trefoil			0.1%
Plantago lanceolata	Ribwort Plantain			1.5%
Prunella vulgaris	Self-heal			1%
Ranunculus acris	Meadow Buttercup			1%
Rhinanthus minor	Yellow Rattle			1%
Rumex acetosa	Common Sorrel			1%
Scorzoneroides autumnalis	Autumn Hawkbit			1%
Silene flos-cuculi	Ragged Robin			1.5%
Succisa pratensis	Devil's-bit Scabious			0.5%
GRASSES (80% of mix)				
Agrostis capillaris	Common Bent (c)	Hydro-seeded and/ or hand sown.	3g/m2	10%
Alopecurus pratensis	Meadow Foxtail (c)			5%
Carex leporina	Oval Sedge			0.05%
Deschampsia caespitosa	Tufted Hair Grass			7.6%
Festuca rubra commutata	Chewing's Fescue (c)			36.5%
Poa pratensis	Smooth-stalked Meadow Grass			20.9%

5. MAINTENANCE AND MANAGEMENT

5.1 Introduction

5.1.1 This section describes the key roles and responsibilities and sets out the soft landscape monitoring and management objectives.

5.2 Overview of Roles and Key Environmental Responsibilities

5.2.1 The contractor team will be responsible for implementing the landscape and ecology measures during construction. They will also be responsible for the establishment of maintenance and monitoring based on more detailed landscape specification for a five-year period unless otherwise agreed with SSEN Transmission.

5.2.2 The BNG Report (**Appendix E** of the EA report) details the monitoring and maintenance requirements including roles and responsibilities in the first five years following construction, and a period of up to 30 years for the purpose of complying with the relevant SSEN Biodiversity project toolkit and technical Guidance, with cognisance of the target condition status. These monitoring and maintenance requirements are summarised below for each general habitat type to be created.

5.2.3 During the construction phase, it will be ensured that all relevant policies, procedures and their requirements are made known to site personnel. This will be undertaken through several methods including site inductions, Work Package Plans (otherwise known as method statements), Task Briefing Sheets (task specific method statement and risk assessment), risk assessment briefings, and toolbox talks.

5.2.4 Staff, operatives and subcontractors have the authority and responsibility to protect the environment at all times during execution of the works; the responsibilities outlined in this section will be highlighted during the site briefing. All personnel will be trained in the necessary skills to fulfil their role.

5.2.5 Key personnel for specific job roles are set out in the **Table 5-1**. The roles outlined may be substituted as required providing that the key environmental responsibilities are clearly and appropriately allocated.

Table 5-1: Schedule of Mitigation

Role	Responsibility
Environment and Sustainability Manager	• Maintaining and revising any environmental procedures that are required; • All measures in the LHMP are implemented on-site. This includes ensuring that adequate resources are allocated to environmental management on-site; • Ensuring all measures to protect retained vegetation are implemented on-site; • Reviews and approves risk assessments and Work Package Plans (RAMS) for environmental content; • Appointing Environmental Specialists where required; • Ensuring environmental issues in risk assessments are communicated effectively on-site and that appropriate training is delivered; • Ensuring that any mitigation measures identified in this LHMP but not covered by a Protected Species Licence will be implemented on-site; and • Ensuring environmental instructions (including any Key Performance Indicators) from the client are carried out.
Environmental Clerk of Works (ECoW)	• The scope of the ECoW would be advised by the ecologist and landscape architect based on relevant environmental commitments, the findings of the pre-commencement walkovers, protected species licensing requirements, presence

