IMPLEMENTATION AND MAINTENANCE GUIDELINES

1.0 GENERAL

All plants shall conform to BS 3936 and be in accordance with the National Plant Specification. Supplying nurseries shall be registered under the HTA Nursery Certification Scheme. All plants shall be packed and transported in accordance with the recommendations of the National Code of Practice for Plant Protection. Care shall be taken to ensure that plants are not damaged by frost/wind or during periods of cold drying winds. All bare root stock shall be not dipped in an approved water retaining polymer. Tree planting implementation and maintenance to conform to BS 8545:2014 Trees: From Nursery to Independence in the Landscape.

If the formation level is compacted it should be ripped through before topsoiling.
Topsoil depths to be 450mm for shrub beds and 150mm for grass areas.

2.0 TOPSOIL

2.1 Existing Topsoil
Undertaking herbicide application:
Apply by suitable spraying operative, an approved translocated systemic herbicide to the manufacturer's instructions and to 1997 Control of Pesticides Regulations and 2002 COSHH regulations on all beds, except those which are both weed free and free from perennial weeds. Do not apply if there is a risk of contamination of ground water or surface water. If there is a delay before planting, or the area is to be seeded, spray after one month following cultivation, to allow dormant seed to terminate. All spraying shall be carried out by skilled and qualified operatives, using protective clothing, in suitable weather (no wind) and any damage caused by spray drift, from incorrect usage or spillage, shall be rectified at the contractor's own cost. Repeat as necessary to ensure complete kill and take off all dead material from site.

Carry out the following works to the existing topsoil on site to ensure it Conforms to BS 3882:2015, being free from rocks larger than 50mm diameter, concrete, all roots, wire, brick, and have less than 20% clay. Allow for pre-application of herbicide as described above. Do not cultivate or dig over if the ground is wet enough to cause compaction in accordance with manufacturer's instructions. For beds less than 5 metres in width, lick over thoroughly or machine rotavate soil to a depth of 300mm, ensuring that the subgrade and topsoil are completely broken up and free draining, relaying any compaction. For beds over 5 metres in width, subsoil to a depth of 450mm, ensuring that the subgrade and topsoil are completely broken up and free draining, relaying any compaction. For beds over 10 metres in width, subsoil where there are no services, or within 10 metres of tree stems or 3 metres of existing hedges. Do not rip areas where roots greater than 10mm diameter are encountered.

2.2 Imported Topsoil
Any imported topsoil for making up ground, shall conform to BS 3882:2015, and be free from rocks (over 50mm diameter), concrete, roots, wire and brick, and have less 20% clay.

3.0 NATIVE SHRUB PLANTING

3.1 Ground Preparation
- Individual plants - planting areas shall be set out using 38x38x1200mm timber stakes at each change in direction and at a maximum of 50m intervals.

Either - for notch planting
All herbaceous material within the proposed planting area shall be sprayed out using an approved herbicide at least two weeks before planting and the ground shall be cultivated to a depth of 150mm.
or - for pit planting
A 900mm diameter circle shall be sprayed out at each planting station using an approved herbicide at least two weeks before planting.

3.2 Planting
Bare rooted stock is to be not dipped in water retaining polymer. Proposed planting is to be planted on an informal grid. To avoid straight lines and planting station can be moved by up to 300mm in any direction.

Either a tar sheltered or a tar radiol fence
a. All stock to be protected from rabbit damage using approved proprietary tree and shrub shelters, 900mm and 450mm high respectively, secured with stakes and ties as advised by the manufacturer.
b. All stock to be protected from rabbit damage by 900mm high rabbit fencing erected in accordance with the manufacturers recommendations.

3.3 Maintenance
Using approved herbicides a 900mm diameter circle centered on each planting station shall be kept weed free throughout the maintenance period.

Each Autumn after planting and until handover to the adopting authority, the contractor will prepare a list of all plants which are dead, dying or diseased and will replace these during the following planting season.

4.0 NATIVE HEDGE PLANTING

4.1 Setting Out
The hedge line shall be set out using 38x38x1200 stakes at maximum 50m intervals and all herbaceous material within 600mm of the centre line shall be sprayed out using an approved herbicide at least two weeks before planting.

