

Low Farm Solar Farm

Landscape and Ecology Management Plan
for Boom Power

May 2025

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Document information

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Purpose	
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1.0 Introduction

1.1. This Report

Landscape Visual Limited was appointed by Boom Power (‘the Applicant’) to prepare a landscape and ecology management plan (LEMP) for the solar farm at Low Farm, Wakefield Road, Grange Moor, Wakefield (‘the Site’), which was consented in August 2022 (ref: 2021/62/93644/E).

The LEMP has been produced based on:

- Information provided by the Applicant;
- The results and recommendations reported within various ecology reports (Western Ecology and Environmental Gain Limited);
- The Landscape and Visual Impact Assessment (LVIA) (Landscape Visual, 2022) prepared for the Site; and
- The following set of landscape proposals drawings:
 - 1282/1: General Arrangement Plan.
 - 1282/101-122: Landscape Proposals for Areas 1 to 22 (1:500).
 - 1282/2: Landscape Proposals with Key Notes.
 - 1282/3: Planting Overview.
 - 1282/4: Glint & Glare Hedgerow Mitigation.
 - 1282/5: Landscape Management Summary Plan.

The aims of this LEMP are to:

- Provide enhancement measures to increase the biodiversity value of the Site;
- Enhance the local landscape character and reduce views towards the development; and
- Provide a management and monitoring plan to ensure the ecological and landscape value of the Site is enhanced and maintained following the construction of the Proposal throughout its operational lifespan.

1.2. Other Documents

This LEMP is to be read in conjunction with documentation used to discharge Conditions 8 to 11, 21 and 23.

- Low Farm, Flockton: Construction Environmental Management Plan for Biodiversity (Environmental Gain Limited, July 2023) ('the CEMP')
- Low Farm, Flockton: Ecological Design Strategy (Environmental Gain Limited, July 2023) ('the EDS')
- Japanese Knotweed Management Plan for Boom Power reference 17670 (Eco Control Solutions, October 2022)
- Discharge of pre-commencement condition number 23 (Badger fencing) (letter from Boom Power, 17 August 2023)
- Low Farm Flockton: Arboricultural Impact Assessment to BS5837:2012 (Arbtech, July 2023) ('the AIA').

All measures set out in these documents are to be observed as part of the LEMP.

1.3. The Site

The Site comprises nine parcels of agricultural land, three to the south and six to the north of Wakefield Road, between Overton (approximately 700 m to the east-north-east) and Grange Moor (approximately 800 m to the west). Flockton lies approximately 75 m to the south of the southernmost field, and Bristfield lies approximately 1.2 km to the north of the Site.

The Site lies within Kirklees District and the county of West Yorkshire. The boundary between Kirklees District and Wakefield District lies immediately to the east of the Site.

The landscape of the Site is described in the LVIA (Landscape Visual Limited, June 2022). The Site's habitats are described in the EDS.

2.0 Management Plan

Proposed landscape and Biodiversity Net Gain (BNG) features are detailed on the Landscape Proposals plan (1282/2) in **Appendix 1**, and summarised on the Landscape Management Summary Plan (LMSP) (1282/5) in **Appendix 2**.

These measures include (with reference to the legend on the Landscape Management Summary Plan (LMSP)):

- A:** Hedgerows (670 m new hedgerows, 3,773 m gapped-up)
- B:** Tree and shrub belts (14,019 m² at 1 m centres and 16,206 m² at 2 m centres)
- C:** Tussocky grassland and wildflowers (15 ha)
- D:** Neutral grassland (61 ha).
- E:** Hedgerow trees (63 no.).

Maintenance Schedules to cover the establishment period and ongoing maintenance of the site landscaping are set out in **Appendix 3**. A rolling 10 year Management Programme covering recurring periods of 10 years for the lifespan of the Proposal is included in **Appendix 4**, and a monitoring diary is included in **Appendix 5**.

2.1. Review

Management and monitoring operations will be reviewed every ten years, and where required, the Maintenance Schedules and 10 year Management Programme (**Appendices 3 & 4**) will be modified if the operations and frequencies set out do not deliver the required results or meet the specific objectives and targets. Where variations to the management programme are required as a result of monitoring or other unforeseen circumstances, these will be reviewed by the applicant, their operatives/contractors, and relevant technical specialists. Any amendments to the programme will be agreed in writing with the planning authority prior to implementation.

2.2. Roles and Responsibilities

Planting, establishment maintenance, and on-going site management will be overseen by the Landscape Manager and undertaken by suitably qualified and experienced operatives/contractors employed and funded by the applicant, for the 30-year period of management required for biodiversity net gain. Long-term management operations will continue under the same funding

mechanisms for the life of the Proposal (anticipated to be 40 years).

2.3. Hedgerows (LMSP key note A)

2.3.1. Existing Ecological and Landscape Feature

Existing hedgerows are present on the edges of most development parcels and also on some internal field boundaries within the parcels.

2.3.2. Influencing Factors for Proposed Enhancement and Management

Hedgerows provide a greater resource for biodiversity when they are species-rich, form part of an intact linear corridor, and are managed sensitively to provide benefit to a range of species. The hedgerow management strategy will also enhance the existing local landscape character, and reduce views towards the Proposal, with existing and reinstated hedgerows bounding the Site maintained at a minimum target height of 3.5 m.

2.3.3. Objectives

To enhance the value of the boundary hedgerows on the Site for the benefit of local biodiversity, landscape character and for local screening.