Role	Responsibility
	of invasive non-native species and with reference to the relevant project programmes. • Relevant site staff would receive toolbox talks as necessary from the ECoW on the relevant ecological risks present, legal requirements, and the working requirements necessary to comply with legislation, and the final approved landscaping and biodiversity management and enhancement measures. Toolbox talks would be repeated as necessary over the duration of the works.
Project Ecologist	• Appointed by the Principal Contractor ; • A Project Ecologist will be employed for the duration of construction, including implementation of the LHMP. This role may be combined with that of the Ecological/Environmental Clerk of Works (ECoW); • The ECoW will advise on and monitor implementation of mitigation measures and compliance with legislation concerning ecological features, including those relevant to the LHMP; • These measures may include carrying out pre-works surveys for relevant protected species in suitable habitat, including otter, water vole, badger, red squirrel. and pine marten. In line with NatureScot guidance, the pre-construction surveys will take place no more than three months before commencing works (including facilitating works such as vegetation clearance); • The ECoW will be responsible for overseeing habitat mitigation works to ensure these align with this LHMP and the overarching BNG assessment. • The contractor team will be responsible for implementing the landscape and ecology measures during construction. They will also be responsible for establishing, managing and monitoring the implementation and establishment of the landscape and ecological measures outlined within this document within the five-year monitoring and maintenance period for establishment.
Landscape Architect	• Monitoring and assessing the landscape related elements of the detailed LHMP for their effectiveness on an annual basis for the first five years following the completion of the development; • The LHMP and specification shall be developed accordingly to suit any changing landscape conditions and shall be monitored for the 5-year period from completion of construction; • Ensuring that any reviews associated with landscape related elements of the LHMP clearly identifies any changes to site conditions and circumstances, whether the aims and objectives of the approved LHMP are being met, and where identified changes are needed to existing management practices and timeframes. This is the responsibility of the landscape architect for the 5-year period from completion of construction.
SSEN Operations Team	• The LHMP and specification shall be developed accordingly to suit any changing landscape conditions and ultimately inform the maintenance operations associated with the development throughout the operational life of the Proposed Development; • Ensuring that any reviews associated with landscape related elements of the LHMP clearly identifies any changes to site conditions and circumstances, whether the aims and objectives of the approved LHMP are being met, and where identified changes are needed to existing management practices and timeframes. This is responsibility of the SSEN Operations team at the end of the 5-year period from completion of construction.

5.3 Soft landscape monitoring and management objectives

General management and monitoring objectives

5.3.1 Soft landscape management across the Site will be achieved through implementing general objectives to maximise the biodiversity value on-site, specifically including:

- applying good horticultural and ecological practice to all operations. Horticultural practice will include the use of peat-free composts, biodegradable mulches and soil conditioners, where practicable. The use of pesticides (insecticides, fungicides and slug pellets), appropriate herbicides (non-residual (glyphosate-free)) and chemical fertilisers will be discouraged, and any weed removal will be undertaken by hand where practicable;
- promoting healthy growth and establishment of all plants;
- ensuring consistent control of invasive weeds;
- ensuring development of optimum plant form, shape, and planting density;
- providing protection against pests and diseases;
- promoting wildlife value and species diversity where appropriate;
- ensuring planting is managed to maintain its function to provide landscape integration, nature and biodiversity value, connectivity for the benefit of wildlife, visual amenity and elements of visual screening;
- ensuring the new landscape reflects the local landscape character and is in keeping with the surrounding area;
- ensuring long term commitment to replacement of defective plant material;
- reviewing opportunities for introduction of new species or replacement of exhausted species where appropriate, in line with original design intentions;
- managing planting to ensure clear forward visibility is maintained along transport and pedestrian access routes;
- ensuring that all areas of hard surfacing are left in a clean condition, free from any soil, mud, leaves, cuttings and plant arisings; and
- ensuring that the works themselves do not cause inconvenience or danger to users.

5.3.2 For certain habitats, to meet the objectives set out in the BNG assessment, specific management requirements are necessary in addition to those general measures outlined above. These are detailed below for each created habitat type. Seven habitat types have been selected for habitat creation/enhancement in suitable areas within the Site, which (in the case of woodland creation) also provide a degree of visual screening:

- peatland restoration, at the locations shown on the Post-development Habitat Plan in Appendix A. This will involve the creation of further Blanket Bog on baseline Poor condition and low-value habitats (such as Sitka spruce plantation on flatter ground that is likely to have been, at least in places, planted on former bog). The peatland restoration will utilise peat excavated for the Proposed Development, seeded with appropriate bog species, and rendered appropriately wet (by e.g. ditch blocking, and ground preparation such as removal of forestry brash). A bund located towards the southeast boundary of the Proposed Development (indicated on Figure 3, sheet 1) has been proposed to support peatland restoration. The bund will be sized and designed to provide the required retention for the proposed peat deposition, with the east facing slope designed to gradually tie in with existing levels. Good condition Blanket Bog is not proposed because it cannot be guaranteed that sufficient wetness or cover of sphagnum / hare's-tail cotton-grass (*Eriophorum vaginatum)* will develop to fully satisfy those condition criteria. In a number of locations, degraded blanket bog will be seeded

with the peatland seeding mix, and it is assumed that heathland is more likely to establish in these locations, rather than good quality blanket bog;

