Planting Schedule

Trees

Plan Ref	Species	Girth (cm)	Height (cm)	Root Zone	Specification	Quantity
Ac	Acer campestre	8-10cm	250-300	2 X RB	Standard	11
Pav	Prunus avium	12-14cm	350-425	3 X RB	Heavy Standard	10
Qr	Quercus robur	8-10 cm	250-300	2 X RB	Standard	6

All Standard trees and above to be Clear Stemmed to 1.8m

Native Woodland Tree Planting - Planted in random groups of 5-7 No.at 2.0m Ctrs

Plan ref	Species and % mix	% Mix	Form	Height (cm)	Specification	Quantity
Ac	Acer campestre	20	Feathered	125-150	BR 2X 3 Brks/Branches	349
Bp	Betula pendula	30	1 + 1	80-100	BR	512
Cb	Carpinus betuls	20	Feathered	125-150	BR 2X 2 Brks/Branches	349
Msy	Malus sylvestris	5	1 + 1	60-80	BR	89
Pav	Prunus avium	10	Whip	100-125	2X BR	175
Qr	Quercus robur	10	1 + 1	60-80	BR	175
Sau	Sorbus aucuparia	5	Feathered	125-150	BR 2X 3 Brks/Branches	89

Native Shrub Planting - Planted in random groups of 10-15 No. at 1.0m Ctrs

Plan ref	Species and % mix	% Mix	Form	Height (cm)	Specification	Quantity
Cm	Crataegus monogyna	55	Transplant	60-80	BR 1 + 1	990
Cs	Cornus sanguinea	20	Branched 3 Brks	60-80	BR 1 + 2	363
Cav	Corylus avellana	15	Branched 2 Brks	40-60	BR 1 + 1	272
Iaq	Ilex aquifolium	5	Bushy 3 Brks	40-60	3L pot Bushy 3 Brks	92
Vo	Viburnum opulus	5	Branched 3 Brks	60-80	BR 1 + 2	92

Native Hedge Planting - Planted in random groups of 5-10 No. as a triple staggered row at 500mm centres with 500mm between rows. 6/ linear metre

Plan Ref	Species	% Mix	Form	Height (cm)	Specification	Quantity
Ac	Acer campestre (Field Maple)	10	Transplant	60-80	BR 1 + 1	227
Cm	Crataegus monogyna (Hawthorn)	45	Transplant	60-80	BR 1 + 1	1028
Cs	Cornus sanguinea (Dogwood)	20	Branched 3 Brks	60-80	BR 1 + 2	456
Cav	Corylus avellana (Hazel)	15	Branched 2 Brks	40-60	BR 1 + 1	342
Iaq	Ilex aquifolium (Holly)	5	Bushy 3 Brks	40-60	3 L Bushy 3 Brks	113
Vo	Viburnum opulus (Guelder Rose)	5	Branched 3 Brks	60-80	BR 1 + 2	113

As indicated on plan amenity grass areas within the development to be sown with Emorsgate General Purpose Meadow Mixture (EG1) (excluding Wildflowers) at a sowing rate of 10-15g/m2. All remaining areas to be sown with Emorsgate Basic General Purpose Meadow Mixture (EM1), including Wildflowers, at a sowing rate of 4g/m2.