Target (30 year objective)

The target habitat condition for hedgerows is as follows:

1. Height > 1.5 m
2. Width > 1.5 m
3. Gaps make up < 10% of total length and no gaps greater than 5 m
4. > 1 m width of undisturbed ground with perennial herbaceous vegetation for > 90% of length
5. > 90% of the hedgerow or undisturbed ground is free of damage caused by human activities.
6. > 90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species.

2.3.4. Implementation

Location

Infill hedgerow planting will take place where deemed necessary following further hedgerow

survey. New hedgerows are proposed as shown on the LSMP. Planting of new and infill hedgerows would comprise native shrubs and trees to increase diversity and screening value (identified as (A) on LMSP **Appendix 2**).

Species

New and infill hedgerows will contain a mix of native hedgerows shrub species including, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, hazel *Corylus avellana*, dog rose *Rosa canina*, holly *Ilex aquifolium*, and field maple *Acer campestre*. Additional hedging will provide both fruit and insect food for birds, bats and dormice, as well as providing shelter for other species.

Planting

Prior to planting, the ground will be prepared to ensure the successful establishment and growth of hedgerow stock. Planting should be undertaken during the late autumn and winter months between November and March when the whips are dormant, in the next available planting season following completion of the development. Hedgerow planting stock to be planted in double- and triple-staggered rows.

Newly-planted hedgerow stock will be protected from grazing mammals, such as rabbits. Individual plants will be protected by guards. New plantings will be kept free of weeds, through weed-control fabric and/or mechanical removal of weeds.

2.3.5. Construction Phase Management

All works to comply with the CEMP and AIA (e.g., in relation to hedgerow trees and their protection).

At the start of construction, a security fence will be erected around the perimeter of the proposed solar areas and their associated infrastructure. The security fence will be as detailed in the planning application drawings and will be installed prior to the commencement of the installation of the solar panels. This security fence will protect the existing and proposed hedgerows, hedge trees, woodlands, other habitats and wildlife on the Site during the construction stage and will remain in situ surrounding the array during the operational period.

Storage of any materials or waste within a 10 m buffer zone of each hedgerow is prohibited. This is to allow wildlife to pass around the Site, enabling connectivity of the existing hedgerows, and for field margins to remain undisturbed.

2.3.6. Operational Phase Management

During early establishment, management is to be focussed on weed control to the base of all newly-planted hedgerow plant stock. New plantings will need to be kept watered until establishment. This is likely to be for the first three years after planting. Water all new hedgerow plants to field capacity by bowser following any period of two weeks without significant rain, or during any period of extreme heat, watering late in the day where possible. Watering is to extend beyond three years if young plants are showing signs of dehydration and heat stress (wilting, dropping foliage).

Both existing and newly-planted hedgerows are to be managed on a cycle as detailed in **Table 2.1**. All hedgerows are to target management at Point 5, where they will be maintained at a minimum height of 3.5 m for the lifetime of the development.

Table 2.1: Existing and Proposed Hedgerows – Operational Phase Management¹

Point	Present condition of the hedgerow	Management action
1	Cut short with many gaps and sparse stems, the bases of the shrubs gnarled or rotting.	Dig out dead or diseased material. Coppice and replant gaps.
2	Cut short and thin, with hard knuckle at trim line and shrubs have mop-headed growth form. Not yet gappy but stems still too far apart to form stock-proof barrier or to provide laying material.	Coppice and replant any gaps.
3	Cut short yet still dense: hard knuckle at trim line and mop-headed growth developing, and gaps developing at base. Stems sufficiently frequent that when allowed to grow up the hedge can be successfully trimmed, laid or coppiced.	Allow the hedge to grow up for between 5 and 10 years so that it can be laid, coppiced or reshaped. Hedge may be trimmed as it grows up, but raise cutting height each time.
4	Recently laid, coppiced or planted.	In first years trim often to create dense growth, initially low down, raising cutting height a few inches each year to reach Point 5.
5	Dense with frequent healthy stems, target height reached: 6 years to target condition for enhanced hedges. 11 years to target condition for new hedges.	For hedges of minimum 3.5 m in height, trim every three to five years, varying trimming height by a few inches every few cuts to prevent dense knuckle and mop-headed growth.

Hedgerows, once established, will be allowed to grow into minimum 3.5 m tall, thick, mature hedgerows with a bushy structure. Hedgerow structure will be maintained by cutting back the

¹ Management action table adapted from Hedgelink ‘Hedgerow Management Cycle’ <http://www.hedgelink.org.uk/>), reflecting the current status of the Site’s hedgerows.

sides of the hedges to maintain access and encourage strong growth at the base of the hedges. Management will maintain an 'A'-profile to the full width of the hedge at the base.

Hedgerows will be managed on rotation (except in areas where safety/ visibility dictates otherwise), with each side of the hedgerow cut on an alternate basis every 3 years.

Hedgerow works will be undertaken outside of the bird-nesting season, which is from March to August inclusive, and will be cut at the end of the winter period (i.e., February) to ensure fruit and seeds remain in place as a food source during the winter months.

2.3.7. Monitoring and Remediation

New hedgerow plants are to be inspected by a suitably qualified operative annually in September for the first five years, and any dead stock is to be replaced in the next available planting season, as set out in the Monitoring Diary at **Appendix 5**.

2.4. Tree and Shrub Belts (LSMP key note B)

Refer to the AIA for all works relating to existing and proposed trees.

2.4.1. Proposed Landscape Feature

Tree belts are to be planted on the edges of various parcels to screen views. These are identified as **(B)** on LMSP **Appendix 2**.

2.4.2. Influencing Factors for Proposed Enhancement and Management

Tree belts are to assist in screening the Proposals. Trees also provide an important food- source, along with roosting, resting and breeding locations for various bird and bat species.

