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## **LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN (LEMP)**

**232653 - CONDITIONS 17 AND 18**

**SPENCER'S WOOD SOLAR FARM**

**Prepared for:** **Greentech**

**Date:** **October 2025**

**Report Reference:** **JN00833/D01**

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Date	October 2025
Checked	
Approved	MK

Amendment History					
Version	Date	Modified by	Check / Approved	Reason(s) issue	Status

## 1. INTRODUCTION

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### Background

1.1 This Landscape and Ecological Management Plan (LEMP) has been prepared in relation to the discharge of Planning Conditions 17 and 18 of Full Planning Permission 232653, which permits the construction of Spencer's Wood Solar Farm (the 'site') on Land North of Sheepbridge Court Farm, Basingstoke Road, Swallowfield, RG7 1PT.

1.2 Condition 17 of the decision notice, states:

*"Landscape and Ecological Management Plan*

*A landscape and ecological management plan (LEMP) shall be submitted to, and be approved in writing by, the local planning authority prior to the commencement of the development. The content of the LEMP shall include the following:*

- a) Description and evaluation of features to be managed.*
- b) Ecological trends and constraints on site that might influence management.*
- c) Aims and objectives of management – to include delivery of a biodiversity net gain for the lifetime of the solar farm, as assessed using Defra metric 4.0.*
- d) Appropriate management options for achieving aims and objectives.*
- e) Prescriptions for management actions.*
- f) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).*
- g) Details of the body or organization responsible for implementation of the plan.*
- h) Ongoing monitoring and remedial measures.*

*The LEMP shall also set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme. The approved plan will be implemented in accordance with the approved details.*

*Reason: To secure delivery of a biodiversity net gain, as per NPPF paragraph 187(d) and MDD policy TB23.”*

1.3 Condition 18 of the decision notice, states:

*“Ecological Permeability*

*Prior to commencement of development a detailed scheme to maintain the ecological permeability of the site for protected species and species of principal importance shall be submitted to and approved in writing by the local planning authority for that sub phase of the development. The measures contained within the plan shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority.*

*Reason: To retain ecological permeability for protected species and species of conservation concern as appropriate under MDD local policy TB23.”*

## **Purpose of this Document**

1.4 This LEMP is designed to protect, maintain and enhance the ecological and landscape resource and features within and adjacent to the site.

1.5 All personnel and sub-contractors working on the development shall perform their duties in accordance with the requirements of this document, where applicable.

## **Legislation and Guidance**

1.6 The following legislation and guidance documents have been used to underpin this LEMP:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- Bern Convention (on the Conservation of European Wildlife & Natural Habitats; and on the Conservation of Migratory Species of Wild Animals) 1979;
- The Conservation of Habitats and Species Regulations 2010;
- The Birds Directive 2009;
- Wildlife & Countryside Act 1981 (and subsequent amendments);
- Countryside and Rights of Way Act 2000;

- Natural Environment and Rural Communities (NERC) Act 2006. Section 41 includes lists of habitats and species recognised as of 'principal importance' for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the 'biodiversity duty';

- Environment Act 2021; and
- The Hedgerow Regulations 1997.

## Project Description

1.7 The project comprises the installation of a ground mounted solar photovoltaic (PV) farm along with ancillary infrastructure, substation, security fencing, landscaping provision, ecological enhancements and associated works.

1.8 The detailed landscape planting design and site layout are shown on the Site/Landscape Plan.

## Ecological Baseline and Assessment

1.9 The ecological baseline of the site and the potential for effects upon biodiversity are presented within the Ecological Appraisal (BSG Ltd, 30/06/2023).

1.10 BSG undertook a Phase 1 Habitat Survey of the solar farm in 2021 and this was updated in 2023. Surveys for breeding bird and great crested newt eDNA were undertaken in 2022 and 2021 respectfully.

1.11 The site mainly comprises arable fields with grassy margins. Hedgerows are present along some sections of the site boundary. A pond is present within a hedgerow and is associate with a ditch system comprising approximately 500m of wet ditches across the site.

1.12 The site does not form part of any statutory or non-statutory designated site for nature conservation. The closest site of international importance is Thames Basin Heath SPA located 3.57km to the south. The site does not provide any supporting habitat for this designated site. The closest designated site of national importance for nature conservation is Stanford End Mill and River Loddon SSSI located approximately 375m to the south. The site falls within the SSSI Impact Risk Zone; risks to the interest features of the SSSI are listed, and include residential

development, any development which could cause air pollution (including industrial processes) and large infrastructure such as warehousing / industrial development. There is no reference to renewable energy.

