



Fosse Green Energy

EN010154

7.15 Framework Landscape and Ecological Management Plan

VOLUME

7

Planning Act 2008 (as amended)

Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

18 July 2025

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009 (as amended)

Fosse Green Energy

Development Consent Order 202[]

7.15 Framework Landscape and Ecological Management Plan

Regulation Reference	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference	EN010154
Application Document Reference	EN010154/APP/7.15
Author	Fosse Green Energy Limited

Version	Date	Issue Purpose
Rev 1	18 July 2025	DCO Submission

Table of Contents

1.	Introduction	1
1.2	The Proposed Development.....	1
1.3	Purpose of the Framework Landscape and Ecological Management Plan.....	2
2.	National Legislation, Policy and Guidance	4
2.2	Legislation	4
2.3	National Policy.....	4
2.4	Local Policy	5
2.5	Other Guidance	5
2.6	Biodiversity Net Gain	5
3.	Existing Landscape and Biodiversity Features.....	6
3.1	Existing Landscape Features	6
3.2	Existing Biodiversity Features.....	6
4.	Landscape and Ecology Strategy	9
4.1	Landscape Strategy.....	9
4.2	Ecology Strategy	11
4.3	Arboricultural Strategy	13
5.	Management Prescriptions	14
5.1	Introduction.....	14
5.2	Existing Habitats.....	14
5.3	Proposed Habitats	18
6.	Permissive paths.....	37
7.	Pre and post construction monitoring.....	39
8.	References.....	41
	Appendix A: Figure 7.15-1	44

Tables

Table 1: Indicative mix for proposed woodland and tree belts	20
Table 2: Indicative mix for hedgerows	23
Table 3: Indicative mix for individual trees	25
Table 4: Indicative mix for species-rich grassland	27
Table 5: Indicative mix for modified grassland	29
Table 6: Indicative mix for permanent grassland	31

1. Introduction

- 1.1.1 This Framework Landscape and Ecology Management Plan (FLEMP) has been prepared to support the Development Consent Order (DCO) application for the Fosse Green Energy development (hereafter referred to as 'Proposed Development') on behalf of Fosse Green Energy Ltd (hereafter referred to as 'the Applicant').
- 1.1.2 This management plan includes provision for the successful establishment and future management of biodiversity, habitat creation, and landscaping works associated with the Proposed Development.
- 1.1.3 This FLEMP sets out the short and long-term measures and practices that will be implemented to establish, monitor, and manage landscape and ecology mitigation and enhancement (biodiversity net gain) measures embedded in the design.

1.2 The Proposed Development

- 1.2.1 The Proposed Development comprises the construction, operation and maintenance, and decommissioning of a ground-mounted solar PV generating station with battery storage, Onsite Substation, and associated infrastructure to generate and export/import electricity to the proposed new National Grid substation near Navenby.
- 1.2.2 The Proposed Development will be situated within the DCO Site as shown on the **Location Plan [EN010154/APP/2.5]** and comprise the following components:
 - a. Solar PV panels (also known as 'modules');
 - b. PV panel mounting structures;
 - c. BESS;
 - d. Inverters;
 - e. Transformers;
 - f. Switchgear;
 - g. An Onsite Substation and control buildings;
 - h. Onsite cabling;
 - i. Ancillary infrastructure (e.g. combiner boxes, weather stations);
 - j. Electricity export and import via high-voltage Grid Connection Cable and connection to the National Electricity Transmission System;
 - k. Fencing and security;
 - l. Access tracks; and

- m. Landscaping, permissive paths and biodiversity mitigation and enhancement areas.
- 1.2.3 The DCO Site is located within the county boundary of Lincolnshire and at a district level falls within the single district of North Kesteven.
- 1.2.4 The maximum extent of land that could be occupied by each component of the Proposed Development is shown on the Works Plans [EN010154/APP/2.2]. The **Landscape Mitigation Plan** provided in **Figure 7.15-1** shows how the landscape and ecology mitigation and enhancement will be implemented across the DCO Site.
- 1.2.5 During construction there will be nineteen site access points across the DCO Site which would provide access to an internal network of access tracks enabling access to each field parcel. During operation there will be seven operational access points across the Principal Site. In addition, during operation there will be three dedicated emergency accesses into the Principal Site. **Figure 3-8: Site Access Locations** of the ES [EN010154/APP/6.2] illustrates the site access points across the DCO Site.
- 1.2.6 Further details of the Proposed Development can be found in **Chapter 3: The Proposed Development** of the ES [EN010154/APP/6.1].
- 1.2.7 Subject to obtaining the necessary consents, construction of the Proposed Development is anticipated to commence in 2031 and would be completed for operation in 2033. The Proposed Development will have a 60-year lifetime, with decommissioning therefore expected around 2093 (based on a 2033 commissioning).

1.3 Purpose of the Framework Landscape and Ecological Management Plan

Purpose

- 1.3.1 The overarching aim of this FLEMP is to set out the measures and prescriptions for:
 - a. Mitigation against the effects of the Proposed Development on the landscape, and biodiversity features;
 - b. The enhancement of biodiversity, landscape value within the application boundary;
 - c. Securing compliance with relevant national and local planning policies; and
 - d. Habitat creation and management with the aim of providing significant ecological enhancements while strengthening green infrastructure within the area.
- 1.3.2 The Proposed Development has been designed, as far as is practicable, to avoid or reduce effects on landscape and biodiversity features through the

implementation and provision of planting, species-specific mitigation, and habitat creation and enhancement.

1.3.3 This document outlines the landscape and biodiversity impact avoidance measures that would be implemented prior to, and during, construction of the Proposed Development, as well as the habitat restoration, enhancement, management, and monitoring measures to be implemented once the Proposed Development is operational.

Objectives

1.3.4 The primary objectives of this FLEMP are to:

- a. Integrate the Proposed Development into its landscape setting, aiming to avoid or minimise adverse effects on the landscape, biodiversity, heritage and visual effects as much as possible;
- b. Diversify the ecological value of existing habitats through initiatives such as hedgerow restoration, riparian corridor management and the creation of an array of diverse habitats; and
- c. Guide the design and management of landscape and biodiversity elements that respond to and enhance the character of the landscape, reinforce local distinctiveness, and strengthen the sense of place.

1.3.5 The Applicant will define the appropriate roles and responsibilities for site staff, as outlined in the **Framework Construction Environmental Management Plan (CEMP) [EN010154/APP/7.7]**. An Environmental Clerk of Works (EnCoW) will be tasked with ensuring that construction-related environmental mitigation measures are properly implemented, monitored, and maintained. These measures will include, but are not limited to, ensuring the Proposed Development complies with environmental legislation, and environmental management plans, monitoring and auditing activities on site, and providing advice to contractors and site managers on best environmental practices. A Landscape Clerk of Works (LCoW) and Ecological Clerk of Works (ECoW) may also be tasked with ensuring landscape plans are implemented correctly and protecting biodiversity during construction, respectively.

1.3.6 The Contractor, appointed by the Applicant to construct the Proposed Development, will be responsible for establishing, managing, and monitoring the implementation of landscape and ecological mitigation during the five-year establishment aftercare period. The Applicant will inspect and report on the success of this establishment during that time.

1.3.7 Any long-term biodiversity monitoring and management requirements specified in this document will be carried out by the Applicant and/or a Contractor appointed by the Applicant.

2. National Legislation, Policy and Guidance

2.1.1 This section sets out the Legislation, planning policy and supporting guidance relevant to the FLEMP and pertinent to the Proposed Development. Further details can be found at **Appendix 8-A: Ecology Legislation, Planning Policy Context and Guidance [EN010154/APP/6.3]** and **Appendix 10-A: Landscape and Visual Amenity Policy and Legislation [EN010154/APP/6.3]**.

2.2 Legislation

- a. Directive 2009/147/EC on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended) (Birds Directive) (Ref 1);
- b. Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) (Ref 2);
- c. Regulation (EU) 1143/2014 on the introduction and spread of invasive alien species (Ref 3);
- d. Convention on Biological Diversity (Ref 4);
- e. COP15: Global biodiversity framework (2023) (Ref 5);
- f. Ramsar Convention (Ref 6);
- g. The Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 7);
- h. The Wildlife and Countryside Act 1981 (as amended) (WCA) (Ref 8);
- i. The Countryside and Rights of Way Act 2000 (Ref 9);
- j. The Natural Environment and Rural Communities Act 2006 (NERC) (Ref 10);
- k. The Protection of Badgers Act 1992 (Ref 11);
- l. The Hedgerows Regulations 1997 (Ref 12);
- m. The Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended) (Ref 13);
- n. The European Landscape Convention (2000) (Ref 14)

2.3 National Policy

- a. Overarching National Policy Statement (NPS) for Energy (EN-1) (2024) (Ref 15);
- b. NPS for Renewable Energy Infrastructure (EN-3) (2024) (Ref 16);
- c. NPS for Electricity Networks Infrastructure (EN-5) (2023) (Ref 17);
- d. National Planning Policy Framework (NPPF) (2025) (Ref 18); and

- e. Environmental Improvement Plan 2023 (Ref 19).

2.4 Local Policy

- a. Central Lincolnshire Local Plan 2023 (Ref 20). This includes principles for development within Biodiversity Opportunity Areas, as well as design criteria relating to natural features such as hedgerows, trees and waterbodies.

2.5 Other Guidance

- a. National Planning Practice Guidance (PPG), Natural Environment (Landscape) (2019) (Ref 21);
- b. 25-year Environment Plan (Ref 22);
- c. UK Post 2010 Biodiversity Framework (including priority habitats and species listed which succeeds the UK Biodiversity Action Plan (UK BAP) (Joint Nature Conservation Committee (JNCC) and Defra, 2018) (Ref 23);
- d. Landscape Institute, Infrastructure Technical Guidance Note 04/20 (2020) (Ref 23);
- e. British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (Ref 25);
- f. BS 3998: 2010 Treework – Recommendations (Ref 26); and
- g. National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees(Ref 27).

2.6 Biodiversity Net Gain

- 2.6.1 Government policy within NPS EN-1 (Ref 15) states that development proposals should provide opportunities for building-in beneficial biodiversity or geological features as part of good design and that such opportunities in and around developments should be maximised where appropriate. The NPPF (Ref 18) states that planning decisions should maximise impacts on and provide net gain for biodiversity.
- 2.6.2 The Applicant has committed to deliver a minimum of 30% biodiversity net gain in habitat units, 50% biodiversity net gain in hedgerow units and 10% biodiversity net gain in watercourse units using DEFRA's Statutory Biodiversity Metric (Version 1.0.4) (Ref 30).
- 2.6.3 Further information on BNG and potential BNG for the Proposed Development can be found in the **Biodiversity Net Gain Report [EN010154/APP/7.12]**.

3. Existing Landscape and Biodiversity Features

3.1 Existing Landscape Features

- 3.1.1 The Principal Site is situated across generally low-lying land, within the plains of the River Witham, at around 10m Above Ordnance Datum (AOD). However, at the northwestern extent of the Principal Site the landform rises to 31m AOD forming part of a localised valley.
- 3.1.2 There is consistent arable land use across the Principal Site, but with localised variation in the field sizes. There are generally larger scale fields across the central part of the Principal Site, in comparison to smaller scale fields across the northern and eastern parts of the Principal Site. There is a constant geometric pattern to the shape of the fields, which is reinforced by boundary hedgerows and trees.
- 3.1.3 There is no ancient woodland noted on published data within the DCO Site. Natural England is currently undertaking an exercise to update the ancient woodland inventory which will include all woodlands >0.25ha in England (including ancient wood pasture which is a form of ancient woodland). The existing inventory currently excludes woodlands <2ha; however, no information within the DCO Site is available at this time.).
- 3.1.4 A number of Tree Preservation Orders were identified within or adjacent to the DCO Site, as discussed in **Appendix 10-H: Arboricultural Impact Assessment** of the ES [EN010154/APP/6.3].
- 3.1.5 The tree survey, as discussed in **Appendix 10-H: Arboricultural Impact Assessment** of the ES [EN010154/APP/6.3], identified a total of 126 veteran trees and two ancient trees within and adjacent to the DCO Site.
- 3.1.6 The combination of the landform and vegetation patterns result in differing perceptions of openness and enclosure. In the northern and central parts of the Principal Site there is a more open character due to the combination of relatively elevated landform and more intermittent field boundaries. In contrast, across the eastern part of the Principal Site, there is a greater sense of enclosure, due to the lower lying landform and greater density of vegetation.