2.4.3. Objectives

Target (30 year objective)

Provided the plantings are retained the habitat condition target will be met.

2.4.4. Implementation

Species

New tree planting will include oak *Quercus robur*, beech *Fagus sylvatica*, Scots pine *Pinus sylvestris*, and small-leaved lime *Tilia cordata*. The mix will also contain native hedgerows shrub species including, hawthorn *Crataegus monogyna*, wild cherry *Prunus avium*, hazel *Corylus avellana*, holly *Ilex*

aquifolium, and field maple *Acer campestre*. For full details refer to the planting schedule (**Figure 1282/2** and detail sheets **101-122**).

Planting

To maximise the chance of successful establishment, planting of trees will be undertaken between November and March in the first season once project construction commences. Planting will not be undertaken if the ground is suffering from hard frost or is heavily water-logged.

Prior to planting, the ground will be prepared such that the plants can grow successfully. The soil should have a good tilth (particle size, moisture content, degree of aeration, rate of water infiltration, and drainage) so that the roots can establish.

Newly-planted stock will be protected from grazing mammals, such as rabbits. Individual plants will be protected by guards. Protective or supporting structures will be removed as soon as possible to avoid dependence on support.

Tree planting to be in accordance with the *BS8545:2014 Trees: from Nursery to Independence in the Landscape – Recommendations*.

2.4.5. Construction Phase Management

As set out in **Section 2.3.5**. All works to comply with the CEMP.

2.4.6. Operational Phase Management

During early establishment, management to be focussed on weed control to the base of all newly-planted trees. New trees to be watered at least weekly between May and September during the first two years, should two weeks pass without rainfall. Following this, trees are to be watered only if showing signs of drought stress.

Routine management to include straightening any skewed trees and re-staking trees as required. Control of ruderal weeds around tree/shrub base by herbicide application.

2.4.7. Monitoring and Remediation

Diseased trees and shrubs will be removed. Trees that die within 5 years of planting will be removed and replanted following any required remedial action.

Tree guards should be removed and recycled off-site after a three-to-five-year period, depending

on growth rates.

All remedial works involving trees are to be undertaken with the guidance of an Arboriculturist.

2.5. Tussocky Grassland (LMSP key note C)

2.5.1. Existing Ecological and Landscape Feature

The Site is currently pasture of varying condition and arable fields.

2.5.2. Influencing Factors for Proposed Enhancement and Management

Tussocky grassland is proposed for the areas between the perimeter fences of individual solar parcels and existing or proposed field boundaries. Tussocky grassland will add structural diversity to the proposed habitat mosaic for small mammals, birds and invertebrates. This grassland will also create corridors around the edge of the solar farm for species such as badger to commute and forage.

2.5.3. Objectives

To create new ecologically-valuable grassland for the benefit of local biodiversity.

Target (30 year objective)

Target habitat condition for this grassland is as follows:

1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.
4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.
5. There is an absence of invasive non-native species (as listed on Schedule 9 of the Wildlife and Countryside Act, 1981). Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging

management activities) accounts for less than 5% of total area.

6. There are greater than 9 species per metre squared.

2.5.4. Implementation

Location

15 ha of tussocky grassland to be created between fenced solar parcels and existing or proposed field boundaries (marked as (C) on LMSP **Appendix 2**).

Species

Sow areas of bareground with 5 to 10 kg / ha of a wildflower and grass seed mix, with minimum 20 per cent wildflower. To include *Rhinanthus minor*, yellow rattle. An example mix would be Emorsgate EM10 Tussock Meadow Mixture.

Planting

As required, refer to the advice in the EDS concerning reducing the nutrient levels of the existing arable fields and grassland fields:

'Grassland will be established on the former arable fields, and on existing improved grassland. In both cases soil nutrient levels are likely to be higher than in semi-natural grassland habitats, which will favour competitive species over finer grasses and small flowers. The contractor will, where practicable, take steps to ameliorate this in accordance with Natural England Technical Information Note TIN067. This may include:

- 1. Leaving the arable fields un-cultivated, spraying-off weeds to reduce the seed stock, and removing the growth.*
- 2. Topping weed growth on the arable fields before seed-set, where spraying off is not practicable.*

'Before sowing into the existing grassland fields, the grass will be cropped and removed repeatedly for up to five years to reduce nutrient levels. The success of this will be monitored annually and the timing of sowing agreed with the operator. Once ready, the grass sward will be harrowed to break up the sward before over-seeding with the chosen seed mix.'

To prepare the seedbed in Tussocky Grassland areas, the ground should be deep-ploughed to reduce nutrient levels. After a few weeks, when natural regeneration of weeds has occurred, these should be removed by shallow cultivation. The ground can then be harrowed to produce a medium tilth, and rolled if necessary to produce a firm surface. Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface-sown and can be applied by machine or broadcast by hand. To get an

even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roller, or by treading, to give good soil / seed contact.

2.5.5. Construction Phase Management

All works to comply with the CEMP.

First year management

Sown meadow species include perennial plants which can be slow to establish. After sowing there will be a flush of annual weeds from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for invertebrates, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year. Control residual perennial weeds such as docks.

2.5.6. Operational Phase Management

Management from year 2 onwards

A single late season cut will occur with removal of arisings. Rotational cut every three years.

Only one third of this habitat will be mowed per annum leaving part as an undisturbed refuge for wildlife. Mowing will be between October and February to a height no less than 15 cm to control expansion of scrub. Refer to Cyclical Mowing regime plan in EDS Appendix 4.

Scrub control may also require targeted herbicide application.

Cuttings should be removed from the Site or placed in piles and left to rot down in corners of the site fields to provide additional habitat areas.

