

PLANTING SPECIFICATION

- 1 GENERAL
- 11 All plants will conform to BS 3336-1 (1992) and be in accordance with the National Plant Specification. Supplying nurseries will be registered under the HTA Nursery Certification Scheme. All plants will be packed and transported in accordance with the Code of Practice for Plant Handling as produced by CPRE.
- 12 Planting will not be carried out when the ground is waterlogged, frost bound or during periods of cold drying winds.
- 13 All bare-root planting stock will be kept covered until actually planted in order to minimise water-loss and prevent the roots from drying out.
- 14 All bare-root planting stock will be root dipped in an approved water-retaining polymer.
- 15 If the formation level is compacted it should be ripped through before topsoiling.
- 16 Any tree(s) or shrub(s) which within a period of five years from the completion of the development dies, is removed or becomes in the opinion of the local planning authority seriously damaged, defective or diseased shall be replaced in the next planting season with another of the same size and species as that originally planted.

2 TREE PLANTING

- 2.1 All areas of proposed woodland planting shall be ripped in advance of planting works to provide suitable de-compaction of soils for planting.
- 2.2 All extraneous matter such as plastic, wood, metal and stones greater than 100mm diameter will be removed from the planting areas and disposed of off-site.
- 2.3 Where necessary existing weeds will be treated with a suitable glyphosate-based herbicide and a suitable period allowed to elapse, as recommended by the manufacturer, for the herbicide to take effect before new planting commences.
- 2.4 All areas of proposed woodland planting shall be prepared and seeded with Emorsgate EM3 Special General Purpose Meadow Mixture prior to planting (in line with Section 4 below)
- 2.5 Light Standard / Standard / Selected Standard Trees
- 2.6 Trees shall be planted as per the plant schedule shown on this drawing
- 2.7 All trees will be held so that movement at the root collar is minimised until new roots have developed to anchor the tree. A single vertical stake (75mm dia x 1.8m length) will be used and attached to the tree at approximately 1200mm above ground level towards direction of prevailing wind. Stakes will be driven 300mm into undisturbed ground beneath tree pit before planting the tree, taking care to avoid underground services and cables. The trees will be secured using proprietary rubber straps and must be firmly fixed with a spacing device used to prevent chafing against the tree.
- 2.8 Heavy standard trees are to be single staked with 75mm dia stakes. Stakes should be driven at least 300mm into undisturbed ground beneath tree, taking care to avoid underground services and cables etc. and should typically be one third the height of the tree stem above ground.
- 2.9 Staked trees shall be secured to stakes with suitable proprietary rubber tree ties and spacers.
- 2.10 Composted bark mulch will be spread to a depth of 75mm across a 0.8m dia circle around individual trees, ensuring that the root flare and base of the stem, along with any ground cover plants, are not buried.
- 2.11 All trees shall be watered in at the end of each day of planting.
- 2.12 Feathered trees are to be placed into the pits 500 x 500 x 300mm deep, with the base sufficiently de-compacted, and backfilled with excavated topsoil. A general-purpose slow-release fertiliser (at the rate of 35g/m²) and Tree Planting and Mulching Compost (at the rate of 20 litres/m²) are to be incorporated into the top 150mm of topsoil during backfilling to sufficiently ameliorate soils if existing ground is unsuitable for re-use or is deemed to be required.
- 2.13 All newly planted feathered trees will be held so that movement at the root collar is minimised until new roots have developed to anchor the tree. Therefore low staking (75mm dia x 1.5m length) will be driven diagonally into the ground and attached to the tree at approximately 600mm above ground level towards direction of prevailing wind. Stakes will be driven 300mm into undisturbed ground below base of tree pit before planting the tree, taking care to avoid underground services and cables. The trees will be staked using proprietary rubber ties and must be firmly fixed with a spacing device used to prevent chafing against the tree.
- 2.14 All feathered trees will be protected from rabbit and deer damage by the fitting of 600mm biodegradable spiral tree guards.
- 2.15 All trees shall be watered in at the end of each day of planting.

