Dean Moor
Solar Farm

Environmental Statement: Appendix 7.7 – Outline Landscape and Ecology Management Plan

on behalf of **FVS Dean Moor Limited**

March 2025
Prepared by: Stantec UK Ltd
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DEAN MOOR SOLAR FARM

ENVIRONMENTAL ASSESSMENT

APPENDIX 7.7 – OUTLINE LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN

PLANNING INSPECTORATE REFERENCE EN010155

PREPARED ON BEHALF OF FVS DEAN MOOR LIMITED

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, Regulation 5(2)(a)

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1 Introduction

1.1 Overview

1.1.1 This Outline Landscape and Ecological Management Plan ('OLEMP') **[REF: 6.3]** has been produced for FVS Dean Moor Limited (the 'Applicant') to support the Development Consent Order ('DCO') application for the Dean Moor Solar Farm ('the Proposed Development') on approximately 276.5ha of land located between the villages of Gilgarran and Branthwaite in West Cumbria (the 'Site'), which is situated within the administrative area of Cumberland Council ('the Council').

1.1.2 The Proposed Development will be within the 'Order Limits' (the land shown on the Work Plans) **[REF 2.3]** within which the Proposed Development can be carried out. In this OLEMP, the terms 'Order Limits' and 'Site' are used interchangeably.

1.1.3 Landscape measures to provide multifunctional green infrastructure benefits are a key part of the Proposed Development. These include creation of new habitats and natural features such as woodland and scrub, enhancements to existing habitats, such as grassland and hedgerows, as well as the introduction of features to support wildlife and outdoor recreation.

1.1.4 This OLEMP provides a means by which the Site is managed to aid meeting the following broad objectives:

- Visual screening – wherever possible retain existing screening vegetation to screen views of new elements of the Proposed Development from the surrounding area, including nearby residential properties.
- Landscape integration – to reflect the local rural grassland, hedgerow and wooded landscape character and planting style, and incorporate elements of a scale redolent of the existing landscape features.
- Nature conservation and biodiversity – to provide biodiverse, connected habitats, following the guidance of the Lawton Report 'Making Space for Nature'[1] for '*more, bigger, better and joined up'*

[1] Professor Sir John Lawton (2010). Making Space for Nature: A review of England's Wildlife Sites and Ecological Network

wildlife sites and ecological networks, and control and eradication of non-native invasive species.

- To deliver Biodiversity Net Gain ('BNG') commitments for habitats which will be retained, created and/or enhanced across the Site.

1.2 Purpose of this Document

1.2.1 The OLEMP is a preliminary document that outlines the management of landscape and ecology features and elements within the Site and targets for the long-term condition of new features as set out on the Landscape Strategy Plan ('LSP') (ES Figure 7.6.1-7.6.5) **[REF: 6.2]** that is submitted with the Environmental Statement (ES) **[REF: 6.1]**.

1.2.2 This OLEMP includes management prescriptions for the landscape establishment period (first 5 years) of the operational phase of the Proposed Development, to support meeting the target condition of each habitat to deliver BNG. Targets are defined as levels or situations that the Proposed Development intends to achieve; however, these are not commitments as their success is subject to several factors. In the first 5 years of operation, the targets and strategy aim to ensure new vegetation successfully establishes.

1.2.3 Until the final layout is established, this OLEMP seeks to commit to a minimum target of BNG while aspiring to meet values presented in the Biodiversity Net Gain (BNG) Report included as ES Appendix 8.8 **[REF 6.3]**. These commitments are as follows:

- 60% in habitat units;
- 20% in hedgerow units, and;
- 5% in watercourse units.

1.2.4 Full details of the BNG methodology are provided in the BNG Report.

1.2.5 Prior to the operation of any part of the Proposed Development, the Applicant must produce a LEMP for that part of the Proposed Development, that must be substantially in accordance with this OLEMP. Preparation of the LEMP is secured by a DCO Requirement and will be agreed with for approval by the Council. The operation of any part of the

Proposed Development must be carried out in accordance with the approved LEMP for that part.

1.2.6 The LEMP will correspond to the Landscape and Ecology Plan ('LEP') which will be prepared in accordance with a requirement in the DCO.

1.2.7 The LEMP must include the habitat management objectives, targets and prescriptions set out for the full 40-year operational period of the Proposed Development. In doing so it will also set out how the Proposed Development will be maintained and monitored to deliver the BNG commitments set out in paragraph 1.2.3.

1.2.8 The LEMP will be a working document and will be used by the Applicant to manage the landscaping and ecological aspects provided as part of the Proposed Development over its operational lifetime.

1.2.9 Any LEMP approved will be a 'live' document and will be updated as required. Existing management measures and mitigation outcomes will not be amended without the prior agreement of the Council.

1.2.10 The LEMP must be reviewed and revised (as appropriate) by the Applicant at the end of the first 5-year establishment period. Thereafter, the LEMP should be reviewed as appropriate and necessary as the planting matures and the ecology of the Site evolves. A suitably qualified and experienced ecologist and landscape architect should undertake any review of the landscape and habitat establishment and quality, to inspect and sign-off the completion of the various enhancement measures. A report is to be prepared for the Applicant and the Council with recommendations for active management as required and incorporate into LEMP as required. Existing management measures and mitigation will not be amended without the prior agreement of the Council.

1.3 Scope

1.3.1 This OLEMP covers:

- An overview of how the LEMP would be implemented, including roles and responsibilities of individual parties.

- A summary of the environmental context of the Proposed Development and the potential effects on landscape and visual receptors or biodiversity resources to support the development of this OLEMP.
- The approach to landscape and ecology including specific design constraints and assumptions.
- The objectives for creation and management of new landscape and ecology features, provisional targets for function/condition, and outline prescriptions for management activities.
- An outline management schedule which includes timescale periods for management activities during the initial establishment period.
- Outline specifications and prescriptions for management activities and monitoring.

1.3.2 This document should be read alongside the Outline Operational Management Plan ('OOMP') (ES Appendix 3.1) **[REF 6.3]**, and the future LEMP against future iterations of the OMP. The OOMP sets out general operational and maintenance requirements of the Proposed Development that are outside the scope of this OLEMP. This OLEMP covers the landscape and ecological aspects of the Site's operational and maintenance activities.

1.4 Definitions

1.4.1 The following provides a list of typical definitions used throughout this document:

- Green infrastructure – A network of multi-functional green and blue spaces and other features, which can deliver a wide range of benefits for nature and people.
- Biodiversity resources – biodiversity elements such as statutory and non-statutory designated sites, priority habitats, and protected species considered during the environmental impact assessment that may be impacted by the Proposed Development.
- Landscape and visual receptors – landscape and visual elements considered during the environmental impact assessment that may incur impacts from the Proposed Development.
- Landscape features – retained features, included within the design of the Proposed Development.
- Landscape elements – new elements included within the design of the Proposed Development to mitigate or compensate for effects on landscape and visual receptors or provide enhancement to the baseline resource.

- Ecology features – retained features, included within the design of the Proposed Development which may be enhanced through sympathetic management.
- Ecology elements - new elements included within the design of the Proposed Development to mitigate, and compensate for effects on biodiversity resources or provide enhancement to this resource; and
- Management activities – management activities that are required to facilitate establishment and desired condition of new elements or retained features.

1.5 The Proposed Development

1.5.1 The Proposed Development is a solar photovoltaic ('PV') energy generating station that will be managed as a multifunctional green infrastructure asset which responds to the climate and biodiversity crisis through the introduction of renewable energy technology and the landscape and ecology measures which are supported by this OLEMP.

1.5.2 The principal components of the Proposed Development include:

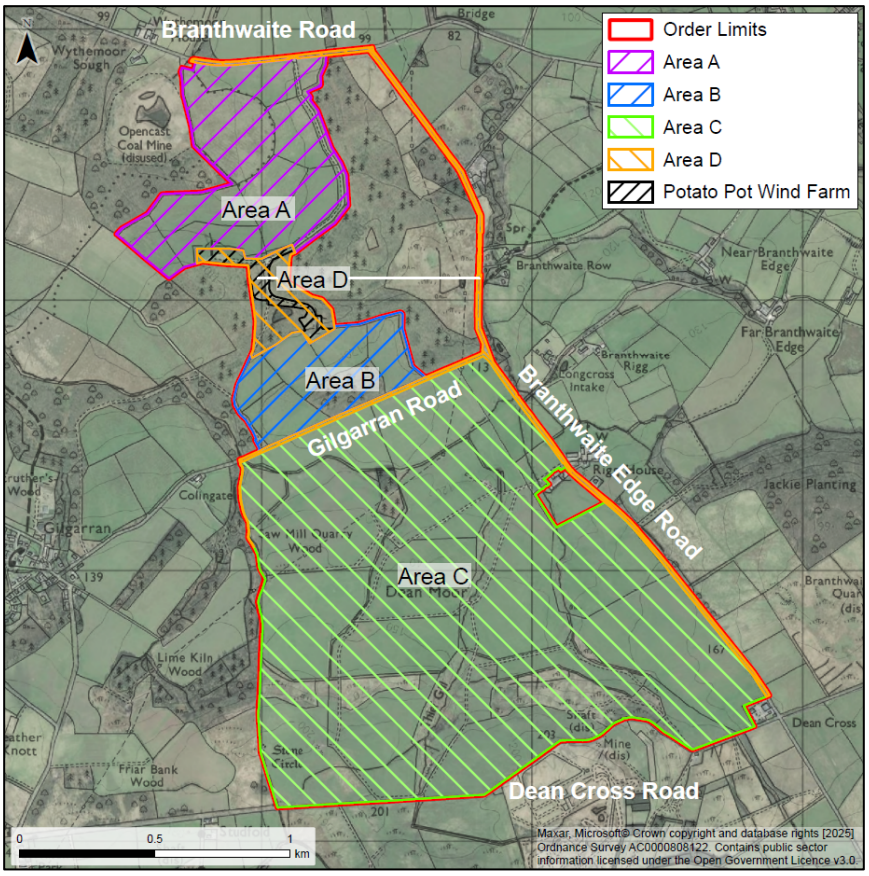
- Solar PV panels;
- Solar PV array mounting structures;
- Power Conversion System ('PCS') units in the form of Inverters and Transformers;
- Grid Connection Infrastructure comprising Customer and DNO Substation buildings and external electrical equipment and ancillary infrastructure within a Security Fence;
- Perimeter Fencing, Gates, CCTV cameras, electrical cabling, and other associated infrastructure;
- Access from the highway and internal access tracks; and
- Green infrastructure including landscape planting and ecological enhancements.

1.5.3 For ease of reference the Site is divided primarily into four areas referred to as Area's 'A', 'B', 'C', and 'D'. These are shown on ES Figure 3.1 and Figure 7.7a and summarised below:

- **Area A** – Land south of Branthwaite Road (approximately 40.2ha);
- **Area B** – Land south of Branthwaite Road and north of Gilgarran Road (approximately 19.9ha);
- **Area C** – Land south of Gilgarran Road and north of Dean Cross Road (approximately 203ha).

- **Area D** – Land connecting Areas A and B, including Potato Pot Wind Farm (the 'Wind Farm'), Gilgarran Road between Areas B and C, and Branthwaite Edge Road (approximately 13.4ha).

Figure 1.1: Solar Farm Area Plan (Extract of ES Figure 3.1)



1.5.4 Further details and descriptions of the Site and Proposed Development are defined in ES Chapter 3, the Design Parameters Document ('DPD') **[REF 5.7]**, and the Design Approach Document ('DAD') **[REF 5.8]** which sets out the framework of vision, objectives, and design principles which have guided the approach to the design of the Proposed Development.

1.6 Roles and Responsibilities

The Applicant

1.6.1 The Applicant is responsible for production of the LEMP and for its implementation as part of the Proposed Development. Responsibilities under the LEMP include:

- Replacing and reinstating existing ecology and landscape features and for implementing new landscape and ecology elements for the full operational lifetime of the Proposed Development.

- Replacing planting defects during the 5-year establishment period, and any other management prescriptions, including monitoring, that are scheduled to be undertaken during this period.
- Monitoring the Site against the LEP and LEMP commitments for conformity to the outcomes assessed in the ES.
- The review and revision of the LEMP as necessary across the Proposed Development's operational lifetime.

1.6.2 The Applicant will appoint an appropriately experienced and qualified landscape contractor to implement new planting. The landscape contractor will be competent at identifying plant species, including those proposed as part of seed and plant mixes, as well as any undesirable species, and experienced in the various habitat creation and enhancement works required as part of the Proposed Development. Specialist work may be carried out by specialist sub-contractors appointed where specific skills, equipment, and / or experience are required.

The Operations & Maintenance (O&M) Contractor

1.6.3 The Operations and Maintenance ('O&M') Contractor is the company appointed by the Applicant to oversee operations and maintenance (and environmental compliance) for the Site. The O&M contractor team will typically rely on a trusted network of suppliers and subcontractors supplemented with locally based companies/providers wherever possible. This function will support the Applicant's responsibility for securing appropriate third-party experts, such as ecologists, as part of the compliance management obligation.

Monitoring Party

1.6.4 Monitoring the progress towards the targets is critical to meeting the objectives. For this OLEMP this role represents the monitoring and advisory function of the range of topic-experts that will play a role in the Site's management. The monitoring party will be appointed by the Applicant to monitor the outcomes of the activities carried out at set intervals during the agreed management / monitoring period following completion of construction activity. The monitoring will be undertaken by a suitably qualified and an experienced ecologist (or team of ecology specialists as appropriate) and landscape architect.

1.6.5 The monitoring will record details of management works carried out, targets met, and / or remedial actions required. Records of monitoring will be retained for reference. Monitoring will continue for the duration that management activities are undertaken.

1.7 Design Approach

1.7.1 The indicative landscape and ecology measures for the Site are illustrated on the LSP (ES Figure 7.6.1.-7.6.5) which accompanies ES Chapter 7 – Landscape and Visual **[REF: 6.1]**.

1.7.2 The environmental resources, including landscape and visual receptors, and biodiversity resources within the study area of the Proposed Development are identified in ES Chapter 7 Landscape and Visual and ES Chapter 8 Biodiversity **[REF: 6.1]**. A summary of key landscape and ecological considerations which have informed the design are provided in Appendix B of this OLEMP.