2.5.7. Monitoring and Remediation

Bi-annual visual inspections will be carried out to ensure no substantial areas of bareground have developed. Should bareground be found, re-seeding will be undertaken in successive autumn or spring months to establish the grassland habitat. If scrub and bramble begin developing or encroaching into the grassland areas then scrub plants should be cut or removed so that there is no more than 10 per cent cover of scrub on the grassland.

2.6. Neutral Grassland (LMSP key note D)

2.6.1. Existing Ecological and Landscape Feature

The Site fields currently contain arable crops or pasture of varying condition.

2.6.2. Influencing Factors for Proposed Enhancement and Management

Neutral grassland is proposed within the fenced solar parcels, in areas between and immediately surrounding the solar panels. Neutral grassland grazed by sheep can be valuable habitat for invertebrates, small mammals and birds.

2.6.3. Objectives

To create new ecologically-valuable neutral grassland for the benefit of local biodiversity and for grazing.

Target (30 year objective)

As set out in **Section 2.5.3**.

2.6.4. Implementation

Location

61 ha of neutral grassland to be created within the fenced solar areas (marked as **(D)** on LMSP **Appendix 2**).

Species

As per the EDS:

‘Seed and stock will be procured from suppliers that can offer regionally-sourced materials where available. The contractor will seek to identify sources of wildflower seed mix from local conservation schemes and suppliers where these are available. Where this is not possible (large areas such as this may not be accommodated by locally-sourced materials), national suppliers that provide locally-appropriate seed mixes will be used.

‘An example of an appropriate regionally-sourced wildflower seed mix that could be used is the Forest of Flowers Wildflower Seed Mix, a mix of 34 native species sourced from wildflower habitats in Yorkshire and including beneficial meadow species such as yellow rattle, Rhinanthus minor.’

Planting

See **Section 2.5.4**, including advice on reducing nutrient levels in former arable and grassland fields.

Sow areas of bareground with 5 to 10 kg / ha of a wildflower and grass seed mix, with minimum

20 per cent wildflower, to contain yellow rattle, *Rhinanthus minor*.

2.6.5. Construction Phase Management

All works to comply with the CEMP.

Traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring grazing.

First-year management

Sown meadow species include perennial plants which can be slow to establish. After sowing there will be a flush of annual weeds from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for invertebrates, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year. Control residual perennial weeds such as docks.

2.6.6. Operational Phase Management²

Traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring grazing.

Management from Year 2 Onwards

Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a tractor mower to ca. 50 mm. Leave the arisings to dry and shed seed for 1-7 days then remove from site.

Mow or graze the re-growth through to late autumn/winter to ca. 50 mm and again in spring if needed. Grazing at low stocking density of ca. 5 to 6 sheep per hectare. It is recommended that fields are divided to allow rotational grazing, with some being grazed between October and April, and others August to March.

Scrub or perennial weed control may require a targeted herbicide application.

² Information in 2.6.6 is cited from information for EM3 from Emorsgate Seeds (accessed May 2025: <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/>) and may need to be varied depending on mixture used.

Apart from when leaving the hay cut to shed seed, arisings should be removed from the Site or placed in piles and left to rot down in corners of the site fields to provide additional habitat areas.

2.6.7. Monitoring and Remediation

As set out in **Section 2.5.7**.

2.7. Trees (LMSP key note E)

Refer to the AIA for all works relating to existing and proposed trees.

2.7.1. Existing Ecological and Landscape Feature

New trees are to be planted alongside hedgerows on the eastern edge of Parcel 4 and the southern edge of Parcel 9 (see Landscape Proposals plan **Appendix 1**).

2.7.2. Influencing Factors for Proposed Enhancement and Management

The new trees are intended to partially screen views. Existing and newly-planted hedge trees must also be managed to maintain their health and amenity value (in addition to contributing to the ecological value of the Site).

2.7.3. Objectives

To protect, maintain and enhance new trees and hedgerow trees on the Site for the benefit of local biodiversity and visual amenity.

2.7.4. Implementation

Location

New tree planting (63 no. new trees) in locations shown on the LMSP including on the eastern edge of Parcel 4, the southern and western edge of Parcel 5, and the southern edge of Parcel 9 (**Appendix 2**), identified as **(E)**.

Species

Oak *Quercus robur* is the predominant existing species of hedge tree and is the proposed species.

Planting

Trees and shrubs will be planted in an appropriate manner to ensure the highest chance for their survival. This could include following pit planting or slit planting methodologies, depending on

stock type and size:

- Pit planting requires the creation of a hole in the ground deep enough for the tree roots. The tree is then placed in the hole, ensuring that all of the roots are below ground level. The hole is then backfilled with soil and firmed up to remove pockets of air.
- Slit planting requires the creation of a slit in the ground deep enough for the tree roots. The slit is then pried open and the tree is placed inside with the root plug approximately 2 cm below ground level. Soil is then placed to fill in around the base of the tree.

Prior to planting, the ground will be prepared to ensure the successful growth of the tree stock. Planting should be undertaken during the late autumn and winter months when the trees are dormant, in the first planting season following the First Export Date.

2.7.5. Construction Phase Management

As set out in **Section 2.3.5**. All works to comply with the CEMP and Arboricultural Method Statement in the AIA.