3 NATIVE HEDGE TRANSPLANTS

- Ground Preparation
- 3.1 Where necessary existing weeds will be treated with a glyphosate-based herbicide and a suitable period allowed to elapse, as recommended by the manufacturer, for the herbicide to take effect.
- 3.2 All extraneous matter such as plastic, wood, metal and stones greater than 50mm diameter will be removed from site to a registered waste disposal facility.
- Planting
- 3.3 New hedgerows to be planted in double staggered rows as per schedule.
- 3.4 Existing hedgerows to have infill planting (as required following detailed review on site), species and stock size to match proposed new hedgerow planting (see planting schedule).
- 3.5 The plants should be planted using L shaped or straight notches using spaces of a design suitable for this purpose. The notches must be vertical and deep enough for the roots to hang freely, with the transplant being planted so that the root collar is exactly level with the ground surface. The notch must then be closed and the soil will be well firmed round the roots in line with the guidelines as set out in BS 4429 (1989).
- 3.6 All bare-root hedge planting stock, will be protected from rabbit damage using approved proprietary 600mm biodegradable clear plastic spiral guards, supported with 0.9m 12/14b canes as advised by the manufacturer. Excluding evergreen species.
- 3.7 All plants shall be watered in at the end of each day of planting.
- 3.8 Weed growth in all areas of tree planting will be controlled until successful establishment is achieved by careful application of a systemic herbicide such as Roundup by an approved landscaping contractor in order to clear any extraneous vegetation.
- 3.9 Hedging shall be planted through biodegradable mulch matting.
- Maintenance during first growing season
- 3.10 All dead, dying or diseased hedge plants will be replaced with plants of similar size and species. If the failure of the plant is due to disease and the disease is considered likely to re-occur then an alternative species may be used as replacement if agreed with the LPA.
- 3.11 The planting area will be kept weed free throughout the maintenance period using approved herbicides in April, June and August.

4 GRASSLANDS

- Ground Preparation
- 4.1 Ground preparation must be adequate to provide the best chance of establishment of grasslands specified. Actions may include repeated cycles of herbicide spraying and cultivation to remove unwanted vegetation prior to sowing. The methodology shall differ around the site and will be agreed in advance in discussion with the site ecologist.
- Seeding
- 4.2 Seeding should take place in accordance with BS 4428 (1989) in September to October in the first year following completion of underground wiring, during calm weather and not when the ground is frost bound or waterlogged, and be broadcast by machine and rolled where possible. The gaps between strings of panels are to be wide enough to accommodate a tractor travelling between them for harrowing, sowing and rolling purposes. In areas where a machine is unable to access, such as far underneath panels, bare areas shall be raked by hand and seeding in these areas should be broadcast by hand.
- 4.3 The seed supplier should be contacted prior to purchasing the seed mixture and the soil conditions and location of the site should be discussed. A bespoke seed mixture suitable for the specific conditions on the site may be more suitable.
- 4.4 Seeds must be mixed with a substrate such as sand or sawdust for ease of broadcasting.
- Initial Management
- 4.5 Areas of newly seeded grassland will be subject to one cut during the first year of establishment. In good growing conditions (warm soils and adequate rainfall) the grass will reach 100mm height around 6-10 weeks from sowing, requiring it's first cut. However, additional cuts may be required to prevent the height of the sward from obscuring the solar panels. The grassland should be cut to 40-70mm.
- 4.6 Cutting should follow a sympathetic method (ie working outwards towards the boundary features), the area will allow fauna such as invertebrates, birds and small mammals to temporarily and safely vacate the area. Management will take a flexible approach and exact dates will be dependent upon weather conditions.

- 4.7 Grassed areas along hedgerow bases can be cut less frequently once established, with a single main cut (reducing sward height to approximately 150mm) late in the season, between August and September, subject to weather conditions.
- 4.8 Problem perennial weeds will be controlled by carefully targeted selective non-residual herbicide applications by way of spot spraying with a knapsack (low pressure to avoid spray drift), or weed wiping.
- 4.9 In the unlikely event that grassland fails to become established upon areas of bare ground created during the works these areas will be lightly scarified and reseeded with the same seed mix used to seed the site at the during the construction phase.
- 4.10 An inspection will be undertaken in early August following completion of the installation. The inspection will be undertaken by the solar farm operator. Should the proportion of bare ground be greater than 20%, sowing will be repeated in these areas. Reseeding in August is likely to be particularly appropriate where the months of May, June and July have been very dry. The operating company will assess the proportion of bare ground on the site.
- 4.11 Please refer to seed suppliers recommendations for ongoing maintenance and cutting regime and to the LEMP for long-term management regime.