1.7.3 The following provides a summary of the key design principles which have informed the design:

a. Retention of existing Site boundary vegetation were reasonably practicable.
b. No built development on the plateau set aside for relaxed grazing which characterises the southern part of Area C.
c. Adoption of suitable land management practices, in particular grazing management, to enhance grassland habitats within the Site.
d. The use of native species of local provenance where practicable to reflect the character of the local landscape and provide for wildlife present in the local area. The species mix would be as diverse as reasonably practicable to ensure resilience against future disease and climate change and provide for wildlife present in the local area.
e. Contribute to resilience and adaptation to climate change; species selection will provide a climatically resilient planting mix, accounting for potential changes in rainfall and temperature in the future by accommodating a mix of species planting and allowing for natural adaptation and resilience against potential future diseases; including ash die-back and climate change.
f. Reinforcement and enhancement (where appropriate) of existing defined key characteristics of the local landscape and its setting, with reference to the defined Landscape Character Areas (LCA):
g. Open rough moorland.

h. Woodland and small belts of trees forming prominent features.

i. Hedge bound pasture fields dominate, interspersed with native woodland, tree clumps and plantations.

j. Improved pasture with distinctive stone walls.

k. Well managed regular shaped medium to large pasture fields.

l. Improvement of existing habitats, and enhancement of the network of multifunctional green infrastructure including green corridors and natural and semi natural features to facilitate and enhance movement corridors through the Site with connection of existing habitats and landscape features.

m. Planting tree belts and groups in areas identified as appropriate to be strengthened, without contradicting the existing recognised character of the landscape to support effective visual mitigation and/or positively contribute to visual amenity and character.

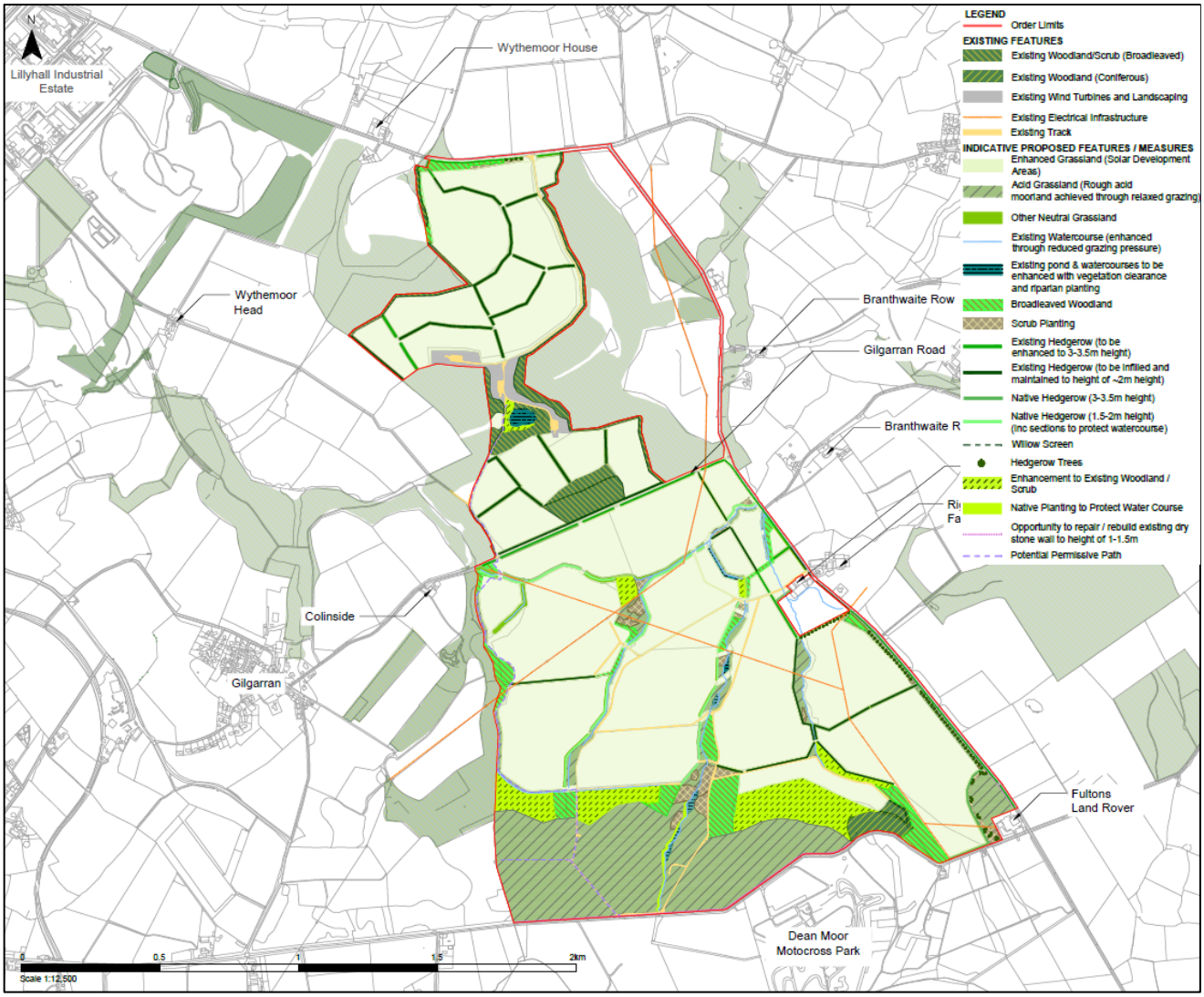
n. Fostering opportunities to promote biodiversity, including retention and enhancement of existing hedgerows, woodland, ponds and watercourses; terrestrial and riparian buffer planting; adoption of a suitable grazing regime under the solar arrays and within Dean Moor CWS to allow establishment of species diverse acid grassland and fencing of watercourses to prevent poaching and enhance water quality.

2 Planting and Ecological Implementation

2.1 Proposed Environmental Measures Overview

2.1.1 The LSP (ES Figure 7.6.1-7.6.5) provides an overview of indicative locations of retained features, some of which are proposed to be enhanced, and new proposed elements. These will be further detailed in the LEP, with delivery secured by the corresponding LEMP.

Figure 2.1: Landscape Strategy Plan (Extract of ES Figure 7.6.1)



2.1.2 In general, new ecological landscape elements include the following:

- Proposed broadleaved woodland to the northern and western boundaries of Area A, and the northern escarpment, western boundary and watercourses within Area C.

- Areas of scrubland adjacent to watercourses and around Dean Cross within Area C, and to the northern boundary of Area A.
- Areas of native hedgerow planting (of either 1.5-2m in height or up to 3-3.5m in height depending on its purpose) across all Sites to enhance green infrastructure connectivity and protect watercourses.
- Hedgerow trees, predominantly along the eastern boundary of Area C to provide a visual screening function and enhance new and existing hedgerows.
- Willow screen adjacent to the pond within Area D to provide protection for wildlife.

2.1.3 Other features and elements proposed for landscape and ecological enhancement include the following:

- Enhancement of grassland within areas of solar development utilising a species-rich mix.
- Enhancement of the existing watercourses by a relaxed grazing regime, riparian planting and potential erection (where appropriate) of stock fences to protect bank structure.
- Enhancements to the existing pond within Area D through vegetation clearance and new riparian planting.
- Enhancements to existing hedgerows through infilling of 'gappy' areas and underplanting with new species.
- Enhancements to existing woodland through additional planting and future maintenance.
- Opportunities to repair and enhance the existing stone wall to a height of 1-1.5m along the southern and eastern boundaries of Area C.
- Improved access through the Site through provision of permissive paths in Areas B, C, and D.
- Erection of bird and bat boxes in suitable habitats across the Site.
- Inclusion of features, like log and brash piles, suitable for species which may occupy the Site from the wider landscape, in particular, hedgehogs and reptiles.

2.2 General Implementation Notes

2.2.1 This section provides an overview of best practice and measures to be followed for the implementation of the proposed landscape elements. Whilst this is not management it is considered to provide a useful guide; ultimately if the proposed landscape elements are not implemented to a good standard, their target condition and management which is set out below could be compromised.

2.2.2 The information set out below is not a detailed specification and will be updated as part of the LEP which will be substantially in accordance the LSP.

2.2.3 Generally, all woody vegetation is to be healthy, hardened-off, and with good fibrous root systems and to comply with the requirements of BS3936 *Specification for Nursery Stock*[2]. All planting is to be undertaken in accordance with BS4428 *Code of Practice for General Landscape Operations*[3], which sets out the following best practice principles:

- At all times, plants to be protected from wind. All plants to be soaked in water for several hours prior to planting and to be well watered in.
- No planting to be carried out during poor weather conditions, i.e. when ground is frozen, waterlogged, or during droughts, hot sunshine or persistent dry or cold winds. All plant material to receive enough water to ensure healthy establishment.
- The seed origin of all native shrub species for use on the Site will be sourced, as far as reasonably practical, from the Forestry Commission Local Seed Zones 301[4]. Evidence of compliance will be retained by the Applicant and made available on request.
- Time of year for planting of woody vegetation: November to March, inclusive.
- Watering: During the growing season newly, planted woody vegetation will be watered to ensure the soil is kept moist; the exact requirement will depend on local climate and soil conditions.

Cultivation

2.2.4 For areas of new planting (excluding tree pits) the existing soil for all proposed seeding must be cultivated by loosening, aerating, and breaking up soil into particles 2-8mm to a minimum depth of 600mm.

Seeding

2.2.5 Areas of disturbed land to be seeded with a species rich pasture and/or wildflower grass mixes to be sown direct onto 150mm cultivated site-won subsoil in accordance with BS 8601:2013[5] in the first instance or imported

[2] The British Standards Institution (2024). Multi-part Document BS3936 – Nursery Stock.
[3] BS 4428:1989. Code of practice for general landscape operations (excluding hard surfaces). ISBN 0 580 17194 9
[4] Forestry Commission Practice Note 8: Using Local Stock for Planting Native Trees and Shrubs.
[5] BS 8601:2013. Specification for subsoil and requirements for use. ISBN 978 0 580 69112 6

low fertility topsoil BS 3882:2015[6] Annex B that has been brought to a fine tithe.

2.2.6 Areas of existing grassland to be overseeded directly into the grass sward after suitable preparation (i.e. grass mowing, and / or scarification).

Planting

2.2.7 Topsoil specification for proposed planting areas within cultivated land should be targeted to be laid to a minimum depth of 300mm and be in accordance with BS 3882:2015 for multi-purpose use. In areas where the topsoil is not 300mm and where it cannot be increased to this using on-site spoil detail, existing soil may need to be treated through further cultivation activities, or addition of ameliorants, or alternatively as a last result through the import of topsoil.

2.2.8 Tree pit planting for all feathered, standard and heavy standard trees should within areas of Broadleaf Woodland (section 3.5), and as Hedgerow Trees (section 3.8) should be undertaken as follows:

a. Pits with a depth and width of 600mm for:
b. Feathered trees (upright central leading shoot and a stem with balanced lateral growths to near ground level).
c. Standard trees (upright stem, clean of lateral growths, supporting a branched crown, typically 8-10cm girth, typical height 2-3m).
d. Pits with a depth and width of 750mm for Heavy Standard trees (12-14cm girth, height >3m).
e. The base of each pit to be broken up to ~200mm with all backfill material thoroughly broken up from the carefully excavated material, and any soil additives and/or ameliorants added prior to backfilling.
f. Backfill material to comprise 300mm topsoil and 300-450mm sub soil.
g. Trees will be secured in position using round timber stakes (top diameter of 50-75mm), stakes for all trees will be firmly driven and positioned into the tree planting pit before planting to a minimum depth of 300mm below the bottom of the pit.
h. The stake will be positioned off centre on the prevailing windward side of the tree as near to the tree as possible but will not interfere with the free movement of the branches and will cause no rubbing.

[6] BS 3882:2015 – TC Specification for topsoil. ISBN 978 0 539 08117 6

2.2.9 The planting of whips (plant consisting of only a single slender stem, without significant side branching) in areas of broadleaf woodland, and scrub will be notch-planted upright in accordance with the following measures:

- Clear surface vegetation.
- Remove arisings.
- Do not plough or cultivate within the root spread of trees or shrubs to be retained.
- Cut and upturn a turf of minimum 300mm square.
- Make a vertical 'I', 'L', 'T' or 'H' notch with a special spade or mattock, deep enough to accommodate full depth of roots.
- Plant tree, close the notch with the root collar at ground level and firm the soil.
- Surrounding soil will be firmed back after planting.
- Cell-grown plants should be planted using a proprietary tool for the purpose.

2.2.10 The setting out of plants will be undertaken in random groups of no less than 3 and more than 7 of the same species.

2.2.11 Hedgerow planting will be undertaken as follows:

- Where existing hedgerows are to be infilled, either notch planting (as set out for whip planting above will be used), or if sufficient room and gaps exist in the existing hedgerow, pits / trenches excavated to a minimum 300mm x 300mm x 300mm deep. The subsoil in the pit base will be broken up to 150mm below the base of the pit.
- Trenches excavated for new hedgerows will be a minimum 600mm wide by 300mm deep. The subsoil in the pit base will be broken up to 150mm below the base of the trench.
- All hedgerow planting will be set out centrally within the trench or hedge line with the individual plants arranged in two parallel rows which are 300mm apart and staggered between the rows.

Mulch and Compost Materials

2.2.12 All new woody vegetation planting areas to have a mulched base to aid establishment, retain soil moisture levels, and inhibit weed growth.

2.2.13 This base is to be free from toxins, pathogens, or other extraneous substances harmful to plant, water, animal or human life. Submit

certification of source, analysis, suitability for purpose and absence of harmful substances.

2.2.14 Mulch is to be chipped natural British forest biomass containing minimum of 70% wood content of particle size 35-45mm and is to be free of pest, disease or weed contamination for handover, as indicated below:

- Purity: Free of pests, disease, fungus, and weeds.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: mulch to 75mm depth to standard trees.
- Finished level of mulch: 30 mm below adjacent grassed or area.
- All products to be peat-free.

Planting Protection

2.2.15 Where planting is taking place in the vicinity of where grazing activity is to occur at a future period during the plant's establishment, all new planting needs to be protected by a suitable barrier during its establishment.