4.2 Preparation
The 800mm wide hedge line shall be cultivated to 150mm incorporating Enmag or equal at 75gm/m2.

4.3 Planting
Plants shall be notch planted in two rows 250mm apart and staggered at 300mm centres.All plants are to be protected with a 600mm proprietary shelter secured with a stake/cane and ties as recommended by the manufacturer.

4.4 Maintenance
Using approved herbicides a 800mm wide swathe centred on the hedgeline shall be kept weed free throughout the maintenance period.

Each Autumn after planting and until handover to the adopting authority, the contractor will prepare a list of all plants which are dead, dying or diseased and will replace these plants during the following planting season.

5.0 WILDFLOWER AND GRASSLAND MIX OUTSIDE THE DESIGNATED ECOLOGY ENHANCEMENT AREA

5.1 Preparation
Grass seed mixtures to be sourced from certified local provenance seed stock. Ground surface will be cleared of weed growth either removed by hand or through the application of an approved Glyphosate based herbicide (all herbicides should only be handled by certified users and in accordance with the COSHH Regulations 2002). The ground will then be ploughed and raked to produce a medium tilth with debris and stones over 25mm diameter removed. The surface shall be raked to smooth flowing contours with a fine to medium tilth.

5.2 Seeding
Meadow and wildflower seed mixes shall be sown in either August -September or March -April during calm weather and not when the ground is frost bound or waterlogged. Seed shall be sown in one single sowing at the sowing rate as per supplier's recommendations listed below. After sowing the contractor shall roll the seed into intimate contact with the soil with a ribbed Cambridge roller.
- EM3 Special Gen. Purpose Meadow Mixture: 3g/m2
- EG8 - Meadow Grass Mixture for Wet Soils: 5g/m2
- Turtle Dove Mixture: 3g/m2

5.3 EM3 Special Gen. Purpose Meadow Mixture Maintenance
First year management
Hay must be removed from areas prior to mowing. The following procedures should not be undertaken in adverse weather conditions or if ground conditions present the use of machinery without damage to the ground surface. Mow newly sown meadows regularly throughout the first year of establishment. The grassland should be assessed at each visit and mown when height is in excess of 100-150mm. When the area is to a height of 60-80mm All arisings shall be deposited to a suitable location on site or an area designated by the Contracts Manager. Any bare patches shall be made good at this time.

Secondary and subsequent years
In the second and subsequent years EM3 sowings can be managed in a number of ways which, in association with soil fertility, will determine the change in the sward. The best results are usually obtained by traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or grazing.
Meadows managed for hay will normally require only one cut per year. Late cutting will allow the majority of species an opportunity to flower. After flowering in July or August take a 'hay cut' - cut back with a suitable petrol driven or tractor mower to c.50mm. Leave the 'hay' to dry and shed seed for 1-7 days then deposit to a suitable location on site or an area designated by the Contracts Manager.

Mow or graze the re-growth through to late autumn/winter to c.50mm and again in spring if needed.

5.4 ESG2 Fine Grassland Mixture Maintenance (Farmland Stewardship Mixtures)
First year management
Top all plant growth (seen species and weeds) at least 3 times through the first season (removing cuttings if dense) to prevent excessive shade and encourage root development. Ensure frequent and regular topping will minimise the amount of toppings produced each time so they can be left to disperse.

Management once established
Management once a grass sward is established will depend on site objectives. Follow stewardship guidelines where these apply. The low productivity of the grasses in ESG2 mean that the mowing requirement is minimised.

5.5 Turtle Dove Mixture Maintenance
These will be marked out along the meadow seeking above and not seeded with the other meadow mix. The strips will be mowed again the following autumn (late August or mid-October) and seeded with a turtle dove mix that creates an open sward that enables turtle doves to forage on the ground. This is seeded in autumn so that these species are at flowering and seed stage by the time turtle dove return the following spring and through the breeding season. These would then be managed as described above for EM3 meadows with a late cut for hay (late July/mid August) and then grazed or cut again in September. These need to be topped up with new seed every year. Owing to these mows, to be informed by monitoring.