1.13 The Ecological Appraisal (EA) included an assessment the various habitats on the site would meet the criteria of Habitats of Principal Importance (HPI) as defined by Maddock (2011). Habitats of Principal Importance (HPI) are those which have been listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as being of principal importance for the conservation of biodiversity in England. Furthermore, the assessment also concluded whether there was potential for the habitats present on site to support protected/notable species, including priority species (Species of Principal Importance) as listed under section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006.

1.14 This EA assessment is summarised in Table 1 below, along with whether the habitat/species are considered to be Valued Ecological Receptors (VERs) within this LEMP.

**Table 1 – Habitats and Species of Principal Importance**

Habitat/Species	Assessment	VER?
Arable	Intensively managed and of low ecological value. Not HPI	Not VER
Grassy field margins	Species poor and not managed for wildlife. Not HPI	Not VER
Pond	Limited aquatic vegetation, negative for GCN eDNA.	Not VER
Ditches	Part of HPI for hedgerows	VER
Hedgerows	HPI	VER
VERs for Bats		
Bats - Roosting	No buildings present. Trees with roost potential are present but these will be retained, and no artificial lighting is proposed.	Not VER
Bats – Commuting and Foraging	Habitats are considered to be of low value to foraging and commuting bats (large arable fields and managed hedgerows), although	VER

	the hedgerow with regular mature trees on the western site boundary is likely to offer a more valuable commuting and foraging resource.	
Otter / Water vole	Habitats are sub-optimal, and no field signs identified.	Not VER
Birds	An owl box is present on site. It was not in use in 2023 but has potential to be used. The site supports common and widespread birds nesting within trees, hedgerows and scrub. The arable fields are suitable for ground-nesting species such as skylark and lapwing, both of which are SPI.	VER
GCN	Negative eDNA surveys for ponds located on site and within 250m of the site.	Not VER
Reptiles	Limited desk study records and sub-optimal habitats.	Not VER
Invertebrates	Habitats on site are unlikely to support a significant assemblage of invertebrates.	Not VER
Other mammals – hedgehog and hare	Habitats on site are suitable for these species.	VER
Invasive non-native plants	No invasive plant species were recorded on site.	Not VER

## 2. SCOPE OF THE LEMP

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### Management Period

2.3 The proposed life of the Solar Farm is 40 years. This LEMP therefore provides the framework for suitable management to ensure the establishment and long term care of the landscape and associated wildlife habitats over a significant period. When the solar farm ceases, in 40 years or sooner if no longer required, all solar panels, fences and electrical apparatus will be removed from the site which will be returned to the landowner.

### Management Responsibilities

2.4 Ongoing maintenance and required remedial measures will be funded by the revenue generated by the operation of the solar farm. The works required are as set out in this LEMP. The implementation of the plan will be the responsibility of the site operator (Greentech at the time of writing) but it is likely that the practical execution of required measures will be undertaken by a suitably qualified and competent contractor or the in-house maintenance team. Any transference of responsibility of this plan should be undertaken with the appropriate appointment of a competent organisation capable of delivering the detailed measures within this document.

### Ecological Trends

2.5 No significant ecological trends have been identified that are likely to influence or constrain the management prescriptions set out in this document.

2.6 Climate change could influence future ecological trends if changes in temperature were to put stress on local ecosystems. However, changes resulting from climate change will be gradual and over a long period of time. Therefore, within the lifeline of this management plan, changes would be predicted to be very small.

2.7 The aim of the habitat improvements are to increase the species diversity/richness of habitats present through creating species rich grassland and planting new native hedgerows. By achieving this there is a chance that new/different protected species may move into the site/mitigation area to utilise the new opportunities for foraging etc. The presence of such species would need to be taken into consideration if the proposed management prescriptions put these species at risk of injury or undue disturbance.

2.8 Long term management should also be vigilant of pests or diseases becoming more widespread and / or prevalent and take action accordingly.