2.2.16 All individual plants will be protected with protective tubes to the sizes set out in Table 2.1. The size of the supporting stakes and the fixings will be in accordance with the protective tube manufacturer's recommendations.

Table 2.1: Protective tube specification

Plant Size	Tube Height/Diameter
Whip planting: 60 to 80cm BR	75cm height x 20cm diameter
Feathered/Standard/Heavy Standard Tree Planting	150cm height x 12cm diameter

3 Landscape and Ecological Management Measures

3.1 Introduction

3.1.1 The landscape design approach is indicatively visualised on the LSP (Figure 7.6.1-7.6.5). The design has considered, amongst other things, guidance within the Cumbria Biodiversity Evidence Base[7], Cumbria Local Nature Recovery Strategy[8], and the wider guidance of Natural England's Green Infrastructure Framework[9]. Nature Capital Best Practice Guidance[10], produced by Solar Energy UK has also been considered.

3.1.2 The following sections provide an overview for each proposed habitat. This includes the design context, proposed locations of the element, its objective, management approach and targets, along with any prescriptions to achieve this.

3.1.3 The monitoring and management principles and objectives, along with the proposed outline species listed in sections 3.2 – 3.10 are intended to support the delivery of the BNG commitments and aspire to achieve those presented in the BNG Report which accompanies the ES (Appendix 8.8).

3.2 Retained Vegetation and Features

Design Context

3.2.1 Landscape and ecological features within the Site including woodland, hedgerows and the pond within Areas A, B, C, and D will be retained and enhanced where practicable. The Site includes a range of existing vegetation as detailed in Chapter 8, Appendix 8.1, Figures 3a and 3b **[REF 6.3]**. Retained features will be set alongside new planting of trees and hedgerows as part of the wider landscape proposals.

[7] Cumbria Biodiversity Data Centre (n.d.). Cumbria Biodiversity Evidence Base [online]. Available at: [redacted] Accessed October 2024

[8] Westmorland and Furness Council (n.d). Cumbria Local Nature Recovery Strategy.

[9] Natural England (2023). Introduction to the Green Infrastructure Framework – Principles and Standards for England

[10] Solar energy UK (2022). Nature Capital Best Practice Guidance

3.2.2 A small area of modified grassland exists close to the Potato Pot Wind Farm ('the Wind Farm'). It will be enhanced from 'poor' to 'moderate' condition though additional sowing and improved management. An ephemeral pond[11] within Area C is also present and will be retained, but no targeted enhancement measures to the waterbody to make it a permanent feature are proposed. However, the grassland around its bank face and top will be enhanced to create a more diverse sward.

Locations

3.2.3 Retained and enhanced features are as follows and are shown as Figures 1 and 2 in the BNG Report (ES Appendix 8.8).

- Existing grassland ground cover across the Site (see section 3.3 and 3.4 for enhancement measures).
- The existing grassland within Area C which falls within part of the Dean Moor County Wildlife Site ('CWS') (see section 3.4)
- Hedgerows to the boundaries of the Site, primarily as existing field boundaries within Area A and Area B and generally across Area C.
- Areas of woodland habitat generally east, west, and north of the Grid Connection Infrastructure (Work No. 2), and most extensively within the escarpment within the southern part of Area C.
- Pond within Area D, south and west of the Wind Farm.
- Opportunities to retain, repair and enhance existing dry-stone walls within Area C.
- The watercourses in Area C which includes Thief Gill and tributaries and other unnamed ordinary watercourses.

General Objectives and Targets

3.2.4 Broad objectives associated with retained features include the following:

a. To maintain the existing vegetation to maximise biodiversity and habitat value and enhance green infrastructure networks.
b. To improve water quality and availability of pond habitats for species.
c. To ensure ongoing health and longevity.
d. Improve the existing structure of vegetation.
e. Retain the characteristics of existing green infrastructure.
f. To maintain a high-quality visual appearance overall.

[11] A pond that is temporary in nature.

3.2.5 Targets presented for each habitat type include those which are created post construction, and those which will be enhanced from their existing condition. Details of habitat conditions for each type are presented in the BNG Report in Appendix 8.8 and supported by the BNG Metric calculations.

Prescriptions

3.2.6 Generally during construction, the retained hedgerows, woodland and trees within the proximity of construction activity will be protected in accordance with measures outlined in the OCEMP (ES Appendix 5.1) **[REF 6.3]**. The CEMP secured by a DCO Requirement must be substantially in accordance with the OCEMP and will be supported by an updated tree survey to reflect the up-to-date tree constraints and protection requirements. This tree survey will also be relied on to inform the LEP and LEMP.

3.2.7 The LEMP will assume that the protections of the CEMP are implemented during construction, and this will be evidenced by regular monitoring by the Ecological Clerk of Works ('ECoW'). While the CEMP does not govern the operational phase of the Site, one of its objectives is to ensure the condition of the Site sets up the landscape and ecological enhancements for success in the operational period and it will be monitored by the ECoW for this purpose.

3.2.8 During the operational phase should any activities occur which are akin to those of the construction phase, relevant measures from the CEMP will be applied. Measures and supporting method statements for such work would be prepared and appended to the LEMP or OMP, which will be in force as a live working documents that govern the Site's management in the operational phase.

Existing Hedgerows

3.2.9 To facilitate construction of the Proposed Development, it is acknowledged that there are locations where existing gaps in hedgerows may need to be widened for access tracks and / or new gaps could be needed for fencing. Beyond this localised temporary loss, there will be no further losses.

3.2.10 Furthermore, the condition of existing hedgerows includes sections with poor species diversity and hedgerows which are gappy.

3.2.11 Hedgerow replacement and enhancement is proposed where existing hedges are gappy, and/or have been removed to facilitate construction activities. Hedgerow removal during construction will be carried out under methodologies set out in the OCEMP (ES Appendix 5.1).

3.2.12 Where parts of hedgerows have been lost, or existing hedgerows are gappy, additional underplanting will be undertaken utilising the species mix set out in section 3.7, to improve species diversity, achieve the overall heights set out on the LSP (ES Figure 7.6.1-7.6.5), and to provide additional year-round food sources for wildlife.

3.2.13 Existing hedgerows will be reassessed prior to construction, and this will help inform the production of the measures in the CEMP and LEMP.

3.2.14 Where hedgerows are not fenced off from land where grazing will be used for ground cover management, appropriate temporary barriers may be erected to protect hedgerows from grazing.

Existing Woodland and Woodland Enhancement

3.2.15 As with hedgerows, existing trees and woodland located within the Site will be protected during construction via the CEMP. Within the Site woodland comprises mixed and coniferous woodland groups. Some of this woodland (within Area B and C) has been historically coppiced and replanted.

3.2.16 Woodland enhancement would comprise selective thinning and replanting of this coniferous woodland with a deciduous mix as set out in section 3.5. It is intended this management of these features will occur post implementation of the proposed landscape elements being implemented and measures will be undertaken periodically over the 40-year lifetime of the Proposed Development. It is likely this activity will follow cyclical management and coppicing of the existing coniferous woodland. Further detail on these measures will be set out in the LEMP. Details of woodland enhancement, including proposed condition targets are provided in the BNG Report (Appendix 8.8).

3.2.17 Works to existing vegetation should be completed in accordance with current best practice guidance. All tree works should be undertaken by a qualified arboriculturist or tree surgeon. Works are to comply with BS3998 *'Tree Work – Recommendations'*[12], and HSE Forestry and Arboricultural safety leaflets. Chainsaw operatives must hold a certificate of competence. Chain or hand saw wounds will be as small as possible, cutting back to sound wood leaving a smooth surface, angled to shed the water, and avoiding bark tears.

3.2.18 Storing of plant, materials, the use of maintenance vehicles and new excavations for utilities within should be avoided within the Root Protection Area (RPA) of retained trees (where possible). As a rule, this should include the area beneath the entire tree canopy, however further advice should be sought from an arboricultural consultant as required.

Existing Ponds and Watercourses

3.2.19 For the purposes of this OLEMP, watercourses include all features on Site which contain water and include streams, ditches and culverted sections. Watercourses have been further classified further in the BNG Report (Appendix 8.8) and assessed using appropriate methodology.

3.2.20 The pond within Area D is currently enclosed by dense overgrown vegetation. To enhance the biodiversity resource of this asset it is proposed that a cut of vegetation surrounding the pond is undertaken to reduce tree growth and shading and promote areas of open water. This will be carried out in the winter months using hand-held tools. Some patches of scrub can be left to develop on the eastern and western edge of the pond. The management will need to be repeated every 5 years, and the ongoing management of this asset will be reflected across future iterations of the LEMP.

3.2.21 Enhancement of watercourses within Area C, will be accomplished through vegetation clearance (gorse), introduction of riparian planting (see section 3.10), and exclusion of sheep grazing to allow habitat growth and

[12] BS 3998:2010. Tree work. Recommendations. ISBN 978 0 580 53777 6

provide additional biodiversity value. Should any temporary barriers be utilised in areas with no permanent fencing to protect watercourses from grazing, or from any other O&M activities in the vicinity, they would be erected a minimum of 8m from the top of the bank of the watercourse.

3.2.22 A further ephemeral pond, identified within ES Chapter 8, Appendix 8.1, lies within the south-western plateau of Area C. It is not intended to make this pond a permanent feature, but the grassland habitat at the bank top will be enhanced.

Existing Lowland Acid Grassland

3.2.23 A small area of lowland acid grassland is present on the upper reaches of Thief Gill and straddles both sides of the watercourse. It exists on the steep sided embankments of the gorge where scrub is absent and where soil is often thin and sometimes exposed.

3.2.24 This area of habitat will be maintained and enhanced through additional planting to diversify the sward; gorse clearance at the habitats current margins to reduce competition and improve growing conditions, and exclusion of sheep grazing to allow habitat expansion and maximise biodiversity value.

Existing other Neutral Grassland

3.2.25 A small area of this habitat exists in Area C and adjacent to an existing track. A small parcel also occurs around an ephemeral pond. This habitat is surrounded by modified grassland which is used extensively for sheep. While the neutral grassland is fenced off, the sward is long, and the ground conditions are wetter which make it unsuitable for grazing.

3.2.26 The habitat will be retained and enhanced through additional planting to diversify the sward. It will be incorporated into the more extensive lowland acid grassland which will exist across the Site where solar development is implemented.

Dry Stone Wall

3.2.27 The existing dry-stone wall located along the southern and eastern boundaries of Area C, is a distinctive feature which responds positively to the open character of the landscape. In places this feature is in a poor state of repair, and as part of the landscape enhancement measures this feature will be restored to provide a defensible boundary which is reflective of the existing intact feature (double stack wall with a consistent height of ~1m with a capstone to the full length) along the length identified on the LSP (ES Figure 7.6.1-7.6.5).

3.3 Other Neutral Grassland (in areas of solar development)

Design Context

3.3.1 This habitat will feature in areas where solar development is present. The existing areas are currently pasture and intensively grazed by sheep. Grazing may continue to be permitted in these areas; however, the intensity of this activity will be reduced as set out in the Outline Grazing Management Plan ('OGMP') which is provided at Appendix A, and which will be expanded on as part of the LEMP. Sheep grazing as an active management would potentially complement mowing to ensure the sward never exceeds a height that obstructs the solar panels.

3.3.2 Where solar PV array structures are not implemented, additional opportunities to increase grassland diversity will be considered within the LEP and LEMP.

Locations

3.3.3 Other neutral grassland has been proposed throughout the areas allocated for solar PV infrastructure, as shown on the LSP (ES Figure 7.6.1-7.6.5).

Objectives

3.3.4 The objectives of the habitats are to:

- Provide a diverse and healthy sward of locally occurring grass species that can support local wildlife across the Site.

- Support the annual cycles of pollination and flowering of grassland species and promote the establishment of wildflowers across the Site.
- Increase the extent of nesting and foraging habitat for ground nesting birds.
- Provide suitable overwintering habitat for passage and wintering birds.
- Provide nectar-rich habitats for invertebrates including diverse assemblages of beetles, butterflies, and bumble bees which act as food sources for bats, birds and other terrestrial wildlife species.

Targets

3.3.5 The targets for other neutral grassland are:

- To create a diverse grassland supporting a range of native species within the initial establishment period.
- To provide enhanced grassland buffer strips adjacent to hedgerows and watercourses where practicable.
- Achieve 'Moderate' target condition in accordance with BNG metric over much of the Site. Where small areas of other neutral grassland already exist, it will be enhanced to achieve a 'Good' target condition.

Prescriptions

3.3.6 The following management prescriptions will be implemented for other neutral grassland creation:

a. Other neutral grassland will be created through a combination of reinstatement of locally occurring species and seeding likely using both EM5 Meadow Mixture for Loamy Soils (@4g/m^2) and EG10 Tussock Grass Mixture (@ 5g/m^2) as set out in Tables 3.1 and 3.2. Where possible generic seed mixes should be supplemented with locally collected seeds of species of value to local invertebrates.

b. Other neutral grassland will be created within the relevant areas as shown on the LSP (ES Figure 7.6.1-7.6.5).

c. Generally sowing will take place in the autumn or spring following construction in that part of the Site and when the weather conditions provide warmth and moisture. The seed will be sown in overlapping sections and firmed in using a roller to ensure a good seed to soil contact (refer to section 2 for further details on approach to seeding for disturbed and undisturbed ground).

d. In areas of disturbed ground during the first two years of establishment, additional mowing and removal of arisings may be required to reduce a flush of annual weeds and encourage any sown species to establish.

e. Vegetation will be maintained under and between the solar arrays as part of the Site's landscape strategy in accordance with best practice

and solar farm hydrological research[13] as part of the Site's landscape-led sustainable drainage ('SuDS') strategy as outlined in the Flood Risk Assessment (ES Appendix 2.4).

f. The prescribed management routine (mowing, and potentially grazing, or a combination thereof) is intended to control annual weeds while managing the balance between faster growing grasses with the wildflower species that take longer to establish. It is considered the prescribed grazing routine (as set out in Appendix A) can control annual weeds while managing the balance between faster growing grasses with the wildflower species that take longer to establish.