2.7.6. Operational Phase Management

During early establishment, management to be focussed on weed control to the base of all newly-planted trees. New trees to be watered at least weekly between May and September during the first three years, should two weeks pass without rainfall, or during any periods of extreme heat. Following this, trees are to be watered only if showing signs of drought stress. Plantings will be selectively pruned in Years 1 and 3 to promote growth and vigour and to ensure operational performance of the Proposal. Dead wood and suckers are to be removed as required to ensure development of a main leader, however, where possible dead wood should be retained on site for its biodiversity value. Larger log cutting will be removed and stacked securely to provide dead-wood habitat. Any tree or limb removal will be preceded by an inspection to determine whether it is suitable for roosting bats. Should features be present, an appropriate survey will be carried out to determine whether roosts are present. Tree works will be undertaken outside of the bird nesting season (March to August inclusive).

2.7.7. Monitoring and Remediation

All new trees and existing hedgerow trees are to be inspected annually by an Arboriculturist for disease, damage and potential problems. Remedial work is to be carried out as required to meet the objectives set out above and in accordance with BS3998: 2010. New trees are to be inspected annually in September for the first five years and any dead trees are to be replaced in the next available planting season, as set out in the Monitoring Diary (**Appendix 5**). Protective or supporting structures for new hedge trees will be removed as soon as possible to avoid dependence on support. Protective and supporting structures will be disposed of appropriately off-site.

Appendix 1: Landscape Proposals

The Landscape Proposals are contained on the following page.

Legend:

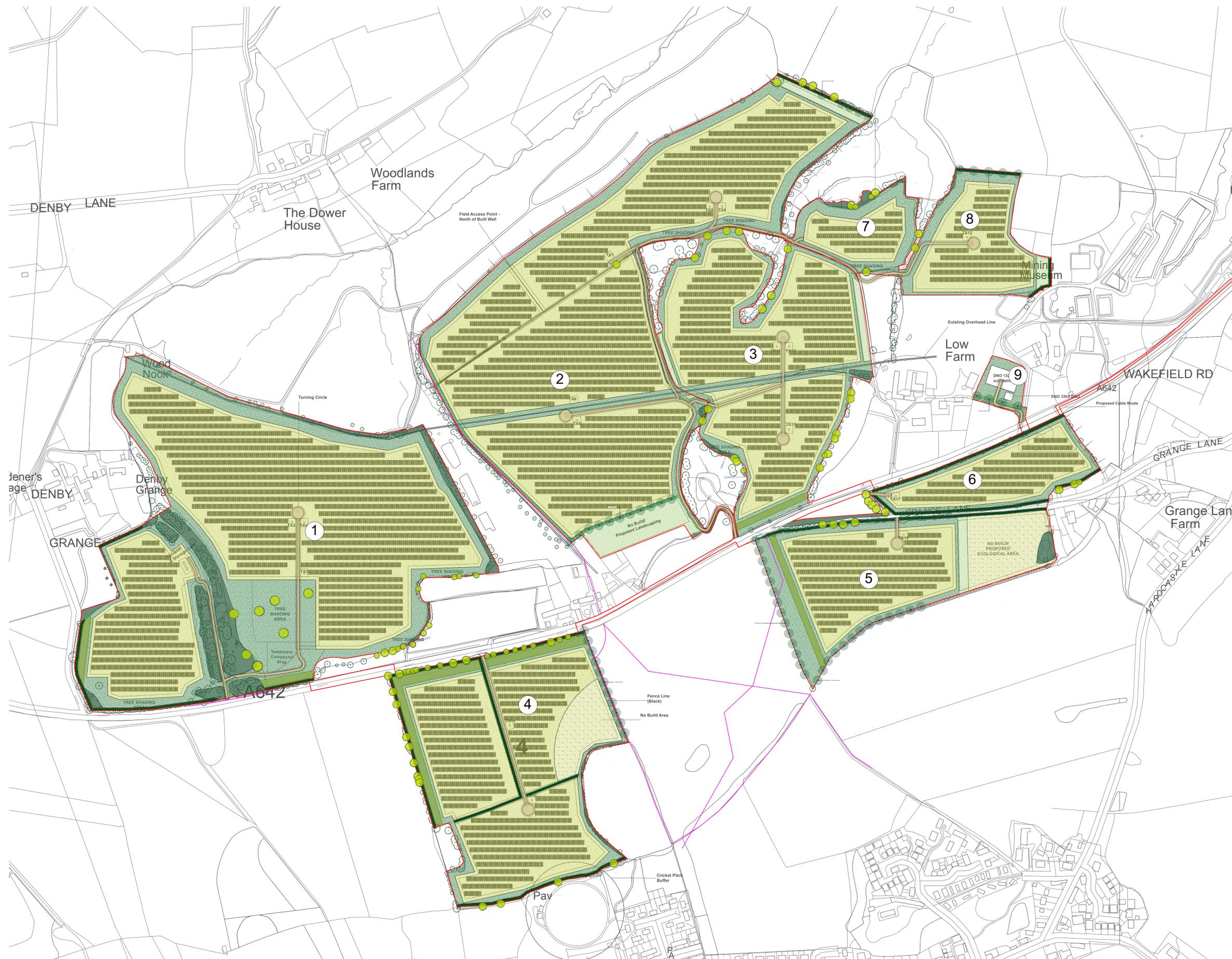
- Site boundary
- - - Public Rights of Way
- 1 Parcel number

● Existing notable trees

Symbol	Qty
●	63

Surfaces Proposed	sq m
LV-Existing - Woodland / scrub	25,726
LV-Proposed - Area of ecological enhancement	23,165
LV-Proposed - Neutral grassland	610,311
LV-Proposed - Site access	13,713
LV-Proposed - Tree / shrub belt planting at 1m centres	14,019
LV-Proposed - Tree / shrub belt planting at 2m centres	16,206
LV-Proposed - Tussocky grassland and wildflowers	149,564

Hedgerows	LM
LV-Existing - Hedgerows gapped up or new hedgerows planted	3,773
LV-Proposed - New native hedgerow	670



Revision	Date	Notes

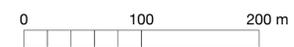
Project: **Low Farm, Flockton**

Title: Landscape Proposals

Date: May 2025

Ref: 1282/2

Scale: 1:3000 @ A1



Appendix 2: Landscape Management Summary Plan

The Landscape Management Summary Plan is contained on the following page.

