	BELECTRIC GmbH	Doc.No.: GB-BKH01&NTD007
	Bunkers Hill	Rev.No.: 03
	External Document	Revised on: 24/01/2024
	LEMP	Prepared by: F. Sperling

GB-BKH01&NTD007\_R03\_LANDSCAPE ENVIRONMENTAL MANAGEMENT PLAN

---


Discipline			
General	Electrical	Mechanical	Civil
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Document Issue			
For Information	Preliminary	Issued for Construction	As-Built
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Document Status		
For Review	For Approval	Approved
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Prepared by	Reviewed by	Approved by
<b>Name</b>	Frank Sperling	Frank Sperling	
<b>Date</b>	24/01/2024	24/01/2024	

Prepared by:	Revised on:	Revision:
Document Management	18.04.2023	R06

	BELECTRIC GmbH	Doc.No.: GB-BKH01&NTD007
	Bunkers Hill	Rev.No.: 02
	External Document	Revised on: 11/01/2024
	LEMP	Prepared by: F. Sperling

### Revision Record Sheet

Rev. No	Date	Description	Page No
03	24/01/2024	6.6.3 re-worded as per comment sheet KBH-BEL-VRE-CSH-012_D	13
02	11/01/2024	Updates as per comment sheet KBH-BEL-VRE-CSH-012_B	5-8 & 14-15
01	25/05/2023	Issued based on client comments on SharePoint	
00	09/03/2023	First issue for use	-

Prepared by:	Revised on:	Revision:
Document Management	18.04.2023	R06

# BUNKERS HILL SOLAR FARM

## LANDSCAPE MANAGEMENT PLAN

*January 2024*



## Report Control Sheet

*Project Name:* Bunkers Hill Solar Farm  
*Project Reference:* CW20-785  
*Report Title:* Landscape Management Plan  
*Reference:* CW20-785-RPT-001  
*Printing Instructions:* Print at A4 Portrait, Double Sided.

<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>Prepared</b>	<b>Reviewed</b>	<b>Approved</b>
/	03/03/2023	<i>Draft report sent to Client for comment.</i>	CO	KB	OC
	09/03/2023	<i>Amended with Client Comments</i>	OC	OC	OC
	20/04/2023	<i>Amended with Client Comments</i>	OC	OC	OC
	24/04/2023	<i>Amended with Client Comments</i>	KB	OC	OC
	02/05/2023	<i>Amended with Client Comments</i>	KB	OC	OC
	25/05/2023	<i>Amended with Client Comments</i>	CO	OC	OC
	11/01/2024	<i>Amended with Client comments</i>	CO	OC	OC
	24/01/2024	<i>Amended with Client comments</i>	CO	OC	OC

Collington Winter Environmental Ltd disclaims any responsibility to Belectric Solar Ltd and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence within the terms of the Belectric Solar Ltd and according to the proposed plans supplied by the client or the client's agent upon commencement of the project.

The contents of this report are valid at the time of writing. As the landscape is constantly evolving and changing, if more than twelve months have elapsed since the date of this report, further advice must be taken before reliance upon on the contents. Notwithstanding any provision of the Collington Winter Environmental Ltd Terms & Conditions, Collington Winter Environmental Ltd shall not be liable for any losses (howsoever incurred) arising as a result of reliance by the client or any third party on this report more than twelve months after the report date.

This report is confidential to Belectric Solar Ltd and Collington Winter Environmental Ltd accepts no responsibility of whatsoever nature to third parties to whom this report or any part thereof is made known. Any such party relies upon the report at their own risk.

## CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>4</b>
1.1.	SCOPE & PURPOSE.....	4
1.2.	LOCATION.....	4
<b>2</b>	<b>AIMS AND OBJECTIVES</b> .....	<b>5</b>
2.1.	AIMS OF THE MANAGEMENT PLAN.....	5
<b>3</b>	<b>ROLES AND RESPONSIBILITIES</b> .....	<b>6</b>
<b>4</b>	<b>PROPOSED LANDSCAPING</b> .....	<b>7</b>
4.1.	THE SITE.....	7
4.2.	RETAINED LANDSCAPE ELEMENTS.....	7
4.3.	LANDSCAPE SCALE HABITAT CREATION.....	7
<b>5</b>	<b>LANDSCAPE MANAGEMENT AND MAINTENANCE</b> .....	<b>8</b>
5.1.	INTRODUCTION.....	8
5.2.	OPERATIONS AND SERVICES.....	8
5.3.	MAINTENANCE SPECIFICATION.....	8
<b>6</b>	<b>LANDSCAPE MAINTENANCE SPECIFICATION</b> .....	<b>10</b>
6.1.	INTRODUCTION.....	10
6.2.	EXISTING TREES.....	10
6.3.	PROPOSED TREE PLANTING.....	10
6.4.	PROPOSED HEDGEROW PLANTING AND HEDGEROW INFILLING.....	11
6.5.	PROPOSED WOODLAND BELT UNDERSTOREY SHRUB PLANTING.....	12
6.6.	GRASS – SOLAR PARK LONG TERM GRAZING MIX.....	12
6.7.	PROPOSED WILDFLOWER GRASSLAND.....	13
<b>7</b>	<b>LANDSCAPE IMPLEMENTATION, MONITORING AND REVIEW</b> .....	<b>14</b>
7.1.	IMPLEMENTATION.....	14
7.2.	PROCESSING FOR MONITORING AND REVIEW.....	14
<b>8</b>	<b>DETAILS OF MANAGEMENT</b> .....	<b>15</b>
8.1.	DOCUMENTATION FOR OPERATORS.....	15
<b>9</b>	<b>SUMMARY</b> .....	<b>16</b>
<b>10</b>	<b>BRITISH STANDARDS</b> .....	<b>17</b>
<b>11</b>	<b>BIBLIOGRAPHY</b> .....	<b>18</b>
	<b>APPENDIX</b> .....	<b>19</b>