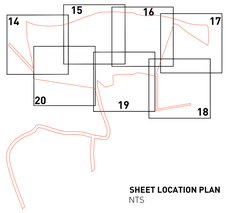
6.0 WILDFLOWER AND GRASSLAND MIX WITHIN THE DESIGNATED ECOLOGY ENHANCEMENT AREA

6.1 Preparation
Grass seed mixtures to be sourced from certified local provenance seed stock. Ground surface will be cleared of weed growth either removed by hand or through the application of an approved Glyphosate based herbicide (all herbicides should only be handled by certified users and in accordance with the COSHH Regulations 2002). The ground will then be ploughed and raked to produce a medium tilth with debris and stones over 25mm diameter removed. The surface shall be raked to smooth flowing contours with a fine to medium tilth.

6.2 Seeding
Meadow and wildflower seed mixes shall be sown in either August -September or March -April during calm weather and not when the ground is frost bound or waterlogged. Seed shall be sown in one single sowing at the sowing rate as per supplier's recommendations listed below. After sowing the contractor shall roll the seed into intimate contact with the soil with a ribbed Cambridge roller.
- EM8 Meadow Grass Mixture for Wetlands: 5g/m2
- EG8 Meadow Grass Mixture for Wet Soil: 5g/m2

Landscape and Ecological Management within the Designated Ecology Enhancement Area subject to Ecology Management Plan prepared by BSG Ecology.

All arisings will remain on site, excavations from the horse field areas will be relocated to the southern boundary of the solar farm in Noke field (top soil stripped, sub-soil added and topsoil reinstated).



SHEET LOCATION PLAN
NTS

Container

PLANT SCHEDULE

PROPOSED TREES

ABBR	SPECIES	COMMON NAME	SUPPLY SPECIFICATION	HEIGHT (CM)	GIRTH	QTY (No.)
ACCA	Acer campestre	Common Maple	LStd	200–250cm	6–8cm	77 –
ALGL	Alnus glutinosa	Common alder	LStd	200–250cm	6–8cm	43 –
LIGVU	Ligustrum vulgare		Std	200–250cm	8–10cm	29 –
PINSY	Pinus sylvestris	Scots Pine	RB	200–250cm	8–10cm	38 –
PRAV	Prunus avium	Gean or Wild Cherry	LStd	200–250cm	6–8cm	14 –
QUERO	Quercus robur	Common Oak	LStd	200–250cm	6–8cm	67 –
SALCAP	Salix caprea	Goat willow	LStd	200–250cm	6–8cm	35 –
TAXBA	Taxus baccata	Common Yew	RB	200–250cm	8–10cm	38 –
TICO	Tilia cordata	Littleleaf linden	LStd	200–250cm	6–8cm	69 –

PROPOSED NATIVE MIXED HEDGEROWS / INFILL MIXES

MIX NAME	ABBR	SPECIES	SUPPLY	HEIGHT (CM)	CENTRES (M)			MIX %	QTY (No.)
NATIVE HEDGEROW MIX EASEMENT	CORAV	Corylus avellana	T1+1	60–80cm	0.3Ctr	Double Staggered at 0.25m offset	20%	7 –	
NATIVE HEDGEROW MIX EASEMENT	LIGVU	Ligustrum vulgare	T1+1	60–80cm	0.3Ctr	Double Staggered at 0.25m offset	30%	10 –	
NATIVE HEDGEROW MIX EASEMENT	PRUSP	Prunus spinosa	T1+1	60–80cm	0.3Ctr	Double Staggered at 0.25m offset	30%	10 –	
NATIVE HEDGEROW MIX EASEMENT	SYAL	Symphoricarpos alba	T1+1	60–80cm	0.3Ctr	Double Staggered at 0.25m offset	20%	7 –	
NATIVE HEDGEROW MIX Z	ACECAM	Acer campestre	T1+2	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	10%	1019 –	
NATIVE HEDGEROW MIX Z	CORAV	Corylus avellana	T1+2	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	5%	512 –	
NATIVE HEDGEROW MIX Z	CRAMON	Crataegus monogyna	T1+2	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	10%	1019 –	
NATIVE HEDGEROW MIX Z	ILEAQ	Ilex aquifolium	5L	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	5%	5074 –	
NATIVE HEDGEROW MIX Z	PRUSP	Prunus spinosa	T1+2	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	20%	2033 –	
NATIVE HEDGEROW MIX Z	ROSCA	Rosa canina	T1+2	175–200cm	0.3Ctr	Double Staggered at 0.25m offset	5%	512 –	