- creation of Upland Heathland in Poor condition, on access track extension and upgrade embankments, within the OHL construction and removal areas, site accommodation area, underground cable route and elsewhere;
- creation of a SuDS basin (Developed Land, Sealed Surface), on an existing area of Other Coniferous Woodland. The SuDS basin will not hold permanent standing water;
- creation of Other Neutral Grassland (wet meadow) in Poor condition surrounding the proposed drainage and SuDs basin, where other coniferous woodland in Poor condition is currently present;
- creation of Wet Woodland (of locally-appropriate native species) in Moderate condition, within existing areas of Poor condition Other Coniferous Woodland and felled plantation woodland, bordering the proposed SuDs basin and adjacent peatland restoration;
- creation of Other Broadleaved Woodland (of locally-appropriate native species) in Moderate condition, on existing Poor condition Other Coniferous Woodland, felled plantation woodland, and other poor-quality habitats around the peripheries of the Site; and
- creation of a compensatory open water habitat constituting Other Standing Water in Moderate condition, as compensation for a small pond lost to the Proposed Development, on existing Other Coniferous Woodland within the Site. The pond is within the Site and an area of 6 by 6m. It was found to support common frog *Rana temporaria* spawn and palmate newt *Lissotriton helveticus*. Duck weed *Lemna minor* covered approximately 20% of the water's surface with reed sweet-grass *Glyceria maxima* occasional and a few other emergent / marginal species (such as soft-rush *Juncus effusus*).

Blanket bog Restoration

5.3.3 Ecological enhancement will be achieved when peatland restoration is conducted. Suitable locations for on-site reuse have been identified in this plan around the proposed substation platform (see **Appendix N – Peat Management Plan** in the EA report for more details). Peatland habitats in this area have been badly disturbed by former forestry operations, leaving the land heavily ridged and drained. Moderate condition for blanket bog could be met through:

- Interventions using recognised best practice techniques[1], e.g. smoothing and/or drainage channel blocking (which would likely make use of excess peat won from the proposed substation platform area) to bring the water table at/near the bog surface all year, with ongoing maintenance of tree/scrub clearance; and / or
- Peat placement to create cells to enable stable blanket bog with the hydrological conditions required to maintain an active peatland.

5.3.4 As noted above, the following general mitigation measures will be implemented to reduce impacts on peat:

- Prioritise avoiding loss or other impacts on peatlands (e.g. bog and heathland habitats). Consideration should be given to a) minimising the impacts on these habitats; and b) compensation by creation / enhancement of bog and heathland habitats to achieve an overall biodiversity net gain;

1 NatureScot (2024). *Peatland ACTION*. Available at: https://www.nature.scot/doc/peatland-action-technical-compendium [Accessed 30 July 2024].

- Avoid deep peat in general – deep peat is highly likely to be present in areas of blanket bog; and
- All soil stripping/peat excavation and storage to follow a process of soil management to ensure the protection of turfs and soil horizons, allowing for successful reinstatement and revegetation.

Upland Heathland

5.3.5 Heathland creation should include regular monitoring and removal of tree / scrub seedlings over a suitable period (e.g. every year, over a period of ten years (which is the predicted Time to Target Condition to achieve this habitat in Poor condition.) years). Areas of heathland creation will require an initial ground preparation, such as scraping / smoothing and will require rotational brush cutting to improve diversity of sward height, if the habitat is to meet Poor Condition.

Other Neutral Grassland / Wet Meadow (around the SuDS basin)

The BNG target condition for these habitats is Poor, and it is assumed that no on-going management of these habitats will be undertaken. Other Broadleaved Woodland

5.3.6 Planting will simulate a more natural woodland, including open glades, and planting the trees in clusters. Whilst woodland habitat only needs 25-30% tree cover to be considered 'woodland' a mature canopy cover of 75% is the target.

5.3.7 To ensure successful woodland establishment the monitoring of planted tree health and removal of Sitka spruce seedlings must be carried out for at least the annually for the first three years, and then at five-year intervals. A moderate condition woodland is targeted, which has a Time to Target Condition of 15 years. At year 15 a review should be undertaken to determine what level of future monitoring, if any, is required, first three years and potentially up to five years.

5.3.8 Areas of woodland planting are linear and irregular shapes to the boundary of the Proposed Development for which individual tree protection using tree shelters to 1.8m, providing protection from red deer, would be adopted.

Other Standing Water

5.3.9 A compensatory open water habitat will be created following best practice guidance[2,3]. The compensatory open water habitat will be located approximately 50 m northeast of the proposed SUDS basin and will be within a peatland restoration area and as such will be surrounded by an area of peatland seeding. This is illustrated on **Figure 3 Sheet 1, Appendix A – Figures.**

The open water component of the compensatory open water habitat does not require planting or seeding, as wildlife will rapidly colonise the pond (within two or three years). In the long-term, the pond will gradually fill with sediment and the habitat will change. This is a natural process and requires no ongoing management. Early, mid and late successional ponds are all valuable for biodiversity. After hundreds of years, the compensatory open water habitat would likely evolve into a form of wet woodland, which would be an important and valuable habitat.