## INTRODUCTION

### 1.1. SCOPE & PURPOSE

- 1.1.1. Collington Winter Environmental Ltd was instructed by Belectric Solar Ltd, to prepare a Landscape Management Plan (LMP) at Bunkers Hill Solar Park, Reading Road (B3349), Hook, Hampshire, near RG27 9DA (OS Grid Reference SU 73255 56178). This report is in support of a proposed planning application relating to the construction of a solar farm and battery stations with associated works, equipment, and necessary infrastructure.
- 1.1.2. The plan has been produced by Caitlin O'Connor, Ecologist at Collington Winter Environmental Ltd. This report is overseen and managed by Olivia Collington BSc (Hons), MEnvSc, CEnv Director at Collington Winter Environmental Ltd. Olivia is highly experienced in developing landscape environment management schemes for a range of projects.

### 1.2. LOCATION

- 1.2.1. Please refer to Figure 1.1 for the site location. The site is located within Rotherwick, a village and civil parish in the Hart district of Hampshire, England.

*Figure 1.1 Site Location*



## AIMS AND OBJECTIVES

### 2.1. AIMS OF THE MANAGEMENT PLAN

2.1.1. This report has been produced to discharge Condition 13 of the November 2021 Decision Notice (Reference: 21/00552/FUL). Condition 13 is as follows:

*“A detailed Landscape Management Plan shall be submitted to and approved in writing by the Local Planning Authority before the development becomes first operational. The Landscape Management Plan shall include (but not be limited to) long term landscape/habitat monitoring and proposed locations of habitat features. The Landscape Management Plan shall be fully implemented in accordance with the approved details before the development becomes first operational and for the lifetime of the development.*

*REASON: In the interest of biodiversity and ecology, in accordance with Policy NBE4 of the Hart Local Plan (Strategy and Sites) 2016-2032, Policy NE02 of the Rotherwick Neighbourhood Plan 2016-2032 and the aims of the NPPF 2021.”*

2.1.2. This report aims to provide a framework of information to deliver the scheme including the long-term design objectives, management responsibilities and maintenance schedules for all landscaped areas and newly created habitats within the scheme.

2.1.3. This report should be read in conjunction with the Landscape Strategy – Bunker Hill Solar Farm (2021) for full details on planting specifications.

2.1.4. The main aims guide the basis for the specific management operations of this plan and include:

- Sustainable management of existing vegetation, including trees to ensure their character, composition and age structure through management and protection with consideration to long-term viability and health and safety.
- Achieve a high standard of maintenance, to ensure the successful establishment and growth of new planting and to take appropriate long-term management measures to ensure the satisfactory appearance and sustainability of vegetation.
- Maintain, compensate, and enhance biodiversity, through protection and management of habitats of value for biodiversity. To fulfil all legal requirements in relation to the protection and management of ecological features including birds, bats and invertebrates.
- Outline the location, specification, and remedial management of fauna features such as bird and bat boxes.
- Uphold the duty of care that all landscape components are safe and that all reasonable steps are taken to minimise risk of injury to people and damage to property.
- Management practices are monitored where necessary and reviewed on an annual basis in accordance with changing circumstances.