3.2 Existing Biodiversity Features

- 3.2.1 The following section summarises the baseline detail for biodiversity, as presented in **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1].

Statutory and Non-Statutory Sites

- 3.2.2 The Principal Site is not covered by any statutory landscape designations, nor does it contain any rare or distinctive landscape features.

3.2.3 There are no sites statutorily designated for their biodiversity value at an international or European level within 10km of the DCO Site. The only European site within 30km of the Proposed Development is Birklands and Bilhaugh SAC, which is approximately 23km from the DCO Site and is designated for its oak woodland habitats. There are no European sites within 30km of the DCO Site for which birds or bats are a qualifying feature.

3.2.4 One site, statutorily designated for its biodiversity value at a national level is within 1km of the DCO Site. This is Whisby Nature Park Local Nature Reserve (LNR) which is approximately 410m north of the DCO Site. Swanholme Lakes LNR and SSSI is approximately 4km from the DCO Site.

3.2.5 There are 29 sites that are non-statutorily designated for their biodiversity value within 2km of the DCO Site. These sites have been designated as Local Wildlife Sites (LWS) for their biodiversity value at a county level and are known to have supporting value to a wide variety of protected and ecologically important species and/or habitats.

3.2.6 In addition, there are three areas of Ancient Woodland within 2km of the Principal Site, these being: Tunman / Housham Wood, which is immediately adjacent to the Principal Site; Hawdin's / Norton Big Wood, which is approximately 850m west of the Cable Corridor; and Great Low Wood, which is approximately 1.35km north west of the Principal Site.

Habitats

3.2.7 Several Habitats of Principal Importance (HaPI) were identified as being present within the DCO Site. These being:

- Lowland mixed deciduous woodland and wet woodland;
- Coastal and floodplain grazing marsh;
- Rivers¹;
- Arable field margins; and
- Hedgerows.

3.2.8 Field surveys identified that the land within the DCO Site (approximately 1,370ha) is flat and dominated by arable agriculture (approximately 83%), with the fields being intersected by a network of drainage ditches within the catchment of the River Witham and River Brant. Other habitat includes improved grassland fields (39.4ha / 2.9%), neutral grassland (17.8ha / 1.3%), with small areas >1% of woodland (6.5ha), wet and dry ditches (2.61ha), scattered scrub (1.9ha), Main Rivers (1.5ha), sparse vegetation (1.3ha), standing water (comprising a reservoir (0.7ha) and ponds (0.1ha) not a HaPI), calcareous grassland (0.6ha) (not a HaPI), swamp (0.3ha), hedgerows (with and without trees) (80.1km) and lines of trees (2.2km).

3.2.9 The surrounding habitat is dominated by arable, with some modified and/or neutral grassland, an ancient woodland (Tunman woodland) and other small

¹ The River Brant qualifies as HaPI due to the presence of Annex II species Spined Loach. The River Witham is important as designated as a Local Wildlife DCO Site.

pockets of mature broad-leaved woodland (plantation and semi-natural). There are individual and clusters of residential properties located adjacent to the DCO Site.

Species

3.2.10 **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1] presents a full list of protected or notable plant and animal species, including invasive non-native species (INNS) that have been identified during the desk study and completed ecological surveys. These include:

- a. Aquatic macroinvertebrates; Vagrant Darter dragonfly;
- b. Aquatic macrophytes; Opposite-leaved Pondweed;
- c. Fish; European Eel, Spined Loach and European Bullhead;
- d. Terrestrial invertebrates; Purple Emperor and White-letter Hairstreak butterflies and two Nationally Scarce species of beetle;
- e. Grass Snake and Common Toad;
- f. Birds; breeding assemblage of 56 species including Lapwing, Skylark, Yellowhammer;
- g. Bats; Foraging and potential roosts of at least ten species of bats comprising Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Noctule, Leisler's Bat, Daubenton's Bat, Natterer's Bat, unknown Myotis species, Serotine, Barbastelle and Brown Long-eared Bat;
- h. Riparian mammals; Otter, Water Vole;
- i. Badger;
- j. Brown Hare;
- k. Hedgehog; and
- l. Invasive non-native species (INNS); Canadian Pondweed and Nuttall's Waterweed.

4. Landscape and Ecology Strategy

4.1 Landscape Strategy

4.1.1 The design process has been shaped by the best practice principles, guidance and practices. These principles were developed in response to policy requirements, published landscape character assessment guidance, and fieldwork analysis to provide good design and meaningful habitat improvements.

4.1.2 As illustrated on the **Landscape Mitigation Plan** in **Figure 7.15-1 [EN010154/APP/7.15]**, the following design mitigation measures have been integrated into the Proposed Development to minimise environmental impacts, including effects on landscape character, visual amenity, and biodiversity.

4.1.3 In developing the landscape design strategy, special attention was given to:

- Recommendations within relevant landscape guidelines, such as Natural England's Statements of Environmental Opportunity (SEO) outlined in the profile for NCA 47 and NCA 48 (Ref 28); and
- Guidance from the Landscape Institute's Infrastructure Technical Guidance Note (TGN) 04/20 (Ref 24).

4.1.4 The overall goal of the landscape strategy is to integrate the Proposed Development into its surrounding landscape and to avoid or minimise adverse landscape and visual effects as much as possible. This design approach also seeks to maximise opportunities for delivering net biodiversity gains. Accordingly, the landscape design aims to:

- Integrate the Proposed Development into the existing landscape pattern by utilising and aligning with existing features, including vegetation where feasible;
- Replace habitats lost during construction and enhance habitats within the DCO Site Boundary through the creation of grasslands, tree belts and areas of scrub; and
- Filter and screen more prominent components of the Proposed Development in views from sensitive receptors.

4.1.5 Details of the landscape measures that are embedded into the Proposed Development's design are presented in **Chapter 3: The Proposed Development** and **Chapter 10: Landscape and Visual Amenity** of the ES [EN010154/APP/6.1].

Overview of Landscape Design Principles

4.1.6 This section provides a description of the landscape design principles employed on the Proposed Development.

4.1.7 With reference to the **Landscape Mitigation Plan** shown in **Figure 7.15-1 [EN010154/APP/7.15]** the design of the Proposed Development has been carefully developed to minimise, or avoid, adverse effects on views experienced by residents.

Careful Siting in the Landscape

4.1.8 All solar PV panels and associated infrastructure has been sited within the existing field pattern, protecting existing vegetation, and maximising the natural screening provided by field boundary vegetation which will be supplemented with additional planting.

4.1.9 The solar PV panels and associated infrastructure have been sited to preserve, as far as possible, cross valley views from Thorpe-on-the-Hill and important views towards Lincoln Cathedral available from Tunman Hill.

4.1.10 Larger infrastructure, such as the Onsite Substation and BESS Compound, have been located within areas of enclosed landscape, bound by frequent small woodlands and hedgerows, to minimise potential visual effects.

4.1.11 Offsets (typically measuring in excess of 100m) from settlement boundaries and new planting have been incorporated to retain a sense of openness whilst screening the solar PV panels from surrounding settlements.

4.1.12 The Principal Site mostly avoids land adjacent to the local road network to minimise the visual impact on people travelling. Where this has not been possible, bespoke offsets (measuring a minimum of 20m) and mitigation planting have been incorporated.

4.1.13 The siting of solar PV panels and associated infrastructure seeks to minimise instances of development on both sides of PRoW. Where development is proposed adjacent to a PRoW, an offset of a minimum of 10m from the centre line has been incorporated. Where development is proposed on both sides of a PRoW, sections of wider offsets have also been integrated to vary the extent of views experienced across the Principal Site where practicable. New and enhanced hedgerows have also been proposed to provide screening where appropriate.

Conserving Existing Vegetation Patterns

4.1.14 Offsets from trees, woodlands, and watercourses have been incorporated to ensure the health and longevity of vegetation, retaining the existing structure of the landscape. This includes minimum offsets of:

- 15m from woodlands;
- 5m from hedgerows;
- appropriate buffers from individual trees (as determined by the root protection area); and
- 10m from watercourses.

4.1.15 The design uses existing tracks and lanes that cross the Principal Site, wherever practicable, to minimise the disturbance of existing vegetation.

- 4.1.16 The design retains some existing arable fields that would include management prescriptions for ground nesting birds and arable field margins. Areas of cropland will be retained, particularly the arable margins, as much as is practicable, buffered and their quality improved through positive management. Habitat will be re-created within arable field margins through management such as annual cultivation and arable fields with pollen and nectar and, or, wild bird mix. These habitats will be managed through annual cultivation to provide suitable conditions for arable flora to grow. New areas of pollen and nectar and, or, wild bird mixes will be provided within non-developed areas.
- 4.1.17 Retained arable field margins present within the DCO Site will be protected during construction, as the setbacks from watercourses (10m undeveloped area) and boundary habitats (such as 5m from hedgerows) will likely overlap with and include arable field margins.
- 4.1.18 Accessible arable field margins within the DCO Site will be cultivated annually (outside the nesting bird season) to provide suitable conditions for germination. Prior to construction, scarce arable flora seed from fields AF17, AF29 and AF72 (see **Figure 8-B-1 Hedgerow and notable flora** of the ES [EN010106/APP/6.3]) would be harvested by hand and seeded in cultivated field margins within retained arable fields close to these fields.

Creating New Green Infrastructure

- 4.1.19 The introduction of grassland beneath the Solar PV Panels, and across the extent of the wider Principal Site, will enhance biodiversity compared to the current agricultural landscape.
- 4.1.20 Hedgerows will generally be improved through 'gapping up' where they are currently fragmented, improving landscape structure and ecological connectivity.
- 4.1.21 Tree and shrub planting throughout the DCO Site to provide additional habitat niches (including for nesting birds) and an increase in biodiversity.
- 4.1.22 Ponds will be restored where appropriate and managed on a rotational basis to reduce shading and build-up of silt.
- 4.1.23 A substantial offset has been integrated along the eastern edge of Witham St Hughs, which continues the green corridor along the drainage ditch running between Haddington Lane in the south and the A46 in the north. A publicly accessible orchard and hedgerows with trees will also be included in this area.

4.2 Ecology Strategy

- 4.2.1 The ecology strategy is based on the embedded mitigation required for ecological receptors where low adverse impacts and minor or negligible effects has been identified during construction within **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1].

4.2.2 The layout of the Proposed Development seeks to minimise adverse ecological effects and to maximise the opportunities for biodiversity benefit by following the 'mitigation hierarchy' as generally referred to in the Overarching National Policy Statement for Energy (EN-1) (paragraph 4.6.1) (Ref 15) and Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (regulation paragraph 14(2)(c)18 (3)(c)) (Ref 29), including measures to avoid, prevent, reduce and if possible, offset any identified significant adverse effects.