## Document Review

2.9 This document should be reviewed after the first twelve months of the planting being completed and then every five years in order to determine whether the management prescriptions are still relevant, appropriate and effective. If during the review it is found that the conservation aims of the LEMP are not being met, then remedial action will be implemented to ensure that the development delivers the biodiversity and landscape objectives of the approved scheme. The review will include information gathered during habitat monitoring surveys which will aim to ensure newly created habitats are successfully established and that management measures ensure the habitats are maintained in a favourable condition in the long term.

## Scope

2.10 The scope of the management proposals covers the retained habitats and the habitats that are created as part of the proposal. The details of the proposed planting are set out on the Site/Landscape Plan and detailed in the Landscape Planting and Maintenance Plan.

### 3. ECOLOGICAL MANAGEMENT AND ENHANCEMENTS PLAN

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#### Aims

3.1 The aim of this section is to set out the management and enhancement measures and how they will benefit valued ecological receptors. This will be done by setting a number of objectives and then prescriptions which contribute towards these objectives.

#### Objectives

3.2 Below are six objectives which will lead to the enhancement of the solar site for nature conservation.

- O1 – To ensure protection of designated sites (both statutory and non-statutory) and valued ecological receptors;
- O2 – To ensure that plans are in line with international legislation and priorities (e.g. conservation of European Protected Species)
- O3 - To ensure that plans are in line with national legislation and priorities such as the Wildlife and Countryside Act 1981 (as amended) and NERC Act;
- O4 - To ensure that plans are in line with local priorities such as the LBAP;
- O5 – To increase biodiversity within the site; and
- O6 - To implement sustainable measures.

#### Prescriptions

3.3 The prescriptions and how they relate to valued ecological receptors (VERs) and the objectives listed above are presented in Table 2, below.

Table 2 – Prescriptions for Ecological Enhancements			
Prescription	VERs	Objectives met	Monitoring Required?
No development works will occur within the root protection area of mature trees. Hedgerows will be retained with a 10m buffer, except for potentially very minor widening of existing accesses to allow access for large vehicles during the construction phase. Any small sections of hedgerow which require widening should be minimised as far as possible and re-planted up with native species following the construction phase if such access is no longer required.	<ul style="list-style-type: none"> <li>• hedgerows</li> <li>• trees</li> <li>• ditches</li> <li>• bats</li> <li>• breeding birds</li> <li>• hedgehogs</li> </ul>	O1, O3 and O4	N
Retained hedgerows, along with associated ditches, will be protected appropriately (e.g. by heras fencing) during the construction phase to avoid damage. This is to prevent accidental damage to the trees and hedgerows. Trees and hedgerows are considered to have an intrinsic value as well as potentially providing shelter, foraging opportunities and commuting routes for a number of species.			
The pond will be retained with a minimum stand off of 2m. The pond will be protected during works through the installation of protective fencing.	<ul style="list-style-type: none"> <li>• ponds</li> </ul>	01, 03 and 04	N
There will be no use of pesticides on the site. The exception to this will be those stated within the Landscape Management Plan as these are designed to target newly planted vegetation and increase the likelihood of it becoming established. This will increase the number and diversity of invertebrates within the site which will in turn pollinate wildflowers and enhance the site for other species such as bats, birds, small mammals etc. If a pest species becomes a persistent problem then biological control measures will be investigated prior to any pesticides being used. If pesticide is the only option then this will be targeted to specific areas rather than blanketing the whole area.	<ul style="list-style-type: none"> <li>• bats</li> <li>• breeding birds</li> <li>• hedgehogs</li> <li>• brown hare</li> </ul>	O5 and O6	N
There will be no use of fertilisers on the site. The exception to this will be those stated within the Landscape Management Plan as these are designed to target newly planted vegetation and increase the likelihood of them becoming established. This will increase the number and diversity of flora species within the site which will enhance the site for invertebrates.			
A native species-rich seed mix (Emorsgate EM3 Special General Purpose Meadow Mixture or similar) will be sown beneath the panels and in the areas around the panels. This will improve the flora diversity within the site which in turn will attract other species and increase the foraging resource available.	<ul style="list-style-type: none"> <li>• bats</li> <li>• breeding birds</li> <li>• hedgehogs</li> <li>• brown hare</li> </ul>	O4, O5 and O6	<p>Y</p> <p>Monitoring in years 2, 5, 10, 15, 20, 25 and 30.</p> <p>Monitoring visits between June – July.</p>