Table 3.1: Species rich mix (EM5 Meadow Mixture for Loamy Soils)

Latin name	Common name
Agrostis capillaris	**Common Bent**
Anthoxanthum odoratum (EM5)	Sweet vernal grass
Brizia media (EM5)	Quaking grass
Phleum bertolonii (EM5)	Smaller Cat's tail
Achillea millefolium (EM5)	Yarrow
Agrimonia eupatoria (EM5)	Agrimony
Betonica officinalis (EM5)	Betony
Centaurea nigra (EM5)	Common knapweed
Daucus carrota (EM5)	Wild carrot
Galium verum (EM5)	Lady's bedstraw
Geranium pratense (EM5)	Meadow Crane's bill
Knautia arvensis (EM5)	Field scabious
Leotodon hispidus (EM5)	Rough hawkbit
Leucanthemum vulgare (EM5)	Oxeye daisy
Lotus corniculatus (EM5)	Birdsfoot trefoil
Malva moschata (EM5)	Musk mallow
Plantago lanceolata (EM5)	Ribwort plantain
Poterium sanguisorba (EM5)	Salad burnet
Primula versis (EM5)	Cowslip
Prunella vulgaris (EM5)	Selfheal
Ranunculs acris (EM5)	Meadow buttercup
Ranunculus bulbosus (EM5)	Bulbous buttercup
Rhianthus minor (EM5)	Yellow rattle

[13] Cook L. and McCuen R. (2013) Hydrologic Response of Solar Farms. Journal of Hydrologic engineering 18:536-541

Latin name	Common name
Silene vulgaris (EM5)	Bladder campion
Vicia cracca (EM5)	Tufted vetch

Table 3.2: Species rich mix (EG10: Tussock Grass Mixture)

Latin name	Common name
Alopecurus pratensis (EG10)	Meadow Foxtail (w)
Cynosurus cristatus (EM5 and EG10)	Crested Dogstail
Dactylis glomerata (EG10)	Cocksfoot
Festuca rubra ssp rubra (EM5 and EG10)	Slender-creeping Red Fescue
Poa pratensis (EG10)	Smooth-stalked Meadowgrass
Schedonorus arundinaceus (Festuca arundinacea) (EG10)	Tall Fescue (w)

Management Approach

During the initial establishment period

3.3.7 Other neutral grassland will be created and maintained by a relaxed grazing and/or mowing regime as set out in the OGMP in Appendix A.

3.3.8 To ensure the ongoing success of the grazing management on grassland creation, the habitat will be monitored quarterly during the first two years and bi-annually through the remaining three years of the initial establishment period. These monitoring visits will include identifying where areas which have not been adequately suppressed by grazing may require additional grassland cuts, as well as evaluate and adapt the GMP, and generally ensure the grassland is establishing to meet its target condition.

3.3.9 Any residual undesirable plants (i.e., docks) will be dug out or treated with spot herbicide, while bare areas which have not developed as intended will be oversown by hand.

3.3.10 The success of the initial establishment at the end of the first year will be evaluated and whether alterations need to be made to the management prescription or additional / different seeding is required will be identified.

Long-term

3.3.11 Long-term management includes routine / cyclical maintenance such as maintaining habitat integrity including removal of inappropriate scrub encroachment and undesirable weed species on an annual basis.

3.4 Lowland Acid Grassland

Design Context

3.4.1 This habitat will be provided in Area C which forms part of the Dean Moor CWS, to reinstate the original botanical communities which were historically present, in particular purple moor grass and rush pasture. This habitat will also be created adjacent to existing watercourses as this may represent the natural habitat type.

3.4.2 It is acknowledged that creating this habitat on previously intensively sheep grazed pasture will be difficult, not least the establishment of this habitat type will be dependent on underlying soil chemistry. To that end, the LEMP, and revisions, thereafter, will make provision for the ambition of achieving this habitat type in an appropriate duration which in accordance with the BNG Report (Appendix 8.8) is 15 years. The habitat will be monitored annually from establishment to determine success with future iterations of the LEMP being revised accordingly depending on species diversity and distribution across Area C.

Locations

3.4.3 This habitat will feature within the raised plateau within Area C which forms part of the Dean Moor CWS, and adjacent to existing watercourses which flow south to north through the Site within Area C. The banks of the watercourse which runs west to east towards Rigg House Farm will also be managed with an aim of delivering lowland acid grassland.

Objectives

3.4.4 The objectives of the habitat are to:

a. Restore grassland diversity and sward heterogeneity in Dean Moor CWS which is designated for its acid moorland habitats with purple moor grass and rush pasture communities.

b. Increase the extent of this habitat within the Site by focusing on watercourses where soil conditions may be suitable.

c. Provide a diverse and healthy sward of locally occurring grass species that can support local wildlife across the Site.

d. Support the annual cycles of pollination and flowering of grassland species and promote the establishment of purple moor grass and rush pastures in Area C of the Site.

e. Increase the extent of nesting and foraging habitat for ground nesting birds.

f. Provide habitats for invertebrates including diverse assemblages of beetles, butterflies, and bumble bees which act as food sources for bats, birds and other terrestrial wildlife species.

Targets

3.4.5 The targets for acid grassland are:

- To expand the coverage of acid grassland on Site which can support a range of native species within the initial establishment period.
- Achieve 'Poor' target condition in accordance with BNG metric in the CWS within Area C and enhance the small area which lies close to Thief Gill to 'Good' condition.

Prescriptions

3.4.6 The following management prescriptions are proposed for lowland acid grassland:

a. Existing acid grassland will be maintained through a combination of reinstatement of locally occurring species and seeding of suitable native species typical of this grass type, such as those set out in Table 3.3. Additional species may be included provided they represent indicator species for this habitat type. Where possible generic seed mixes should be supplemented with locally collected seeds of species of value to local invertebrates.

b. Acid grassland will be targeted within the areas as shown on the LSP (ES Figure 7.6.1-7.6.5).

c. Generally sowing will take place in the autumn or spring and when the weather conditions provide warmth and moisture. Surface sow in overlapping sections. Do not cover seed but firm in using a roll to ensure good seed to soil contact (refer to section 2.3 for further details on approach to seeding for disturbed and undisturbed ground).

d. The prescribed ground vegetation management routine (mowing, grazing, or a combination thereof) would control annual weeds while managing the balance between faster growing grasses with the wildflower species that take longer to establish.

Table 3.3: Acid Grassland Species

Latin name	Common name
Festuca rubra	Red fescue
Carex arenaria	Sand sedge
Agrostis curtisii	Bristle bent
Bromus hordeaceus	Soft brome
Vulpia ciliata	Bearded fescue
Aira praecox	Early hair grass
Avenalla flexuosa	Wavy hair grass
Erica cinerea	Bell heather
Lotus corniculatus	Bird's foot trefoil
Lathyrus linifolius	Bitter vetch
Erodium cicutarium	Common stork's bill
Succisa pratensis	Devil's bit scabious
Galium saxatile	Heath bedstraw
Galium verum	Lady's bedstraw
Pedicularis sylvatica	Lousewort
Pilosella officinarum	Mouse-ear hawkweed
Viola lactea	Pale dog-violet
Conopodium majus	Pignut
Potentilla erecta	Tormentil
Thymas drucei	Wild thyme

Management Approach

3.4.7 Acid grassland would be maintained by a relaxed mowing regime and/or grazing regime as set out in the outlined in the OGMP in Appendix A.

3.4.8 Sheep may be used within Work No. 1 – Solar PV Infrastructure **[REF: 2.3]**, although the use of cattle within Dean Moor CWS outside of Work No. 1 may also be explored over the operational lifetime of the generating station.

During the initial establishment period

3.4.9 If mowing is undertaken, ad-hoc mowing to be undertaken to control annual weeds and manage the balance of grass establishment between the slower growing wildflowers. In subsequent years, one or two cuts may be required at the end of the summer which would maintain diversity and interest. All mowing operations shall be undertaken between late August and early October during dry weather: Arisings should be removed from site. Where possible, cuttings shall be left lying for 1-7 days to allow seeds to ripen and drop. Margin would be left where grassland is adjacent to other habitats and would be mown less frequently than the main grassland area. Margins would remain undisturbed other than when mown to allow a refuge for invertebrates and other animals.

3.4.10 To ensure the ongoing success of the grassland management, the habitat will be monitored quarterly during the first two years and bi-annually through the remaining three years of the establishment period. These monitoring visits will include identifying where areas which have not been adequately suppressed by grazing may require additional grassland cuts. These visits will evaluate and inform GMP adaptation where required, to generally ensure the grassland is establishing to meet its target condition.

3.4.11 Any residual undesirable plants (i.e., docks) will be dug out or treated with spot herbicide, while bare areas which have not developed as intended will be oversown by hand.

3.4.12 The success of the establishment at the end of the first year will be evaluated and whether alterations need to be made to the management prescription or additional / different seeding is required will be identified. The monitoring party's engagement with CWT will confirm if the habitat type should be pursued, or other more generic grassland habitats, such as 'other neutral grassland' would be best suited to the Site.

Long-term

3.4.13 Long-term management includes routine / cyclical maintenance such as maintaining habitat integrity including removal of inappropriate scrub encroachment and undesirable weed species on an annual basis.

3.5 Broadleaf Woodland

Design Context

3.5.1 Broadleaf woodland is proposed in various locations across the Site as shown on the LSP (ES Figure 7.6.1-7.6.5). Generally, woodland has been proposed as multifunctional green infrastructure that performs a screening function to reduce or eliminate potentially adverse visual effects for receptors identified within ES Chapter 7), while also providing additional habitat and landscape scale connectivity across the Site.

Locations

3.5.2 Proposed broadleaf woodland is targeted along the northern / north-western boundary of Area A, on the western boundary of Area C contiguous with the adjoining replanted ancient woodland, in parcels on the northern extents of the escarpment within Area C, and in small woodland blocks in the northeast of Area C.

Objectives

3.5.3 The broad objectives of this habitat are to:

- Create a screening function along Branthwaite Road which will reduce potential visual effects for residents of Wythemoor Sough and adjoining barn and stable (hereafter referred to as 'Wythemoor Sough') and road network users.
- Provide a level of visual screening for residents off the Branthwaite Edge Road to the east of Area C.
- Facilitate and improve green infrastructure network connections along the northern escarpment within Area C.
- Integrate with retained woodland, mature vegetation, and riparian habitats.
- Improve biodiversity through provision of areas of shelter and enhanced habitat availability for breeding and foraging by a range of species as well as contribute to green networks and support species distribution and dispersal in the wider landscape.

Targets

3.5.4 The targets for this landscape element are to:

a. Achieve proposed area coverage of a minimum of 75% by the end of the establishment period covered by the first iteration of the LEMP.

b. Target that 'Mixed Deciduous Woodland' and primary species are present 15 years following implementation including: *Quercus robur* (Oak), *Alnus glutinosa* (Alder), *Acer campestre* (Field Maple), *Acer pseudoplatanus* (Sycamore), and *Betula pubescens* (Downy Birch).

c. Ensure that vegetation forms groups of similar species, with a form and height reflective of those in the vicinity to reflect local vegetation structure.

d. Ensure that the woodland will be reasonably diverse with a range of native woody species which is resilient to disease and climate change.

e. Create woodland which can provide effective visual screening before or at least by year 15.

f. Achieve both 'Moderate' and 'Good' target condition in accordance with BNG metric for created woodland and enhance existing broadleaved woodland from 'Moderate' to 'Good'.

Prescriptions

3.5.5 The following prescriptions are proposed for broadleaf woodland creation:

a. Typically, new woodland would be planted at a density of 1 plant per 1.5m^2.

b. Planting plot mixes to be typically, 60% Trees, 40% Shrubs.

c. Nursery stock to be used:

- For trees typically - 3% Heavy Standard, 5% Standard, 12% Feathered and 80% transplants (typically Bare Root ('BRT') stock 40-60cm height).
- For shrubs 100% transplants typically BRT stock 40-60cm height.

d. All new woodland will be watered and protected from rabbit encroachment by appropriate exclusion fencing.

e. New woodland would undergo establishment period management for a duration of 5 years. Beyond this period maintenance would be undertaken as detailed in the subsequent LEMP iterations to be provided (and updated every 5 years for a duration of 35 years). This would include thinning, with selected areas coppiced or pollarded on rotation, typically this would require removal of ~15% of trees in the years 5-10.

f. Where coppicing is used, trees will be cut on first occasion to a 20cm height above ground, and thereafter any regrowth will be cut back to the same point. Pollarding will be used where there is a means to prevent browsing of the regrowth by sheep.

g. An illustrative species list for woodland planting is provided in Table 3.4. *Fraxinus excelsior* (Ash) is not specified for use in planting due to the high risk of importing *Hymenoscyphus fraxineus* (ash dieback) disease and the ability of the species to readily colonise.

Table 3.3: Broadleaf woodland illustrative species

Latin name	Common name
Acer campestre	Field maple
Acer pseudoplatanus	Sycamore
Alnus glutinosa	Alder
Betula pendula	Silver birch
Betula pubescens	Downy birch
Carpinus betulus	Hornbeam
Corylus avellana	Common hazel
Euonymus europaeus	Common spindle tree
Ilex aquifolium	Common holly
Fagus sylvatica	Common beech
Larix decidua	European Larch
Lonicera periclymenum	Common honeysuckle
Populus nigra subsp. betulifolia	Black poplar
Prunus spinosa	Blackthorn
Quercus robur	Common oak
Quercus pubescens	Downy oak
Rosa canina	Dog rose
Salix caprea	Goat willow
Sorbus aucuparia	Rowan
Tilia × europaea	Common lime

Management Approach

3.5.6 The management approach for broadleaf woodland is set out below:

a. New woodland will undergo establishment period management for a duration of 5 years. During this period, tree and shrub planting will be monitored in August, when trees are in leaf for signs of stress or failure.

b. New woodland will be managed to maintain a dense low canopy that provides effective visual screening to sensitive receptors. A scrub / shrub layer within the woodland would be encouraged through inclusion of scrub / shrub species.

c. Woodland will be created through a mixture of new planting and natural generation. To provide new woodland, trees will be planted in random formation to support natural colonisation. Woodland plots will have scalloped edges where possible.

d. All new woodland will undergo thinning as required, with selected areas coppiced or pollarded on rotation. Typically, this will require removal of ~15% of trees in the years 5-10. Thinning will be carried out in winter by hand using chainsaws. Weak, damaged, or irregular growth trees will be selected for removal. Any retained mature or veteran trees within these plots will be protected and retained.

e. Thinning, pollarding, or coppicing operations would aim to maintain visual screening or continuity of habitat corridors as much as possible while balancing the objective to provide light to ground flora and bushy re-growth.

f. Dead wood within woodland would be left in situ and not disturbed as much as possible to provide habitat for invertebrates.

g. New woodland would be protected from rabbits and sheep by means of appropriate fencing. Areas required for dense visual screening would be permanently protected from sheep to maintain a low canopy and shrub layer.

h. Tree pruning works should be completed in accordance with current best practice guidance. All tree works should be undertaken by a qualified arboriculturist or tree surgeon. Works are to comply with BS3998 *'Tree Work – Recommendations'*[14], and HSE Forestry and Arboricultural safety leaflets[15]. Chainsaw operatives must hold a certificate of competence. Chain or hand saw wounds will be as small as possible, cutting back to sound wood leaving a smooth surface, angled to shed the water, and avoiding bark tears.