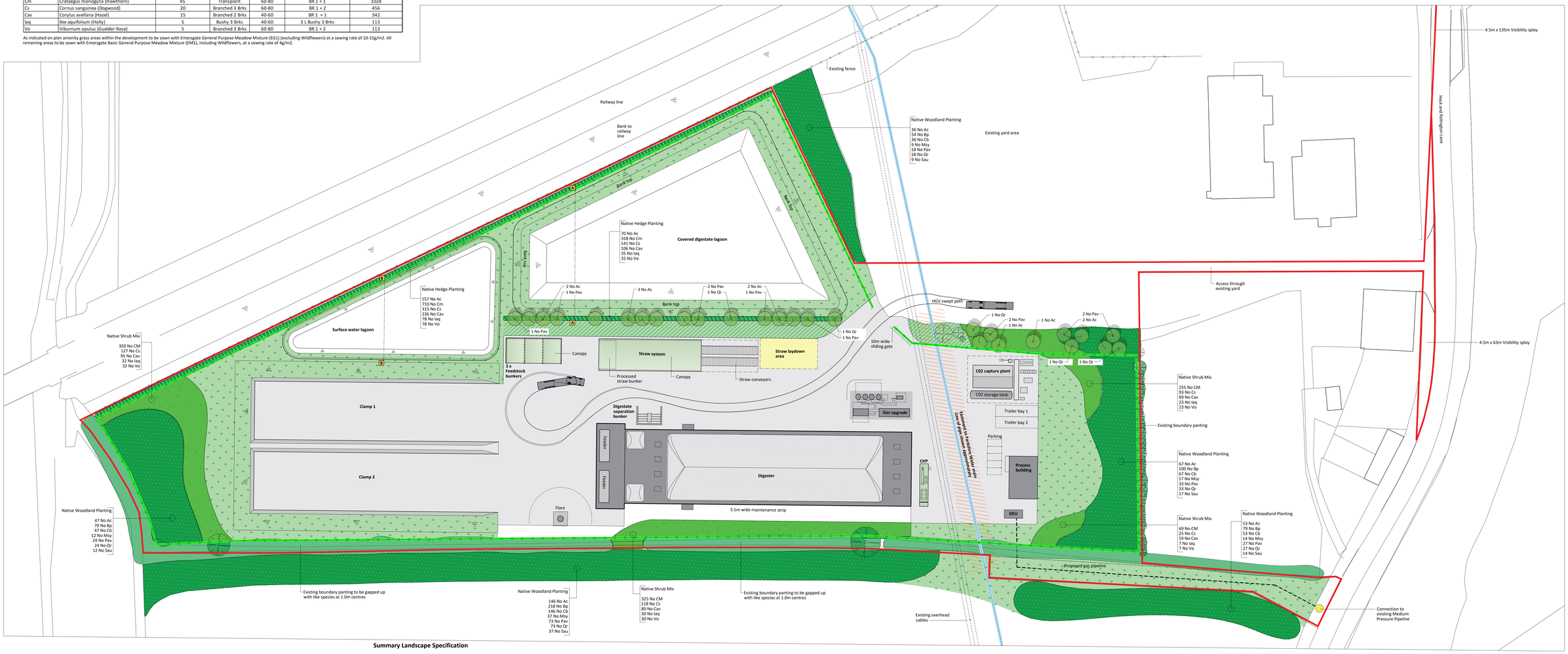
Emorsgate General Purpose Meadow Mixture - EG1

%	Species
10	Agrostis capillaris - Common Bent
35	Cynosurus cristatus - Crested Dogtail
30	Festuca rubra - Red Fescue
5	Phleum bertolonii - Smaller Cats-tail
20	Poa pratensis - Smoothstalked Meadow Grass

Emorsgate General Purpose Meadow Mixture with Wildflowers - EM1

%	Species
Wildflowers 10	
0.3	Achillea millefolium - Yarrow
1.5	Centaurea nigra - Common Knapweed
1.5	Leucanthemum vulgare - Oxeye Daisy
1.5	Malva moschata - Musk Mallow
3	Plantago lanceolata - Ribwort Plantain
1	Poterium sanguisorba spp sanguisorba - Salad Burnet
0.7	Ranunculus acris - Meadow Buttercup
0.5	Daucus carota - Wild Carrot
Grasses 90	
9	Agrostis capillaris - Common Bent
31.5	Cynosurus cristatus - Crested Dogtail
27	Festuca rubra - Red Fescue
4.5	Phleum bertolonii - Smaller Cats-tail
18	Poa pratensis - Smoothstalked Meadow Grass

Emorsgate Seeds
Neeps Bridge Farm
Middle Drive
Wisbeech
Cambridgeshire
PE14 8JT
Tel: 01553 829028



Approximate areas (for BNG calculations)