<p>New planting will include approximately 1.8km of new native hedgerow and five new hedgerow trees. Additionally existing gaps within retained hedgerows will also be infilled with approximately 400m of new native species mix planting. Hedgerows and trees are to be managed in accordance with BS3998;2010 and 'Hedgelink- 'The Complete Hedgerow Good Management Guide'. This will provide additional foraging habitat and shelter for a variety of species and will also provide better connectivity across the site and to the wider landscape, increasing ecosystem resilience.</p>	<ul style="list-style-type: none"> <li>• bats</li> <li>• breeding birds</li> <li>• hedgehogs</li> <li>• brown hare</li> </ul>	O3, O4 and O5	Y  Monitoring will be undertaken in the first two years of planting, Hedgerows will be inspected 3-4 times per year in mid-spring, late-spring, mid-summer and late summer.
<p>Vegetation clearance of habitat with the potential to support nesting will be undertaken outside the breeding season (March to August). Where this is not possible further checks will be undertaken by an ecologist to ensure no breeding birds are present immediately prior</p>	<ul style="list-style-type: none"> <li>• breeding birds</li> </ul>	03 and 04	N
<p>Although not a VER a precautionary method of working (PMW) will be followed for reptiles when clearing grassy field margins. The PMW will include:</p> <ul style="list-style-type: none"> <li>• Regular mowing of the grassy arable field margins in the weeks leading up to their removal to reduce the suitability of the grassland for reptiles and encourage dispersal of individuals into adjacent habitat;</li> <li>• Timing of the clearance and any habitat piles outside of the hibernation period (typically October to March but this can vary based on weather conditions). The optimal period would be September to avoid nesting bird season, but if removal is only possible during nesting bird season, these areas would also require a</li> </ul>	<ul style="list-style-type: none"> <li>• reptiles</li> <li>• amphibian</li> <li>• hedgehog</li> </ul>	O1, O2 and O4	N

<p>pre-works check for nesting birds;</p> <ul style="list-style-type: none"> <li>• Hand-searching of any suitable habitat piles present at the edges of the grassy field margins prior to their removal;</li> <li>• Delivery of a toolbox talk to site clearance contractors to make them aware of the risk of reptiles being present, describe any precautionary working methods required, and the process to follow if any reptiles are found during the works;</li> <li>• Ecological supervision of the clearance of suitable areas of habitat where required to ensure compliance with the precautionary working methods.</li> </ul> <p>This PMW will also help safeguard hedgehogs.</p>			
<p>Areas of open fields that could provide shelter for breeding hares will be walked ahead of vehicle use when being mown or cleared. Works will start from the centre of the field outwards or in a manner that allows hares to escape machinery and disperse into adjacent fields.</p>	<ul style="list-style-type: none"> <li>• brown hare</li> </ul>	O1, O2 and O4	N
<p>The Biodiversity Gain assessment for the Site indicates that there will be a net gain of 206.04% in habitat units, 88.21% in hedgerow units and 51.95% in watercourses (ditches) units. The development will therefore exceed planning policy requirements for developments to provide at least 10% Biodiversity Gain provided habitat creation and enhancements are delivered effectively.</p>	<ul style="list-style-type: none"> <li>• grassland</li> <li>• hedgerows</li> <li>• ditches</li> </ul>	05	Y Monitoring in years 2, 5, 10, 15, 20, 25 and 30.

## 4. LANDSCAPE MANAGEMENT PLAN

- 4.1 Without cutting or grazing by sheep, coarse grasses and scrub will dominate the grassland areas and will outcompete the flowering species leading eventually to dense scrub.
- 4.2 Without management, the hedgerows will become misshaped and develop gaps. The positive management outlined in the objectives below will provide wide biodiversity gains in the long-term as a result of these proposals.

### Landscape Planting Plan

- 4.3 The proposed landscape planting scheme is set out in the *Landscape Planting & Maintenance Plan, Planting Specifications & Schedules, Maintenance, Inspection & Replacement Planting* (provided as Appendix 1).

### Management

#### Grassland

- 4.4 The site is to be sown with a species-rich grassland mix (Emorsgate EM3 Meadow Mix or similar) following suitable ground preparation. The seed mix will then be applied as per the suppliers instructions, with the best sowing time considered to be the autumn.
- 4.5 Given meadow species such as those contained within the seed mix can be slow to establish, no cut shown be taken until at least mid to late summer.
- 4.6 After establishment, grass cutting, if necessary, will be undertaken in the final week of February and/or during September to ensure the grass is palatable to sheep and to ensure slow growth/short height plants receive sufficient sunlight during the Spring. An additional 1-metre wide strip cut immediately in front of and behind each row of panels and around inverters may also be necessary in late Spring or early summer. Where such a cut is undertaken the cut will be no less than 0.2 metres above ground level. Where sheep are introduced to the site, stocking densities will be maintained at no more than 1 ewe per hectare. Sheep will not be introduced to the site until year 5 to enable healthy meadow sward to develop.