4.2.3 The scale of the Proposed Development provides the opportunity to deliver improvements to biodiversity at the landscape scale by delivering large areas of biodiverse habitats that are well connected both within the DCO Site Boundary and to habitats in the surrounding area. Key to delivery of these benefits is ensuring that the Proposed Development provides:

- A range of good quality and well managed habitats that provide opportunities for a range of legally protected and notable flora and fauna to thrive;
- Heterogeneity within habitats to ensure that large expanses of open habitats can be used effectively by a range of species;
- Connectivity of habitats through the careful location of infrastructure and delivery of habitat corridors providing access to wider expanses of habitat both within and outside of the DCO Site Boundary; and
- Focusing on providing habitats for local conservation priorities to maximise benefit to the most vulnerable species present within the locale.

4.2.4 The proposed planting design shown in the **Landscape Mitigation Plan** presented in **Figure 7.15-1** within the **Framework LEMP [EN010154/APP/7.15]** has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. Based on the indicative layout of the Principal Site, new planting would include, in addition to hedgerow enhancement, gapping up and infill planting, and grassland under the panels and along perimeter buffers:

- Approximately 16km of new native hedgerows;
- Over 200 new trees;
- Approximately 20ha of species rich grassland (outside of Solar PV areas);
- Approximately 83ha of permanent grassland for bird mitigation purposes; and
- Approximately 1.8ha of community orchard².

4.2.5 As presented in **Biodiversity Net Gain Report [EN010154/APP/7.12]**, based upon the **Landscape Mitigation Plan** in **Figure 7.15-1 EN010154/APP/7.15** and the **Maximum Vegetation Removal Plan (Figure 3-17) [EN010154/APP/6.2]**, the Proposed Development is anticipated to

² The purpose of the community orchard is for use by local residents and the community to enable open access to the area, enjoyment of the space and to allow residents and the community to pick fruit from the trees grown within this orchard.

result in an uplift in biodiversity, as measured using the Statutory Biodiversity Metric (Version 1.0.4), of a minimum of:

- a. 760.57 habitat units, an increase of 30.64%;
- b. 399.20 hedgerow units, an increase of 50.62%; and
- c. 6.67 watercourse units, an increase of 11.83%.

4.2.6 The Applicant has committed to deliver a minimum of 30% biodiversity net gain in habitat units, 50% biodiversity net gain in hedgerow units and 10% biodiversity net gain in watercourse units using DEFRA's Statutory Biodiversity Metric (SBM) (Version 1.0.4) for the Proposed Development.

4.2.7 Habitats will be monitored, in line with the management prescriptions set out in **Section 5** of this report, to ensure correct establishment and growth is achieved, and remedial action (such as re-seeding if establishment fails) would be taken as relevant to ensure the delivery of the committed biodiversity units.

4.2.8 The extent of the DCO Site provides the opportunity to deliver landscape scale nature conservation benefits that can positively contribute to the Local Nature Recovery Strategies (LNRS) being developed for Lincolnshire.

4.3 Arboricultural Strategy

4.3.1 The arboricultural strategy is based on the embedded mitigation required for arboricultural receptors where low adverse impacts and minor or negligible effects has been identified during construction within **Appendix 10-H: Arboricultural Impact Assessment** of the ES [**EN010154/APP/6.3**].

4.3.2 The layout of the Proposed Development seeks to minimise adverse arboricultural effects and to maximise the opportunities for biodiversity benefit by following the 'mitigation hierarchy' as generally referred to in the Overarching National Policy Statement for Energy (EN-1) (paragraph 4.6.1) (Ref 15) and Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (regulation paragraph 14(2)(c)18 (3)(c)) (Ref 29), including measures to avoid, prevent, reduce and if possible, offset any identified significant adverse effects.

4.3.3 A detailed plan for the establishment and maintenance of new trees will be submitted within an Arboricultural Method Statement (secured by the **Framework CEMP** [**EN010154/APP/7.7**] and will be produced as part of the detailed CEMP).

5. Management Prescriptions

5.1 Introduction

5.1.1 This section describes how existing and new habitats will be protected and/or implemented. These habitats are:

- Existing retained hedgerows, trees, woodland, arable and ponds;
- New hedgerows, trees, scrub, community orchards; and
- Grassland.

5.1.2 As an outline management plan, further details will be added as the design progresses to refine species and seed mixes of local provenance, management prescriptions and timescales, and site-specific mitigation and enhancement measures.

5.1.3 The EnCoW would supervise the implementation and monitoring works. The advice and supervision of an arboriculturist and other specialists will be utilised as required.

5.2 Existing Habitats

5.2.1 Existing habitats to be retained include:

- Individual trees, shrubs, and woodland
- Hedgerows
- Arable land; and
- Ponds and ditches.

Existing individual trees, shrubs and woodland (including hedgerow trees)

5.2.2 The primary function of the retained trees, shrubs and woodland will be to maintain established habitats, visual amenity and the character of the landscape and provide a structure for the addition of the new planting and other features of the solar farm development.

5.2.3 Existing trees, shrubs and woodland will be managed to provide longevity, increase species diversity, enhance habitat value and improve resilience to climate change. This will include the gapping up of existing hedgerows, where appropriate, to boost species and age diversity, providing better connectivity and increasing the number of climate and disease resilient species.

5.2.4 During construction the retained vegetation will be protected. Measures to be employed will include the use of clearly defined stand-offs, managing the structure and integrity of the retained vegetation, and undertaking any pruning outside of the bird breeding season and in accordance with hedgerow regulations.

- 5.2.5 Retained trees will be periodically inspected by an arboriculturist during construction. Where construction works are adjacent to retained trees, works will be undertaken under a watching brief to record root loss and to recommend further arboricultural works where required. A grassland buffer will be maintained around retained individual trees. Management of the grassland buffer is detailed under species-rich grassland below.
- 5.2.6 No veteran or ancient trees or ancient woodland are to be removed. No trees subject to Tree Preservation Order (TPO) or within a Conservation Area (CA) are to be removed, as set out in the **Arboricultural Impact Assessment (Appendix 10-H of the ES [EN01054/APP/6.3])**.
- 5.2.7 Removal of existing trees will only occur where access is required. These crossings will, wherever possible, be located at current field access locations or in areas where there are existing gaps in the hedgerow and no trees. For information on location of vegetation to be removed, see **Landscape Mitigation Plan in Figure 7.15-1**.
- 5.2.8 Should the detailed design route any cables through trees or woodland that are being retained, they will be installed via HDD at least 2m beneath the ground surface in order to protect the tree roots.

Existing hedgerows

- 5.2.9 Existing hedgerows will be managed to enhance biodiversity and improve ecosystem services, whilst also increasing screening for visual receptors. This will involve filling gaps and thickening hedgerows with a broader range of native species, where needed.
- 5.2.10 All retained hedgerows without trees will be managed to achieve a minimum height of 3m. Where overshading of solar panels is not of concern the height of hedgerows will be managed to be higher where suitable. The planting of hedgerow gaps and positive management to increase hedgerow size will commence in the planting season (i.e. winter) prior to the commencement of construction.
- 5.2.11 When 'gapping up' hedgerows, additional species diversity will be introduced; this will include the provision of hedgerow trees where appropriate (i.e. where over-shading issues can be avoided). The hedgerows will be managed in a rolling programme to ensure that no hedgerow is cut more than once in each three-year period, to maximise flower and fruit production. More detail on the implementation, management and maintenance of hedgerow enhancements is described below.
- 5.2.12 No tracks (other than field entrances), solar panels or other electrical infrastructure (other than cable crossings) will be located within 5m of the centre line of a hedgerow. Within this buffer zone a variety of habitats may be established including species-rich grassland, scrub, flower-rich margins (including those tailored for turtle doves), winter bird food margins, cultivated areas for arable plants and autumn sown bumblebird mix.

5.2.13 Removal of existing hedgerow will only occur where access is required. These crossings will, wherever practical, be located at current field access locations or in areas where there are existing gaps in the hedgerow. The anticipated maximum extent of hedgerow removal required is illustrated in **Figure 3-17 Maximum Vegetation Removal Plan** of the ES [EN010154/APP/6.2].

5.2.14 Where hedgerows are present within visibility splays at access and egress points from the local highway network, vegetation management will be used to maintain safety during the period of construction. These hedgerows will be reduced to a height to be agreed with County Highways, most likely 0.9m, allow suitable visibility, whilst avoiding hedgerow removal. During the operational period these hedgerows will be allowed to re-grow.

5.2.15 With regards to any localised removal of Ecological Important Hedgerows and Important Historic Hedgerows (as per the **Hedgerow Plan [EN010154/APP/2.9]**, **Appendix 8-B: Terrestrial Habitats and Notable Flora** of the ES [EN010154/APP/6.3] and **Appendix 7-E Historic Landscape Character Assessment** of the ES [EN010154/APP/6.3]) to facilitate construction, similarly where hedge removal is required for visibility splays only, where practical they will be trimmed down to a height to be agreed with County Highways, most likely 0.9m, so that it is not removed altogether and can regrow after construction.

5.2.16 A typical cross-section to illustrate the spacing (accommodating the necessary offsets/buffers) between hedgerows, solar PV arrays and footpaths will be provided within the detailed Framework LEMP.

Retained managed arable land

Function

5.2.17 Managed arable land would be provided within the areas of the DCO Site where there is no solar PV infrastructure to benefit ground nesting birds. These areas are indicatively illustrated as Arable fields A to F on **Figure 8-5 Bird Mitigation Land Allocation** of the ES [EN010154/APP/6.2]. These would provide habitat for important ground nesting birds such as Skylark and Lapwing.

Implementation

5.2.18 A minimum 181ha of managed arable will be provided for bird mitigation purposes, as set out in **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1] and illustrated in **Figure 8-5 Bird Mitigation Land Allocation** of the ES [EN010154/APP/6.1]. The managed arable would be rotated within the areas of the DCO Site where there is no solar PV infrastructure, providing the principles for field sizes are achieved. These fields will continue as currently used for maize, barley or wheat.

5.2.19 The managed arable areas comprise:

- Area A – 1 field (11.52ha)

- b. Area B – 2 fields (8.98 ha)
- c. Area C – 1 field (18.87 ha)
- d. Area D – 1 field (32.80 ha)
- e. Area E – 6 fields (58.64 ha)
- f. Area F – 4 fields (50.29 ha)

5.2.20 Annually, within these fields, skylark plots will be created at a rate of 2 per ha, comprising essentially a small uncropped/fallow area at least 3m wide and between 16 and 24 m² in area (e.g. 4 x 4m). In each field, the plots will be created as groups a minimum of 25m between the plots and at least 50m from the field boundary. Plots will be created by one of the following: a. Turning off the drill during sowing to leave an unsown plot; or b. Sowing the crop as normal and spraying with an herbicide to create the plot by 31 December. Harvesting should not take place until August, at the earliest. Note, if spring sown cereals are included then the need for skylark plots may be removed.

5.2.21 Annually one field in Area E or F will be left as fallow (with no skylark plots), specifically to encourage nesting Lapwing. This will be cultivated with tines or discs in as short a time as possible, between 1 and 20 of March to provide attractive ground for prospecting lapwings and avoid subsequent damage to nests. Lapwing like very short or no vegetation. The fallow will be maintained until 31 July or later as lapwings will continue to use these areas for nesting and annual arable plants including poppies will flower and set seed. The amounts of bare ground and re-vegetated ground will vary from site to site.

5.2.22 Flower-rich margins (2-6m wide) around field edges will be left uncultivated to provide additional habitat. These could be sown with a tussocky mix.

Ponds

Function

5.2.23 Existing ponds within the DCO Site will be managed to enhance the biodiversity value for aquatic species as well as birds and other animals that use these wetland features. Amphibians will thrive in the restored ponds and enhanced surrounding habitat and invertebrates will benefit from the improved water quality.

5.2.24 The location of existing ponds are illustrated on the **Landscape Mitigation Plan in Figure 7.15-1 [EN010154/APP/7.15]**.