	Areas in m2
Red line	41,085
On site provision	
Proposed Amenity Meadow Grassland	760
Proposed Wildflower Meadow Grassland	8,525
Proposed Native Shrub Planting	1,820
Proposed Native Woodland Planting	2,260
Proposed built form	17,100
Proposed covered digestate lagoon (excl. banks)	4,100
Proposed surface water lagoon (excl. banks)	1,750
Existing boundary planting	1,770
Proposed access route & visibility splays	3,000
	41,085
Proposed triple staggered native hedge	263m
Proposed individual tree planting	11 trees
(note: not all trees and hedgerows indicated on plan are included in the BNG calculation)	
Off site provision	
Proposed Wildflower Meadow Grassland	415
Proposed Native Woodland Planting	4,670

Key

Existing boundary panting

Proposed Native Woodland Planting
Planted at 2.0m centres

Proposed Native Shrub Planting
Planted at 1.0m centres

Proposed Amenity Meadow Grassland
Emorgate General Purpose Meadow Mixture (EG1) Grass Seed (excluding Wildflowers) sown at 10-15gm^{2}

Proposed Wildflower Meadow Grassland
Emorgate General Purpose Meadow Mixture including Wildflowers (EM1) sown at 4g/m2

Proposed Tree Planting

Proposed Triple Staggered Native Hedge Planting

2m high green weld mesh fence

Summary Landscape Specification

EXISTING TREES AND SHRUBS

Where any existing trees and -shrubs affecting the proposed development are to be retained it is recommended that they should be subject to a full arboricultural condition survey and inspection for safety.

Any works required shall be in accordance with BS 3998 (2010) 'Tree Work - Recommendations', shall comply with any existing T.P.O. / Conservation Area requirements and shall require approval of the Landscape Architect and as appropriate the relevant Local Planning Authority prior to undertaken any works.

Avoid damage to branches, trunks and roots of trees. All existing trees and hedges to be retained are subject to BS 5837 (2012) 'Trees in Relation to design, Demolition and Construction - Recommendations' and should be fully fenced off, prior to the commencement of any works, in accordance with Figures 2 & 3 (p.20-21) at the full extent of the root protection area, as determined by Section 4.6 (P.10-11) and Annex D (P. 40).

No storage of materials, disposal of rubbish, site fires, spillage of oil and chemicals, ground compaction, excavation or changes in level shall be carried out within existing tree/hedge canopies or fenced root protection areas.

PLANTING

All plants and planting shall comply with the requirements of all current/relevant British Standard specifications including BS 3936: Part 1 (1992) Specification for Trees and Shrubs, Part 2 (1990), Part 4 (2007), Part 7 (1989), Part 9 (1998), Part 10 (1990), BS 4043 (1989) where applicable and BS4428 (1989). All plants to be supplied in accordance with the plant schedule. Any plant material planted outside the recognised planting season (Nov-Feb) is to be containerised stock and supplied at the sizes specified. As far as practically possible to do so, all stock should be from the relevant provenance zone. Any reputable nursery can advise on provenance. Tree Planting will be in accordance with: BS 8545:2014 Trees: from nursery to independence in the landscape - Recommendations

Note:

Due to the national concerns regarding Chalara dieback of ash (Chalara fraxinea) and the import and movement restrictions of this species, ash trees will be excluded as a species choice within this tree planting scheme.

TREE PLANTING

A suitable method of foundation allowing for existing ground conditions is to be provided to accommodate proposed tree planting. All trees are to be planted as shown ensuring a minimum of 5 metres from built form and 3 metres from drainage and utility services. Where necessary, root barriers are to be installed (supplier GreenLeaf or similar approved), in accordance with Structural Engineers and manufacturers recommendations. Plants should be planted during the dormant season between November and March when ground conditions and weather is most favourable. Planting during hard frosts should be avoided. During periods of storage bare rooted plants should be firmly heeled in to a prepared trench spreading the roots and covering with peat or topsoil. Allow for the use of container stock during the period 1 April to 31 October, and field grown stock from 1 November to 31 March.

TOPSOIL REQUIREMENTS

To BS 3882 (2015) and as qualified by any site specific project contract specification. All areas shall be cultivated to a minimum depth of 150mm. All weed, rubbish and stones over 50mm gauge shall be removed. Earth to be rolled as required and raked in two directions as directed by further sections in this specification..