---

## ROLES AND RESPONSIBILITIES

- 3.1.1. JBM Solar Projects 18 Ltd will be responsible for the execution of the following plan and for maintaining the landscape elements. Any transference of responsibility should be undertaken with the appropriate appointment of a competent organisation capable of delivering the detailed measures within this plan.
- 3.1.2. This plan is not intended as a fully prescriptive or definitive 'maintenance' schedule but identifies key 'management and maintenance' requirements. This is to ensure that the management of the landscape is flexible and allows for changes overtime. This ensures the continued establishment and satisfactory management and maintenance in the long-term and in the interest of the landscape, visual amenity, as well as the ecology of the site and wider area.
- 3.1.3. The organisation implementing this plan will be JBM Solar Projects 18 Ltd with the necessary certificates of competence to implement landscape management operation on site. The managing organisation will ensure that management complies with best practice standards (detailed in Section 11) and all relevant health and safety procedures, protection of the environment, avoidance of pollution and protection of protected/notable species and associated habitats.
- 3.1.4. The site will be managed to comply with all relevant environmental, health and safety legislation, approved codes of practice (ACOP'S) and Health and Safety Executive (HSE) guidance.
- 3.1.5. As the managing organisation will be the main company involved in on site works, the managing organisation will fulfil the landowner's role and the work manager's role. This places an obligation on the managing company to ensure that any contractor understands and fulfils their health and safety role and any work undertaken on the site will follow the guidelines of the HSE and consider protection of the environment.



## PROPOSED LANDSCAPING

### 4.1. THE SITE

4.1.1. The scheme comprises Bunker's Hill Solar Farm which will be a 66.7MWp capacity solar photovoltaic plant. The development will mainly consist of steel framework to support the panels as well as inverter/transformers and battery containers. The development contains landscaping where possible. The key components of the development include:

- Proposed planting of trees, understorey shrub, hedgerows (including hedgerow infill planting of existing hedgerows), wildflower meadows, and grass – solar park long term grazing mix.
- Wheel washing facilities.
- Waste segregation.
- Storage areas for equipment that requires protection for weather, dust etc.
- Access roads from the B3349.
- Car parks.

4.1.2. A detailed Landscape Strategy has been produced by Pegasus Environment which provides habitats and species lists for the proposed development.

### 4.2. RETAINED LANDSCAPE ELEMENTS

4.2.1. Where possible, Category A woodland (High Quality and Value) is to be protected and retained, as shown in the Arboricultural Method Statement / Tree Protection Plan (Tyler Grange Group Ltd, 2019). The report details the retention of T18, H4, and H4 during development and their appropriate protection. It is understood that T21 and W2 are to be protected only during the construction of the access track along the eastern aspect of the site.

4.2.2. The River Whitewater bounds the site to the east and is to be retained and protected through a 12 m no development buffer zone. The river channel will be enhanced through the eradication of non-native species and planting of native species along the bankside habitat. Full details of enhancements and management of the buffer and river habitat are included with the Buffer Zone Protection Scheme (CW20-785 R3). The Buffer Zone Protection Scheme also details protection and enhancements to the streams on site.

### 4.3. LANDSCAPE SCALE HABITAT CREATION

4.3.1. The Management Areas described within this document are shown on the Landscape Plan and include:

- Tree planting
- Hedgerow planting
- Woodland understorey planting
- Wildflower meadow planting
- Grass – solar park long term grazing mix planting.

4.3.2. The information includes a description and specific management objectives for each component along with the annual and occasional management regimes required.

## LANDSCAPE MANAGEMENT AND MAINTENANCE

### 5.1. INTRODUCTION

5.1.1 To achieve the long-term vision for the development, a Landscaping Contractor will be appointed to ensure that the landscape vision and the strategy of the proposed landscape design, is maintained across the site.

### 5.2. OPERATIONS AND SERVICES

5.2.1. The project owner will utilise local companies / labour to deliver the following services:

- All litter collection, lighting, and drainage systems.
- Maintain the trees, planting, grass cutting, grounds maintenance.

5.2.2. All vegetation clearance / maintenance will be undertaken outside the bird nesting season (March to September, inclusive) unless a nesting bird survey is undertaken on site prior to any works to ensure no nesting birds are present.

### 5.3. MAINTENANCE SPECIFICATION

5.3.1. A maintenance operations schedule for year 1 and year 2-20 and future years can be found within the Appendix of this document. It has been prepared to provide a best practice baseline for the maintenance and management of the external landscape for the proposed facility.

5.3.2. The success of the scheme is dependent upon the quality and frequency of the maintenance it receives during its lifetime. The following aims and objectives will be adopted as part of the maintenance regime:

- To ensure the successful establishment and growth to maturity of the soft landscape scheme;
- To ensure that the design intentions of the scheme are fulfilled;
- To ensure the effects of the different elements within the scheme are successful and effective;
- To maximise the potential of all plants through the adoption of pruning methods specific to species or groups of plants;
- To maintain a safe environment for site users by maintaining visibility splays and removal of dead, dying or diseased tree branches.