Trees (E) LEMP Section 2.7

Objective: Establish trees to provide screening of views. Protect, maintain and enhance new trees and hedgerow trees on the Site for the benefit of local biodiversity and visual amenity.

Keep planted area well watered and weed free during establishment. Refirm plants as needed. Replace failed plants during the following planting season for a minimum of 5 years. Carry out pruning work as required to ensure strong, healthy growth.

Tree Belt (B) LEMP Section 2.4

Objective: Plant new tree belts to provide screening to views, the trees growing to ca. 10 to 15 m height.

Keep planted area well watered and weed free during establishment. Refirm plants as needed. Replace failed plants during the following planting season for a minimum of 5 years. Prune establishing feathered trees to a central leader to encourage strong, balanced growth. As trees mature, begin to thin growth if needed, selecting strong growing specimens of varied species. Thin or prune nearby growth to allow best establishment.

New Hedgerow (A) LEMP Section 2.3

Objective: Plant new hedgerows, and repair and infill existing hedgerows, to enhance the value of the boundary hedgerows on the Site for the benefit of local biodiversity, landscape character and for local screening.

Keep planted area well watered and weed free during establishment. Refirm plants as needed. Replace failed plants during the following planting season for a minimum of 5 years. Hedgerows will be managed on rotation (except in areas where safety/ visibility dictates otherwise), with each side of the hedgerow cut on an alternate basis every 3 years. Once target height of > 3.5 m is reached, vary the cutting height each year (> 3.5 m) to avoid developing a hard knuckle.

Tussocky Grassland (C) LEMP Section 2.5

Objective: Establish tussocky grassland of good condition for biodiversity in areas outside the solar parcel fencing between the solar fence and field boundaries.

Cut in late August year 1 to give the grassland an opportunity to establish. Remove arisings after each cut, and stack at field margins. Keep short by cutting or grazing through to March the following year. From year 2 onwards, cut a third of each area on rotation each August. Remove arisings and stack at field margins. Alternatively, graze through autumn and winter.

Neutral Grassland (D) LEMP Section 2.6

Objective: To create new ecologically-valuable neutral grassland for the benefit of local biodiversity and for grazing.

Traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring grazing. Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a tractor mower to ca. 50 mm. Leave the arisings to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to ca. 50 mm and again in spring if needed.



Legend:

- Site boundary
- Public Rights of Way
- ① Parcel number
- Existing notable trees
- Proposed hedgerow tree Qty 63

Surfaces Proposed	sq m
LV-Existing - Woodland / scrub	25,726
LV-Proposed - Area of ecological enhancement	23,165
LV-Proposed - Neutral grassland	610,311
LV-Proposed - Site access	13,713
LV-Proposed - Tree / shrub belt planting at 1m centres	14,019
LV-Proposed - Tree / shrub belt planting at 2m centres	16,206
LV-Proposed - Tussocky grassland and wildflowers	149,564

Hedgerows	LM
LV-Existing - Hedgerows gapped up or new hedgerows planted	3,773
LV-Proposed - New native hedgerow	670

This summary plan is to be used with reference to the detailed notes contained in the Landscape and Ecology Management Plan document. LMSP letters indicate examples of areas with that habitat and management but are only indicative: refer to detailed drawings which show all proposed habitats of that type and their locations. All actions to align with guidance in the Construction Environmental Management Plan and Arboricultural Impact Assessment.

