



LEGEND

SITE BOUNDARY

Existing

EXISTING TREES/VEGETATION

Softworks

EXTRA-HEAVY STANDARD TREE PLANTING

HEAVY STANDARD TREE

STANDARD TREE PLANTING

NATIVE HEDGE PLANTING

AMENITY GRASS SEEDING -
'A22 (Low Maintenance) seed mix by Germinal Seeds Ltd or equal and approved. 50g / m² overseed rate; 20g / m².

NATIVE SCRUB/THICKET MIX

WILDFLOWER MEADOW MIX -
'WFG8 Hedgerows and Shaded Areas Mix' by Germinal Seeds Ltd or equal and approved. 5g / m²

WET WILDFLOWER MIX -
'WFG9 Wetland and Pond Areas Mix' by Germinal Seeds Ltd or equal and approved. 5g / m²

MARGINAL AQUATIC PLANTING

Hardworks

BITUMINOUS MACADAM SURFACE - to vehicular areas to engineers details and specification.

SURFACE DRESSED MACADAM -
6-10mm light grey colour loose aggregate laid over single layer of hot-applied bitumen emulsion, lightly rolled once laid with rubber drum. Finished level to be flush with adjacent level.

BITUMINOUS MACADAM SURFACE - to footpath to engineers details and specification.

Boundary Treatments

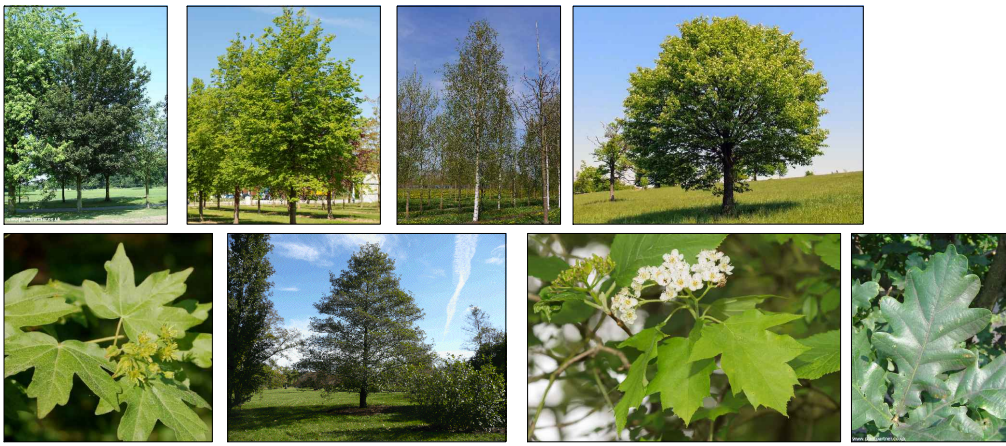
ACOUSTIC FENCING -
3000mm high acoustic fencing

Indicative Planting Schedule

Trees

Natives only

Name	Common Name
Acer campestre	Field maple
Alnus glutinosa	Common alder
Betula pendula	Silver birch
Pinus sylvestris	Scots Pine
Quercus robur	Common, English oak
Sorbus torminalis	Wild service tree
Tilia cordata	Small-leaved lime



Native Species-Rich Hedging

Name	Common Name	Height	Form	Brks	Mix
Acer campestre	Field maple	80-100cm	Transplant	Bushy	5%
Cornus sanguinea	Common dogwood	80-100cm	Transplant	Bushy	10%
Corylus avellana	Hazel, Cobnut	80-100cm	Transplant	Bushy	50%
Crataegus monogyna	Common hawthorn	80-100cm	Transplant	Bushy	50%
Ilex aquifolium	Holly	60-80cm	Bushy	Bushy	10%
Ligustrum vulgare	Common privet	60-80cm	Bushy	Bushy	10%
Rosa canina	Dog rose	80-100cm	Bushy	Bushy	5%