5.3.3. During the first year after Practical Completion, the soft landscape will be maintained by the Landscape Contractor responsible for implementation of the works. The contract should include a defects liability clause to ensure replacement planting is carried out and successful establishment achieved. Appendix provides information on the general techniques and methods to be adopted for the ongoing maintenance operations and an indicative schedule of maintenance, respectively, for the lifetime of the facility.

5.3.4. This plan covers the maintenance of grassland, newly planted and existing trees, hedges, paved areas etc. The overall objectives are as follows:

- Apply good horticultural and ecological practice to all operations;
- Promote healthy growth and establishment of all plants, trees and grass;
- Ensure consistent control of invasive and aggressive competitor species e.g. common nettle (*Urtica dioica*) and/or non-native invasive plant species (if applicable);
- Ensure development of optimum plant form, shape and planting density;
- Provide protection against pests and diseases;
- Promote wildlife value and species diversity where appropriate;
- Ensure long-term commitment to replacement of defective plant material;
- Review opportunities for introduction of new species or replacement of exhausted species where appropriate, in line with the original design intentions.

5.3.5. More specific management objectives are outlined below:

- Existing Trees: To ensure the continuity of tree cover, amenity and biodiversity value. Whilst to maintain trees in line with a tree owners legal 'Duty of Care' under the Occupiers Liability Act 1957 & 1984 (and Health and Safety at Work Act 1974 where applicable).
- Proposed Trees: To establish a stable and healthily growing tree with a well-shaped framework for future growth. Where necessary to pollard or coppice species to prevent collapse of the trees. Regular safety inspections and report on condition of trees by arboricultural advisor. Implementation programmes of recommended tree work to comply with British Standard BS 3998:1989 'Recommendations for tree work'.
- Hedgerow Planting: Where appropriate, to regularly clip the hedges and shrubs to maintain a uniform and tidy appearance and a well-developed cover of vegetation. Cutting to be within ecological guidelines.
- Proposed woodland understorey: To ensure that weeding is completed, prune back scrub between October-March and water throughout dry periods.
- Grass – solar park long term grazing mix: To ensure the satisfactory establishment of the grass sward and to maintain healthy and suitable grass areas, appropriate to function and use.
- Wildflower Grassland: To ensure the satisfactory establishment of the grass sward and to maintain healthy and suitable grass areas, appropriate to function and use.
- Hard landscape: To keep all areas of paving and drainage systems across the site, free of litter, weeds, silt and other debris that will detract from the appearance of the site and will help to retain functionality of the site.

## LANDSCAPE MAINTENANCE SPECIFICATION

### 6.1. INTRODUCTION

6.1.1. The following specification items are to be addressed within the long-term landscape maintenance contract. Included are performance specifications, quality standards and some detailed operational descriptions. The landscape maintenance contractor will be required to apply their expertise in relation to the Management Objectives above in producing annual programmes of work. Maintenance to accord with requirements of BS 7370:1991.

6.1.2. Please note, details of planting and management within the buffer zones along the river and streams are detailed in the Buffer Zone Protection Scheme (CW20-785 R3).

### 6.2. EXISTING TREES

#### *Description*

6.2.1. Existing trees/woodland is located within the south-eastern corner of the site, along the western aspect, along the eastern aspect and occasionally along the northern. The trees are varied in quality and condition and will require ongoing maintenance to provide sustainable long-term value and tree cover at the site.

#### *Management Objectives*

6.2.2. The management objectives for existing trees will be to:

- To ensure the continuity of tree cover, amenity and biodiversity value.
- To maintain trees in line with a tree owners legal 'Duty of Care' under the Occupiers Liability Act 1957 & 1984 (and Health and Safety at Work Act 1974 where applicable)

#### *Tree Inspections*

6.2.3. To ensure that the above management objectives are met, existing trees should be inspected on completion of the development process by a qualified arboricultural consultant and appropriate recommendations for remedial work should be made.

6.2.4. The frequency and level of future tree inspections should be determined by the appointed arboricultural consultant, based on the condition of the existing trees and access / occupancy of areas surrounding the trees.

#### *Implementation of Tree work*

6.2.5. Tree work should be carried out in accordance with British Standard 3998 Tree Work - Recommendations (2010) and all relevant health and safety legislation.

6.2.6. On undertaking the recommended works, the contractor must report any defects observed while climbing or working on the tree/s in question. This must be reported immediately to the relevant manager, landowner and/or the arboricultural consultant to enable the appropriate follow up action.

### 6.3. PROPOSED TREE PLANTING

#### *Planting Description*

6.3.1. New tree planting is incorporated within the site throughout the woodland belt to substation and along certain hedgerows for additional screening value. The tree planting will compensate for the loss of trees during development and is anticipated to provide suitable features for invertebrates, birds, and foraging bats. Species includes field maple (*Acer campestre*), scots pine (*Pinus sylvestris*), oak (*Quercus robur*), and wild service tree (*Sorbus torminalis*). All trees are to be 'Heavy Standard' habit and will total 24 trees.