Implementation

5.2.25 Existing ponds will be restored with the aim of maximising their wildlife value. This will partly be achieved by de-silting to ensure that they remain at least partly wet during normal conditions, allowing amphibians and invertebrates to complete their life cycles. Where existing ponds are over-shaded by mature trees, including poplars, willows and oak pollards, these trees will be prioritised for re-pollarding, to increase light and decrease leaf fall onto the ponds.

5.2.26 Scrub clearance and de-silting around ponds will be phased over five years, to prevent the site-wide loss of existing shaded pond habitats and to provide ponds in various stages of natural succession to provide a wider range of niches for wildlife. Water features tend to be colonised naturally, therefore no planting is considered necessary or desirable in these areas.

5.2.27 No planting of aquatic species is proposed, and ponds will be allowed to colonise naturally. Some adjacent bankside/grassland planting may be undertaken where required following scrub clearance and de-silting.

Establishment Maintenance (Anticipated 2033-2038)

5.2.28 The growth of naturally colonising aquatic plants and any adjacent grassland planting will need to be controlled and managed to maintain the habitat diversity. A detailed plan for the establishment and management of any planting will be developed for the five-year establishment maintenance period. This will be determined through monitoring of the ponds through annual site inspections to identify requirement for any remedial action.

Long-term management (Anticipated 2038-2093)

5.2.29 The long-term management will be undertaken to manage the ponds at various stages of succession to maintain a relatively stable and diverse wetland community in the long-term, and to avoid areas becoming dominated by one to two species.

5.2.30 The management prescriptions below should be adapted as required following findings of annual site inspections and condition monitoring reports.

- a. Remove all litter, rubbish and foreign debris from site.
- b. Carry out rotational management of the marginal plants with the selective removal of the most dominant marginal planting to ensure the intended species diversity is retained. Works to be carried out in October.
- c. Prohibit excessive and extensive spread of plants once planting is established. Remove spreading plants as required in October.
- d. Monitor silt depth and, if required, remove silt material if it is considered to be detrimental to the function of the pond. All material should be left at the edge of the channel over night before being removed off site or to an agreed area offsite so any aquatic fauna can migrate back to the feature. This should be carried out annually in November to December.
- e. Bank erosion will be monitored and any erosion reported, and mitigation provided.

5.3 Proposed Habitats

Overview of proposed habitats

5.3.1 Habitats proposed within the Proposed Development include:

- a. Woodland and tree belts;
- b. Hedgerows with trees (including existing hedgerow enhancement);
- c. Scrub
- d. Individual trees;
- e. Species-rich grassland;
- f. Modified grassland;
- g. Permanent grassland;
- h. Community orchard;
- i. Localised features; and
- j. Arable flora.

General Principles for Planting

5.3.2 The following steps and working methods will be included as part of the establishment of all planting:

- a. Areas identified for planting will be clearly marked out and agreed with the LCoW in advance.
- b. Planting will take place in the first available planting season and at a time of year appropriate to the species being planted.
- c. Plants will be inspected by the LCoW at the nursery and on delivery to site prior to planting.
- d. Plants will be planted in double staggered row at 5 plants per metre in single species groups of 3, 5 or 7's. Specimen trees to be planted at 10m intervals as hedgerow trees.
- e. Plants will be protected from strimming activities and damage from animals with individual biodegradable spiral guards, supported by a bamboo cane for hedgerow plants or double staked 300x60cm weld mesh guard for specimen trees. The type of guard selected will be appropriate to the plant species and growth habit.
- f. Trees will be staked to protect against wind-rock.

Woodland and tree belts

Function

5.3.3 Proposed woodland and tree belts will be established to introduce new areas of woodland and provide screening in sensitive areas. Proposed areas of woodland and tree belts will be planted to provide visual and physical screening to more sensitive receptors on the edge of the Proposed Development. These will also provide better connectivity and habitat for local wildlife.

5.3.4 Trees will be managed to achieve their maximum mature height, to better provide biodiversity enhancements and screening, where necessary.

Species will be chosen to build in resilience and will consider the requirements of the local area, taking into account climate change and potential pest and pathogen threats.

5.3.5 Native species will form the majority of the tree stock, while specially selected non-natives may be used to build in resilience in the face of climate change.

Implementation

5.3.6 The locations of the new woodland and tree belts are shown on the **Landscape Mitigation Plan in Figure 7.15-1**.

5.3.7 Larger specimens within the mix indicated below should be planted approximately 2.5m apart to allow the canopy to close sooner. Specific species will be determined through future detailed design work to ensure mixes are reflective of local character, whilst also building in climate resilience.

5.3.8 New areas of woodland and tree belts will be planted in well-prepared ground, with protection such as biodegradable spiral rabbit guards or shrub shelters to avoid harm by local wildlife. Where larger specimens have been specified, suitable anchoring will be necessary with tree stakes and ties to avoid root rock and/or displacement of trees. Once shelters and ties are deemed too small, they are to be removed and disposed of off-site.

5.3.9 Larger specimens within the mix indicated in **Table 1** will be planted in pits measuring 900 mm in diameter and 900 mm in depth. The base of the tree pit will be broken up to a depth of 200 mm, and the pit will be backfilled with topsoil, consolidated in layers to ensure the tree is positioned at the correct depth. Each tree will be secured with stakes and ties. A specification for proposed woodland and tree belts will be developed, detailing the indicative species, sizes, and percentages outlined in **Table 1**.

Table 1: Indicative mix for proposed woodland and tree belts

Botanical Name	Common Name	Height	Root	Form	% Mix
<i>Acer campestre</i>	Field Maple	175-200cm	Root ball	Feather	10
<i>Cornus sanguinea</i>	Dogwood	40-60cm	Bare root	Transplant	10
<i>Corylus avellana</i>	Hazel	40-60cm	Bare root	Transplant	15
<i>Crataegus monogyna</i>	Hawthorn	40-60cm	Bare root	Transplant	15
<i>Ilex aquifolium</i>	Holly	40-60cm	Cell grown	1L	5
<i>Prunus padus</i>	Bird Cherry	175-200cm	Root ball	Feather	10
<i>Quercus robur</i>	English Oak	175-200cm	Root ball	Feather	15

Botanical Name	Common Name	Height	Root	Form	% Mix
<i>Tilia cordata</i>	Small Leaved Lime	175-200cm	Root ball	Feather	10
<i>Terminalis glaberrima</i>	Wild Service tree	175-200cm	Root ball	Feather	10

Establishment Maintenance

5.3.10 The aim of establishment maintenance will be to support the early stages of growth to encourage thick, bushy growth and good form. This is based on the following principles and outline prescriptions:

- Maintain a 0.5m weed free strip around the base of the tree through mechanical control;
- Irrigation may be required during periods of drought or extended dry weather;
- Remove litter, rubbish, and debris from planted areas throughout the year;
- Re-firm soil around roots to ensure plants are supported and upright in spring each year;
- Inspect and adjust stakes, guards, and ties in spring and autumn and after periods of particularly inclement weather;
- Check and record failed or defective plants in September annually;
- Replace failed or defective plants with matching species of the same size during the next planting season after failure; and
- LCoW to undertake a quarterly check of plants to record their growth and condition.

Long-Term Management

5.3.11 The long-term management of proposed woodland and tree belts will focus on the following interventions:

- Tree belts will be left to reach maturity, with careful thinning to avoid any one species becoming dominant;
- Any necessary pruning/thinning will take place outside of the bird nesting season and at the end of the winter in February. This will allow any fruit to stay in place for the maximum period of time throughout the winter;
- Any branches/growth that overhangs or obstructs PRoWs or access tracks will be cut back to keep routes clear to use;
- Dead, dying or over-mature trees will be removed if considered a hazard on health and safety grounds and in accordance with any protected species constraints; and

5.3.12 Monitoring of new tree belts will be undertaken periodically in order to check any significant changes in health and viability of the hedgerow. Maintenance and condition checks will take place every three years.

Hedgerows with trees (including retained and enhanced)

Function

5.3.13 New species-rich hedgerows with trees will be established to supplement the existing, retained hedgerows with trees.

5.3.14 New species-rich hedgerows with trees will be planted across the DCO Site to help supplement the existing hedgerow network and to filter views of the Proposed Development. New hedgerows with trees will provide valuable habitats for a range of species, allowing for better connectivity across the Proposed Development. The height at which these hedgerows will be maintained will be between 3- 4m in order (hedgerow trees to grow taller) to adequately screen the Solar PV Infrastructure. Where screening is not required, proposed hedgerows will be maintained at 3m or lower with a balance struck between biodiversity and desire to maintain open views of the countryside.

5.3.15 Species will be chosen to build in resilience and will consider the requirements of the local area, taking into account climate change and potential pest and pathogen threats.

5.3.16 Existing hedgerows across the DCO Site will be ‘gapped up’, in order to enhance existing landscape features, reinforce field patterns, increase species diversity and to provide continuous habitat corridors.

5.3.17 New tree and hedgerow planting will also be designed where feasible to follow historic field boundaries in order to preserve the extant field system and minimise the effect of the Proposed Development on historic landscape features.

Implementation

5.3.18 The locations of the new hedgerows and gapping up of existing hedgerows are shown on the **Landscape Mitigation Plan** in **Figure 7.15-1 [EN010154/APP/7.15]**.

5.3.19 Hedge trenches will be dug to dimensions of 450 mm wide by 450 mm deep, with the base loosened before returning the backfill mixture. All stock will be supplied as bare root if in season (unless otherwise stated) and container-grown if planted out of season. A detailed specification for hedgerows will be developed based on the indicative species, sizes, and percentages outlined in **Table 2**:

5.3.20 Individual trees will be planted in pits measuring 900 mm in diameter and 900 mm in depth. The base of the tree pit will be broken up to a depth of 200 mm, and the pit will be backfilled with topsoil, consolidated in layers to ensure the tree is positioned at the correct depth. Each tree will be planted to the nursery line and secured with stakes, ties, and an irrigation pipe.

5.3.21 Planting should take place from November to March, in soil that is not frozen or waterlogged. New planting shall be protected using adequate strimmer and pest guards and will vary depending on the size of the plant.

Table 2: Indicative mix for hedgerows

Botanical Name	Common Name	Height	Root	Form	% Mix
<i>Acer campestre</i>	Field Maple	40-60cm	Bare root	Transplant	5
<i>Cornus sanguinea</i>	Dogwood	40-60cm	Bare root	Transplant	5
<i>Corylus avellana</i>	Hazel	40-60cm	Bare root	Transplant	15
<i>Crataegus monogyna</i>	Hawthorn	40-60cm	Bare root	Transplant	15
<i>Ilex aquifolium</i>	Holly	40-60cm	Container	Transplant	10
<i>Ligustrum vulgare</i>	Wild privet	40-60cm	Bare root	Transplant	10
<i>Malus sylvestris</i>	Crab Apple	40-60cm	Bare root	Transplant	5
<i>Prunus spinosa</i>	Blackthorn	40-60cm	Bare root	Transplant	10
<i>Rosa canina</i>	Dog Rose	40-60cm	Bare root	Transplant	10
<i>Ulmus 'Wingham'</i>	Elm 'Wingham'	40-60cm	Bare root	Transplant	5
<i>Viburnum opulus</i>	Guelder Rose	40-60cm	Bare root	Transplant	5

Establishment Maintenance

5.3.22 A detailed plan for the establishment and maintenance of new hedgerows with trees will be submitted as part of the detailed LEMP. This will include temporary landscape measures during construction as well as the on-going management measures covering a period of five years post-construction of the Proposed Development.