Shrub/hedge/structure planting beds	- 450mm
Transplants	- 300 x 300 mm depth
Bush, Whip and small feathered tree pits	- 600 x 250mm depth
Standard and large Feathered tree pits	- 750 x 600mm depth
Heavy Standard	- 900 x 750mm depth
Grass Areas (Amenity)	- 150mm
Grass Areas (Wildflower)	- No Topsoil required

Where necessary excavate any compacted ground or areas of hardstanding that may conflict with the proposed planting to a minimum depth of 450mm, break up base to a depth of 150mm and backfill with topsoil. Increase tree pit dimensions to ensure that tree pits are at least 75mm deeper and 150mm wider than the rootball. Break up bottom of pits to a depth of 150mm and dome to the centre of the pit. Compacted glazed sides of pits should be roughened to allow root penetration. All plants should be planted to the root collar level. Plants should be firmed in, to the point whereby a gentle tug will not remove them from the soil. Each allocated spot for tree planting should be weed free. A minimum of 1m diameter is recommended.

Areas of proposed Wildflower grassland comprise land presently with a layer of highly fertile topsoil which has supported a range of arable crops. In order to provide a soil which will support a meadow grass the top 200mm of topsoil should be removed to leave the underlying subsoil exposed. This layer will be cultivated to provide a fine tilth which can then be used to sow the meadow grass sward.

Where the soil environment is in such a condition that would limit or restrict good tree growth topsoil should be imported into the site and spread and cultivated into the planting site. The top soil specification should be in accordance with BS 3882:2015 Specification for Top Soil. Full analysis of both existing and any imported topsoil is recommended prior to use to identify nutrient properties and content that may be detrimental to and inhibit establishment and growth.

TOPSOIL REQUIREMENTS

Applied to all newly planted areas, to manufacturers recommendations where appropriate:

1) Incorporate Alginure Soil Improver or similar approved. 1.5kg/m3 to tree pit backfill;
2) Watering - as appropriate supply minimum 54 litres/tree and 4.5 litres/shrub at planting;
3) Mulch - lightly fork over planted areas before applying a 75mm depth of 50-100mm grade bark mulch. Native tree and shrub planting to be provided with a 500mm bark mulch collar. Bark to consist of predominantly matured British Pine bark with a nominal particle size distribution of 5-35mm with 0% dust and fines and less than 5% wood content. The product shall be pest, disease and weed free and not have been treated with any additives. The product shall have been tested in accordance with the requirements of BS 4790:1987, for fire resistance. NB Watering to be carried out prior to the application of bark mulch.

PLANT MATERIAL TREATMENT

NB All to be British grown stock and fully hardened-off.

Root Dip - Proprietary Root Dip applied to all bare rooted stock (1) at time of lifting at the nursery and (2) prior to planting.

Anti-Desiccant - At the discretion of the supplier/nursery proprietary anti desiccant to be applied to foliage of all containerised/rootballed material in leaf, specimen conifers and evergreens etc. (1) prior to transportation and (2) during any delay in planting.

Pruning - Allow for pruning all deciduous trees and shrubs by upto 1/3rd following planting at Landscape Architects direction or as instructed in the planting schedule.

Tree Stakes - Stakes to be vacuum pressure treated round, smooth and peeled Larch or Chestnut in accordance with the following requirements. Heavy Standard, nursery stock to be double staked with cross bar.

PLANTING

Trees should be planted at the original root collar depth with allowance made for soil settlement

Trees should be positioned centrally within the pit, the stem in an upright position.