PROPOSED NATIVE SHRUB MIXES

MIX NAME	ABBR	SPECIES	SUPPLY	HEIGHT (CM)	HABIT	CENTRES (M)	MIX %	QTY (No.)
NATIVE SHRUB MIX AH	CORAV	Corylus avellana	T1+1	60–80cm	Transplant	1Ctr	10%	2454 –
NATIVE SHRUB MIX AH	CRAMON	Crataegus monogyna	T1+1	60–80cm	Transplant	1Ctr	10%	2454 –
NATIVE SHRUB MIX AH	ILEAQ	Ilex aquifolium	2L	60–80cm	Bushy	1Ctr	10%	2454 –
NATIVE SHRUB MIX AH	LIGVU	Ligustrum vulgare	T1+1	60–80cm	Transplant	1Ctr	15%	3676 –
NATIVE SHRUB MIX AH	PRUSP	Prunus spinosa	T1+1	60–80cm	Transplant	1Ctr	10%	2454 –
NATIVE SHRUB MIX AH	ROSCA	Rosa canina	T1+1	60–80cm	Transplant	1Ctr	5%	1230 –
NATIVE SHRUB MIX AH	TAXBA	Taxus baccata	2L	30–40cm	Bushy	1Ctr	15%	3676 –
NATIVE SHRUB MIX AH	ULEEU	Ulex europaeus	2L	30–40cm	Bushy	1Ctr	15%	3676 –
NATIVE SHRUB MIX AH	VIBOP	Viburnum opulus	T1+1	60–80cm	Transplant	1Ctr	10%	2454 –
NATIVE SHRUB MIX EASEMENT C	BERCAN	Berberis candidula	2L	30–40cm		1Ctr	40%	34 –
NATIVE SHRUB MIX EASEMENT C	EUOEPS	Euonymus europaeus	2L	40–60cm		1Ctr	30%	26 –
NATIVE SHRUB MIX EASEMENT C	VIBOP	Viburnum opulus	2L	60–80cm		1Ctr	30%	26 –

PROPOSED WILDFLOWER MEADOW (or similar approved)

MIX NAME	SEED MIX SUPPLIER	AREA	DENSITY
EM3 – Special Gen. Purpose Meadow Mixture	Emorsgate Seeds	26362.0243m²	4g/m²

MEADOW GRASS MIXTURE FOR WET SOILS(or similar approved)

MIX NAME	SEED MIX SUPPLIER	AREA	DENSITY
EG8 –MEADOW GRASS MIXTURE FOR WET SOILS	Emorsgate Seeds	30900.7264m²	5g/m²

MEADOW MIXTURE FOR CLAY SOILS (or similar approved)

MIX NAME	SEED MIX SUPPLIER	AREA	DENSITY
EM4–Meadow Mixture for Clay Soils	Emorsgate Seeds	30941.6476m²	4g/m²

PROPOSED TURTLE DOVE MIXTURE (or similar approved)

SPECIES	MIX (%)
Early English common vetch	25%
Bird's-foot trefoil	20%
Early white clover	10%
Black medick	20%
Early red clover	10%
Fumitory	5%

SEED MIX SUPPLIER www.kingscrops.co.uk

AREA: 1606.136 sqm

DENSITY: 3g/m2

NOTES

All trees, feature shrubs, climbers, shrubs and hedgerows to be planted in accordance with the implementation and maintenance guidelines. All landscape proposals must be referred to by the Structural Engineer during foundation design. No tree, feature shrub, climber, shrub and hedgerow species, size or location should be altered without prior approval from the Landscape Architect.