2 Freshwater habitats (2024) Constructing ponds. Available at: https://freshwaterhabitats.b-cdn.net/app/uploads/2022/11/constructing-ponds.pdf [Accessed: 31 July 2024]

3 Freshwater habitats (2024) Managing ponds after creation. Available at: https://freshwaterhabitats.b-cdn.net/app/uploads/2022/11/managing-ponds-after-creation.pdf [Accessed: 31 July 2024]

Implementing and Monitoring

5.3.10 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 as set out above to ensure the proposed target conditions (as set in the BNG assessment) are met.

5.3.11 Monitoring will be undertaken in years 1, 2, 3, 5, 10, 15 and 20 to check on progress towards achieving the targeted conditions. The monitoring should follow the habitat condition assessment methodology[4] to check progress, where progress towards the target condition is not on track, remedial measures will be recommended.

5.3.12 To ensure positive enhancements are achieved long term, procedures will be implemented by the SSEN Transmission as follows:

- 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;
- peatland restoration areas will be appropriately prepared prior to placement of extracted peat and seeding with bog species, including removal of forestry brash, and blocking of ditches as necessary; and,
- created (and enhanced) habitats will be monitored to ensure correct establishment, and remedial action taken if growth fails. The maintenance of peatlands is expected to be minimal, however, if vegetation fails to establish, bare areas can re-landscaped, and re-seeded and/or planted using recognised peatland restoration techniques[1].

[4] Natural England. 2022. Biodiversity Metric 3.1. [Online] Available at: Archive Site for Legacy Biodiversity Metrics

APPENDIX A – FIGURES

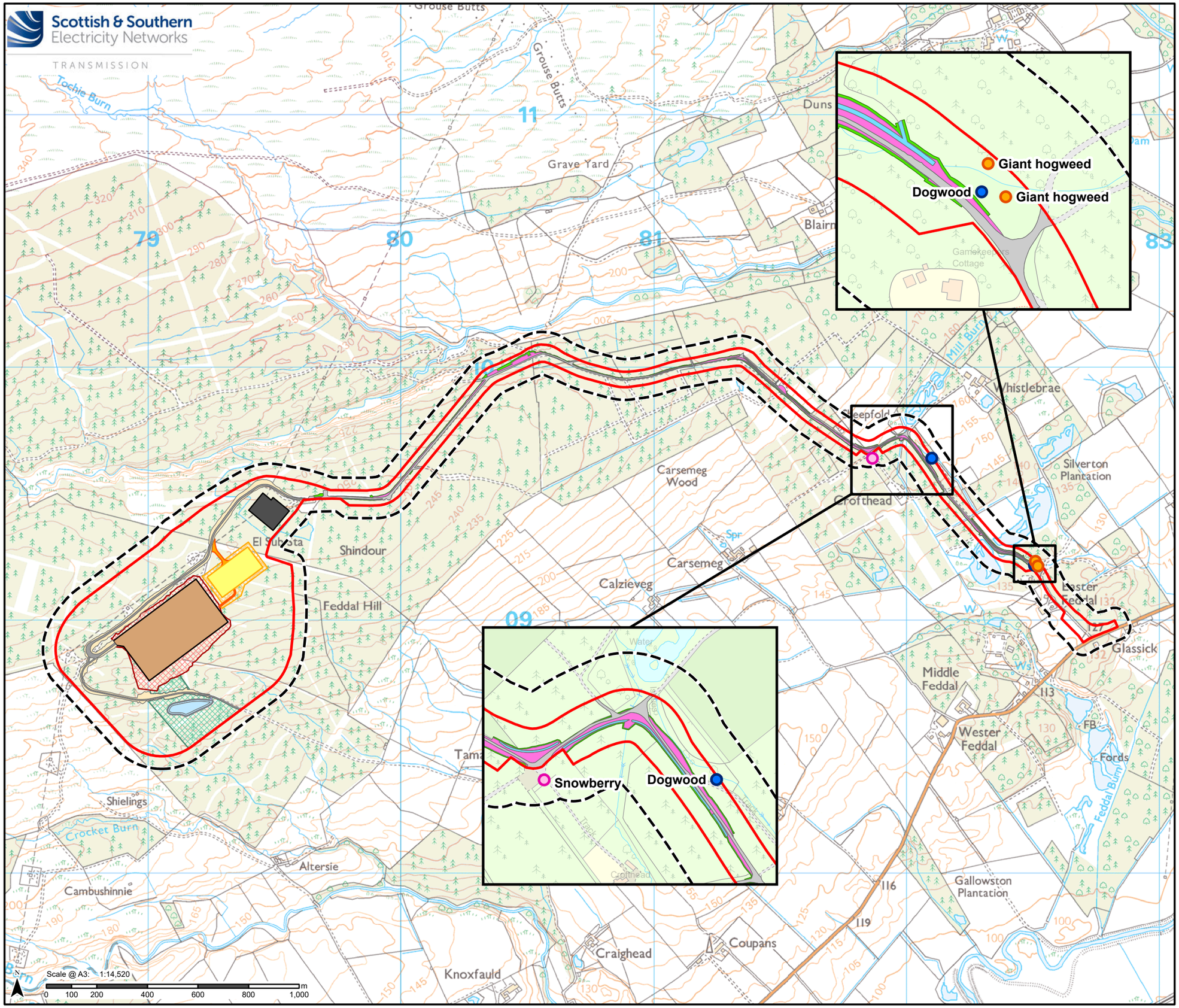
Invasive and Non-native Species Figure 2