#### *Management Objectives*

6.3.2. The management objectives for new tree planting are to:

- Ensure the satisfactory establishment and growth of new tree planting typical of the respective species;
- Promote conditions so that trees are healthy and safe; and
- Ensure continuity of the design approach and amenity value of tree planting.

#### *Annual Works*

6.3.3. **General tree maintenance during establishment:** Check all trees for firmness and stability in the ground. Check and adjust tree ties, replacing if necessary. Prune back any diseased or rotten wood (including the removal of main stems and limbs) back to sound wood as required. Remove all cut material from site.

6.3.4. **Watering trees:** Water trees during dry periods (being any period without substantial rainfall for 14 days or more), until trees are successfully established. The Landscape Management Contractor shall be entirely responsible for varying the frequency of these visits according to climatic conditions and for contacting the landowner and agreeing the timing of any additional watering visits if required and where restrictions are placed on the use of water, sources and costs of obtaining second class water. The Landscape Management Contractor shall be responsible for any tree failures or excessive die back from drought stress during the management contract.

#### *Occasional Works*

6.3.5. **Checking and removal of tree stakes and ties:** Review the need for tree stakes and ties annually for up to 6 years. Remove stakes and ties between 4 to 6 years after planting, but be sure trees are firm and stable. Stakes and ties removed shall be cut at ground level, below lowest grass height (to prevent snagging mower blades) or pulled from the ground and the post holes filled with suitable topsoil. If the tree is found to be weak or unstable after the stakes have been removed, then check the base of the tree for signs of rot. If rotten or unlikely to stabilise, remove the tree and replace. If the tree is free from rot or other cause of its instability, then re-instate a tree support, using 100 mm diameter chestnut stake and single tie. The stake should be pushed into the ground with a post rammer, to a depth of 600 mm and cut to one third the height of the tree. Fix the tree stem with a rubber tie and spacing device attached to at a point no more than 25-35 mm below the top of the post, in order to prevent chafing against the post in high winds. Remove old posts, ties and arisings and dispose of off-site.

6.3.6. **Long-term tree surgery works:** After 10-20 years of maintenance (or earlier if required), newly planted trees will reach semi-maturity and at this time may be in need of corrective surgery. Trees should become subject to the annual Arboricultural Assessment.

6.3.7. Replacement and enhancement planting is best undertaken during the planting season (November through to March, inclusive).

### **6.4. PROPOSED HEDGEROW PLANTING AND HEDGEROW INFILLING**

#### *Planting Description*

6.4.1. Hedgerow planting is proposed throughout the site. The length of hedgerow planted within the scheme will total approximately 2,389 linear metres. The hedgerows will provide screening value from the surrounding public right of way as well as provide ecological value for a range of species including birds, bats, amphibians, reptiles, and other terrestrial mammals. The hedgerows will be planted at a frequency of 5 per linear metre in a double staggered row. Rows will be 40cm apart or as appropriate when infilling gaps in existing hedgerows. Flora species to be planted include field maple (*Acer campestre*), common dogwood (*Cornus sanguinea*), common hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), dog rose (*Rosa canina*), and elder (*Sambucus nigra*).

6.4.2. Existing hedgerows on site are to be largely retained especially along the northern and eastern aspects of the site and will be subject to hedgerow infill planting.

#### *Management Objectives*

6.4.3. The management objectives for new hedgerow include:

- Ensure the satisfactory establishment and growth of new planting typical of the respective species;
- Promote conditions so that it is healthy and safe; and
- Ensure continuity of the design approach and amenity value of tree planting.

*Annual Works*

6.4.4. **Watering of hedges:** Water hedges during dry periods (being any period without substantial rainfall for 14 days or more). The Landscape Management Contractor shall be entirely responsible for varying the frequency of these visits according to climatic conditions and for contacting the landowner and agreeing the timing of any additional watering visits if required and where restrictions are placed on the use of water, sources and costs of obtaining second class water. The Landscape Management Contractor shall be responsible for any tree failures or excessive die back from drought stress during the management contract.

*Occasional Works*

6.4.5. **Gapping up hedges:** Where sections of hedgerow become thin or fail, gap up hedgerows with an appropriate mix of species to an approximate density of 6 plants/linear metre, planted in a double staggered row during the planting season (November through to mid-March inclusive). Gap up areas of less dense growth with additional plants as required to achieve a continuous hedge line taking due allowance for natural growth and regeneration of cut material. All plants should match those that the infill section will relate to.