3.6 Scrub

Design Context

3.6.1 Native scrub planting is proposed to create and establish linkages between areas of existing, proposed, and retained woodland, and within areas of proposed and existing vegetation, and to provide shelter and habitats suitable for wildlife, including protected species.

3.6.2 Planting will also strengthen green corridors and improve biodiversity opportunities, whilst offering a degree of visual screening. Native scrub planting is proposed to the periphery of new woodland and species-rich grassland, and to the periphery of retained vegetation.

[14] BSi (2010) Tree Work: Recommendations

[15] HSE, Various [online] Accessed February 2025

Locations

3.6.3 Native scrub planting will be targeted in the following areas of the Site:

- Within the north-western part of Area A and south-western edge of Area A connecting areas of existing woodland.
- Adjacent to existing retained watercourses within Area C, in particular around the escarpment and Thief Gill.
- Within the central northern area of Area C to enhance proposed species-rich grassland, broadleaved woodland, and the area of existing woodland.

Objectives

3.6.4 The broad objectives applicable to native scrub planting are to:

- Provide a landscape buffer to existing and proposed features and elements throughout the Proposed Development.
- Improve the existing structure of vegetation throughout the Site.
- Improve biodiversity and green infrastructure through creation of diverse native species habitat and planting structures that link to existing wildlife corridors and provide opportunities for shelter and foraging for a range of species.
- Contribute to resilience and adaptation to climate change. Species selection will provide a climatically resilient planting mix, accounting for potential changes in rainfall and temperature in the future by accommodating a mix of species planting and allowing for natural adaptation and resilience against potential future diseases. Provide additional sources of native flowering and fruiting shrubs to enhance invertebrate populations and provide a food source to support local wildlife.

Targets

3.6.5 The targets for native scrub planting are to:

a. Provide suitable habitat with primary target species (small trees) in keeping with local woodland to be present 15 years following implementation including *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), and *Lonicera periclymenum* (Honeysuckle) by the end of the establishment period.

b. Manage the landscape element to achieve area coverage of a minimum of 75% by the end of the establishment period.

c. Form vegetation groups of similar species, with a form and height reflective of those in the vicinity to reflect local vegetation structure.

d. Achieve ‘Moderate’ target condition in accordance with BNG metric for new areas of scrub and enhance existing areas to both ‘Moderate’ and ‘Good’ condition.

Prescriptions

3.6.6 The following prescriptions are proposed for scrub planting creation:

- New scrub planting would be planted at a density of 1 plant per $2m^2$.
- Nursery stock to be used: 100% transplants typically BRT stock 40-60cm height.

3.6.7 New planting will be created using a mixture of suitable native species.

Illustrative species are set out in Table 3.5.

Table 3.5: Native scrub planting illustrative species

Latin name	Common name
Acer campestre	Common maple
Corylus avellana	Common hazel
Crataegus monogyna	Common hawthorn
Cytisus scoparius	Common broom
Lonicera periclymenum	Common honeysuckle
Malus sylvestris	Common crab apple
Prunus spinosa	Blackthorn
Rosa canina	Dog rose
Rubus fruticosus	Bramble
Ulex europaeus	Gorse
Viburnum opulus	Guelder rose

- New scrub planting would undergo establishment period management for a duration of 5 years.
- If required coppicing would commence 5 years after the scrub planting has established and matured to ensure succession to woodland is controlled and managed.
- A maximum of 30% of the total planted area would be cut in any one year to ensure dense growth is always present with some shrubs able to produce berries.
- If pruning is required it should encourage basal growth, rejuvenate plants, and promote good flowering.
- Management of scrub will be undertaken in accordance with best practice guidelines to prevent impacts to species such as nesting birds.

Management Approach

3.6.8 Native scrub planting should not require regular management; however, some maintenance measures may be necessary; these are listed below:

a. Prune plants to remove any dead, dying or diseased wood in accordance with best horticultural practice.
b. Monitor no less than every 5 years for signs of succession to woodland and carry out pruning or coppicing should it be required to prevent this.
c. Native shrub on woodland edge will be coppiced on rotation, with a selection cut every winter to maintain graduation of structure.
d. Pruning will be undertaken to maximise the availability of edge habitat which will blend in sympathetically with adjacent habitats and not lead to clearly defined hard edges.
e. Pruning works should be completed in accordance with current best practice guidance. All tree works should be undertaken by a qualified arboriculturist or tree surgeon. Works are to comply with BS3998 *'Tree Work – Recommendations'*, and HSE Forestry and Arboricultural safety leaflets. Chainsaw operatives must hold a certificate of competence. Chain or hand saw wounds will be as small as possible, cutting back to sound wood leaving a smooth surface, angled to shed the water, and avoiding bark tears.

3.7 Native Hedgerow

Design Context

3.7.1 New native hedgerows will be a valuable part of the Site's green infrastructure contribution and will also support screening of generating station infrastructure and facilitate visual integration of the Proposed Development into the wider landscape.

Locations

3.7.2 New native species hedgerows would include hedges at up to 3-3.5m in height, and hedgerows at 1.5-2m in height.

3.7.3 Proposed new native species hedgerows of 3-3.5m in height, will be targeted the south-eastern corner of the Proposed Development and will act to filter or screen views from nearby residents / commercial property.

3.7.4 Proposed new native species hedgerows of 1.5-2m height will be more widespread, and are proposed to be located:

- In proximity to watercourses within Area C at a distance of no less than 8m from the top of the banks.
- Along sections of the eastern boundary of Area C (these will act largely as enhancement/restoration of an existing sparse and patchy boundary feature).
- A short linear section within Area A which will act to connect existing vegetation to enhance green infrastructure.

Objectives

3.7.5 The broad objectives applicable to the creation of native species hedgerows are to:

- Provide connections between new and existing woodland, and scrub planting.
- Provide supplementary visual screening of the generating station equipment and 'break up' blanket visibility of solar arrays.
- Improve biodiversity through creation of diverse habitat and planting structures that link to existing wildlife corridors and provide opportunities for shelter and foraging for a range of species, in particular breeding birds and foraging bats.
- Contribute to resilience and adaptation to climate change. Species selection will provide a climatically resilient planting mix, accounting for potential changes in rainfall and temperature in the future by accommodating a mix of species planting and allowing for natural adaptation and resilience against potential future diseases.
- Provide additional sources of native flowering and fruiting shrubs to enhance invertebrate populations and provide a food source to support local wildlife.

Targets

3.7.6 The targets for native species hedgerow are:

- Establish hedgerows with a range of native woody species with similarities to local hedgerows by the end of the initial establishment period. Primary target species include *Crataegus monogyna* (hawthorn), *Euonymus europaeus* (spindle), *Corylus avellana* (hazel) and *Acer campestre* (field maple).
- Manage the hedgerow landscape features to achieve 85% coverage by the end of the initial establishment period and ensure that new hedgerows have no gaps and provide an intact linear element.
- Achieve 'Good' target condition in accordance with BNG metric for newly created hedgerows and enhance existing hedgerows to 'Moderate' and 'Good' condition.

Prescriptions

3.7.7 The following prescriptions are proposed for new and improved/reinforced existing native species hedgerows:

- New planting, including for gapping up existing hedgerows, will be created using a mixture of suitable native species. Specifications are defined in Table 3.6.
- New hedgerow planting will be undertaken at a density of five plants per linear metre, planted in a double staggered hedgerow with 0.4m offset, with plants at 0.4m centres.
- New hedgerows will undergo establishment period management for a duration of 5 years, including suppressing grass growth and topping hedgerow to control growth. Beyond this maintenance will be undertaken as detailed in the LEMP.
- Hedgerow plants would be protected from rabbits and sheep.

Table 3.6: Native species hedgerow illustrative species

Latin name	Common name
Acer campestre	Common maple
Corylus avellana	Common hazel
Crataegus monogyna	Common hawthorn
Euonymus europaeus	Common spindle tree
Ilex aquifolium	Common holly
Lonicera periclymenum	Common honeysuckle
Prunus spinosa	Blackthorn
Rosa canina	Dog rose

Management Approach

3.7.8 The following approach to native hedgerow will be undertaken:

- Following their establishment, hedgerows will undergo thinning as required, then trimmed on rotation every 2-3 years, to promote bushy regrowth. In relation to hedgerow management, any existing mature trees located within hedgerows, or trees with features suitable for roosting bats, or with deadwood suitable for invertebrates, will be retained and not removed, pollarded, or coppiced.
- Hedgerows will be cut, likely using tractor mounted strimmer's with a cutting blade and not a rotary drum. Cutting will occur after the flowering season and once fruiting species have dropped fruit. Management will also not occur when grassland at hedgerow bases is in flower or setting seed.

- All hedgerow management will follow best practice and will limit impacts during the nesting bird season, generally taken as March to August inclusive.
- New hedgerow plants will be protected from rabbits and sheep until established.

3.8 Hedgerow Trees

Design Context

3.8.1 Hedgerow trees and individual trees are included within Site's green infrastructure strategy to strengthen existing hedgerow boundaries and provide additional visual screening or filtering of views towards the Site at strategic locations. Species selected will reflect those listed in Table 3.7 below. It is not recommended to plant ash trees, due to ash dieback disease.

Locations

3.8.2 Proposed trees would be located:

- To the northern boundary of Area A to support existing hedgerow along Branthwaite Road.
- South of the Rigg House Farm outbuildings within the proposed native species hedgerow, perpendicular to Branthwaite Edge Road.
- Along the south-eastern boundary of Area C south of the Rigg House Farm outbuildings within / adjacent to the existing hedgerow adjacent to Branthwaite Edge Road.
- Around the perimeter to the southeast corner of Area C, planted in groups of three within proposed native scrub planting and adjacent to species rich wildflower grassland and native species hedgerow.

Objectives

3.8.3 The broad objectives applicable to the creation of native species hedgerows trees are:

- Individual trees to be planted and maintained in a manner which allows them space to mature and develop an open crown.
- Trees will be planted to maximise opportunities for biodiversity including the provision of additional nesting resources for birds; increased shelter, commuting and foraging areas for birds, bats and invertebrates.
- To improve the landscape structure and green infrastructure on the Site and promote green networks in the surrounding landscape.

Targets

- The landscape element will be maintained to achieve a 95% success rate for planted stock by the end of the initial establishment period.
- To improve hedgerow condition to contribute to Site-wide BNG commitments.

Prescriptions

3.8.4 The following management prescriptions are proposed for planting of individual trees:

- Location of individual tree planting will be determined based on accessibility and reducing risk of unsympathetic management.
- Nursery stock to be used: for trees typically 100% Heavy Standard.
- Individual hedgerow trees would undergo establishment period management for a duration of 5 years. Beyond this maintenance would be undertaken as detailed in the LEMP.
- Individual hedgerow trees will be protected from rabbits and sheep by means of appropriate fencing or guards until established.
- Following the establishment period, individual hedgerow trees will be assessed every 5 years by an arboricultural specialist, and any required pruning or maintenance (such as removal of guards) will be carried out as necessary.
- Indicative new tree planting species includes the following species, in Table 3.7.

Table 3.7: Hedgerow tree species

Latin name	Common name
Acer campestre	Field maple
Acer pseudoplatanus	Sycamore
Alnus glutinosa	Common alder
Crataegus monogyna	Hawthorn
Corylus avellana	Hazel
Ilex aquifolium	Holly
Malus sylvestris	European crab apple
Prunus avium	Wild cherry
Pyrus communis	Pear
Sambucus nigra	Elder

Latin name	Common name
Quercus robur	Common oak

Management Approach

3.8.5 The following approach to hedgerow trees will be undertaken:

- Hedgerow tree planting would be protected from rabbits and sheep by means of appropriate fencing or guard until established.
- Regular checks and formative pruning would be carried out as necessary by an arboricultural specialist during the initial establishment and throughout the management period.

3.9 Willow Screen

Design Context

3.9.1 A band of willow is located adjacent to the pond within Area D to provide a level of protection for wildlife from users of the permissive path which will pass to the west. The screen could be ready-made 'off the shelf', providing instant screening ability.

Locations

3.9.2 The screen would be located west of the pond within Area D (between Areas A and B, south and west of the Wind Farm turbines), and directly east of the new permissive path.

Objectives

3.9.3 The willow tree band will be placed in such a way that it would provide noise and visual screening for wildlife utilising the pond from recreational users of the proposed permissive path.

Prescriptions

3.9.4 The willow screen will require to be coppiced by one third every 3-5 years.

Targets

3.9.5 Targets for the willow screen are:

- To provide a relatively low-maintenance, efficient solution for visual and noise screening.

- To create an attractive area surrounding the pond to enhance the experience of recreational users of the permissive path.
- To promote biodiversity and increase opportunities for foraging and nesting by local wildlife, by providing visual separation from the adjacent pond within Area D to encourage its use.

Management Approach

3.9.6 The following approach to willow screen will be undertaken:

- Given the speed at which willow can grow, the band would need coppiced every 3-5 years by approximately one third. All coppicing should be carried out at an appropriate time of year to avoid impacts on ecology receptors such as nesting birds.
- Any grass around the base of the structure should be cleared before planting and a weed control membrane considered.
- A deep mulch of composted bark or bark chippings should be used.
- The willow should be watered thoroughly in any dry spells.