5.3.23 The aim of establishment maintenance will be to support the early stages of growth to encourage thick, bushy growth and good form. This is based on the following principles and outline prescriptions:

- Maintain a 0.5m weed free strip either side of hedgerow primarily through mechanical control. Use of chemical control would be limited to pernicious weeds only as required;
- First cut in spring to 45–60cm above ground level taking care to exclude hedgerow trees;
- Irrigation may be required during periods of drought or extended dry weather;
- Re-firm soil around roots to ensure plants are supported and upright in spring each year;
- Inspect and adjust stakes, guards, and ties in spring and autumn and after periods of particularly inclement weather;
- Check and record failed or defective plants in September annually;

- g. Replace failed or defective plants with matching species of the same size during the next planting season after failure; and
- h. LCoW to undertake a quarterly check of plants to record their growth and condition.

Long-Term Management

5.3.24 The long-term management of new hedgerows with trees will focus on the following interventions:

- a. Hedgerows required for screening purposes will be managed and maintained at a height of 3m-4m, whilst individual tree species planted within hedgerows will be allowed to establish and left to reach maturity;
- b. Cutting of hedgerows will take place outside of the bird nesting season and at the end of the winter in February. This will allow berries to stay in place for the maximum period of time throughout the winter;
- c. Any branches/growth that overhangs or obstructs access tracks will be cut back to keep routes clear to use;
- d. Dead, dying or over-mature hedgerow trees will be removed if considered a hazard on health and safety grounds and in accordance with any protected species constraints;
- e. Monitoring of new hedgerows will be undertaken periodically in order to check any significant changes in health and viability of the hedgerow. Maintenance and condition checks will take place every three years; and
- f. Hedgerow with trees will be managed for the duration of the operation phase (up to 60 years).

Scrub

5.3.25 Areas throughout the DCO Site where notable arable flora has been recorded will be subject to the provision of disturbed field margin strips to provide suitable conditions for annual species following the cessation of arable farming. These include fields AF17, AF29 and AF72 that are of county to national importance, (see **Figure 8-B-1 Hedgerow and notable flora** of this **Environmental Statement [EN010106/APP/6.3]**).

Individual trees

Function

5.3.26 Individual trees will be planted along field boundary edges, within existing and proposed new hedgerow and in larger areas of grassland to supplement existing retained trees and provide further screening and ecological benefits. Planted both singularly and in groups, they will provide structure in larger, wide spanning landscapes, whilst breaking up long distance views.

5.3.27 Proposed planting of individual trees within existing hedgerows will provide visual amenity and enhance biodiversity across the DCO Site, creating important opportunities for nesting birds and creating habitats for invertebrates and small mammals. Whilst providing valuable shelter for

various nesting birds and other wildlife, individual trees also link larger areas of woodland, hedgerows and belts of trees, further adding to connectivity across the DCO Site and therefore the landscape.

5.3.28 As well as providing additional habitat and wildlife connections, scattered individual trees will screen and filter views from the PRoWs and residences.

Implementation

5.3.29 The locations of the individual trees are shown on the **Landscape Mitigation Plan in Figure 7.15-1 [EN010154/APP/7.15]**.

5.3.30 Individual trees will be planted in pits measuring 900 mm in diameter and 900 mm in depth. The base of the tree pit will be broken up to a depth of 200 mm, and the pit will be backfilled with topsoil, consolidated in layers to ensure the tree is positioned at the correct depth. Each tree will be secured with stakes and ties.

5.3.31 Planting will take place from November to March, in soil that is not frozen or waterlogged. Consideration will be given to periods of excess flooding. New planting will be protected using adequate strimmer and pest guards and will vary depending on the size of the plant.

5.3.32 A specification for individual trees will be developed based on the indicative species, sizes and percentages presented in **Table 3**.

Table 3: Indicative mix for individual trees

Botanical Name	Common Name	Height	Root	Form	% Mix
Acer campestre	Field Maple	175-200cm	Root ball	Feather	5
Alnus glutinosa	Alder	175-200cm	Root ball	Feather	10
Betula pubescens	Downy Birch	175-200cm	Root ball	Feather	10
Crataegus laevigata	Midland Hawthorn	175-200cm	Root ball	Feather	15
Crataegus monogyna	Hawthorn	175-200cm	Root ball	Feather	5
Populus nigra	Black Poplar	175-200cm	Root ball	Feather	15
Prunus padus	Bird Cherry	175-200cm	Root ball	Feather	10
Quercus robur	English Oak	175-200cm	Root ball	Feather	15
Salix caprea	Goat Willow	175-200cm	Root ball	Feather	10
Sorbus torminalis	Wild Service tree	175-200cm	Root ball	Feather	5

Establishment Maintenance

5.3.33 The aim of establishment maintenance will be to support the early stages of growth to encourage thick, bushy growth and good form. This is based on the following principles and outline prescriptions:

- Maintain a 0.5m weed free strip around the base of the tree through mechanical control;

- b. Irrigation may be required during periods of drought or extended dry weather;
- c. Remove litter, rubbish, and debris from planted areas throughout the year;
- d. Re-firm soil around roots to ensure plants are supported and upright in spring each year;
- e. Inspect and adjust stakes, guards, and ties in spring and autumn and after periods of particularly inclement weather;
- f. Check and record failed or defective plants in September annually;
- g. Replace failed or defective plants with matching species of the same size during the next planting season after failure; and
- h. LCoW to undertake a quarterly check of plants to record their growth and condition.

Long-Term Management

5.3.34 The long-term management of proposed individual trees will focus on the following interventions:

- a. Individual trees will be left to reach maturity, where trees are spaced close together, pruning/thinning may be required in order to promote growth and longevity;
- b. Any necessary pruning/thinning will take place outside of the bird nesting season and at the end of the winter in February. This will allow any fruit to stay in place for the maximum period of time throughout the winter;
- c. Any branches/growth that overhangs or obstructs PRoWs or access tracks will be cut back to keep routes clear to use;
- d. Dead, dying or over-mature trees will be removed if considered a hazard on health and safety grounds and in accordance with any protected species constraints; and

5.3.35 Monitoring of new individual trees will be undertaken periodically in order to check any significant changes in health and viability of the hedgerow. Maintenance and condition checks will take place every three years.

Species-rich grassland

Function

5.3.36 Species-rich grassland will be established on the DCO Site, outside the Solar PV areas. The type of mix chosen will consider ground conditions and soil types to establish a diverse and successful sward of grasses and wildflowers.

5.3.37 Grassland diversity will be achieved both through different species mixes and through management (e.g. traditional meadow style management and maintenance of flower rich tussocky swards).

5.3.38 By establishing a diverse sward of grasses and wildflowers, biodiversity will increase, enhancing value for wildlife. The mixes used for the open areas,

verges and field margins will provide a variety of wildflowers to both enhance biodiversity and to provide a valuable food source and habitat to local invertebrates and wildlife.

Implementation

5.3.39 The exact make-up of the seed type used will be tailored to conditions on site and to the needs of the DCO Site's biodiversity.

5.3.40 A specification for species-rich grassland will be developed to best suit the ground conditions and soil chemistry. This will be developed during the detailed design phase to ensure best practices are maintained and the seed has the best chance to establish. An indicative species mix is presented in **Table 4**.

Table 4: Indicative mix for species-rich grassland

Botanical Name	Common Name	% Mix
Wildflowers		
Achillea millefolium	Yarrow	0.75
Agrimonia eupatoria	Agrimony	0.3
Centaurea nigra	Common Knapweed	1.5
Daucus carota	Wild Carrot	0.9
Galium verum	Lady's Bedstraw	1.5
Knautia arvensis	Field Scabious	0.45
Leucanthemum vulgare	Oxeye Daisy	1.27
Malva moschata	Musk Mallow	1.8
Plantago lanceolata	Ribwort Plantain	1.8
Poterium sanguisorba	Salad Burnet	0.9
Primula veris	Cowslip	0.3
Ranunculus acris	Meadow Buttercup	0.75
Silene dioica	Red Campion	1.5
Rhinanthus minor	Yellow Rattle	0.98
Rumex acetosa	Common Sorrel	0.3
Grasses		
Agrostis capillaris	Common Bent	8.5
Cynosurus cristatus	Crested Dog's-tail	29.75
Festuca rubra	Red Fescue	25.5
Phleum bertolonii	Smaller Cat's-tail (w)	4.25
Poa trivialis	Rough Meadow-grass	17

Establishment Maintenance

5.3.41 The aim of establishment maintenance will be to support the early stages of growth to encourage a healthy sward and allow a diverse mix of species to establish. This is based on the following principles and outline prescriptions:

- a. Where practicable, seed will be obtained from a local source for the purpose of maintaining continuity with local species-rich grasslands;
- b. Receiving soils should be prepared in order to reduce the nutrient levels. Techniques for reducing nutrient levels should follow best practice and take into consideration soil survey results. These measures may include sowing of crops such as forage maize or mustard without fertiliser application;
- c. Once the nutrient level is reduced, all clods will be broken up and alien material (such as plastics and metals) above 50 mm in size will be removed.
- d. The top 50mm should be raked to allow for a fine tilth before seeding. This should be done directly before seeding which should take place in preferably in the autumn to avoid sowing during dry periods. If unable to sow during autumn then the spring sowing window should be used; and
- e. Seeding and rolling will be carried out in dry weather and access will be prohibited to seeding areas until seed has germinated and a sward has established (see establishment maintenance section for grasslands generally).

5.3.42 Spot checks will be undertaken at locations within each grassland area during years 1, 3 and 5, the purpose being to record plant species, their distribution, and the overall condition of the grassland. Other relevant indicators relating to the sward that may require remedial action during the contract period or in the future will also be recorded.

5.3.43 If remedial action is required, actions will be agreed with suitably qualified Technical Specialist Advisors and areas identified will be re-seeded.

Long-Term Management

5.3.44 Within the first 12 months after sowing, the species-rich grassland will be cut to help the sown species to establish. The cuttings will be left for a period of seven days before being removed to appropriate storage areas on site.

5.3.45 Once the areas are fully established, typically the second Spring after sowing, the area will need to be cut in the Spring (before April) to reduce the vigour of the grass.

5.3.46 Following this, areas will be cut towards the end of September, after the breeding season (typically March to August inclusive), to avoid disturbing ground nesting birds.

5.3.47 Cutting will be done strategically to allow for areas with both taller and shorter swards to provide opportunities for a range of fauna.

5.3.48 The results of annual monitoring surveys will be used to adjust the management regime to maximise biodiversity.

Modified grassland

Function

5.3.49 Areas of modified grassland are proposed within the solar PV areas. By establishing a diverse sward of grasses and herbs of modified grassland (moderate condition), biodiversity will increase compared to the arable baseline, enhancing value for wildlife beneath and around the PV panels within the fenced areas of the Proposed Development.

Implementation

5.3.50 A specification for proposed modified grassland will be developed during future detailed design work. This will be based on the prevailing soil types. An indicative species mix is presented in **Table 5:**

Table 5: Indicative mix for modified grassland

Botanical Name	Common Name	% Mix
	Perennial Ryegrass	25
	Red/Chewings Fescue	20
	Timothy	15
	Smooth Stalked Meadow Grass	15
	Creeping Red Fescue	12.5
	Rough Stalked Meadow Grass	2.5
	Wild White Clover	5.0
	Red Clover	5.0

Establishment maintenance

5.3.51 A proposed plan for the establishment and management of the modified grassland for the five-year establishment maintenance period is set out below and supplemented by measures to reduce soil fertility and prepare the necessary substrate for development of the grassland.

5.3.52 The aim of establishment maintenance will be to encourage development of a diverse sward of grasses and herbs. Establishment maintenance will be based on the following principles and prescriptions:

- Immediately after sowing, the ground will be left undisturbed and unwatered to allow the grassland to establish naturally.
- Grassland management will be achieved by mowing and/or commercial sheep grazing.