**6.5. PROPOSED WOODLAND BELT UNDERSTOREY SHRUB PLANTING***Description*

6.5.1. Woodland belt understorey shrub is proposed within the woodland belt and will total an area of approximately 2,400m<sup>2</sup>. A mixed native species rich habitat which will provide suitable features for invertebrates, birds, reptiles, and bats. Species include field maple (*Acer campestre*), common dogwood (*Cornus sanguinea*), common hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), dog rose (*Rosa canina*), holly (*Ilex aquifolium*), and elder (*Sambucus nigra*).

*Management Objectives*

6.5.2. The management objectives for the understorey shrub areas are to:

- To ensure the scrub has a well-developed edge with scattered scrub/ tall grassland to the edges.
- To maintain clearings, glades or rides present within the scrub providing sheltered edges.
- To ensure the satisfactory establishment of the plants; and
- To maintain healthy and suitable areas, appropriate to function and use.

*Annual Works*

6.5.3. **General planting maintenance:** At each visit firm in and straighten any loose plants.

*Occasional Works*

6.5.4. **Replacement and enhancement planting:** Cut back any scrub and herbaceous plants where they have become old, misshapen, leggy or they have lost their vigour. Specimens, shrubs or herbaceous plants that fail to show growth or develop full foliage (including plants damaged during management operations), where such plant failure leaves a gap in the foliage not filled by adjacent plants, shall be replaced with stock of the size, species and quality originally specified. Include any plants that are destroyed by vandalism, theft or similar cause through no fault of the Landscape Management Contractor, up to and not exceeding 5% of the plant stock. Planting should be implemented and maintained in accordance with good horticultural practice. Include any works necessary to enable planting to be properly carried out i.e. removal and disposal of dead material off site and for topping up/replacement of bark mulch. Once annually the site shall be considered for the need for any strategic replacement or enhancement planting, to broaden the age class of vegetation in the interests of the long-term sustainability of strategically important vegetation.

**6.6. GRASS – SOLAR PARK LONG TERM GRAZING MIX***Planting Description*

6.6.1. A total area of 552,557m<sup>2</sup> will be proposed Solar Park Long-Term Grazing Mix. The mix will comprise mainly perennial ryegrass (*Lolium perenne*) with occasional fescue and white clover (*Trifolium repens*). The grassland is to be grazed by livestock.

6.6.2. The management objectives for the grassland areas are to:

- To ensure the satisfactory establishment of the grass sward; and
- To maintain healthy and suitable grass areas, appropriate to function and use.

6.6.3 Either sensitive grassland cutting (up to twice per year to reduce shading of solar panels or tougher perennial weeds) and/or rotational livestock grazing will be utilised ensuring scrub and bracken distribution remains below 20% which will be checked in the monitoring visits. No pesticides or herbicides are to be used within this habitat.

Where necessary, invasive species will be eradicated in line with industry best practice.

## 6.7. PROPOSED WILDFLOWER GRASSLAND

### *Planting Description*

6.7.1. It is proposed that Emorsgate EM2 Standard General-Purpose Meadow Mix is to be utilised in the field margins and open meadow areas of the site. The proposed meadow areas will total approximately 103,136 m<sup>2</sup>. It is intended that these areas are maintained as 'meadow' and mowing is kept to a minimum. It will provide a suitable feature for invertebrates, foraging birds and bats. Fencing may be required to prevent intensive livestock grazing in the wildflower grassland areas.

### *Objectives*

6.7.2. The management objectives for wildflower meadow areas will be to:

- To ensure the satisfactory establishment of the grass sward; and
- To maintain healthy, suitable, and low maintenance grass area, appropriate to function and use.

### *Occasional Works*

6.7.3. **Replacement of failed grass:** Small areas showing signs of degradation shall be reseeded directly following the cutting. Seed with a wildflower seed mix, raking until the seed is a few millimetres below the surface. Water thoroughly and maintain the soil in a moist condition, removing stones, weeding and mowing until the grass is established.

## LANDSCAPE IMPLEMENTATION, MONITORING AND REVIEW

### 7.1. IMPLEMENTAION

7.1.1.JBM Solar Projects 18 Ltd will undertake all management aspects relating to the external landscape areas.

7.1.2.JBM Solar Projects 18 Ltd will coordinate all management of the site in perpetuity in accordance with Landscape Management Plan and the accompanying maintenance schedules.

7.1.3.JBM Solar Projects 18 Ltd may employ a Landscape Management Contractor to carry out general maintenance operations. Specialist Contractors may be used on an as needs basis to complete specialist operations and/or occasional works.

7.1.4.JBM Solar Projects 18 Ltd may also appoint from time-to-time consultants to provide specialist advice, monitoring or to undertake a watching brief in relation to particular aspects of this site or specific maintenance operations. This may include suitably qualified ecologists, arboriculturists, landscape architects, engineers and/or health and safety.

7.1.5.All works, materials and operations will be in accordance with relevant legislation, British Standards, Regulations (including the CDM Regulations) and Codes of Practice.