Landscape and Habitat Restoration Plan Figure 3 Sheet 1

Landscape and Habitat Restoration Plan Figure 3 Sheet 2a/b

Scottish & Southern Electricity Networks

TRANSMISSION



Legend

- Proposed Development Site
- 50m Study Area
- Existing Substation

Substation Layout

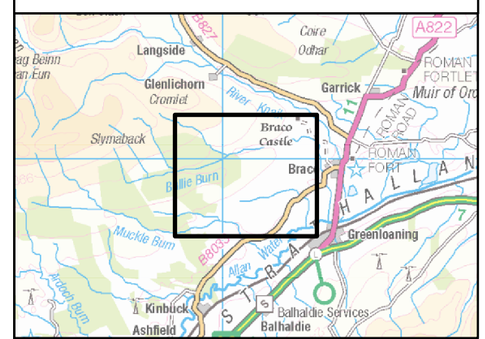
- Substation Platform
- Track Extension and Track Upgrades between Braco West substation and around the proposed Cambushinnie substation
- Track Extension and Track Upgrades between Braco West substation and around the proposed Cambushinnie substation - Earthworks
- SUDs Basin
- SUDs Basin Access Track
- Construction Compound
- Temporary Construction Compound Access
- Earthworks for Construction Compound
- Earthworks for Proposed Substation Platform
- Clearance for Drainage and SUDs Pond

Existing Access Track Upgrades – B8033 and Braco West Substation

- Existing Road
- Proposed Track Widening Extents
- Access Track New Ditch Extents
- Access Track Temporary Working Area