PLANTING SCHEDULE

NATIVE WOODLAND								
To be planted at 2.5m centres in 15-25 tree clusters of same species. Shrubby edges and small glades/openings to be incorporated into woodland edge (10% open space to be included within woodland area).								
No	Species	Common Name	Mix (%)	Height (cm)	Form	Age/Times transpl	Root	
Trees - 40%								
25	Alnus glutinosa	Alder	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Alnus glutinosa	Alder	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Alnus glutinosa	Alder	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem (4 breaks)	2x	B	
26	Betula pendula	Silver Birch	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Betula pendula	Silver Birch	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Betula pendula	Silver Birch	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Betula pubescens	Downy Birch	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Betula pubescens	Downy Birch	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Betula pubescens	Downy Birch	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Carpinus betulus	Hornbeam	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Carpinus betulus	Hornbeam	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Carpinus betulus	Hornbeam	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Populus tremula	Aspen	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Populus tremula	Aspen	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Populus tremula	Aspen	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Quercus robur	English oak	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Quercus robur	English oak	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Quercus robur	English oak	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Salix fragilis	Crack Willow	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Salix fragilis	Crack Willow	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Salix fragilis	Crack Willow	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
26	Sorbus aucuparia	Rowan	2.5	150-175	Feathered: 3 breaks	2x	B	
15	Sorbus aucuparia	Rowan	1.5	250-300, 6-8cm girth	Light standard: clear stem 150-175cm; 3 breaks	2x	B	
10	Sorbus aucuparia	Rowan	1	300-350, 10-12cm girth	Selected standard: min 200cm clear stem; 4 breaks	2x	B	
408 TOTAL								
Shrubs - 60%								
153	Corylus avellana	Hazel	15	60-80	Transplant	1+1	B	
102	Crataegus monogyna	Hawthorn	10	60-80	Transplant	1+1	B	
102	Ilex aquifolium	Holly	10	60-80	Transplant	1+1	B	
123	Prunus spinosa	Blackthorn	12	60-80	Transplant	1+1	B	
72	Rosa canina	Dog Rose	7	60-80	Transplant	1+1	B	
65	Sambucus nigra	Elder	6	60-80	Transplant	1+1	B	
633 TOTAL								

BLACK POPLAR CONSERVATION AREA									
To be planted along brook edge. Size of existing trees to be investigated, with new trees furthering diversity to maximise sexual reproduction to aid self-sustaining population.									
No.	Species	Common Name	Girth (cm)	Height (cm)	Form	Root condition			
150	Populus nigra	Black Poplar	8-10	250-300	Standard	RB			

ORCHARD TREE PLANTING						
Species selected for their local provenance/heritage						
No.	Species	Pollination Group	Height (cm)	Root condition		
3	Malus Annie Elizabeth	4	120-150	12L	(MMIOE Rootstock)	
2	Malus Barnack Orange	4	120-150	12L	(MMIOE Rootstock)	
3	Malus Dumelow's Seeding	5	120-150	12L	(MMIOE Rootstock)	
2	Malus Prince Charles	5	120-150	12L	(MMIOE Rootstock)	
2	Malus Sweetings	2	120-150	12L	(MMIOE Rootstock)	
2	Prunus Golden Monarch	17	120-150	12L	(St Julien A Rootstock)	
14 TOTAL						

HEDGEROW TREES						
To be planted within proposed / alongside existing hedgerows						
No.	Species	Common Name	Girth	Height (m)	Form	Root condition
105	<i>Crataegus monogyna</i>	Hawthorn	8-10	250-300	Standard	RB
80	<i>Malus sylvestris</i>	Crab Apple	8-10	250-300	Standard	RB
29	<i>Salix caprea</i>	Goat Willow	8-10	250-300	Standard	RB
27	<i>Salix cinerea</i>	Grey Willow	8-10	250-300	Standard	RB
241 TOTAL						

NATIVE HEDGEROW/INFILL PLANTING							
To be planted in double staggered row with 5 plants per linear metre.							
No.	Species	Common Name	Mix (%)	Height (cm)	Form	Age/Times transpl	Root condition
1040	Corylus avellana	Hazel	7.5	60-80	Branches: 3 breaks	1+2	B
7247	Crataegus monogyna	Hawthorn	55	60-80	Branches: 3 breaks	1+1	B
1040	Ilex aquifolium	Holly	7.5	60-80	Branches: 3 breaks	1+2	B
371	Ligustrum vulgare	Wild Privet	2.6	60-80	Branches: 3 breaks	1+2	B
2770	Prunus spinosa	Blackthorn	20	60-80	Branches: 2 breaks	1+1	B
371	Rosa canina	Dog Rose	2.5	60-80	Transplant	1+1	B
695	Viburnum opulus	Guelder Rose	5	60-80	Branches: 2 breaks	1+1	B