### 7.2. PROCESSING FOR MONITORING AND REVIEW

7.2.1.The Landscape Management Plan and maintenance schedules will be monitored and assessed for their effectiveness on an annual basis for the first five years following the completion of the facility.

7.2.2.Each annual review will be coordinated and completed by a suitably qualified representative of the JBM Solar Projects 18 Ltd. The review will include advice from specialist consultants as required (such as a qualified arboriculturist and ecologist), the Landscape Management Contractor and other stakeholders including representative(s) from the LPA.

7.2.3.To this end the review may include (as appropriate):

- Specialist reports - advising on particular aspects such as protected species, general silvicultural husbandry and health and safety issues;
- Records or attendance sheets demonstrating the maintenance work undertaken; and
- A walk over assessment of the landscape areas to assess landscape components and their condition, and the need for enhancement including minutes.

7.2.4.The review shall identify any changes to site conditions and circumstances, whether the aims and objectives of the Landscape Management Plan are being met, and where identified changes are needed to existing management practices and timeframes. Furthermore, any strategic enhancements, including new planting should be identified and priorities established for undertaking these works.

7.2.5.Within 1 calendar month of the review, a revised Landscape Management Plan shall be produced (if appropriate) and circulated to stakeholders. Within 5 years of the completion of the site, then the revised document shall be submitted to the LPA as a non- material amendment to the previously approved Landscape and Ecological Management Plan.

7.2.6.After the first five years the LMP will be reviewed every five years, or as required to ensure the satisfactory management of the landscape in perpetuity.



---

## DETAILS OF MANAGEMENT

### 8.1. DOCUMENTATION FOR OPERATORS

8.1.1. All areas subject to this plan are identified on the following landscape plans: Landscape Strategy – Bunkers Hill Solar Farm (Pegasus Environment, 2021). The hand-over to JBM Solar Projects 18 Ltd will include this document and relevant drawings, and will enable JBM Solar Projects 18 Ltd to know which areas of the site are covered by which section of this Management Scheme.

---

## SUMMARY

9.1.1. This plan has provided as follows:

- The landscape masterplan demonstrates proposed landscaping proposals.
- A schedule of actions to create or enhance and maintain each habitat at the required quality for a period of 20 years, to achieve the desired condition.
- A schedule of ecological monitoring for the 20-year period identifying when key indicators of habitat maturity should be achieved and;
- A schedule of actions to be undertaken in case signs of failing are identified, so target conditions can be obtained.

9.1.2. Much of the site currently comprises monocultured arable fields with little ecological value. Other habitats include amenity grassland, hardstanding, dense scrub, ditches, hedgerows, scattered broadleaved trees, semi-improved grassland, and treelines – as detailed in the Preliminary Ecological Appraisal (Tyler Grange, 2021). Overall, the site in its current form provides some value for a range of fauna species including bats, amphibians, reptiles, birds, and other terrestrial mammals. The site, as now proposed, will provide ample opportunities for ecological enhancement, including the proposed habitats discussed above. These habitats should be suitably managed to increase the value of the site for local species and to promote biodiversity.

---

## BRITISH STANDARDS

10.1.1. In addition to the standards described above, the soft landscape works should meet the following British Standards:

### *Topsoil Handling, Stripping and Storage*

- BS ISO 15799:2003 Soil quality – guidance on ecotoxicological characterisation of soils and soil materials BS 3882:1994 Specification for topsoil
- BS 6031:1981 Code of practice for earthworks
- BS 4428:1989 Guide of practice for general landscape operations (excluding hard surfaces) AMD 6784

### *Quality of Trees and Shrubs*

- BS 3936-1:1992 Nursery stock specification for trees and shrubs BS 3936-5:1985 nursery stock specification for poplars and willows
- BS 3936-10:1990 nursery stock specification for ground cover plants

### *Maintenance of Gardens/ Landscapes*

- BS 7370-3:1991 grounds maintenance recommendations for maintenance of amenity and functional turf (other than sports turf)
- BS3998: 2010 'Tree Work – Recommendations 'and AMD 6549

### *Horticulture*

- BS EN 12579:2000 Soil improvers and growing media - sampling
- BS EN 12037:2000 Soil improvers and growing media - determination of pH

### *Biodiversity*

- BS42020 Biodiversity – Code of Practice For Planning & Development

---

## BIBLIOGRAPHY

- Pegasus Environment (2021) Landscape Strategy – Bunker Hill Solar Farm
- Tyler Grange (2021) Arboricultural Method Statement/Tree Constraints Plan.
- Tyler Grange (2021) Preliminary Ecological Appraisal Bunker's Hill Farm.