Native Scrub/Thicket Mix - buffer / boundary infill plant mix

Name	Common Name	Height	Form	Brks	Cntr	Density (m2/in lin m)
Cornus sanguinea	Common dogwood	80-100cm	Transplant	Bushy	5	1
Corylus avellana	Hazel, Cobnut	80-100cm	Transplant	Bushy	5	1
Crataegus monogyna	Common hawthorn	80-100cm	Transplant	Bushy	5	1
Eunymus europaeus	Spindle	80-100cm	Transplant	Bushy	4	1
Ilex aquifolium	Holly	60-80cm	Bushy	Bushy	4	3L
Ligustrum vulgare	Common privet	60-80cm	Transplant	Bushy	4	3L
Prunus spinosa	Blackthorn	80-100cm	Transplant	Bushy	4	1



Wetland Thicket Mix 1 - taller local wetland scrub plant mix

Name	Common Name	Height	Form	Brks	Cntr	Density (m2/in lin m)
Rhamnus frangula	Alder Buckthorn	60-80cm	Transplant	Bushy	3	5
Salix cinerea	Grey Willow	60-80cm	Branched	Bushy	3	5
Rosa canina	Dog Rose	40-60cm	Branched	Bushy	4	3L
Viburnum opulus	Gelder Rose	40-60cm	Branched	Bushy	4	3L



Marginal Aquatic Planting -

Name	Common Name
Butomus umbellatus	Flowering rush
Deschampsia cespitosa	Tufted hair grass
Lythrum salicaria	Purple loosestrife
Filipendula ulmaria	Meadowsweet



PLANTING SPECIFICATION

General Guidance

All plant handling to be in accordance with the HTA Handling and establishing landscape plants' Part I, Part II and Part III (obtainable from the Horticultural Trades Association) and the CPSE publication: 'Plant Handling' and all planting to conform to National Planting Specification Guidelines.

The individual setting-out of the plants on site shall be the responsibility of the contractor and should follow closely the locations shown on the detailed planting proposal drawings supplied by the landscape architect. Contractor to ensure that plants are equally spaced within individual planting groups.

Contractor to ensure that smaller plants are located to the front of plant species groups as shown on detailed planting plans.

Contractor shall maintain existing levels around the base of existing trees and shall undertake all planting works occurring within root protection areas (RPA) in accordance with BS5837:2012. Contractor shall not remove or relocate any tree protection fencing without prior consent of the client.

Contractor to check the locations of all underground services, existing and proposed, prior to the excavation of any tree pits or shrub beds and identify any potential conflicts to the client / landscape architect.

All arisings shall be removed from site and the contractor shall at all times, keep the site free from rubbish and debris.

For the duration of the works the contractor shall keep the site free from injurious weeds as listed in the Weeds Act 1959.

All plants should be supplied at the same size and of the same species as specified in the planting schedules on the landscape proposals plan. Any proposed replacement species or deviation from the planting schedules should be highlighted to and agreed with the client prior to installation.

All plants shall be hardened-off at the Contractor's own nursery or at the source prior to planting out.

All field grown and rootballed trees must have been transplanted or undercult in the nursery no less than 18 months prior to supply.

The Contractor shall carry out the work while soil and weather conditions are suitable. Planting is not to take place during periods of frost or strong winds.

The contractor is to ensure that adequate watering and weed control is provided at the time of planting.

Any topsoil retained on site in stockpiles for use in planting works is to be stored in accordance with the DEFRA publication: 'Code of practice for the sustainable use of soils on construction sites'

Do not use peat or peat based products.

Prior to planting, planting areas shall be cleared of grass and weed growth physically and/or chemically with a proprietary translocated herbicide and a period of time shall be allowed to elapse as recommended by the manufacturer before commencement of soil preparation for planting.

All plants are to be watered thoroughly before planting stage to ensure rootball is thoroughly soaked prior to final backfilling.