3.10 Riparian Planting

Design Context

3.10.1 Riparian planting is vegetation along the banks of existing watercourses and waterbodies, which is in addition to grassland habitats (i.e., lowland acid grassland) which will be established as the main ground cover. It is proposed to create and establish linkages between areas of existing, proposed, and retained features, to provide protection to the watercourses.

3.10.2 Planting will strengthen blue infrastructure corridors and improve biodiversity opportunities, through new shelters and habitats suitable for wildlife, including protected species, which occupy the Site.

Locations

3.10.3 Riparian planting will be targeted in the following areas of the Site:

- Adjacent to existing watercourses within Area C, in particular around the escarpment and Thief Gill.

Objectives

3.10.4 The broad objectives applicable to riparian planting are to:

- Improve the existing structure of vegetation throughout the Site.

- Provide benefit to the environment and improve water quality (riparian zones help filter sediment and nutrients before they enter waterways).
- Improve biodiversity through creation of diverse native species habitat and planting structures that link to existing wildlife corridors and provide opportunities for shelter and foraging for a range of species.

Targets

3.10.5 The targets for this landscape element are to:

- Provide suitable habitat with primary target species (small trees) in keeping with local species to be present 15 years following implementation including *Alnus glutinosa* (alder), *Salix cinerea* subsp. Oleifolia (grey willow), *Salix alba* (white willow), and *Betula pubescens* (downy birch), Populus nigra subsp. betulifolia (Black poplar) by the end of the initial establishment period.
- Manage the landscape element to achieve area coverage of a minimum of 75% by the end of the initial establishment period.
- Form vegetation groups of similar species, with a form and height reflective of those in the vicinity to reflect local vegetation structure.

Prescriptions

3.10.6 The following prescriptions proposed for riparian planting are:

a. New planting would be planted at a density of between 1 plant per 1.5m^2 and 2m^2.
b. Planting plot mixes to be typically, 50% Trees, 50% Shrubs.
c. Nursery stock to be used:
    - For trees typically 20% Standard, 30% Feathered and 50% transplants (typically BRT stock 40-60cm height).
    - For shrubs 100% transplants typically BRT stock 40-60cm height.
d. All new planting will be watered and protected from rabbit and sheep encroachment by appropriate exclusion fencing.
e. New planting would undergo establishment period management for a duration of 5 years. Beyond this maintenance would be undertaken as detailed in the subsequent LEMP iterations.
f. If required coppicing would commence 5 years after the planting has established.
g. Management of planting will be undertaken in accordance with best practice guidelines to prevent impacts to species such as nesting birds.
h. An illustrative species list for planting is provided in Table 3.8.

Table 3.8: Riparian planting illustrative species

Latin name	Common name
Alnus glutinous	Common alder
Betula pubescens	Downy birch
Carex sylvatica	Wood sedge
Carex riparia	Greater pond sedge
Juncus effusus	Soft rush
Juncus inflexus	Hard rush
Polypodium vulgare	Common polypody (Fern)
Polystichum setiferum	Soft shield fern
Populus nigra subsp. betulifolia	Black poplar
Salix cinerea subsp. Oleifolia	Grey willow
Salix alba	White willow

Management Approach

3.10.7 Planting should not require regular management; however, some maintenance may be necessary, and these are listed below:

- Prune plants to remove any dead, dying or diseased wood in accordance with best horticultural practice.
- Monitor every 5 years for signs of succession to woodland and carry out pruning or coppicing should it be required to prevent this.
- Pruning will be undertaken to maximise the availability of edge habitat which will blend in sympathetically with adjacent habitats and not lead to clearly defined hard edges.
- Pruning works should be completed in accordance with current best practice guidance. All tree works within riparian areas should be undertaken by a qualified arboriculturist or tree surgeon. Chainsaw operatives must hold a certificate of competence. Chain or hand saw wounds will be as small as possible, cutting back to sound wood leaving a smooth surface, angled to shed the water, and avoiding bark tears.

3.11 Ecological Measures

Design Context

3.11.1 Targeted ecological measures will be implemented as part of the Proposed Development's operational management regime. These will include but may not be limited to the following:

a. Erection of barriers and fences for hedgerows, watercourses as appropriate, ancient woodland and peat containing soil to protect them from grazing and other Site activities.

b. The adoption of a GMP covering the use of grazing for ground cover management across the Site and enhance habitats from ground nesting birds.

c. Supplementary planting and seed mixes to enhance hedgerow boundaries and riparian corridors. Planting and seed mixes will be representative of the local landscape.

d. Enhancement and protection of watercourses and ponds to promote and maintain fringe and open water habitats which will benefit riparian plant species, invertebrates, birds and aquatic species, including European eel and brown trout.

e. Installation of bat and bird boxes on suitable trees across the Site.

f. Creation of habitat / log piles in suitable areas across the Site to diversify habitats and provide shelter for species which may occupy the local area, including hedgehogs, reptiles and amphibians, and invertebrates. These will be sited to promote the uptake of ecology elements and features and maximise the use of the green infrastructure network.

g. The appointment of relevant monitoring parties which will include, as a minimum, appropriately qualified ecological and arboricultural experts to undertake tasks including but not limited to monitoring visits to assess habitat conditions against BNG commitments; report on success or otherwise of planting within margins; monitor the functionality of mammal gaps, and provide advice and Site, and as a presence for any ancillary work needed for Site operation.

h. Drainage channels and SuDS infrastructure will be maintained and managed to promote use by species and maximise the extent of the green and blue infrastructure across the Site.

Location

3.11.2 Ecological enhancements occur throughout the Site, and protection of ecological interests secured by the LEMP will be for the Site as a whole. However, there are some areas that are considered more sensitive which will benefit from additional monitoring and focus of mitigation efforts. These are the part of Area C, which is also within the Dean Moor CWS, area of peat within Area C, and for blue infrastructure including ponds and ordinary watercourses such as the Thief Gill.

Objectives

3.11.3 The objectives of the ecological measures are as follows:

- Provide opportunities for species such as bats and birds to breed and roost, and areas of shelter for other animals and invertebrates.
- Seek to prevent both harm and disturbance to wildlife and allow them to continue to survive, breed and shelter within the Site.
- Provide enhanced green and blue infrastructure to support dispersion and facilitate dispersal across the local landscape.
- Support species populations by retaining key habitats and providing enhancements.

Prescriptions

Habitats

3.11.4 Species diverse grassland habitats, retained and enhanced woodland, scrub, hedgerows, and trees will be monitored at least annually for the five years of establishment. Terrestrial habitat monitoring will follow UKHab methodology and record both botanical species composition and habitat condition. Monitoring will determine the need for interventions such as additional sowing, slot seeding, alterations to the grazing regime, additional tree or shrub planting or increased watering during summer months, or the cutting back of scrub when it encroaches onto grassland areas or watercourses.

3.11.5 Although grassland may be maintained by grazing, as will be set out in a GMP, any arisings from mechanical cutting will be removed from Site. Should tree thinning or removal be undertaken then cuttings can be included as habitat piles around the Site and in areas recommended by the Site's ecological advisors.

3.11.6 Buffers of any development, including perimeter fencing, will be maintained for features such as hedgerow and at least 8m from any watercourse (there is a further approximately 5m buffer from any perimeter fencing to solar PV arrays). This is to promote the creation of a species rich buffer which supports a diversity of grassland and wildflowers. These margins will be allowed to grow to a greater height than those under and

between solar arrays which will serve to enhance the habitat for small mammals and invertebrates, in particular pollinators.

3.11.7 A heterogenous sward with bare areas will be encouraged as this will provide niches for invertebrates as well as foraging and habitat for ground nesting and overwintering birds.

3.11.8 Ponds and watercourses monitored at least annually for the five years of establishment to confirm they are progressing as planned and not impacted by surface water run-off, with particular attention being paid to Thief Gill. Watercourses will be checked to ensure debris does not build up behind watercourse crossings such as culverted access tracks, or that they become blocked which may affect flow regime. Marginal vegetation will be cut back where it encroaches on to open water habitats.

3.11.9 Should any swales and ditches be provided as part of the Drainage Strategy they will be monitored for pollution and sedimentation and to confirm any potential overflow does not impact watercourses which drain into Thief Gill.

Fences

3.11.10 All fences and guards which protect trees and woodland plots will be monitored regularly for damage.

3.11.11 Barriers (temporary or permanent) which protect watercourses and buffers from grazing livestock will be fit for purpose, with any damage repaired, before grazing is allowed to occur in that part of the Site. Where mammal gates or gaps are incorporated into fences, they will be inspected to confirm they are in sound working order. Maintenance of mammal gates or gaps will be undertaken regularly as part of the Site visual inspection regime as described in the OOMP (ES Appendix 3.1).

3.11.12 All perimeter fencing of the Proposed Development will be regularly checked to ensure it is safe and fit for purpose. Repairs and replacement of fencing will be made as soon as practically possible as and when required.

Non-statutory Protected Sites

3.11.13 All works in Dean Moor CWS will be subject to additional monitoring and method statements where required. This will include the following:

- Reviewing the results of any changes to the grazing regime within the CWS in relation to sward height, diversity of habitats and species, and presence of fauna.
- Recording evidence of damage to fences or sward and implementing corrective measures as soon as possible.
- Undertaking annual recording of grassland species diversity and habitat condition for the 5 years of establishment within the CWS. A methodology will be adopted (e.g. quadrats) to facilitate repeatability and detect changes in habitat.

Ecology Elements

3.11.14 Bat and bird boxes will be erected on suitable trees at the edge and within the Site, particularly in broadleaved woodland. A range of box types will be installed on trees and facing a range of orientations to support uptake across the seasons and prevailing weather conditions. All boxes will be installed at a height where they will be safe from predators, not exposed to disturbance, and where they can be retained for the duration of the Proposed Development. Monitoring will be carried out by an ecologist, although a suitably licensed bat ecologist will be employed to check bat boxes.

3.11.15 Details of the locations and specifications will be provided by the LEP and LEMP. They will indicate the species being targeted, numbers of boxes used, make and model, and orientation.

3.11.16 Habitat piles can be distributed across the Site to support wildlife and invertebrates. They would be placed within or adjacent to areas where habitats are being managed for biodiversity. This will include at the bases of hedgerows, within woodland, adjacent to ponds, and alongside watercourses. All elements will need to be sited where they are free from disturbance, including that which may arise from temporary grazing. Piles can be created from hedge and tree cuttings made as part of ongoing management, while grassland cuttings could be heaped to form compost piles.

Targets

3.11.17 The objectives of the above measures are:

- To safeguard habitats and ensure they attain suitable condition and extents to maintain their ecological functionality during the establishment.
- To protect animals from harm during the operational phase and to provide habitat and other elements useful for a range of ecological functions.
- To contribute to the overall biodiversity value of the Site and improve upon existing habitat type and quality.
- Maximise use of green and blue infrastructure by wildlife and meet BNG commitments.

Management

3.11.18 Habitats will be managed to promote improvements for ecological receptors as set out below. All management will be carried out at an appropriate time of year and subject to agreement between the Applicant's O&M Contractor and team and the monitoring parties, including the use of an ECoW for any works that are akin to construction activities (e.g., excavations, activities involving night lighting, removal of dead trees, etc). Management will adhere to best practice and take account of seasonal constraints and the likely presence of ecology receptors, for example nesting birds and roosting bats.

Ecologically Sensitive Lighting Strategy

3.11.19 A lighting strategy has been included in the OCEMP (Appendix 5.1) and it will be adopted during the operational phase to safeguard habitats and species.

3.11.20 Any maintenance works will generally cease or be winding down before dusk when bats emerge and will not begin before dawn when bats return to roosts. Therefore, it is not expected that artificial night lighting be required.

3.11.21 However, in late autumn or early spring when daylight hours are limited but weather conditions may be suitable for bats to be active, there may be a brief overlap between bat activity and on-Site maintenance works.

During this period lighting may be required to enable the maintenance works to progress.

3.11.22 In these circumstances, a sensitive lighting strategy is required. Lighting should be kept to the minimum required, with no upward directed lighting and should be directed away from features suitable for bats. In particular watercourse corridors, woodland edges, and hedgerows will be avoided.

3.11.23 The location and associated lighting of any required temporary Site compound set up to facilitate maintenance should be advised by a suitably experienced ecologist prior to its installation. This should be kept to the minimum required for safety and security and avoid light spill onto sensitive habitats.

Biosecurity Management Plan

3.11.24 No invasive non-native species ('INNS') were identified during surveys. Rhododendron was identified off-Site, close to the eastern boundary, and measures will be taken to prevent this plant, and any other INNS from becoming established on the Site.

3.11.25 The OLEMP does not provide details on the management of INNS as none are present on-Site. The CEMP includes best practice measures to minimise the potential for INNS and their spread during the construction phase.

3.11.26 For the operational phase of the Proposed Development, a Biosecurity Management Plan for INNS will be detailed in the LEMP. Furthermore, this will include monitoring during operation for INNS.

3.11.27 Should any INNS be recorded during annual ecological surveying and general Site monitoring, then an eradication plan will be prepared and implemented. This may include spot treating with herbicide, removal or consultation with an invasive species contractor. The approach taken will be similar to that set out in the OCEMP. The LEMP will include a methodology specific to the operational phase but in alignment with what is provided in the CEMP.

4 Public Access and Engagement

4.1.1 The Applicant is committed to a Proposed Development that will deliver multifunctional green infrastructure benefits. A key part of this is seeking opportunities for outdoor recreation and improved connectivity between places and for interactions with nature.

Permissive Paths

4.1.2 While the wider PRoW network is well defined, there are no PRoW on the Site or immediately adjoining the Site where connections could be improved. Through public consultation the Applicant has been anecdotally advised of informal use of paths on land east and west of Area A and B and across the Site in Area D. Further detail on this topic and how public engagement has informed the Site's green infrastructure strategy is provided in section 6.3 of the DAD.

4.1.3 Whilst the Applicant is not seeking consent to create paths outside the Site, as part of the green infrastructure provision for the Site, two new permissive paths are proposed, the indicative routes for which are shown on Figure 7.7b: Permissive Paths. One of which is to the north through Area D and one of which is a new route providing positive new north/south connectivity along the western boundary of Area C.