- c. Visual inspections will be made during the growing season.
- d. Control of undesirable species (e.g. arable weeds) and injurious weeds will be undertaken by spot treatment with a systemic herbicide and intensive grazing over several seasons.
- e. Subsequently, to prevent colonisation and domination of the grassland further spot application of herbicide or manual control (e.g. pulling of ragwort) will be used.
- f. A 5m wide track around the periphery of the PV panels will be mown as required to maintain service access to the panels.
- g. Spot checks will be undertaken at locations within each grassland area during years 1, 3 and 5, the purpose being to record plant species, their distribution, and the overall condition of the grassland. Other relevant indicators relating to the sward that may require remedial action during the contract period or in the future will also be recorded.
- h. If remedial action is required, actions will be agreed with suitably qualified Technical Specialist Advisors and areas identified will be re-seeded.

Long-Term Management

- 5.3.53 Long-term management will be undertaken to maintain a relatively stable grassland community in the long-term, and to avoid areas naturally progressing into tall, dense, grass-dominated areas.
- 5.3.54 Measures for modified grassland (moderate condition) will focus on a regime of:
 - 5.3.55 Sheep grazing (if undertaken) at a stocking density and time periods which favour sward diversity within the modified grassland (moderate condition).
 - a. Visual inspections during the growing season.
 - b. Control of undesirable species (e.g. arable weeds) and injurious weeds to prevent colonisation and domination of the grassland using spot treatment of herbicide.
 - c. The results of annual monitoring surveys will be used to adjust the management regime to maximise biodiversity.

Permanent grassland

Function

- 5.3.56 Areas of permanent grassland are proposed as bird mitigation areas. This is likely to be stock grazed or cut outside the bird nesting season (which is March to August inclusive).

Implementation

- 5.3.57 As set out in **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1] and illustrated in **Figure 8-5 Bird Mitigation Land**

Allocation [EN010154/APP/6.1], a minimum 64ha of permanent grassland will be created within the areas illustrated (Area A is 20.43 ha, Area B is 28.51ha, and Area C is 15.11ha, and Area D is TBC). For ground nesting birds the sward will contain a mix of short and longer grass, creating a variety of nesting and foraging opportunities. It will remain uncut between 1st March and 31st August.

- 5.3.58 A band of grassland (other neutral grassland) up to 10m wide will be planted adjacent to watercourses within the retained arable land within the Principal Site in order to achieve a minimum 10% biodiversity net gain for watercourse habitats, as set out in **Biodiversity Net Gain Report [EN010154/APP/7.12]**.
- 5.3.59 A specification for proposed permanent grassland will be developed during future detailed design work but is likely to be based on a neutral grassland mix. This will be based on the prevailing soil types. The grassland would be managed to provide a mosaic of taller tussocky grassland and shorter areas, with access to damp areas, such as a restored pond or a watercourse. An indicative species mix is presented in **Table 6**:

Table 6: Indicative mix for permanent grassland

Botanical Name	Common Name	% Mix
Wildflowers		
Achillea millefolium	Yarrow	0.8
Agrimonia eupatoria	Agrimony	0.6
Arctium minus	Lesser Burdock	0.2
Centaurea nigra	Common Knapweed	2.0
Centaurea scabiosa	Greater Knapweed	1.0
Daucus carota	Wild Carrot	2.0
Dipsacus fullonum	Wild Teasel	1.6
Filipendula ulmaria	Meadowsweet	0.6
Galium album	Hedge Bedstraw	1.8
Geranium pratense	Meadow Crane's-bill	0.4
Knautia arvensis	Field Scabious	0.8
Lathyrus pratensis	Meadow Vetchling	0.4
Leucanthemum vulgare	Oxeye Daisy	1.6
Malva moschata	Musk Mallow	0.6
Plantago lanceolata	Ribwort Plantain	1.8
Poterium sanguisorba	Salad Burnet	0.8
Silene dioica	Red Campion	1.2
Vicia Cracca	Tufted Vetch	0.4

Botanical Name	Common Name	% Mix	
Silene vulgaris	Bladder Campion	1.6	
Grasses			
Agrostis capillaris	Common Bent	4.0	
Alopecurus pratensis	Meadow Foxtail (w)	8.0	
Carex divulsa ssp divulsa	Grey Sedge (w)	4.0	
Cynosurus cristatus	Crested Dogtail	24.0	
Dactylis glomerata	Cocksfoot (w)	4.0	
Festuca ovina	Sheep's-fescue	4.0	
Festuca rubra ssp rubra	Slender-creeping Fescue	Red	16.0
Phleum bertolonii	Smaller Cat's-tail (w)	8.0	
Schedonorus arundinaceus (Festuca arundinacea)	Tall Fescue (w)	8.0	

Establishment Maintenance

5.3.60 This will be similar to species-rich grassland. The aim of establishment maintenance will be to support the early stages of growth to encourage a healthy sward and allow a diverse mix of species to establish. This is based on the following principles and outline prescriptions:

- Where practicable, seed will be obtained from a local source for the purpose of maintaining continuity with local species-rich grasslands;
- Receiving soils should be prepared in order to reduce the nutrient levels. Techniques for reducing nutrient levels should follow best practice and take into consideration soil survey results. These measures may include sowing of crops such as forage maize or mustard without fertiliser application;
- Once the nutrient level is reduced, all clods will be broken up and alien material (such as plastics and metals) above 50 mm in size will be removed.
- The top 50mm should be raked to allow for a fine tilth before seeding. This should be done directly before seeding which should take place in preferably in the autumn to avoid sowing during dry periods. If unable to sow during autumn then the spring sowing window should be used; and
- Seeding and rolling will be carried out in dry weather and access will be prohibited to seeding areas until seed has germinated and a sward has established (see establishment maintenance section for grasslands generally).

5.3.61 Spot checks will be undertaken at locations within each grassland area during years 1, 3 and 5, the purpose being to record plant species, their

distribution, and the overall condition of the grassland. Other relevant indicators relating to the sward that may require remedial action during the contract period or in the future will also be recorded.

5.3.62 If remedial action is required, actions will be agreed with suitably qualified specialist advisors and areas identified will be re-seeded.

Long-Term Management

5.3.63 Within the first 12 months after sowing, the grassland will be cut to help the sown species to establish. The cuttings will be left for a period of seven days before being removed to appropriate storage areas on site.

5.3.64 Once the areas are fully established, typically the second year after sowing, the area will need to be cut in the Spring (before March or after August to consider ground nesting birds) to reduce the vigour of the grass.

5.3.65 Following this, areas will be cut towards the end of September, after the breeding season (typically March to August inclusive), to avoid disturbing ground nesting birds.

5.3.66 Cutting will be done strategically to allow for areas with both taller and shorter swards to provide opportunities for a range of fauna.

5.3.67 The results of annual monitoring surveys will be used to adjust the management regime to maximise biodiversity.

Community Orchard

Function

5.3.68 The orchard will feature a variety of fruit trees (e.g. apple and pear) suited to the local landscape and climatic conditions. The species chosen will take into consideration the effects of climate change in order to build in resilience and a fruiting tree stock that will provide for future generations to come. The orchard and their grassland below will also provide valuable benefits to local wildlife.

Implementation

5.3.69 A specification for the proposed orchard will be developed during future detailed design work. Planting spacings and densities will depend on the tree species and ground conditions. The mix of species will reflect those of local provenance and use of the fruit (i.e. eating, cooking or juicing). Another key determinant in choosing species will be those that show resilience to climate change and future changing conditions, with species tolerant of drought and warmer weather favoured in order to provide a tree stock that will last.

5.3.70 Consideration of soil conditions including fertility and drainage, shelter from the wind and type of rootstock used are important considerations. Trees will need protecting from grazing deer. The use of vigorous rootstocks would facilitate the development of tall trunks out of reach of deer but may limit the ease of harvesting the fruit.

Establishment maintenance

5.3.71 The objective of establishment maintenance is to promote early growth and to minimise future management needs by addressing weed competition. The maintenance plan adheres to the following principles and specific guidelines:

- a. Maintain a weed-free zone of 1m around trees using mechanical methods.
- b. Provide adequate water to new plants to reduce drought-related failures.
- c. Regularly clear litter, rubbish, and debris from planted areas throughout the year.
- d. Firm soil around roots in spring to ensure plants remain upright and well-supported.
- e. Inspect and adjust guards, ties, and stakes during spring, autumn, and after severe weather events.
- f. Conduct annual assessments in September to identify and document any failed or defective plants.
- g. Replace unsuccessful or defective plants with identical species and size during the subsequent planting season.
- h. Perform quarterly checks on plant growth and overall health status.

Long-Term management

5.3.72 The on-going management prescriptions for the orchard will include conducting of an annual condition assessment and development of a suitable plan of action to address any changes in condition or site requirements.

5.3.73 From year 5 onwards, assuming plant growth is deemed acceptable and successful, guards, ties and stakes will be removed from plants to avoid any restrictions to the trees.

5.3.74 The orchard will be underplanted with a species-rich seed mix that is well suited to an orchard environment and will follow similar management practices as those given for species-rich grassland, such that less than 10% of the ground will be occupied by scrub.

5.3.75 An appropriate pruning regime will be required depending on the requirements of the different fruit trees. For example, pruning of apple and pear trees is normally done in late winter when the trees are dormant.

Localised features

5.3.76 Habitat creation and enhancements have been included within the Proposed Development design to increase biodiversity. Whilst a number of these will minimise the landscape and visual impacts, they will also provide landscape-scale benefits for biodiversity through the increase in habitat availability and connectivity for a wide range of fauna.

5.3.77 A range of localised measures will be delivered to increase the opportunity for a range of flora and fauna. These measures are:

- a. Provision of habitat boxes
- b. Creation of habitat piles

Habitat boxes

5.3.78 Artificial bird boxes and bat boxes will be installed in existing woodland areas, on retained individual trees and existing trees in hedgerows to increase the availability of nesting and roosting features and enhance the value of these habitats for these species groups. Boxes will be of varying designs to suit different species of birds and bats will be installed in suitable locations to be determined by an ecologist at the time of installation. A minimum of 30 bird and 30 bat boxes is proposed. A minimum of five tree mounted or tower mounted barn owl boxes will be provided in the DCO Site located >1km from the A46, A607 and A15.

Long-term management

Bird/barn owl boxes

5.3.79 All wild birds, their active nests and eggs are protected under the Wildlife and Countryside Act (1981), as amended. This makes it an offence to deliberately or recklessly kill or injure any wild bird, or damage or destroy any active nest or eggs of a wild bird.

5.3.80 Annual cleaning of bird boxes cannot be undertaken between the months of March and August inclusive, when birds may be using the boxes. Therefore, bird boxes should be cleaned between October and February to prevent the build-up of nest parasites in the boxes whilst avoiding the risk of disturbing birds using the boxes as a roost site during the cold winter months.

5.3.81 Barn owl boxes will be inspected annually between November and December by a suitably licensed ecologist. Where barn owls are absent any nesting material of other species (such as accumulations of sticks) will be removed where required.

Bat boxes

5.3.82 Bat boxes will be inspected by an appropriately licensed bat surveyor for evidence of uptake as per the post-construction monitoring programme (see timing in Section 7), and any evidence of roosting bats will be recorded to assist with ongoing management of the woodland on site.

5.3.83 Where monitoring is not undertaken above, the condition of all wildlife boxes installed will be monitored annually during the operation of the Proposed Development and replacements will be made as necessary. Inspections can be timed to coincide with the required inspections of new tree and shrub plantings.

5.3.84 Bat boxes are, in most circumstances, unlikely to be used by hibernating bats during winter months (between November and February inclusive). Therefore, any maintenance that is required on bat boxes should be undertaken during these months, when any bird nests will be removed. All bats and their roosts are protected under the Wildlife and Countryside Act

(1981), as amended. Therefore, it is an offence to possess, control, transport, sell or exchange any live or dead bat. Therefore, if bats are inadvertently discovered during maintenance, the person undertaking the maintenance should replace the box and leave it undisturbed.