- Individual shrub/herbaceous/grass species to be planted in groups of 3-7.
- Shrub planting to be planted in staggered rows at 300mm centres in groups of 5-9.
- Lower growing species within ornamental shrub mixes to be planted at the front of the shrub bed (as indicated).
- Individual bulbs species to alternate every 2 linear metres.
- Native hedgerow shrubs to be supplied as bare root stock unless stated.
- Ornamental shrub species to be supplied as container grown stock (as included).
- Any native hedgerow shrubs, to be planted on a double staggered row, 250mm apart with no less than 4 per linear metre within a 50cm wide bed in accordance with implementation and maintenance guidelines. Any hedgerow stock to be supplied as a single upright central cane furnished with evenly spread and balanced lateral growth the full length of the stem. If feathered hedgerow stock is proposed, shrubs are to be attached to a double line support line for feathered stock at 1m high and one for transplant stock at 60cm high) fence using an approved clip tie and cut back to a single upright central cane.
- Pond marginal planting to be sourced from certified local provenance plant stocks.
- Seeding operations to be carried out in accordance with the implementation and maintenance guidelines.
- Turfing to be undertaken using a high quality turf material as specified.
- No species, variety, size or position to be amended without the Landscape Architects prior approval.
- Before trees are planted, the Landscape Contractor shall ascertain the location of drains from the site manager, and shall, if necessary make minor adjustments to tree positions to ensure that they are planted at least 3.5m from drains. They should however be planted no closer than 2m from manhole/gratings than is shown on the drawing, and if shown located in bitmac beds, the shape of the latter should be adjusted if necessary to accommodate the revised tree position.
- Tree planting to be undertaken using a high quality material in accordance with the implementation and maintenance guidelines.
- If planting is required outside the October-March season, bare root shrubs will be replaced by 3L pot grown plants, and trees will be replaced by a containerised equivalent to be approved by the project landscape architect.

KEY

- Site boundary
- Existing trees and vegetation to be retained
- Existing trees and vegetation to be removed
- Existing grassland to be retained
- Soft landscape proposals — Refer to plant schedule for details.
- Existing public right of way
- Existing electricity pylons and powerlines (11kv)
- Existing electricity pylons and powerlines (33kv)
- Existing waterbodies
- Proposed perimeter fencing 2.1m high
- Proposed 4m wide EM3 meadow mixture buffer around perimeter fencing
- Proposed 1m wide EM3 meadow mixture buffer around perimeter fencing
- Proposed location of solar modules
- Proposed operational service tracks - access from NOKE village utilising existing agricultural access track
- Spares cabin
- Inverters and associated infrastructure
- CCTV cameras
- Grid connection point
- Underground DNO cable route
- Permissive footpath route
- Indicative permanent wetland habitat (The max depth to be 600mm and depths vary throughout between the islands at varying depths, the gradient to be 1:20, subject to engineer's detailed design)
- Timber footbridge — 1m wide hardwood timber footbridge with handrails and anti slip surface to comply with BS 5400, BS 5268 & BS 6180:2011. Bridge span to be determined by bridge engineer. As supplied by CTS bridges or similar approved manufacturer.

H - (10/02/2023 WM) Updated seed mix.
G - (13/12/2021 WM) Updated to the latest layout.
F - (30/09/2021 WM) Updated to the client's comments.
E - (20/09/2021 WM) Updated to the client's comments.
D - (24/09/2021 WM) Updated to the client's comments.
C - (09/09/2021 WM) Updated to the client's comments.
B - (06/09/2021 WM) Updated to the client and design team comments.
A - (03/08/2021 WM) Updated to the latest site layout.
Revisions:-
First Issue: 28/04/2021 WM

NORTH

Land at Manor Farm, Noke, Oxfordshire

Detailed Soft Landscape Proposals (sheet 7 of 7)

Drawing Ref: **P19-2636_20H**
Client: **Oxford New Energy**

Date : 28/04/2021
Drawn by : WM
Scale : 1 : 500 @ A0

Pegasus Group

DESIGN ENVIRONMENT PLANNING ECONOMICS HERITAGE

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