---

**APPENDIX**

**GENERAL – ALL AREAS**

General – All Areas	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6 to 20 and future years
Weekly visual inspection of all areas; removal of any litter, debris or fly tipping as necessary.	Weekly during the works, monthly after works have been completed.	Every two months.	Every three months.	Every three months	Every three months	Every three months
Keep all grassed and planted areas tidy, rake and remove all, litter and rubbish.	Every two months.	Every two months.	Every three months.	Every three months.	Every three months.	Every three months.
All newly planted areas lightly cultivated.	2 x year in March/ Oct	2 x year in March/ Oct	All plants should be well established after two years, no further maintenance is required.	N/A	N/A	N/A
Firming up: plants which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading.	Every three months.	2 x year in March/ Oct	All plants should be well established after two years, no further maintenance is required.	N/A	N/A	N/A
Stakes and ties: check stakes are secure and adjust ties to allow for growth as necessary, avoid chaffing of bark. Remove stakes at the end of the third growing season.	2 x year in March/ Oct	2 x year in March/ Oct	All plants should be well established after two years, no further maintenance is required.	N/A	N/A	N/A
Diseased or dead plants to be removed and replaced with appropriate species.	2 x year in March/ Oct	2 x year in March/ Oct	2 x year in March/ Oct	2 x year in March/ Oct	No further maintenance required.	No further maintenance required.

**MAINTENANCE OF SOFT PLANT LANDSCAPED AREAS**

Tree planting	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6 to 20 and future years
Water monthly in growing season (March to September) and at least weekly in dry periods to maintain healthy growth.	Monthly or every 2 weeks in dry periods.	Monthly or every 2 weeks in dry periods.	As required in prolonged dry periods.	As required in prolonged dry periods.	As required in prolonged dry periods.	As required in prolonged dry periods
Apply organic wood chip/ bark mulch min 5 cm thick, 0.5 m circle around tree stem.	2 x year in March/ Oct	2 x year in March/ Oct	Tree should be established, no further maintenance required.	Tree should be established, no further maintenance required.	Tree should be established, no further maintenance required.	Tree should be established, no further maintenance required.
Remove all tree ties, stakes or supports.			Year 3/4			

Inspect annually, prune as necessary, remove dead, damaged or diseased branches; Works to be carried out by an approved contractor.	1 x year	1 x year	As and when required.	As and when required.	As and when required.	As and when required.
<b>Planted areas, and hedges</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Years 6 to 20 and future years</b>
Weekly visual inspection of all areas; removal of any litter, debris or fly tipping as necessary.	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly
Maintain all planted areas weed-free; control by hand-dig.	Monthly visits (x 12)	7 x year	4 x year	4 x year	4 x year	4 x year
Water regularly minimum 10 litres per shrub during growing season (March to September) and at least weekly in dry periods to maintain healthy growth.	Monthly or weekly in dry periods	Monthly or weekly in dry periods	As required in prolonged dry periods.	As required in prolonged dry periods.	As required in prolonged dry periods.	As required in prolonged dry periods
Hedges: remove diseased or dead plants and replace with appropriate species	2 x year in March/ Oct	2 x year in March/ Oct	2 x year in March/ Oct	N/A	N/A	N/A
Hedges: Years 1 & 2, cut back hard in encourage bushy growth; Years 3+, prune/ clip to create regular height and width as required.	2 x year	2 x year	1 x year	1 x year	1 x year	1 x year
<b>Woodland understorey shrub</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Years 6 to 20 and future years</b>
Shrub planting: Inspect annually, prune as necessary: straggling, crossing stems, over- vigorous shoots, suckers and dead, misshapen or broken branches to be removed with a clean smooth cut; also prune to avoid conflict with footpaths, grass mowing, etc.	1 x year	1 x year	As and when required.	As and when required.	As and when required.	As and when required.
<b>Long wildflower areas</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Years 6 to 20 and future years</b>
In the first year, mow at least 6 x a year. In following years mow 2 x year.	1 x month in May-Oct (6 times total)	2 x year in June-July and Sept-Oct	2 x year in June-July and Sept-Oct	2 x year in June-July and Sept-Oct	2 x year in June-July and Sept-Oct	2 x year in June-July and Sept-Oct
Maintain weed-free	1 x year in spring	1 x year in spring	1 x year in spring	1 x year in spring	1 x year in spring	1 x year in spring
Over-seed damaged, worn, shaded areas to maintain a robust sward.	1 x year	1 x year	1 x year	1 x year	1 x year	1 x year

Grass – solar park long term grazing mix	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6 to 20 and future years
Rotational grazing or sensitive grassland cutting. Reseeding as required by manufacturer's instructions if areas become bare. Removal of invasive species as required by certified contractor.	N/A	N/A	N/A	N/A	N/A	N/A



**THIS PAGE HAS BEEN LEFT INTENTIONALLY BLANK**