Invasive and Non-Native Species

- Dogwood
- Giant hogweed
- Snowberry



Project No: LT000520

Project: Cambushinnie 400kV Substation

Title:
Invasive and Non-Native Species

Drawn by: JBARR Date: 02/04/2025

Drawing: Figure 2

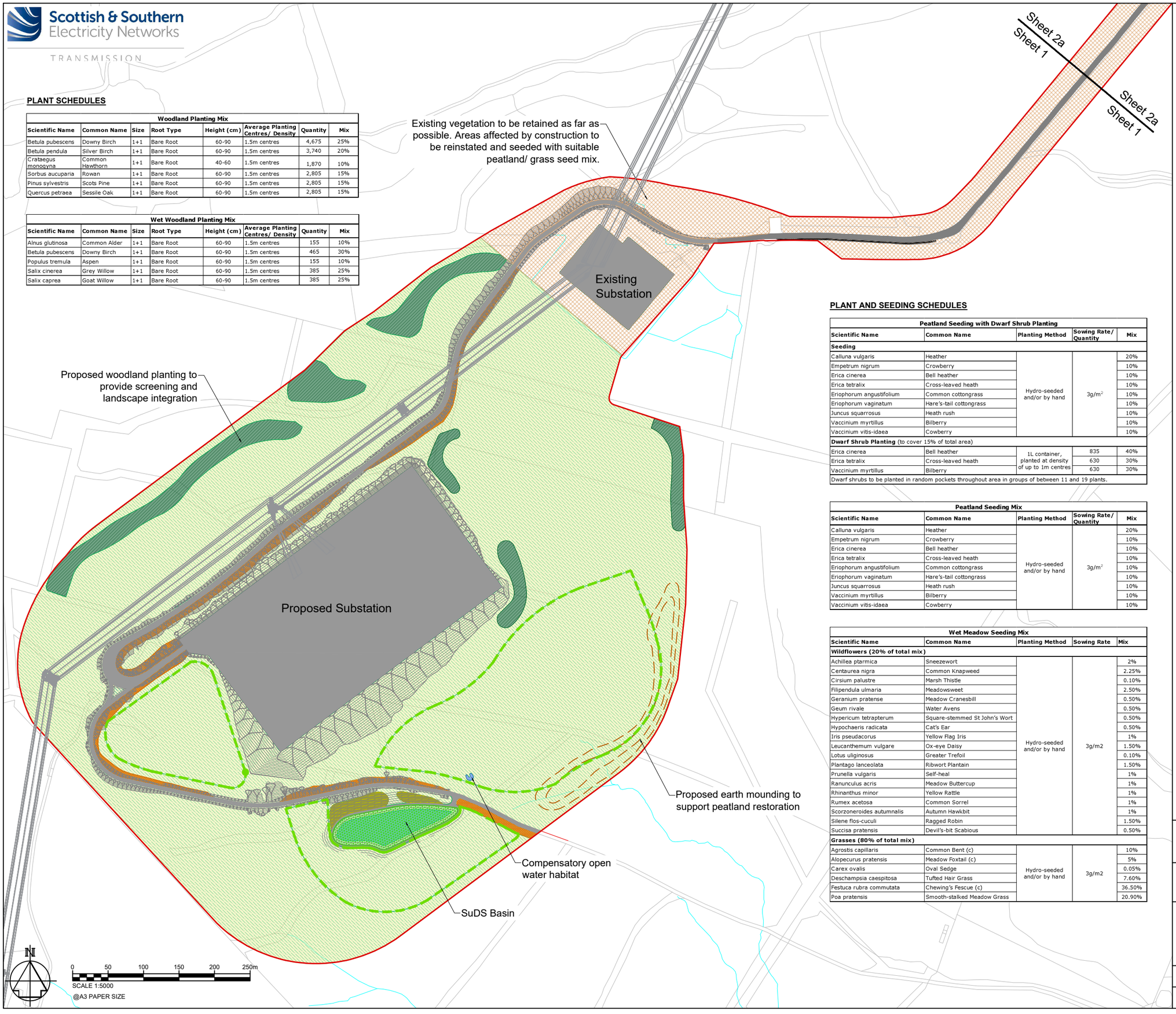
Scottish & Southern Electricity Networks

TRANSMISSION

PLANT SCHEDULES

Woodland Planting Mix							
Scientific Name	**Common Name**	**Size**	**Root Type**	**Height (cm)**	**Average Planting Centres/ Density**	**Quantity**	**Mix**
Betula pubescens	Downy Birch	1+1	Bare Root	60-90	1.5m centres	4,675	25%
Betula pendula	Silver Birch	1+1	Bare Root	60-90	1.5m centres	3,740	20%
Crataegus monogyna	Common Hawthorn	1+1	Bare Root	40-60	1.5m centres	1,870	10%
Sorbus aucuparia	Rowan	1+1	Bare Root	60-90	1.5m centres	2,805	15%
Pinus sylvestris	Scots Pine	1+1	Bare Root	60-90	1.5m centres	2,805	15%
Quercus petraea	Sessile Oak	1+1	Bare Root	60-90	1.5m centres	2,805	15%

Wet Woodland Planting Mix							
Scientific Name	**Common Name**	**Size**	**Root Type**	**Height (cm)**	**Average Planting Centres/ Density**	**Quantity**	**Mix**
Alnus glutinosa	Common Alder	1+1	Bare Root	60-90	1.5m centres	155	10%
Betula pubescens	Downy Birch	1+1	Bare Root	60-90	1.5m centres	465	30%
Populus tremula	Aspen	1+1	Bare Root	60-90	1.5m centres	155	10%
Salix cinerea	Grey Willow	1+1	Bare Root	60-90	1.5m centres	385	25%
Salix caprea	Goat Willow	1+1	Bare Root	60-90	1.5m centres	385	25%



PLANT AND SEEDING SCHEDULES

Peatland Seeding with Dwarf Shrub Planting				
Scientific Name	**Common Name**	**Planting Method**	**Sowing Rate/ Quantity**	**Mix**
Seeding				
Calluna vulgaris	Heather	Hydro-seeded and/or by hand	3g/m²	20%
Empetrum nigrum	Crowberry			10%
Erica cinerea	Bell heather			10%
Erica tetralix	Cross-leaved heath			10%
Eriophorum angustifolium	Common cottongrass			10%
Eriophorum vaginatum	Hare's-tail cottongrass			10%
Juncus squarrosus	Heath rush			10%
Vaccinium myrtillus	Bilberry			10%
Vaccinium vitis-idaea	Cowberry			10%
Dwarf Shrub Planting (to cover 15% of total area)				
Erica cinerea	Bell heather	1L container, planted at density of up to 1m centres	835	40%
Erica tetralix	Cross-leaved heath		630	30%
Vaccinium myrtillus	Bilberry		630	30%
Dwarf shrubs to be planted in random pockets throughout area in groups of between 11 and 19 plants.				