5.3.85 The bird and bat boxes will be made from long lasting materials (such as Woodcrete) and would be expected to have a life expectancy of 20-25 years. Given the Proposed Development's 60-year lifespan the bird and bat boxes will be replaced every 20 years, which will be secured within the detailed LEMP.

Creation of Habitat Piles

5.3.86 Habitat piles and hibernacula will be constructed throughout the Proposed Development in suitable areas, such as close to ponds, wet drains or rivers, using natural materials generated during clearance of the DCO Site, such as logs, turf, and grass strimming. These will provide refuge and hibernation opportunities for amphibians and reptiles, as well as dead wood habitat for invertebrates, which will in turn benefit fauna such as bats and birds.

5.3.87 These will be created during any initial management works and then periodically during the life of the DCO Site when woodland is thinned or the hibernacula are noted as having degraded such that the ECoW considers a replacement is required. Locations will be across the DCO Site when works are undertaken and may include piles from cutting in the conservation margins and any hedgerow or woodland management.

Arable Flora

5.3.88 Areas throughout the DCO Site where notable arable flora has been recorded will be subject to the provision of disturbed field margin strips to provide suitable conditions for annual species following the cessation of arable farming. These include fields AF17, AF29 and AF72 that are of county to national importance, (see **Figure 8-B-1 Hedgerow and notable flora of the ES [EN010106/APP/6.3]**).

5.3.89 For these arable flora areas there will be no routine application of herbicides, but where a pernicious weed burden becomes an issue, targeted herbicide application and or hand pulling will be necessary. No seed or crop will be added to these areas, to encourage the existing seed bank to germinate, grow and re-seed. The strips will be cultivated in either spring (February-March) or autumn (September-November) each year for the lifetime of the Proposed Development, to a depth of 150mm to establish a firm, fine tilth. This will then be left undisturbed to naturally regenerate. The cultivation depth can be adjusted to control germination of problematic weeds. These strips will be disturbed using disc harrowing to a depth of between 80-180mm. Disc-harrowing will occur in February with the vegetation left to naturally regenerate within the strips.

5.3.90 Retained arable fields within the DCO Site will also continue to be cultivated to allow arable flora to persist.

6. Permissive paths

- 6.1.1 New permissive paths have been designed to supplement the existing Public Right of Way (PRoW) network, linking existing routes and creating new connections. As with existing PRoW on-site, a minimum offset of 10m from the centre line has been incorporated. Where development is proposed on both sides of a PRoW or permissive path, sections of wider offsets have also been integrated where practicable. The location of the proposed permissive path network is shown in **Figure 3-3 Proposed Permissive Path Plan** of the ES [EN010154/APP/6.2].
- 6.1.2 The permissive paths will be made available to the public for up to 364 days a year during operation of the Proposed Development, with the Applicant reserving the right to periodically exclude the public by closing the path, either to ensure that the way does not become a highway or to carry out repair and maintenance, although in practice such closures are likely to be infrequent.. They will be managed by the Applicant and will include signs to make clear that its use is for the public by permission of the Landowner. At the end of the Proposed Development's operation (with further detail to be included in the DEMP), when the land will be in private ownership, the permitted public use will cease.
- 6.1.3 There is a network of numerous PRoW and existing permissive paths which traverse the Principal Site and provide pedestrian connectivity between adjacent settlements. The PRoW network within and surrounding the DCO Site is shown on **Figure 2-2 Public Rights of Way Plan** of the ES [EN010154/APP/6.2]. More information on this impact is provided in **Chapter 13: Traffic and Transport** of the ES [EN010154/APP/6.1].
- 6.1.4 Baseline research and consultation feedback demonstrated that local communities and stakeholders would benefit from the provision of additional permissive paths to the east of Witham St Hughs, to the west of Bassingham, and to the south west of Thorpe on the Hill providing pedestrian connectivity to Morton Hall. A permissive path network, totalling approximately 9.5km, will be implemented providing routes across the Principal Site and enhancing the recreational value of the DCO Site. See **Figure 3-3 Proposed Permissive Path Plan** of the ES [EN010154/APP/6.2] and the **Framework Public Rights of Way Management Plan** [EN010154/APP/7.14] for further details.
- 6.1.5 Permissive paths will be open for use by pedestrians, cyclists, and equestrians. The surface will be permeable, typically comprising mown grass, with crushed aggregate used where required.
- 6.1.6 These new permissive paths will feature many of the proposed habitats mentioned within this report, with their management prescriptions following those given in the relevant sections. Proposed habitat types along the permissive paths will feature (but are not limited to), grassland, individual trees, hedgerow, hedgerows with individual trees and woodland and tree belts.

- 6.1.7 As well as proposed habitats, the permissive path network will feature and interact with existing habitats such as ditches, hedgerows and grassland. The management of these existing habitats will follow the management prescriptions listed in this document with the aim of preserving and enhancing the existing landscape features and habitats.
- 6.1.8 As shown in **Figure 7.15-1**, the Proposed Development also includes two new proposed private access tracks to link the Cathedral View Holiday Park and Field Farm House with proposed permissive paths.
- 6.1.9 A typical cross-section to illustrate the spacing (accommodating the necessary offsets/buffers) between hedgerows, solar PV arrays and footpaths will be provided within the detailed Framework LEMP.

Implementation

- 6.1.10 New signage will be installed to help wayfinding and provide information on how to link to existing parts of the PRoW network as well as course distances to promote active travel. Access points will be clearly defined. Signage will be designed to be durable, weather-resistant and sympathetic to the natural surroundings.

Long-Term Management

- 6.1.11 Management of the habitats found along the permissive paths will follow the management prescriptions noted in this report, with particular attention paid to the heights and canopies of the individual trees and hedgerows in order to maintain accessibility for all users, including equestrian recreation activities.
- 6.1.12 Regular inspection of the path signage and wayfinding equipment will be undertaken in order to identify any damage or vandalism. Replacement or repairs will be carried out promptly to maintain visibility and accessibility. Regular inspection of the surface of the paths will also be undertaken.

7. Pre and post construction monitoring

7.1.1 Monitoring is required in order to determine that the functions documented within this LEMP are being achieved and whether any remedial management action may be required. The baseline against which the monitoring can be compared comprises the pre-construction baseline data. This baseline data collected in 2023/2024 will require updating prior to construction, as by operation (anticipated 2033) this data will be ten years old and out of date. Updates would include a similar set of surveys undertaken at the baseline where relevant ecological receptors have been identified, including surveys of breeding and non-breeding birds, bats, riparian mammals and badgers, as set out in **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1] and the **Framework Construction Environmental Management Plan** [EN010154/APP/7.7]. These would be undertaken a year prior to construction to identify any ecological constraints, including any protected species licensing requirements.

7.1.2 With regards to bats, pre-construction (ground-level inspection) surveys will be undertaken to support the baseline survey findings, the purpose of which is to ensure mitigation during the construction phase is based on the latest protected species information and Proposed Development design. Should there have been any changes to the design which could impact upon roosting bats (i.e. additional tree removal of trees with potential to support roosting bats), where found within the DCO Site, then further surveys will be undertaken as required (e.g. bat emergence surveys), then Natural England licences will be sought (if required) and mitigation measures updated accordingly.

7.1.3 The Applicant will define the appropriate roles and responsibilities for site staff, as outlined in the **Framework Construction Environmental Management Plan** [EN010154/APP/7.7]. An ECoW will be tasked with ensuring that construction-related environmental mitigation measures are properly implemented, monitored, and maintained. These measures will include, but are not limited to, vegetation clearance, species identification, and exclusion of protected or non-protected species.

7.1.4 The ECoW's responsibilities will encompass activities that could impact biodiversity, such as providing advice on methods to prevent or minimise light spill, as well as delivering Toolbox Talks before starting any work that might affect habitats and species.

7.1.5 The Contractor, appointed by the Applicant to construct the Proposed Development, will be responsible for establishing, managing, and monitoring the implementation of landscape and ecological mitigation during the five-year establishment aftercare period. The Applicant will inspect and record the success of this establishment during that time.

- 7.1.6 Any long-term biodiversity monitoring and management requirements specified in this document will be carried out by the Applicant and/or a Contractor appointed by the Applicant.
- 7.1.7 A post-construction monitoring programme will be formalised, agreed and included within the detailed LEMP. Walkover surveys of the DCO Site will be undertaken between April and June in years 2, 4, 6, 10 and then every 5 years post-construction until year 60. This monitoring will also be used for the purposes of BNG Condition Assessments that requires a 30-year management plan.
- 7.1.8 The surveys will involve inspection of the hedgerows, tree belt and trees, and grassland habitats to ensure they are being managed accordingly.
- 7.1.9 Post-construction monitoring for flora, birds (breeding and non-breeding), riparian mammals, badgers and bats (bat box roosting and activity survey), will be undertaken in the respective seasons, in years 1, 3, 5, 10 and 15 post-construction and thereafter every ten years from years 20 to 60. These surveys are likely to involve similar methods to those used to determine the ecological baseline of the Proposed Development and will be overseen by an Ecological Advisory Group or similar.
- 7.1.10 Maintenance checks of wildlife features (e.g. bat and bird boxes etc.) will be made annually to ensure that these features are still in position and secure. Some refitting of boxes, repairs and replacements are likely to be required over the life-time of the Proposed Development.
- 7.1.11 Results from the post-construction monitoring will feed into the management plan and, if required, management may be amended accordingly based on this monitoring. For example, replacement planting and/or changes to planting species where planting has failed to establish.

8. References

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Ref 26 BS 3998: 2010 Treework – Recommendations


Ref 27 National Joint Utilities Group (NJUG) (2007) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees [online] Available at: <http://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf>


Ref 28 Natural England (2025) National Character Areas. [online] Available at: <https://nationalcharacterareas.co.uk/>

Ref 29 The Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2017. Available at: <https://www.legislation.gov.uk/ksi/2017/571/schedule/4/made>.

Ref 30 DEFRA (2023). Statutory biodiversity metric calculation tool. Link: <https://assets.publishing.service.gov.uk/media/65c60e5114b83c000ca715f4/The%20Statutory%20Biodiversity%20Metric%20Calculation%20Tool%20-%20Macro%20enabled%2002.24.xlsm>

Appendix A: Figure 7.15-1: Landscape Mitigation Plan





- Site Boundary
- Solar PV Panels
- Access Roads
- Solar Station Compound
- Public Rights of Way
- Proposed Permissive Paths
- Field Numbers
- Existing Ponds
- Existing Hedgerow
- Existing Woodland
- Existing Trees
- Proposed Individual Trees
- Proposed Hedgerows
- Proposed Species Rich Grassland - outside solar PV areas
- Proposed Species Rich Grassland or Retained Arable - outside solar PV areas
- Proposed Grassland - under solar PV areas
- Bird Mitigation Areas - Managed Arable (indicatively shown)

NOTES

Plans are indicative subject to detailed design.

Plans are based on a Fixed South Facing Configuration and may be subject to change in the event that an East West Single Axis Tracker Configuration is progressed.

Trees are indicative and not intended to represent precise tree locations or canopy sizes.