The pit should be backfilled with a suitable topsoil/compost, mixed planting medium

Lightly firm backfill soil to ensure close contact with roots and to ensure roots are held secure within the soil

Secure each tree to the top of the stake including a rubber spacer between the stake and the tree stem

TREE STAKES TIES & GUARDS

Trees planted within grassed areas to be planted with appropriate non plastic conical strimmer guards. Stakes to be vacuum/pressure treated with TANALITH preservative to comply with the Treatment Code (TE/GF6), softwood, round, peeled, straight, free of projections and pointed at one end. Minimum length, number and thickness for bare root stock to be determined as follows:

Tree Type	Min dia	Overall Hght	Hght above grd	No. stakes	No. ties
Whip/Fthd (1.2/1.5m)	50mm	1.2m	0.45	1	1
Std Trees 3.5/2.5m	75mm	1.5m	0.6	1	1
Hvy Std	100mm	1.8m	0.6	2	1

I trees will need support and protection from browsing in the first few years of establishment to establish an upright growth formation. Woodland Planting trees should be guarded by a sufficient 1.2m tube style tree guard and supported by a stake driven into the ground and attached to the guard by cable ties. The stakes will be in place when the trees are first planted. Native Shrub planting to be protected with suitable bio-degradable spiral rabbit guards and support cane. Allowance to be made for evergreen and bushy species to be protected with biodegradable mesh shrub guards and 750 x 25 x 25 timber stake and natural ties.

Native hedge planting to be protected with suitable bio-degradable spiral rabbit guards and support cane. Allowance to be made for evergreen and bushy species to be protected with biodegradable mesh shrub guards and 750 x 25 x 25 timber stake and natural ties.

GENERAL PURPOSE MEADOW MIXTURE (EG1) GRASS SEED (WITHOUT WILDFLOWERS) TO INTERNAL AMENITY GRASS AREAS OF THE DEVELOPMENT

Break up any compacted soil to a full depth. Reduce top 100mm of all soil to a tilth suitable for blade grading (10mm down particles) taking care to work around existing trees. Remove undesirable material brought to the surface including stones and clay balls, roots, grass tussocks and foreign matter. When soil is reasonably dry and workable grade to smooth, flowing contours with falls for adequate drainage, removing all minor hollows and ridges. Unless otherwise stated finished levels after settlement are to be 25mm above adjoining paving, kerbs and drainage covers. Control any perennial pernicious weeds. Only apply approved herbicide to control weed growth where areas have become overgrown and only if absolutely necessary to avoid the spread of noxious weeds. Avoid blanket treatment and spot treat pernicious perennial weeds and allow period of time to elapse as recommended by the manufacturer before further cultivation. Once complete carry out final cultivation to reduce top 25mm to a fine tilth. Rake to a true, even, lightly firmed surface removing all stones and clay balls more than 50mm in any dimension.

For best results sow the grass seed in the autumn. Bulk up the seed with an inert carrier such as sand to make distribution easier. The seed must be surface sown and can be applied by machine or broadcast by hand. Rolling is not usually necessary in the first year of management after sowing mow as needed, aiming to keep the grass short (30-50mm). Continue to mow all areas on a regular basis for amenity value purposes to produce a short turf and lawn. After twelve months the weed should be well established. As an ongoing process, observe and remove any pernicious weeds which invade the area. Over time, some species within the mixture may become more dominant due to environmental factors and natural selection. To encourage diversity, simply reduce the number of dominant plants in order to restore the balance. In some areas with more dominant grasses, it may be necessary to overseed occasionally.

BASIC GENERAL PURPOSE MEADOW MIXTURE (EM1) GRASS AND WILDFLOWER SEED

Do not spread topsoil to proposed Wildflower Grassland to Habitat Creation Areas. Endeavour to use soil that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success so aim to control weeds and produce a good quality seed bed before sowing. To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll, or tread, to produce a firm surface. Where possible avoid the use of herbicides and only apply approved herbicide to control weed growth where areas have become overgrown and only if absolutely necessary to avoid the spread of noxious weeds. Avoid blanket treatment and spot treat pernicious perennial weeds and allow period of time to elapse as recommended by the manufacturer before further cultivation.

Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil/seed contact.

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

Once Established in the second and subsequent years EM1 sowings can be managed in a number of ways which, in association with soil fertility, will determine the character of the grassland. 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. Meadow grassland should not be cut from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow the re-growth through to late autumn/winter to c 50mm and again in spring if needed.