Peatland Seeding Mix				
Scientific Name	**Common Name**	**Planting Method**	**Sowing Rate/ Quantity**	**Mix**
Calluna vulgaris	Heather	Hydro-seeded and/or by hand	3g/m²	20%
Empetrum nigrum	Crowberry			10%
Erica cinerea	Bell heather			10%
Erica tetralix	Cross-leaved heath			10%
Eriophorum angustifolium	Common cottongrass			10%
Eriophorum vaginatum	Hare's-tail cottongrass			10%
Juncus squarrosus	Heath rush			10%
Vaccinium myrtillus	Bilberry			10%
Vaccinium vitis-idaea	Cowberry			10%

Wet Meadow Seeding Mix				
Scientific Name	**Common Name**	**Planting Method**	**Sowing Rate**	**Mix**
Wildflowers (20% of total mix)				
Achillea ptarmica	Sneezewort	Hydro-seeded and/or by hand	3g/m2	2%
Centaurea nigra	Common Knapweed			2.25%
Cirsium palustre	Marsh Thistle			0.10%
Filipendula ulmaria	Meadowsweet			2.50%
Geranium pratense	Meadow Cranesbill			0.50%
Geum rivale	Water Avens			0.50%
Hypericum tetrapterum	Square-stemmed St John's Wort			0.50%
Hypochaeris radicata	Cat's Ear			0.50%
Iris pseudacorus	Yellow Flag Iris			1%
Leucanthemum vulgare	Ox-eye Daisy			1.50%
Lotus uliginosus	Greater Trefoil			0.10%
Plantago lanceolata	Ribwort Plantain			1.50%
Prunella vulgaris	Self-heal			1%
Ranunculus acris	Meadow Buttercup			1%
Rhinanthus minor	Yellow Rattle			1%
Rumex acetosa	Common Sorrel			1%
Scorzoneroides autumnalis	Autumn Hawkbit			1%
Silene flos-cuculi	Ragged Robin			1.50%
Succisa pratensis	Devil's-bit Scabious			0.50%
Grasses (80% of total mix)				
Agrostis capillaris	Common Bent (c)	Hydro-seeded and/or by hand	3g/m2	10%
Alopecurus pratensis	Meadow Foxtail (c)			5%
Carex ovalis	Oval Sedge			0.05%
Deschampsia caespitosa	Tufted Hair Grass			7.60%
Festuca rubra commutata	Chewing's Fescue (c)			36.50%
Poa pratensis	Smooth-stalked Meadow Grass			20.90%

Legend

- Proposed Development Site
- Existing vegetation to be retained and/or reinstated
- Proposed Woodland Planting
- Proposed Wet Woodland Planting
- Proposed Peatland Seeding with Dwarf Shrub Planting
- Proposed Peatland Seeding
- Proposed Wet Meadow Seeding
- Proposed Peatland Restoration Area
- Drainage/ SuDs basin
- Compensatory Open Water Habitat

Project No: LT000520

Project: Cambushinnie 400kV Substation

Title:
Landscape and Habitat Restoration Plan
Sheet 1

Drawn by: JDEVENNY Date: 20/02/2025

Drawing: Figure 3

Scottish & Southern Electricity Networks

TRANSMISSION

Existing access track to be upgraded (local widening and additional drainage).

Existing vegetation to be retained as far as possible. Areas affected by construction to be reinstated and seeded with suitable peatland/ grass seed mix.

Sheet 2a
Sheet 1

Sheet 2a
Sheet 1

Sheet 2a
Sheet 2b

Sheet 2a
Sheet 2b

N

SHEET 2a

0 50 100 150 200 250m

SCALE 1:5000

@A3 PAPER SIZE

Sheet 2a
Sheet 2b

Sheet 2a
Sheet 2b

Existing access track to be upgraded (local widening and additional drainage).

Existing vegetation to be retained as far as possible. Areas affected by construction to be reinstated and seeded with suitable peatland/ grass seed mix.