These plans should be read in conjunction with the Streets, Rights of Way, Access Plans [EN010154/APP/2.3]


LEGISLATION

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

ISSUE PURPOSE

DCO Submission

PROJECT NUMBER

60700987

FIGURE TITLE

Landscape Mitigation Plan

FIGURE NUMBER


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
Sheet 3 of 16

01

DOCUMENT REFERENCE

EN010154/APP/7.15-1





Fosse Green Energy

PROJECT

Fosse Green Energy

CLIENT

Fosse Green Energy Ltd

CONSULTANT

ICENI PROJECTS LIMITED

DA VINCI HOUSE
44 SAFFRON HILL
LONDON
EC1N 8FH

LEGEND

- Site Boundary
- Solar PV Panels
- Access Roads
- Solar Station Compound
- Public Rights of Way
- Proposed Permissive Paths
- Proposed Private Track
- Field Numbers
- Existing Ponds
- Existing Hedgerow
- Existing Woodland
- Existing Trees
- Proposed Individual Trees
- Proposed Hedgerows
- Proposed Species Rich Grassland or Retained Arable - outside solar PV areas
- Proposed Grassland - under solar PV areas
- Bird Mitigation Areas - Managed Arable (indicatively shown)
- Bird Mitigation Areas - Permanent Grassland (indicatively shown)

NOTES

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LEGISLATION

Regulation 5(2)(a) Infrastructure Plan (Applications: Prescribed Forms and Procedure) Regulations 2009.

ISSUE PURPOSE

DCO Submission

PROJECT NUMBER

60700987

FIGURE TITLE

Landscape Mitigation Plan

FIGURE NUMBER

Sheet 4 of 16

DOCUMENT REFERENCE

EN010154/APP/7.15.1

- Site Boundary
- Solar PV Panels
- Access Roads
- Solar Station Compound
- Public Rights of Way
- - - Proposed Permissive Paths
- Field Numbers
- Existing Ponds
- Existing Hedgerow
- Existing Woodland
- Existing Trees
- Proposed Individual Trees
- Proposed Hedgerows
- Proposed Species Rich Grassland - outside solar PV areas
- Proposed Species Rich Grassland or Retained Arable - outside solar PV areas
- Proposed Grassland - under solar PV areas
- Proposed Community Orchard
- Bird Mitigation Areas - Permanent Grassland (indicatively shown)

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

DCO Submission


60700987


Landscape Mitigation Plan


Sheet 5 of 16

01

EN010154/APP/7.15-1







- Site Boundary
- Solar PV Panels
- Access Roads
- Solar Station Compound
- Public Rights of Way
- Field Numbers
- Existing Ponds
- Existing Hedgerow
- Existing Woodland
- Existing Trees
- Proposed Individual Trees
- Proposed Hedgerows
- Proposed Species Rich Grassland - outside solar PV areas
- Proposed Species Rich Grassland or Retained Arable - outside solar PV areas
- Proposed Grassland - under solar PV areas
- Bird Mitigation Areas - Managed Arable (Indicatively shown)

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LEGISLATION

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

ISSUE PURPOSE

DCO Submission

PROJECT NUMBER

60700987

FIGURE TITLE

Landscape Mitigation Plan


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
Sheet 8 of 16

REV. 01

DOCUMENT REFERENCE

EN010154/APP/7.15-1





- Site Boundary
- Solar PV Panels
- Access Roads
- Solar Station Compound
- Public Rights of Way
- Field Numbers
- Existing Hedgerow
- Existing Woodland
- Existing Trees
- Proposed Individual Trees
- Proposed Hedgerows
- Proposed Species Rich Grassland or Retained Arable - outside solar PV areas
- Proposed Grassland - under solar PV areas

NOTES

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LEGISLATION

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

ISSUE PURPOSE

DCO Submission

PROJECT NUMBER

60700987

FIGURE TITLE

Landscape Mitigation Plan

FIGURE NUMBER


Sheet 10 of 16


REV. 01

DOCUMENT REFERENCE

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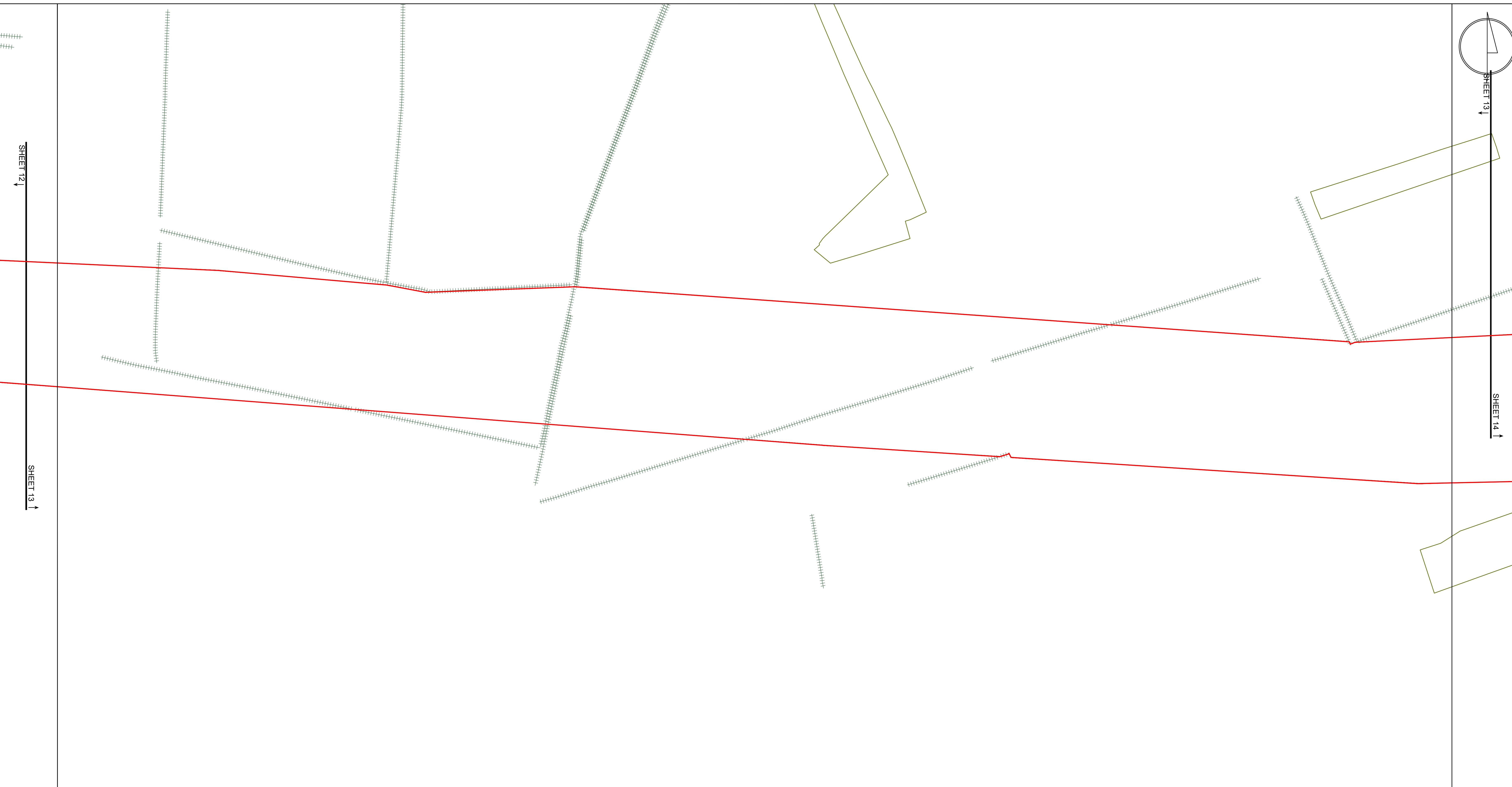
NOTES
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LEGISLATION
 Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.

ISSUE PURPOSE
 DCO Submission
PROJECT NUMBER
 60700987
FIGURE TITLE
 Landscape Mitigation Plan
FIGURE NUMBER REV.
 Sheet 13 of 16 01
DOCUMENT REFERENCE
 EN010154/APP/7.15-1

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LEGISLATION

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

ISSUE PURPOSE

DCO Submission

PROJECT NUMBER

60700987

FIGURE TITLE

Landscape Mitigation Plan

FIGURE NUMBER

REV.

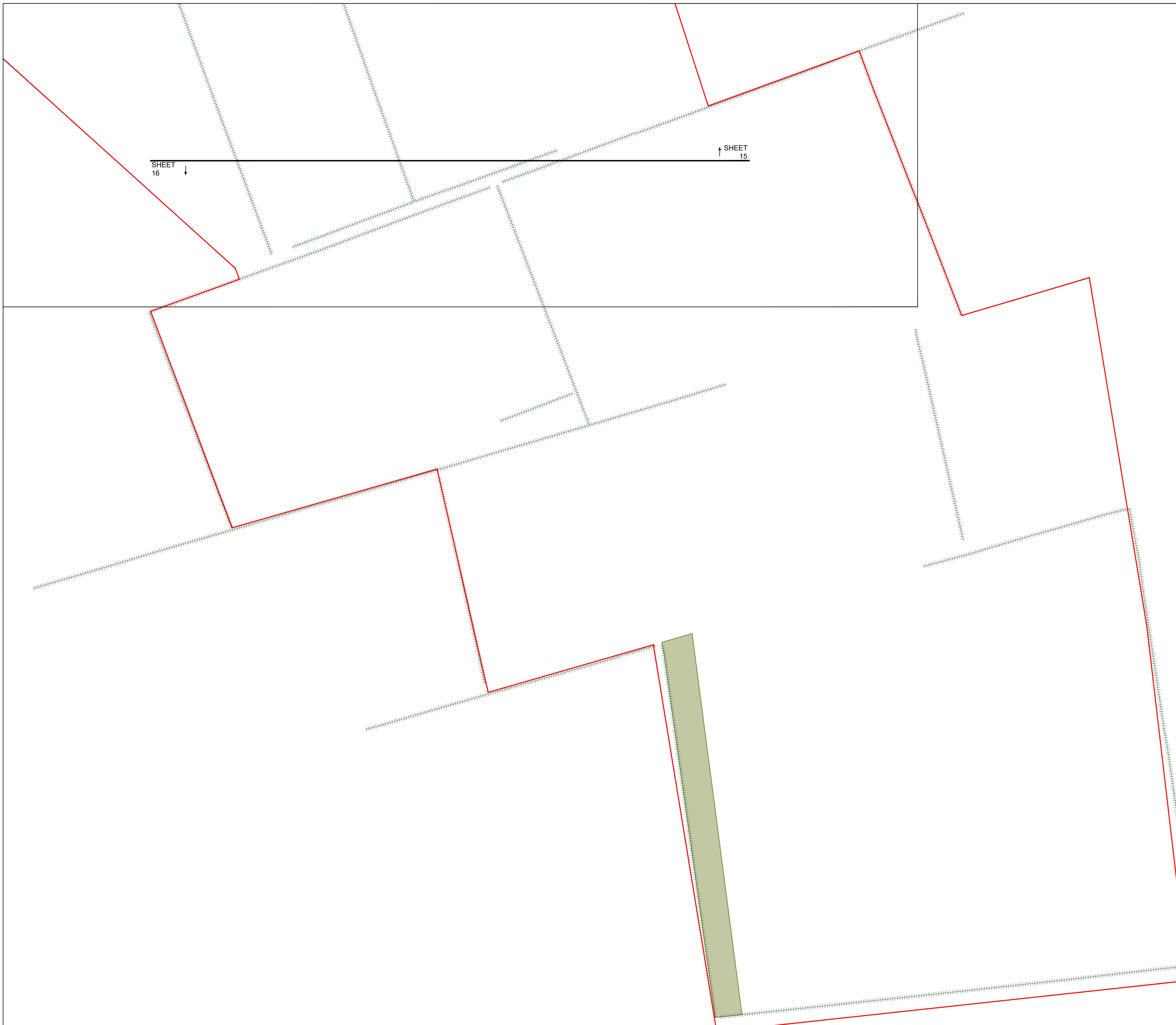
Sheet 16 of 16

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