PROTECTIVE FENCING

The contractor shall maintain any tree protective fencing until all the site works are completed. The contractor will then remove the fencing and reinstate the ground. The fencing will remain the property of the contractor. Within the area so fenced, the existing ground level shall be neither raised nor lowered in the vicinity of existing trees, all excavations shall then be carried out by hand.

MAINTENANCE

Regular visits to maintain all planted areas in a weed and litter free condition using hand weeding methods. Where pernicious perennial weeds persist spot treat with appropriate approved herbicides applied to manufacturers recommendations. The widespread blanket use of herbicides is not permitted. Maintenance to include watering, pruning, pest and disease control and re-mulching as required. Amenity Grass areas within the development are to be mowed at regular intervals during the growing season. Cut amenity grass areas to ensure the height of growth does not exceed 75mm at any time. Cut as and when necessary to a height of 35mm and remove all arisings. Before each cut remove all litter and debris. At the time of each cut trim all grass edges and remove arisings. Ensure sufficient water is provided to maintain healthy growth unless water restrictions are in place. Wildflower Meadow grass areas are to be managed as described previously

For the establishment of young tree plants the first 5yrs are most important. The young tree plants should have been protected in the first instance with the use of appropriate shelters. These are ideal for small irregular shaped areas and will protect the plants from rabbit, hare and vole damage. This will also provide a micro climate condition for more favourable plant growth. The shelters will also provide the support plants need in the first few years of establishment. It is essential that the shelters are checked twice a year or following high winds to ensure they are stable and in an upright position. Young plants will have to compete for water, nutrients, light and soil when growing in competition with grasses and weeds. Following planting, for the first 2yrs additional maintenance will be required for beating up. Beating up is the process of replacing failed plants so that the planting density can be maintained. Suspected nutrient deficiency should be corrected with the use of a suitable regime of fertilizer. Prune damaged/diseased branches and during periods of dry/drought conditions a regime of watering should take place with total wetting of the rooting volume. Adjust stakes and ties as necessary and especially check tree stability following adverse weather conditions.

Native woodland, shrub and hedge planting areas shall be maintained as non-competitive weed free environment using hand weeding methods as appropriate to aid establishment and prevent competition. Suppress weed growth in an area at least 150mm beyond the perimeter of the tree pit. Persistent weeds and unwanted scrub shall be spot treated as necessary with an appropriate herbicide. The blanket use of herbicides is not permitted. Watering shall be carried out as necessary to maintain healthy growth subject to any statutory restrictions.

SAFETY PRECAUTIONS

The landscape contractor is to take all safety precautions to prevent any injury to any persons. They shall comply with the requirements of the current Health and Safety at Work Act and current Construction, Design and Management Regulations.

The landscape contractor shall notify the Landscape Architect immediately of any pernicious/notifiable weeds identified on the site and shall take all reasonable precautions to prevent the spread of such weeds.

Notes

Ordnance Survey Map
© Crown Copyright. OS Licence No.: AR 100010613.

Dimensions
All dimensions shown are for the purposes of obtaining the relevant planning permission only.

CDM 2015
This drawing is for illustrative purposes and/or obtaining the relevant planning permission only. It should not be used for construction and accordingly, risk identification under the Construction (Design & Management) Regulations 2015 has not been undertaken.

0 5 10 15 20 25m

Rev	Description	Date
D	BNG figures updated RE; red line revision	18.12.23
C	North West boundary line amended in line with Network Rail land	16.11.23
B	Area encroached owned by Network Rail hatched	14.11.23
A	Areas revised/ additional planting shown. Green weld mesh fence shown to perimeter.	20.10.23

rdc
Robert Doughty Consultancy
32 High Street, Helpringham
Sleaford, Lincolnshire, NG34 0RA
Tel:01529 421646
Email: admin@rdc-landplan.co.uk
Web: www.rdc-landplan.co.uk

Client	Great Heck Green Energy Ltd
Project	AD Plant Great Heck
Drawing	Proposed Soft Landscaping Plan
Scale @ A0	1: 500
Date	24/04/23
Drawn By	WW
Checked By	-
Job Number	1550-1
Status	PL
Purpose of Issue	Planning
Drawing No.	1550-1_PL_PP01
Rev	D