N

SHEET 2b

0 50 100 150 200 250m

SCALE 1:5000

@A3 PAPER SIZE

Legend

- Proposed Development Site
- Existing vegetation to be retained and/or reinstated
- Proposed Woodland Planting
- Proposed Wet Woodland Planting
- Proposed Peatland Seeding with Dwarf Shrub Planting
- Proposed Peatland Seeding
- Proposed Wet Meadow Seeding
- Proposed Peatland Restoration Area
- Drainage/ SuDs basin
- Compensatory Open Water Habitat

Project No: LT000520

Project: Cambushinnie 400kV Substation

Title:
Landscape and Habitat Restoration Plan
Sheets 2a and 2b

Drawn by: JDEVENNY Date: 20/02/2025

Drawing: Figure 3

APPENDIX B – POST-HABITAT INTERVENTION RATIONALE

Rationale for condition of each additional post-intervention area-based habitat that will be created.

General LHMP habitat	UKHab type	Target condition	Rationale/description
Blanket bog restoration	f1a5 Blanket bog	Poor	Poor condition for Blanket bog met would be through interventions using recognised best practice techniques (e.g. smoothing and/or drainage channel blocking) to bring the water table at/near the bog surface all year, and tree/scrub clearance (if required). Scrub/tree cover to be maintained at a low cover (i.e., <10%). Areas of bare ground (as a result of previous erosion or disturbance caused by interventions) are expected to naturally revegetate - peat haggs in the area are revegetating, which strongly suggests that current grazing levels are low enough to allow bog vegetation recovery. The inventions are likely to increase wetness to bring down heather cover and maintain/promote key peat bog species (sphagnum *Sphagnum* spp./cottongrass Eriophorum spp.). On a precautionary basis, poor condition is targeted because it cannot be guaranteed that sufficient wetness or cover of sphagnum/cottongrass will develop to fully satisfy those condition criteria. All of the above are achievable following smoothing and/or drainage channel blocking (e.g. through use of peat dams), plus minimal ongoing maintenance. Initial ground preparation would include ecologist-supervised bog restoration, to include the use of suitable plant (e.g. wide-tracked 13-tonne excavator with an untoothed bucket). Regular monitoring of scrub/tree cover is recommended (with removal where necessary) over a suitable period (e.g. less than every year, over a period of 20+ years). Regular monitoring of bog vegetation recovery is required to ensure blanket bog is on track to meet the condition criteria.Further interventions to restore bog hydrology to be considered (and implemented, where feasible).
Retained woodland: Scattered conifers on blanket bog	f1a6 Degraded blanket bog with Sitka spruce	n/a	n/a
Wet woodland mix	w1d	Moderate	Woodland comprising a mix of native species. After 15 years (up to 30 years) expected to be semi-mature birch *Betula* spp./rowan *Sorbus aucuparia* / aspen *Populus tremula* with a grassy ground flora of acid species or a heathy ground flora dominated by dwarf shrubs. Moderate condition met through good diversity/cover of native tree species and controlling the extent and spread of Sitka spruce. The habitat fails to meet Good condition due to criteria that could only be met in long-established or ancient woodland.
Woodland mix	w1g Other Broadleaved Woodland	Moderate	Woodland comprising a mix of native species. After 15 years (up to 30 years) expected to be semi-mature birch / rowan / aspen with a grassy ground flora of acid species or a heathy ground flora dominated by dwarf shrubs. Moderate condition met through good diversity/cover of native tree species and controlling the extent and spread of Sitka spruce. The habitat fails to meet Good condition due to criteria that could only be met in long-established or ancient woodland.

Wet meadow mix	g3c Other Neutral Grassland	Poor	Grassland comprising a mix of native species (e.g. Lowland meadow seed mix). No management is intended, however, so some species would not persist and hence the habitat aimed for is Other Neutral Grassland. Likely only to achieve poor condition in the absence of management. Expected time to target condition is two years.
Heathland mix	h1b Upland Heathland	Poor	Dominated by heather with one or more dwarf shrubs (e.g. bilberry). Meets all condition criteria but fails to meet Good condition due to lack of structural diversity and age classes of heather. Expected time to target condition is 10 years.
Heathland mix with dwarf shrub planting	h1b Upland Heathland	Poor	Dominated by heather with one or more dwarf shrubs (e.g. bilberry). Limited management is proposed and thus taking a conservative approach, poor condition is targeted. Expected time to target condition is 10 years.
Compensatory open water habitat	r1g Other standing water	Moderate	The following condition criteria are expected to be easily achieved by creating the pond and leaving it to fill up naturally with rainwater / colonise naturally by plants and animals: • Good water quality; • No nutrient enrichment or <10% duckweed Lemna minor / filamentous algae species; • Not artificially connected to a waterbody, • Water levels fluctuate naturally; and • Fish at no more than low densities. Expected time to target condition is three years. No ongoing management is necessary. Change to another valuable habitat (such as wet woodland) in 100+ years.