Revision	Date	Notes
A	28/5/25	On review of CEMP and EDS

Project: Low Farm Solar Farm

Title: Landscape Management Summary Plan

Date: May 2025

Ref: 1282/5

Scale: Not to scale



Appendix 3: Maintenance Schedules

Establishment Maintenance (Years 1-5)	J	F	M	A	M	J	J	A	S	O	N	D	Notes - All maintenance to comply with CEMP and AIA
General Operations to all planted areas													
Plant replacement inspection								✓	✓				Identify and tag any plants that are dead, diseased, or damaged to an extent that will restrict future growth.
Plant replacement											✓	✓	New plants to match original specification unless otherwise agreed in writing with the LPA.
Weed control				✓	✓	✓	✓	✓					Maintain a weed free base to each plant by hand weeding or application of non-residual herbicide.
Watering – all new tree and shrub plants				✓	✓	✓	✓	✓					Pay particular regard to watering during any periods of drought or extreme heat, watering a minimum of weekly if two weeks pass without rain.
Re-firming – all new tree and shrub plants	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Review planting following any periods of strong winds, heavy rain, or snowfall, and re-firm and re-stake as necessary.
Mulch – top up to 70mm			✓							✓			
Operations to Hedgerows													
Pruning	✓	✓											Prune each side of the hedgerow on an alternating basis, every 3 years. Increase height of cut to a target height of > 3.5 m. Ensure hedgerow trees are tagged to avoid accidental pruning.
Gapping-up	✓	✓	✓										Fill any gaps with suitable species.
Operations to New Trees, Hedgerow Trees and Tree Belt													
Tree inspection	✓	✓							✓				Inspect trees for disease, damage, and any conflicts with adjoining uses.
Pruning	✓	✓											Prune feathered trees to a central leader to encourage strong balanced growth. Undertake any further works as identified at inspection in accordance with BS3998: 2010.
Tree supports (check, adjust, replace)	✓	✓	✓										Pay particular regard to ensuring functionality of supports following any periods of high winds, heavy rain, or snowfall.
Operations to Tussocky Grassland													
Watering				✓	✓	✓	✓	✓					Watering of autumn sown seed is unlikely to be necessary, however if vegetation is yet to germinate, water sown areas using a fine spray during any periods of prolonged dry weather.
Cutting (year one)								✓	✓	✓	✓	✓	Cut in late August year 1 to give the grassland an opportunity to establish. Remove arisings after each cut, and stack at field margins. Keep short by cutting or grazing through to March the following year.
Cutting (years 2-4)								✓					Cut a third of each area on rotation each August. Remove arisings and stack at field margins. Alternatively, graze through autumn and winter.
Operations to Neutral Grassland													
Watering				✓	✓	✓	✓	✓					Watering of autumn sown seed is unlikely to be necessary, however if vegetation is yet to germinate, water sown areas using a fine spray during any periods of prolonged dry weather.
Cutting (year one)								✓	✓	✓	✓	✓	Cut in late August year 1 to give the grassland an opportunity to establish. Remove arisings after each cut, and stack at field margins. Keep short by cutting or grazing through to March the following year.
Spring grazing (years 2 - 4)				✓	✓								Possibly, depending on growth rate.
Summer hay cut (years 2 - 4)								✓					Hay cut after flowering in July or August (leave hay to shed seed for 1 – 7 days before removing)
Autumn grazing (years 1 or 2 - 4)									✓	✓			From year 1 or 2, graze young meadow growth through to late autumn to ca. 50 mm and again in spring if needed.

Ongoing Maintenance (Year 6 onwards)	J	F	M	A	M	J	J	A	S	O	N	D	Notes
General Operations to all planted areas													
Weed control				✓	✓	✓	✓	✓					If plants are well established, relax weed control to allow diverse flora to develop at base of new plantings. Continue to control and remove pernicious weeds.
Watering – <u>all new tree and shrub plants</u>				✓	✓	✓	✓	✓					Review planting for any signs of drought or heat stress, and water as necessary, paying particular regard during any periods of drought or extreme heat.
Re-firming – <u>all new tree and shrub plants</u>				✓									Review planting each spring, re-firming if necessary. If plants are well established, remove stakes, canes, and guards and dispose of at a licensed waste disposal site.
Operations to Hedgerows													
Pruning	✓	✓											Prune each side of the hedgerow on an alternating basis, every 3 years. Increase height of cut to a target height of > 3.5 m. Ensure hedgerow trees are tagged to avoid accidental pruning. Once target height is reached, vary the cutting height slightly each year (maintaining minimum of 3.5 m) to avoid developing a hard knuckle.
Operations to New Trees and Existing Hedgerow Trees													
Tree inspection	✓	✓							✓				Inspect trees for disease, damage, and any conflicts with adjoining uses.
Pruning	✓	✓											Undertake any works identified at inspection in accordance with BS3998: 2010.
Operations to Tree Belts													
Tree inspection	✓	✓							✓				Inspect trees for disease, damage, and any conflicts with adjoining uses. Review woodland composition and identify any crowded areas. As trees mature, begin to thin growth if needed, selecting strong growing specimens of varied species. Thin or prune nearby growth to allow best establishment.
Pruning and thinning	✓	✓											Undertake any works identified at inspection in accordance with BS3998: 2010.
Operations to Tussocky Grassland													
Cutting								✓					Cut a third of each area on rotation each August. Remove arisings and stack at field margins. Alternatively, graze through autumn and winter.
Operations to Neutral Grassland													
Spring grazing				✓	✓								Possibly, depending on growth rate.
Summer hay cut								✓					Hay cut after flowering in July or August (leave hay to shed seed for 1 – 7 days before removing)
Autumn grazing									✓	✓			Graze re-growth through to late autumn to ca. 50 mm and again in spring if needed.

Appendix 4: 10-Year Management Programme

Habitat/ Species Specific Feature	Construction	Operation						
		Year One	Year Two	Year Three	Year Four	Year Five	Years Six to Ten	
Hedgerows (Section 2.3)	<p>Protection of existing hedgerows bordering the Site at the start of construction with the erection of a security fence around the perimeter of the solar array area.</p> <p>Planting of new native species hedgerows between November and March to create new and gap up existing hedgerows in accordance with Section 2.3.</p> <p>Relaxation of management of existing hedgerows selected to target >3.5 m in height, to allow hedgerows to mature and grow out. Management action to accord with present condition of hedgerow for Points 1 to 3 in Table 2.1.</p>	<p>Selective pruning of new plantings between September and February (see Point 4 in Table 2.1).</p> <p>Hedgerows to be managed with an ‘A’ profile to the full width of the hedge at the base in late winter (January / February) (see Point 5 in Table 2.1). Target height of >3.5 m.</p> <p>Prune each side of the hedgerow on an alternating basis, every 3 years. Increase height of cut to a target height of > 3.5 m. Ensure hedgerow trees (which will be allowed to grow into mature trees) are tagged to avoid accidental pruning.</p> <p>Once target height is reached, vary the cutting height slightly each year (maintaining minimum of 3.5 m) to avoid developing a hard knuckle.</p>						
		Maintenance and weeding of new plantings.						
New Trees / Existing Hedgerow Trees (Section 2.7)	<p>Protection of existing hedgerow trees bordering the Site at the start of construction with the erection of a security fence around the perimeter of the solar array area</p> <p>Planting of new native tree species between November and March.</p> <p>Annual inspection to ensure risks to personnel and / or infrastructure are managed appropriately.</p> <p>Pruning of trees between September and February as required for safety and good arboricultural practice.</p>	Trees to be watered at least weekly between May and September if two weeks pass without rain.		Water if showing signs of drought stress.				
		Selective pruning of new plantings between September and February to encourage good form.		Selective pruning of new plantings between September and February to encourage good form.		Pruning of trees between September and February as required for safety and good arboricultural practice at Year 6 and Year 9 and every three years until decommissioning.		
		Maintenance and weeding of new plantings.						
		Inspect trees annually in September and replace dead trees in the next available planting season.						
		Annual inspection by an Arboriculturalist for disease, damage and potential problems to ensure risks to personnel and / or infrastructure are managed appropriately. Remedial work to be carried out as required in accordance with BS3998: 2010.						
		Check stakes, ties and guards monthly from March to October inclusive, and after frosts or high winds, and adjust or replace as necessary.				Remove stakes and ties if trees are self-supporting.		
		Remove dead wood, where necessary, and suckers as required.						