#### Hedgerows

- 4.7 Over 1.8km of new native hedgerow is to be planted across the site along with 5 new hedgerow trees.

4.8 When hedge plants have matured to a height of 3 metres, hedgerows should be cut regularly to encourage bushy growth. Thereafter, cutting will be on a rotational basis so that no more than half of the hedgerows are cut in a given year. Arisings will be collected and assembled into small refuges at the base of hedgerows. Hedgerows will not be cut more regularly than once in every three years and will be cut in February, as this promotes flowering and fruiting (whilst also avoiding the breeding bird season). This will create a more diverse structure within the hedgerows therefore improving them and providing higher quality habitat for fauna.

4.9 The hedgerows will be inspected annually to ensure that they thrive as dense, bushy continuous hedgerows as shown on the Site Landscape Plan, with additional planting undertaken where necessary to ensure the hedgerow does not develop gaps or become thinner than 2 metres.

## Works Schedule

### Initial Habitat Enhancement Year 1:

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grassland creation			✓	✓	✓	✓	✓	✓	✓			
Hedgerow and tree planting	✓	✓	✓									✓

### Habitat Management Year 2-5:

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grassland cutting where required			✓					✓	✓			
Hedgerow cutting	✓	✓							✓	✓	✓	✓

**Ongoing Management (Year 5 onwards):**

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grassland cutting where required								✓	✓			
Hedgerow and buffer planting cutting (no more than 50% cut in any one year).	✓	✓							✓	✓	✓	✓

**Remedial Measures and Long-Term Monitoring**

- 4.10 The newly planted areas will need regular watering especially in dry periods.
- 4.11 The arisings from hedgerow pruning and maintenance work will be retained on site. However, any arisings that are diseased or infected will be removed from site and responsibly disposed of by the contractors appointed to carry out these works.
- 4.12 Habitats on site will be inspected through monitoring visits undertaken in years 2, 5, 10, 15, 20, 25 and 30. Any obvious defects or deviations from intended outcomes, such as scrub encroachment into grassland etc, will be noted and an assessment made to ensure remedial action is taken.

# APPENDIX 1

# Landscape Planting & Maintenance Plan

## Planting Specifications & Schedules, Maintenance, Inspection & Replacement Planting

Spencers Wood Solar Farm  
Land North Of Sheepbridge Court Farm,  
Basingstoke Road, Swallowfield, RG7 1PT

Planning permission: 232653  
Planning Condition: 13

## DOCUMENT INFORMATION & CONTROL

### INFORMATION

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<b>GTPUK/Our Project Reference</b>	2021-0085_Spencers Wood
<b>Local Planning Authority:</b>	Wokingham Borough Council
<b>Local Planning Authority Reference:</b>	232653
<b>Planning Condition:</b>	13

### CONTROL

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Date	Version	Author	Reviewer	Approver
20/09/2025	1	JJ	JJ	JJ

## SUPPORTING DOCUMENTATION

This document is to be read in conjunction with:

- ❖ Site/Landscape Plan Rev.7 dated 15/09/2025 drawn by greentech

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## 1. INTRODUCTION

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- 1.1 This document provides the detailed specification for the execution and subsequent inspection, maintenance and defects replacement, during the initial 5 year defects/maintenance period, of the soft landscape works associated with the construction and operation of the for the approved solar farm development Spencers Wood Solar Farm, Land North Of Sheepbridge Court Farm, Basingstoke Road, Swallowfield, RG7 1PT. It should be read in conjunction with the Site/Landscape Plan Rev.7 dated 15/09/2025 drawn by greentech. The landscape planting plan and its management is an integral aspect of the solar farm investment.
- 1.2 The plan is being submitted to confirm compliance with condition 13 of the planning permission. The condition reads as follows:

*Prior to the commencement of the development, hard and soft landscaping schemes shall be submitted to and approved in writing by the local planning authority. These details shall include, as appropriate, proposed finished floor levels or contours, means of enclosure, car parking layouts, other vehicle and pedestrian access and circulation areas, hard surfacing materials and minor artefacts and structure (e.g. furniture, play equipment, refuse or other storage units, signs, lighting, external services, etc). The soft landscaping scheme shall include planting plan, specification (including cultivation and other operations associated with plant and grass establishment), schedules of plants, noting species, planting sizes and proposed numbers/densities where appropriate, and implementation timetable. All hard and soft landscape works shall be carried out in accordance with the approved details prior to the occupation of any part of the development or in accordance with a timetable approved in writing by the local planning authority. Any trees or plants which, within a period of five years after planting, are removed, die or become seriously damaged or defective, shall be replaced in the next planting season with others of species, size and number as originally approved and permanently retained.*

- 1.3 This document includes a schedule of detailed planting proposals and plans consistent with the approved plans as set out below:

Figure 1.2a Site Layout Plan dated 15/04/2024 drawn by ITPEnergised  
0190-05-03-1000 Figure 6.5 – Outline Landscape Mitigation Strategy drawn by Stephenson Halliday  
Ashfield Solutions Group Flood Risk & Drainage Assessment ref: 155622-F01 (FRDA) dated 08/03/2023

- 1.4 A more detailed site landscape plan has now been drawn up and includes:

Swales in accordance with the Flood Risk & Drainage Assessment and extended in places.  
Reduced track length with removal of the hammerheads  
Additional hedgerow planting set away from powerlines to create continuous species rich hedgerows  
Trees along the north and south boundaries  
A wider separation between the existing solar farm and the proposed solar farm where the public footpath is located.  
Tree planting and mammal gates within the fence line.

- 1.5 Where not otherwise stated all works, inspection and maintenance are to be in accordance with BS3936 (Part 1, 1992, Nursery Stock, Specifications for trees and shrubs), BS4428:1989 – General Landscape Operations and Hedgelink 'The Complete Hedge Good Management Guide'.
- 1.6 Once planted hedgerow, shrub and tree planting and meadow are to be managed in accordance with the approved Landscape Planting Plan, this document, BS 3998: 2010 and Hedgelink 'The Complete Hedge Good Management Guide'.

## 2. SITE DESCRIPTION

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- 2.1 The site comprises two large fields bounded by hedgerows, with the eastern field having open aspects to the east and south. The hedgerows in the western field are more intact and include mature trees. There is a group of mature trees on neighbouring land at the north-east corner of the eastern field. As a result of the solar farm proposal these hedgerows are to be augmented with additional planting to strengthen their structure and additional new hedgerows and shrub areas planted. The fields will be transformed into wildflower meadows.

## 3. GENERAL PLANTING SPECIFICATIONS

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- 3.1 The hedge, shrub and tree planting works shall be undertaken in the first available bare root planting season (November to March) following installation of the solar farm.
- 3.2 All hedge, shrub and tree plants shall be good quality stock that complies with the relevant parts of the National Plant Specification.
- 3.3 During the construction period the site shall be accessed via the approved construction access route and co-ordinated with the site manager.

### 3.4 VEGETATION CLEARANCE FOR HEDGEROW PLANTING

- ❖ Clear planting areas of any material deleterious to plant growth.
- ❖ Clear injurious and invasive weeds and brambles.
- ❖ Apply a suitable non-residual herbicide to eradicate grass/weeds in areas to be planted with hedgerows, shrubs and trees to prevent soil and sunlight competition from weeds during plant establishment.

## 3.5 SOIL CONDITIONS

- ❖ Plant into moist friable soil that is not waterlogged.
- ❖ Do not plant into frozen or snow covered soil. Provide adequate additional root protection and prevent planting pit sides and bases and backfill materials from freezing.

## 3.6 CLIMATIC CONDITIONS

- ❖ Where possible carry out the work while soil and weather conditions are suitable for the relevant operations. Avoid planting during periods of frost or strong winds where possible. Plant only during the following periods:
  - ❖ Bare root deciduous trees and shrubs: November to late February/early March (depending upon local weather conditions).
  - ❖ Evergreens: March/April.
  - ❖ Wildflower/grass mix seeding: March /April, late August/early September.

## 3.7 MACHINES & TOOLS

- ❖ Use only machinery and tools suitable for the site conditions and the work to be carried out.