4.1.4 An aim of the green infrastructure strategy is to provide greater access to the 'large irregular stone circle and a round cairn on Dean Moor' (the 'Stone Circle and Cairn') Scheduled Monument, and the local pond (within Area D) which is anecdotally accessed by members of the public.

4.1.5 The permissive path into Area D will be a walking loop, most likely to be of recreational interest for local residents. It will enter the Site off the Gilgarran Road and skirt the northwestern boundary of Area B until arriving in Area D with a small loop by the pond. If possible, without compromising the ecological interests of the area, a bench or other form of seating will be provided at a suitable distance to allow birdwatching and other wildlife observation in the area.

4.1.6 The permissive path across Area C is likely to have local interest and will also be a valuable contribution to the wider off-road walking route network. It will initiate to the north off Gilgarran Road and broadly follow the western boundary of the Site, passing by the Stone Circle and Cairn on the Site's boundary, eventually exiting on Dean Cross Road where the off-road network has a connection to Open Access Land immediately south of the Site and FP 404018 which is approximately 700m to the west.

4.1.7 The permissive paths would likely comprise either grasscrete or a geogrid pressed into the existing surface where required to provide stability and make them as accessible as reasonably possible.

4.1.8 Maintenance would be as and when required to keep the path safe and to prevent it becoming overgrown. This is detailed in the OOMP (ES Appendix 3.1) although all management of vegetation in proximity will be in accordance with the LEMP.

4.1.9 The final routes of the permissive paths will be shown on the LEP, with details of their makeup set out within the LEMP.

Public Engagement

4.1.10 The OOMP (section 5) sets out the Applicant's principles and commitments relating to community and stakeholder engagement over the operational period and these will not be duplicated in the OLEMP. If any matters arising from ongoing community engagement on benefits outside the scope of planning lead to commitments that are appropriate to detail in the LEMP (e.g. educational days, outdoor classroom opportunities, etc) they will be set out in this part of the LEMP.

5 Outline Management Schedules

5.1 Establishment period outline management

5.1.1 Table 5.1 identifies the outline management plan for the landscape elements as set out herein. It summarises the requirements for the initial establishment period (the first five-year period) for each element, the target measures, and the responsibility.

Table 5.1: Management Prescriptions

Management Feature	Locations	Management Prescriptions	Attribute against which to measure target	Detail (where required)	Timing
Retained vegetation and features					
Hedgerows	Site wide.	• Pruning – Cutting to promote healthy growth, a natural shape, and avoid obstruction within the proposed visibility splays.	• Hedgerow diversity including target species. • Hedgerow integrity, including connectivity and screening efficacy • Hedgerow achieving height prescribed on LSP		Annually
Existing Woodland (generally) and Woodland Enhancement	Site wide	• Arboricultural inspections • Coppicing on long rotation • Selective thinning and removal of coniferous plantation / replanting with native broadleaf species	• Structural diversity • Number of species / target species		Beyond initial establishment period
Existing Ponds & Watercourses	Area D and C	• No active management, periodic monitoring to ensure management of existing landscape elements does not impede functionality of watercourses.	Number of species / target species and coverage		Annual monitoring
Lowland Acid Grassland	Area C	• No active management, periodic monitoring.	Number of species / target species and coverage.		Annual monitoring

Management Feature	Locations	Management Prescriptions	Attribute against which to measure target	Detail (where required)	Timing
Other neutral grassland	Area C	• No active management, periodic monitoring.	Number of species / target species and coverage.		Annual monitoring
Dry Stone Wall	Area C	• No active management, periodic monitoring to ensure intactness of boundary and ad hoc repair	Intactness of feature		As required
Landscape Elements					
Other neutral grassland	Within Site co-located with solar development	• Sward height typically 70cm or less • Reinstate wear and tear, bald patches caused by overgrazing, by means of re-seeding	Number of species / target species and coverage.	Allow 10-12 weeks of initial establishment before permitting grazing. Mowing and / or grazing to be undertaken between October-March, and should be rotated between land parcels	Annually following establishment
Lowland Acid grassland (proposed)	Within the plateau of Area C, adjacent to Area C watercourses, and field margins within Area C	• Relaxed grazing regime to allow natural growth	Number of species / target species and coverage.	Monitor success of growth	Annually
Broadleaf Woodland	Northern boundary of Area A Various locations within Area C	• Initial establishment period maintenance, including: • Provide irrigation during the woodland's initial establishment period (Year 1)	• Number of species / target species • Screening effectiveness • Structural diversity	Watering as required	Annually

Management Feature	Locations	Management Prescriptions	Attribute against which to measure target	Detail (where required)	Timing
		and growing season (April-September) • Adjust any guy fixings, stakes, and ties at the start/end of growing season • General pruning • Replacement of dead or damaged plants • Weeding	• Survivorship		
Scrub	Northern boundary of Area A Various locations within Area C	• Coppicing on long rotation (outside OLEMP) • Pruning should encourage basal growth, rejuvenate plants, and promote good flowering.	• Number of species • Target species/habitat extent	Coppice one third of dense scrub in winter every 5 years	Annually at the start and end of the growing season
Native species hedgerow	Site and field parcel boundaries Adjacent to watercourses within Area C Internal areas within Area A	• Initial establishment period maintenance • Trimming on rotation	• Hedgerow diversity including target species. • Hedgerow integrity, including connectivity and screening efficacy	Cut/trim one side each year on rotation in winter annually following establishment	Annually
Hedgerow trees	Northern boundary of Area A Eastern boundary of Area C North and west of offset to property	• Initial establishment period maintenance • Arboricultural inspections to identify canopy thinning	• Crown shape and branch structure • Screening effectiveness	Maintenance to include cutting as required	Annually

Management Feature	Locations	Management Prescriptions	Attribute against which to measure target	Detail (where required)	Timing
	adjoining the southeast corner of Area C				
Willow Screen	Adjacent to the pond within Area D	• Initial establishment period maintenance	Screening effectiveness	Maintenance to include cutting as required	Annually
Riparian Planting	Adjacent to watercourses with Area C	• Initial establishment period maintenance • Pruning should encourage basal growth, rejuvenate plants, and promote good flowering.	• Number of species • Target species/habitat extent • Coppicing on long rotation	Maintenance to include cutting as required	Annually at the start and end of the growing season
Ecological Measures					
Bat and bird boxes	Site wide	• Monitoring and of boxes • Replacement of like for like bat and bird boxes if damaged.	• Species diversity • Species uptake	Maintenance and monitoring to ensure functionality and species presence	Annually
Habitat piles	Site wide	• Appropriate distribution of piles closes to habitats	• Species diversity • Presence and functionality	Maintenance and monitoring to ensure functionality and species presence	Annually

6 Outline Monitoring specifications

6.1.1 This section outlines the monitoring approach to assess progress towards the aims, objectives and targets of the OLEMP. The exact monitoring specifications will be detailed in the LEMP and updated as appropriate in subsequent iterations of the LEMP which will be updated every five years.

6.1.2 Monitoring activities undertaken to support the LEMP, will be carried out to determine:

- Whether measures have been implemented as agreed.
- The relative success / effectiveness of the measures.
- How to remedy the situation if any of the measures fail.

6.1.3 Monitoring will be undertaken following habitat enhancement or creation in accordance with the LEMP to assess the progress towards the targets of the management features – outlined in section 4. Monitoring will provide information to determine whether habitat condition targets have been met or missed, and whether maintenance operations or remedial actions are required.

6.1.4 Ecological measures implemented such as the erection of bat and bird boxes, and including the creation of reptile hibernacula and log piles will be monitored annually. Any of these features which require maintenance will be undertaken promptly, within the first five years. Monitoring will be undertaken by an ecologist and details of species counts will be maintained for the duration of the operational phase.

6.1.5 Monitoring for establishment of newly created landscape elements would follow the specifications produced during detailed design and set out in the LEMP. Monitoring of landscape and ecology elements following establishment will be undertaken at appropriate intervals by suitable consultants appointed by the Applicant during the operational phase depending on habitat type by the monitoring party as set out in section 1.6. If necessary, the findings of monitoring may result in corrective actions being required an / or the prescriptions for a management feature or the targets themselves being modified.

6.1.6 The LEMP will establish regular monitoring activities and adoption of robust ecological records being kept, (which will feed into annual monitoring reporting. These in turn will support the updates to the LEMP in accordance with the timeframes as set out in section 1.2).

6.1.7 Table 6.1 provides a draft monitoring schedule for all landscape and ecology features during the initial 5-year establishment period, and which will be relevant for the LEMP during the operational lifetime of the Proposed Development.

Table 6.1: Outline monitoring schedule

Monitoring method	Timescale	Responsibility
Establishment inspections following the implementation of new planting or other enhancements	Twice annually	The Applicant
Walkover survey to record species diversity and coverage of habitats	At least annually	The Applicant
Ecological monitoring of bird / bat boxes, reptile hibernacula, and log piles	At least annually	The Applicant

6.1.8 The Applicant will appoint suitable qualified persons (i.e., an appropriately qualified ecologist and landscape management consultant or arboriculturist) to undertake monitoring and report on progress towards the habitat condition targets. Monitoring activities will document failures and any replacement requirements in accordance with the target for the landscape habitat / feature. Replacement for failed planting required during the establishment period will be undertaken in accordance with the LEMP i.e., planting to occur at the next available planting season after the failure has occurred.

7 Summary

7.1.1 This document provides an outline monitoring and management strategy for the Proposed Development during the operational phase, proposed to be undertaken over a 40-year period.

7.1.2 The monitoring and management principles and objectives, along with the proposed outline species listed in sections 3.2 – 3.10 aim to result in the Proposed Development accomplishing the targets outlined in the BNG Report which accompanies the ES (ES Appendix 8.8), and as illustrated on the LSP (ES Figure 7.6.1-7.6.5).

7.1.3 The OLEMP sets out detail that will be included in the LEMP including detail on the management of landscape and ecological elements with a focus on the initial five-year establishment period, with broader outline management principles on the longer term. Prior to the operation of any part of the Proposed Development, the Applicant must produce a LEMP for that part of the Proposed Development, that must be substantially in accordance with this OLEMP. Preparation of the LEMP is secured by a DCO Requirement and will be agreed with for approval by the Council. The operation of any part of the Proposed Development must be carried out in accordance with the approved LEMP for that part, which will demonstrate in greater detail the monitoring and management prescriptions required for ongoing successful growth.

Appendix A Outline Grazing Management Plan

A.1.1 To ensure the delivery of species-rich grasslands across the Site with variable sward hights and minimise the need for cutting or herbicide application and to ensure the success of new boundary vegetation planting. Subject to paragraph A.1.6 below, a suitable grazing regime is proposed to be implemented which will be set out in a Grazing Management Plan.

A.1.2 The GMP is intended to be developed in partnership between the Applicant and a local farmer (likely the current farm owner) who will provide the livestock. To prevent damage to solar panels (Work No. 1), cattle would be avoided in this area and only sheep will be used for grazing management.

A.1.3 Sheep will be able to graze areas around the solar panels during the months of October to March so that the sward develops, and both grasses and wildflowers can grow, flower and set seed. Livestock will be restricted from grazing buffer strips adjacent to hedgerows, ponds and watercourses through the erection of barriers, which could be either permanent or temporary. The Site will be appropriately sectioned to facilitate grazing management and prevent overgrazing or grazing in restricted areas.

A.1.4 The number and distribution of grazing units applied to each land parcel across the Site will be monitored and adapted should damage be detected, or sward height exceed 70cm, or any such height such that it interferes with the solar arrays and their management. To achieve the desired height and grassland composition, livestock will be rotated across the Site and moved off-Site when no grazing is required.

A.1.5 Suitable watering provision will always be available regardless of the land parcel being grazed, and livestock welfare will be monitored by the grazier appointed by the Applicant.

A.1.6 In the event that animal grazing is not practical or feasible an alternative mechanical approach can be used relying on brushcutters, hand tools, or tractor mounted mowers. Arisings should be taken off site no longer than 3 days after cutting to prevent increased nutrient input which would undermine

the intended botanical community. This is particularly relevant after any late winter cut. Alternatively, areas of the Site can be identified where arisings can be deposited and stored as compost which may be useful for invertebrates. Another alternative may be the possibility of letting cut grass dry to become hay.

Appendix B Summary of Key Landscape and Ecology Considerations

Table B.1: Summary of Key Considerations (Landscape and Ecology)

Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
Designated Sites and Sensitive Habitats (Ecology and Landscape)		
Statutory Designated Sites	The English Lake District World Heritage Site (WHS) lies approximately 3.2km east of the Site.	The Lake District National Park (LDNP) Authority (LDNPA) highlighted visibility from the WHS as a concern. As a result, mitigation planting was proposed to 'break up' visibility of the solar panels within the landscape from wider views.
	Lake District National Park (LDNP) lies approximately 4km east of the Site.	The LDNPA highlighted visibility from the LDNP as a concern. As a result, mitigation planting was proposed to 'break up' visibility of the solar panels within the landscape from wider views. The management and maintenance of the proposed broadleaf woodland and scrubland planting to support this aim, are set out in section 3.5 and 3.6 of this OLEMP.
	River Derwent & Bassenthwaite Lake Special Area of Conservation (SAC) and River Derwent and Tributaries SSSI approximately 1.2km east of the Site.	Watercourses on Site will be enhanced, and water quality improved through a range of measures including riparian planting, fencing along their banks will reduce poaching by livestock, and a reduction in grazing pressure on Site. The management and maintenance of the existing watercourse is set out in section 3.2 of this OLEMP, and the OGMP in Appendix A.
	Solway Firth Special Protection Area (SPA) 5km west of the Site.	Enhancement of Dean Moor CWS will provide suitable over wintering habitats, while a reduction in grazing across the Site may encourage use. The management and maintenance of the proposed acid grassland to support this aim, are set out in section 3.4 of this OLEMP.
	River Ehen SAC 6.1km south of the Site.	Not hydrologically linked to the Site so no influence
	Lake District High Fells SAC 8km southeast of the Site.	Distant from the Site so no influence.

Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
	North Pennine and Dales Meadows SAC 8.9km east of the Site.	Distant from the Site so no influence.
Non-Statutory Designated Sites	Dean Moor County Wildlife Site (CWS) partially within the southern part of the Site.	Impact to the CWS has been minimised by the limited placement of solar arrays within it, and only in areas where no qualifying features are present. Dean Moor CWS will be enhanced by appropriate grassland management, including oversowing where necessary, and a reduction in grazing pressure, to enhance botanical diversity. Purple Moor Grass and Rush Pasture communities for which the Site is designated will be encouraged. The management and maintenance of the proposed acid grassland to support this aim, are set out in section 3.4 of this OLEMP.
	SRV MP K3 is within DCO Order Limits where it is included within Highways Estate on Branthwaite Edge Road.	No impacts to SRV during operation.
	Further 13 CWS and three SPVs within 2km of the Site with Gilgarran Plantation and Wythemoor contiguous with the Site.	No impacts to CWSs outside the Site.
Tree cover and TPOs	There are no TPOs within the Site boundary, or protected trees that would be affected by the Proposed Development. An area of ancient woodland (Struther's Wood) lies directly west of Area C and Area B. Branthwaite Edge Wood ancient woodland lies approximately 200m east of Area C at its nearest point.	A suitable buffer has been implemented between the ancient woodland and the Proposed Development.
Long-distance paths, National Cycle Routes, Public Rights of Way	There are no Long-distance paths, NCN Routes or PRoW within the Site boundary. There is a network of PRoW within the wider study area.	No direct impacts on Long-distance paths, National Cycle Routes or PRoW. The mitigation proposals include planting for screening purposes which aims to reduce potential visual effects from these receptors.
Priority Habitats	Three Priority habitats identified within the Site: lowland dry acid grassland, ponds and hedgerows.	Grassland species diversity will be enhanced by appropriate seed mixes and management, including the adoption of a grazing management

Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
		plan. The management and maintenance of the proposed acid grassland to support this aim, are set out in section 3.4 of this OLEMP. Hedgerows will be retained, enhanced and managed to improve structure and complexity. The management and maintenance of hedgerows to support this aim, are set out in section 3.7 of this OLEMP. Ponds retained and instream and edge habitats will be managed to promote biodiversity. The management and maintenance of existing ponds to support this aim, are set out in section 3.2 of this OLEMP. Furthermore, suitable buffers will be in place around hedgerows and ponds while suitable terrestrial and riparian planting along edges will benefit habitats and species.
Landscape Character (within the Site Boundary)		
Landscape Sub-type 9a: Open Moorlands	• High, mostly open landscapes • Undulating semi-improved and unimproved pasture • Open rough moorland • Areas of deciduous woodland • Areas of peat and raised mire	The landscape sub-type will remain largely unaffected by the Proposed Development. Peat was confirmed very locally in two distinct locations of the Site. To minimise the impact on peat, infrastructure that would have an adverse effect on identified peat deposits have been avoided within the operational design of the Proposed Development. Moorland will also be preserved where practicable and will be retained for grazing.
Landscape sub-type 9d: Ridges	• Distinct ridges • Extensive areas of heathland moorland • Improved pasture with distinctive stone walls • Woodland and small belts of trees form prominent features	The plateau area within Area C which characterises this Landscape sub-type will be retained as no development is proposed in this area. Furthermore, enhancement will occur with over sowing of appropriate seed mixes and management, including the adoption of a grazing management plan. The management and maintenance of the proposed acid grassland to support this aim, are set out in section 3.4 of this OLEMP.

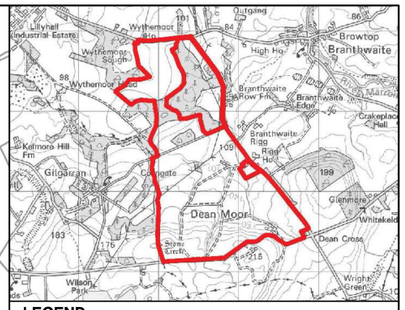
Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
Landscape sub-type 5a: Ridge and Valley	• A series of ridges and valleys that rise gently towards the Lakeland Fells • Well managed regular shaped pasture fields • Hedge bound pasture fields dominate, interspersed with woodland tree clumps and plantations • Scattered farms and linear villages found along ridges • Large scale structures generally scarce	Hedgerows will predominantly be protected and retained, with new features introduced including woodland to retain and reinforce the landscape pattern. The management and maintenance of hedgerows, proposed broadleaf woodland and scrubland planting to support these aims are set out in sections 3.7, 3.5, and 3.6 of this OLEMP.
Key Protected Species Considerations (Ecology)		
Bats	Habitat is generally of low value to bats with suitable foraging habitats confined to hedgerows and woodland. Desk study results, surveys carried out as part of windfarm development and current surveys indicate an assemblage limited to a few common species. No buildings are present on-Site which were considered suitable for roosting. Only trees along the Gilgarran Road have potential to support bats.	Hedgerows, trees, and woodland which may be used for commuting and foraging by bats will be retained while enhancement and management will improve botanical diversity, structure and complexity. The management and maintenance of hedgerows proposed broadleaf woodland, and scrubland planting to support these aims are set out in sections 3.7, 3.5, and 3.6 of this OLEMP. Buffers and grassland management will promote invertebrate biomass which offer a food source for bats. The management and maintenance of enhanced grassland and acid grassland to support these aims are set out in sections 3.3 and 3.4 of this OLEMP. Riparian planting and enhancement of ponds and watercourses will improve habitats which support invertebrate prey. The management and maintenance of existing ponds and riparian planting to support these aims, are set out in section 3.2 and 3.10 of this OLEMP. Erection of bat boxes on trees to promote species assemblage on-Site.
Otter	Known to use watercourses on-Site for commuting and foraging. No holts identified on-Site.	Buffers along watercourses and riparian planting will reduce disturbance and offer cover for commuting and foraging otters.

Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
		Fencing off watercourses will reduce disturbance caused by livestock, improve water quality and promote food sources for otters. The management and maintenance of existing ponds and riparian planting to support these aims, are set out in section 3.2 and 3.10 of this OLEMP.
Breeding birds	Site is used by woodland and hedgerow nesting species while grassland is used by those which prefer open habitats.	Woodland will be retained whilst enhancement and management will improve botanical diversity, improve structure and complexity. Generally, hedgerows will be retained. Buffers along hedgerows, ponds and watercourses coupled to enhanced planting and a reduction in grazing pressure will promote the abundance and suitability of habitats for birds. The management and maintenance of existing woodland, hedgerows, proposed broadleaf woodland, and scrubland planting to support these aims are set out in sections 3.2, 3.5, 3.6, and 3.7 of this OLEMP. The OGMP is included in Appendix A. Erection of bird boxes on trees to promote species assemblage on Site and encourage breeding.
Wintering (inc. passage) birds	Grasslands used by overwintering species, including black-headed gull, herring gull and lapwing.	Woodland will be retained and enhanced. Generally, hedgerows will be retained. Favourable management of grassland habitats, inclusion of suitable buffers along hedgerows, ponds and watercourses, a reduction of grazing pressure and the enhancement of Dean Moor CWS will provide suitable habitat for overwintering birds. The management and maintenance of existing woodland, hedgerows, proposed broadleaf woodland, and scrubland planting to support these aims are set out in section 3.2, 3.5, 3.6, and 3.7 of this OLEMP. The management and maintenance of enhanced grassland and acid grassland to support these aims are set out in sections 3.3 and 3.4 of this OLEMP.

Consideration	Summary of Baseline Information (Ecology and Landscape Character)	Influence on Design, LSP and measures within OLEMP
Other Protected Species Considerations (Ecology)		
Hen harrier	Schedule 1 bird known to use surrounding habitats for foraging and roosting. Surveys did not identify individuals using Site.	Enhancement of Dean Moor CWS and a reduction in grazing pressure across the Site may promote abundance of small mammals and nesting birds which may provide a food resource for hen harrier. Enhanced sward heterogeneity in Dean Moor CWS will provide opportunities for nesting. The management and maintenance of enhanced grassland and acid grassland to support these aims are set out in sections 3.3 and 3.4 of this OLEMP .
Hedgehog, water vole, brown hare, dormice, red squirrel, reptiles, water shrew, polecat and amphibians	Heavily grazed habitats across the Site and a lack of cover suggest most species will either be absent, exist at very low populations or be confined to small parts of the Site. Water voles were not recorded during species specific surveys and both eDNA surveys and traditional surveys did not identify the presence of great crested newt. Records obtained from desk study for these species are very limited or absent.	Retained and enhanced habitats; buffer planting and a reduction in grazing pressure on Dean Moor CWS and across the wider Site will provide food resources and shelter for a range of species. The management and maintenance of existing woodland, hedgerows, proposed broadleaf woodland, and scrubland planting to support these aims are set out in sections 3.2, 3.5, 3.6, and 3.7 of this OLEMP. The management and maintenance of enhanced grassland and acid grassland to support these aims are set out in sections 3.3 and 3.4 of this OLEMP. Distribution of habitat / log piles across Site to provide shelter for species and promote use of green infrastructure to facilitate species dispersion.

Figure 7.7a: Site Areas

N



LEGEND

- Order Limits
- Area A
- Area B
- Area C
- Area D

0 0.5 1 1.5 2km

Scale 1:12,500

Project Title

Dean Moor Solar Farm

Client

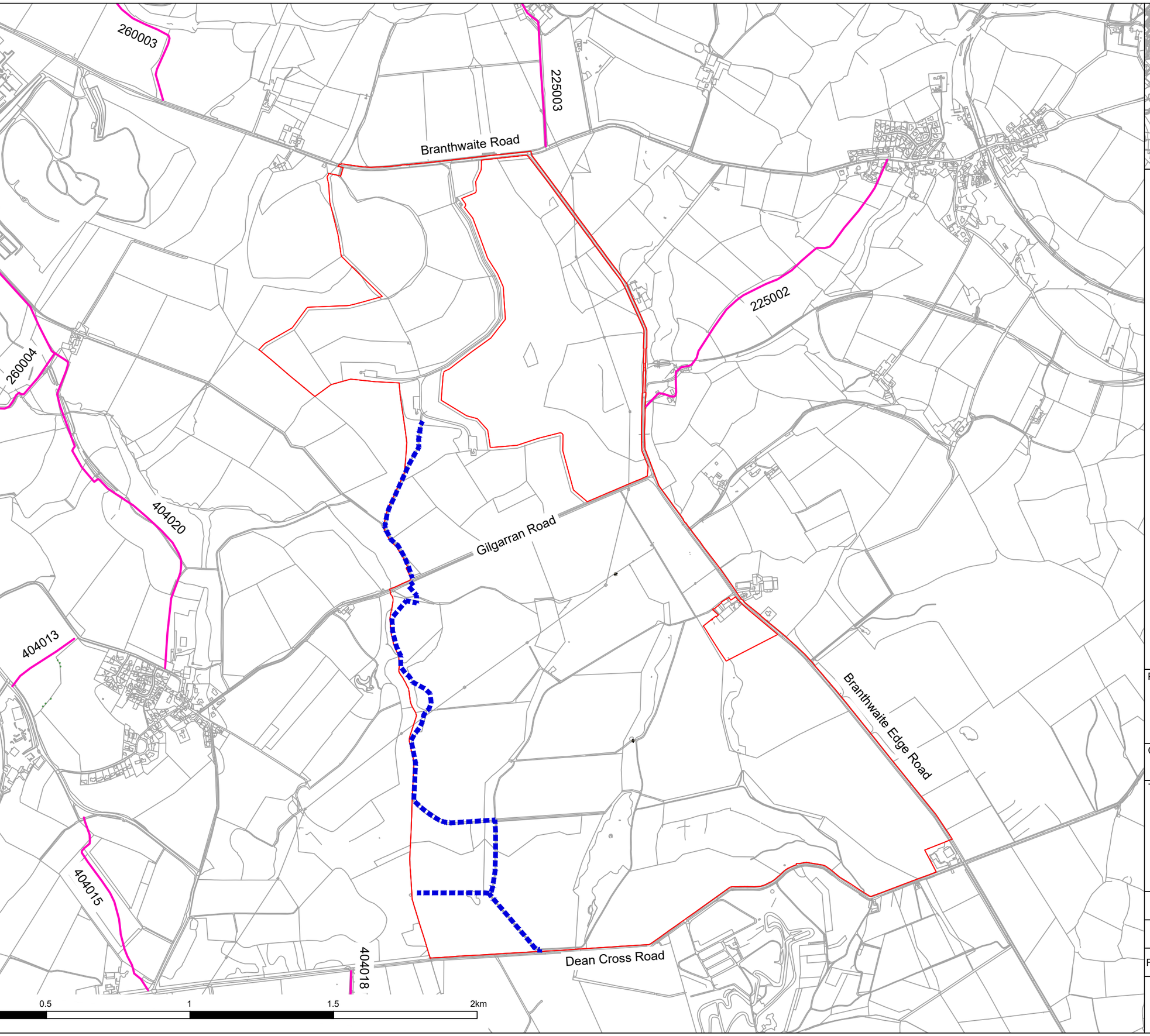
FVS Dean Moor Limited

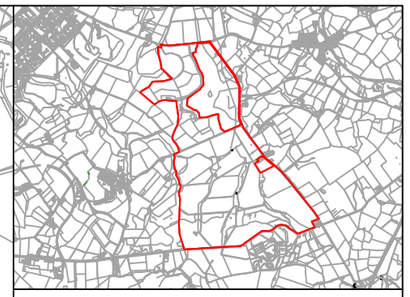
Title

DEAN MOOR SOLAR FARM
DEVELOPMENT CONSENT ORDER
Figure 7.7a: Site Areas

Scale: 1:12500 @ A3	Date: 03/12/2024
Drawn: MB	Checked: RW
Figure: 7.7a	Sheet 1 of 1 / Rev: N/A

Figure 7.7b: Permissive Paths





LEGEND

Order Limits

EXISTING FEATURES

Public Right of Way (PRoW)

INDICATIVE PROPOSED FEATURES / MEASURES

Indicative Permissive Path

Project Title

Dean Moor Solar Farm

Client

FVS Dean Moor Limited

Title

DEAN MOOR SOLAR FARM
DEVELOPMENT CONSENT ORDER
Figure 7.7b: Indicative Permissive Paths and PRoW

Scale: 1:12500 @ A3	Date: 05.02.2025
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Figure: 7.7b	Sheet 1 of 1 / Rev: N/A