Habitat/ Species Specific Feature	Construction	Operation					
		Year One	Year Two	Year Three	Year Four	Year Five	Years Six to Ten
Tree Belts (Section 2.4)	Planting between November and March in accordance with Landscape Proposals.	Trees to be watered at least weekly between May and September if two weeks pass without rain.	Water if showing signs of drought stress.			Pruning of trees between September and February as required for safety and good arboricultural practice at Year 6 and Year 9 and every three years until decommissioning.	
		Maintenance and weeding of new plantings.					
		Inspect trees annually in September and replace dead trees in the next available planting season.					
		Annual inspection of trees by an Arboriculturalist for disease, damage and potential problems to ensure risks to personnel and / or infrastructure are managed appropriately. Remedial work to be carried out as required in accordance with BS3998:2010.					
		Check stakes, ties and guards monthly from March to October, inclusive and after frosts or high winds, and adjust or replace as necessary.			Remove stakes and ties if trees are self-supporting.		
		Where tree stock has failed replace with newly-planted trees to original specification.					
Tussocky Grassland (Section 2.5)	Prepare soil and seeding in autumn or spring. Mow newly-sown grassland regularly in first year. Removal of arisings to create habitat piles on margins.	Cut in late August year 1 to give the grassland an opportunity to establish. Remove arisings after each cut, and stack at field margins. Keep short by cutting or grazing through to March the following year.	Cut and rake a third of the grassland between October and February on rotation, with rotating one third cut each year. Removal of arisings to create habitat piles on margins every year until decommissioning.				
Neutral Grassland (Section 2.6)	Prepare soil and seeding in autumn or spring. Mow newly-sown grassland regularly in first year. Removal of arisings to create habitat piles on margins.	Cut in late August year 1 to give the grassland an opportunity to establish. Remove arisings after each cut, and stack at field margins. Keep short by cutting or grazing through to March the following year.	Hay cut after flowering in July or August (leave hay to shed seed for 1 – 7 days before removing) From year 1 or 2, graze young meadow growth through to late autumn to ca. 50 mm and again in spring if needed.				
5-Yearly Landscape and Ecological Management Plan Progress Report				Landscape and Ecological Management Plan Progress Report to be prepared following site monitoring by a qualified ecologist. Report to be submitted to the local planning authority every five years until decommissioning.		Landscape and Ecological Management Plan Progress Report to be prepared following site monitoring by a qualified ecologist. Report to be submitted to the local planning authority every five years until decommissioning.	

Habitat/ Species Specific Feature	Construction	Operation					
		Year One	Year Two	Year Three	Year Four	Year Five	Years Six to Ten
UK Habs survey required to determine if condition has met targets (see Plan)		Year 1 – Tussocky and neutral grassland areas Year 1 - Existing hedgerows					Year 5 - New hedgerows Year 5 – Tree belt Year 10 – Tussocky grassland and neutral grassland

Appendix 5: Monitoring Diary

Habitat	Objective	Action	Annually Year 1-5	Year 2, 5, 10 and every 5 years thereafter to decommissioning
Hedgerow / Tree plantings	Meet required targets	Beat up: Replace any dead, diseased or damaged stock. Once tree/shrub has established remove any stakes/guards	y	
	Monitor success and inform changes to management	Assess condition against targets		y
Grassland	Meet required targets	Beat up: Re-sow any areas which have not taken. Manage ruderal weed and scrub growth within grassland	y	
	Monitor success and inform changes to management	Assess condition against targets		y
Tree Belts	Meet required targets	Beat up: Replace any dead, diseased or damaged stock. Once trees have established remove any stakes/guards	y	
	Meet required targets	Prevent overgrowth of internal glades, manage ruderal herbs at margins and within glades. Manage ruderal weed growth amongst shrubs	y	y
	Monitor success and inform changes to management	Assess condition against targets		y
All habitats	Monitor success and inform changes to management	Site monitoring by a suitable experienced contractor with reporting to planning authority on: <ul style="list-style-type: none"> - extent of habitats on site; - realistic constraints to net gain being realized; - proposed rectifying actions to meet targets 		y

Appendix 6: Abbreviations

AIA	Arboricultural Impact Assessment
BNG	Biodiversity Net Gain
CEMP	Construction Environmental Management Plan
EcIA	Ecological Impact Assessment
EDS	Ecological Design Strategy
LEMP	Landscape and Ecology Management Plan
LMSP	Landscape Management Summary Plan
LVIA	Landscape and Visual Impact Assessment

References

BS 3998, 2010. *Tree work. Recommendations.*