## 3.8 WATERING

- ❖ Monitor weather and soil moisture conditions and water as necessary to ensure the establishment and continued thriving of all planting.

## 3.9 TREES/PLANTS GENERALLY

- ❖ Tree, hedge and shrub plants will be materially undamaged, sturdy, healthy, vigorous, of good shape and without elongated shoots and with a balanced root and branch system in accordance with the relevant part of the National Plant Specification.
- ❖ Tree hedge and shrub plants shall be free from pests, diseases, discolouration, weeds and physiological disorders.

## 3.10 CONTAINER GROWN PLANTS

- ❖ Any container grown plants will be supplied in a growing medium with adequate nutrients and root growth for the plant to thrive until permanently planted.

## 3.11 LABELLING & INFORMATION

- ❖ Provide each tree or group of trees/plants of a single species or cultivar with supplier's labelling for delivery to site - all trees are to be individually labelled with wrap around weatherproof label tags positioned 1.5 metres above the base for ease of identification showing:
  - ❖ The full botanical name
  - ❖ Total number
  - ❖ Number of bundles and part bundles
  - ❖ Supplier's name
  - ❖ Employer's name and project reference
  - ❖ Plant specification, in accordance with the scheduled National Plant Specification categories
- ❖ The grass and wildflower seed mix bags are to be appropriately labelled (including place of purchase, provenance and clear details of the seed species mix and weight) and the labels and purchase receipt photographed and provided to the site manager and owner.

## 3.12 PLANT/TREE HANDLING, STORAGE & TRANSPORT

- ❖ Protect plants/trees from frost and prevent from drying out.
- ❖ Handle plants/trees with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.

## 3.13 TREATMENT OF TREE WOUNDS

- ❖ Keep wounds as small as possible and cut cleanly back to sound wood using sharp, clean tools. Set cuts so that water will not collect on cut area.

## 4. PREPARATION OF PLANTING AREAS

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### 4.1 WEEDS

- ❖ Prevent weeds from seeding and perennial weeds from becoming established.

### 4.2 CULTIVATION

- ❖ Break up any compact topsoil to full depth.

### 4.3 GRADING PRIOR TO PLANTING

- ❖ Following cultivation and when topsoil is reasonably dry and workable grade any disturbed/uneven ground to smooth, flowing levels to tie in with adjoining levels.

### 4.4 PIT EXCAVATION

- ❖ Drill or excavate pits for hedge, shrub and tree plants to accommodate root spread to a depth 150mm deeper than root system.

## 5. PLANTING

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### 5.1

Planting will be undertaken in accordance with BS3936 (Part 1, 1992, Nursery Stock, Specifications for trees and shrubs) and BS4428:1989 – General Landscape Operations. The fields will be seeded in a species rich grassland wildflower mix (Emorsgate EM3 Special General Purpose Meadow Mixture or similar) at 20-40kg/hectare. Seeds will be evenly spread and ensure that there are no bare patches of earth left unseeded.

### 5.2 SETTING OUT (Hedgerows, trees and shrub areas)

- ❖ New and infill hedgerow planting will be planted as double staggered rows at 7 plants per metre and 0.4 metre centres.
- ❖ Plant species in random groups ensuring a continuous mixed species hedgerows.
- ❖ Planting species, quantities and distribution will be in accordance with the Detailed Planting Proposal plans described on the Planting Schedule.

## 5.3 STAKING

- ❖ Stake as follows:

Tree/shrub size/type:	No. and overall length of stake (allow for 300mm driven into base of pit):	Min. cross section of stake:	No. of Ties
Feathered trees over 1.5 high	Single stake, 1/2 height of stem	50mm	1
Selected Standard Trees	Single stake, 2/3 height of clear stem	75mm	2

### Additional Requirements for Select Standard Trees:

- ❖ Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting. Consolidate material around stake during backfilling.
- ❖ Secure tree firmly but not rigidly to stake with at least two black rubber or nylon reinforced rubber belt ties with rubber spacers/pads to prevent abrasion. Use three ties if necessary to prevent tree touching stake.
- ❖ Position top tie within 25 mm of top of stake and lower tie approximately halfway down.

### Additional Requirements for Feathered Trees:

- ❖ Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting. Consolidate material around stake during backfilling.
- ❖ Secure tree firmly but not rigidly to the stake with 1 no. tie within 25 mm of top of stake.

## 5.4 BACKFILLING MATERIAL

- ❖ Replace any subsoil in base of pit and firm soil around plants without damaging roots to ensure plants remain firmly upright.
- ❖ Replace previously excavated topsoil and firm soil around plants without damaging roots to ensure plants remain firmly upright.

## 5.5 TREE, SHRUB & HEDGEROW PROTECTION

- ❖ New hedgerows alongside security fencing and around shrub and tree planting areas will be protected by stock fencing with two strands of barbed wire to discourage animal grazing.
- ❖ All planting not protected by fencing will be protected with spiral or tubex box guards.
- ❖ Vole guards (min. 200mm high) to be applied to base of all feathered and selected standard trees.

## 6. REPLACEMENT OF DEAD, DAMAGED, DISEASED & REMOVED PLANTS

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6.1 Dead, damaged, diseased or otherwise defective hedge and shrub plants and trees will be replaced within the first five years subsequent to planting in accordance with BS3936 (Part 1, 1992, Nursery Stock, Specifications for trees and shrubs) and BS4428:1989 – General Landscape Operations.

## 7. MAINTENANCE & INSPECTION

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7.1 The new and re-inforced hedgerows, shrub and tree planting will be subject to an initial 5-year inspection and maintenance programme to ensure the successful establishment and long term vitality of the landscape areas. The first 2 years will comprise the initial establishment of the hedgerow planting and Years 3-5 will comprise general maintenance. Hedgerows and trees are to be managed in accordance with BS3998:2010 and 'Hedgelink- 'The Complete Hedgerow Good Management Guide'.

7.2 In the first two years of planting, planting will be inspected 3-4 times per year in mid-spring, late-spring, mid-summer and late summer with additional inspections if extended dry periods are evident/forecast. Soil moisture will be inspected and plant watering undertaken if it appears plants are under stress.

## 8. PLANTING SCHEDULE

### 8.1 HEDGEROW, SHRUBLAND & TREE PLANTING SCHEDULE

Hedge planting			H1*	H2*	H3 <sup>Λ</sup>	H3a*	H4a*	H4*	H5*	H6*	H7	H8*	H9*	H10*	H12	H13 <sup>Λ</sup>	
Hedgerow length in metres (approx..)			270	28	200	55	70	130	230	205	390	140	315	330	110	200	
Number of rows/no. per m)			2/5	2/5	2/5	7/30	7/30	3/7	3/7	2/5	N/A	2/5	2/5	2/5	2/5	2/5	
			Size (cm)	%	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Total
Acer campestre (Field Maple)	60-80cm	10	135	14	50	165	210	91	161	102	N/A	70	160	165	55	50	
Rosa canina (dog rose)	60-80cm	10	135	14	50	165	210	91	161	102	N/A	70	160	165	55	50	
Cornus sanguinea (Dogwood)	60-80cm	20	270	28	100	330	420	182	322	204	N/A	140	320	330	110	100	
Prunus spinosa (Blackthorn)	60-80cm	20	270	28	100	330	420	182	322	204	N/A	140	320	330	110	100	
Crateagus monogyna (Hawthorn)	60-80cm	40	540	56	200	660	840	364	644	413	N/A	280	615	660	220	200	
Total			1350	140	500	1650	2100	910	1610	1025		700	1575	1650	550	500	14260
* denotes new hedgerow.		^ denotes hedgerow re-inforcement and gapping up.															

Shrub planting areas (density 1/m <sup>2</sup> )			Area (1200m <sup>2</sup> )	
Species	Size (cm)	%	Qty	
Acer campestre (Field Maple)	60-80cm	10	120	
Rosa canina (Dog Rose)	60-80cm	10	120	
Cornus sanguinea (Dogwood)	60-80cm	20	240	
Crateaegus monogyna (Hawthorn)	60-80cm	20	240	
Prunus spinosa (Blackthorn)	60-80cm	40	480	
Total			1200	

Tree planting				H1	H3	H5	Total	
	Form	Girth (cm)	Height (m)	Qty	Qty	Qty		
Quercus robur (oak)	Sel Std	10-12	3.0-3.5	2	1	2	5	

## 8.2 FIELDS

- ❖ In the planting season immediately following installation the fields will be sown with a species rich grassland wildflower mix (Emorsgate EM3 Special General Purpose Meadow Mixture or similar) at 20-40kg/hectare.

# DRAWINGS