Tree Planting

Generally plant trees in pits with minimum dimensions of:-

- 1000 x 1000 x 700-800mm deep for trees in soft, planted areas including grass/shrub areas and rear gardens.

Backfill the pits in layers as specified below (from bottom up):-

Drainage layer

- 200mm layer of compacted inert free draining gravel or pea shingle, wrapped in geo-textile membrane.
- 100mm layer of washed medium-course sand to act as binding layer between geotextile and soil.

Topsoil layer

- 400-500mm layer of retained site-sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2015; sandy loam); depth dependent on size of rootball.

Depth of topsoil should only be as deep as the rootball of proposed tree to a max. depth of 400-500mm. Should the rootball be larger i.e. 800mm height, then the pit should be increased in depth to suit, but with the difference in depth from the 400-500mm topsoil layer and the drainage layer made up of quality imported free-draining subsoil to BS5861:2013 to avoid topsoil occurring at depths of greater than 500mm.

Likewise, for smaller trees i.e. feathered trees, with more limited rootballs/bare root, the depth of topsoil can be reduced to reflect the surrounding topsoil depths or to a max. topsoil depth of 350mm, with a further layer of site-sourced or imported subsoil (to BS5861:2013) below to create a total depth of growth medium of between 400-500mm i.e. 150-200mm layer of subsoil. Drainage layer should remain as above.

As stated above, the min. pit size for trees planted in newly created planting areas should be 1m x 1m, however where planting is occurring in clean, undisturbed ground, pits should be dug to approx. 200mm greater than the rootball to limit distribution of surrounding soil structure. For very large stock, pit dimensions should be increased accordingly.

Break up bottom of tree pit to a depth of 200mm and ensure ground is free-draining. Loosen the tree pit at time of planting by hand, using a fork to ensure good drainage. This should be accelerated no greater than 48hrs prior to planting and dewatered as required.

Incorporate a soil conditioner/ameliorant in the form of peat-free free and shrub compost or well-rotted spent mushroom compost or 'Roomaster' by GreenTech Ltd (01423 332100) into backfilled topsoil material at the rate of min. 40L per pit.

Incorporate soil improver 'Tensarottom Actor' by GreenTech Ltd (01423 332100) at a rate of 1kg per pit, mixed thoroughly into backfilled topsoil.

Backfill topsoil mix in layers of 150mm, firming at each layer and loosening the pit sides to aid drainage. The surface level of the pit should be 50mm above the surrounding ground.

Trees shall be planted in the centre of the excavated pits.

Trees in soft planted areas to be dressed with a minimum 75mm mulch layer, consisting of pine bark fines, particle size 15-50mm to a min. diameter of 1000-1200mm.

Semi-mature trees shall be secured by use of a proprietary underground guying system, incorporating guy mats to protect the upper surface of the rootball and secured to the base of the tree pit or by use of deadman anchors. Guying supports to be sized in line with the size of the tree as recommended by the manufacturers.

Extra-heavy and heavy standard trees shall be staked and supported with a low, double stake consisting of 2No. 75mm diameter x min. 2000mm length, rounded timber posts driven into the ground, 600mm above ground level and fixed to the tree by a proprietary rubber tree tie / horizontal cross support.

Standard trees shall be staked and supported with a low, single stake consisting of 1No. 75mm diameter x min. 2000mm length, rounded timber post driven into the ground at 45 degree angle to approx. 450mm above ground level and fixed to the tree by a proprietary rubber tree tie.

Trees shall be installed with proprietary flexible perforated irrigation/eration pipe with integral cap. Pipes to be installed encircling equally around rootball to the full depth of planting pit, with the final cap section installed just above ground level and nailed securely in place to the adjacent timber stake.

All trees in grass areas to be protected by min. 450mm high (Rodenit) x 38mm diam. proprietary biodegradable plastic spiral guards, by Green-Tech Ltd. or equal and approved. Where trees have a basal trunk diameter greater than this, e.g. semi-mature, then two or more guards should be joined together using jointing tape and then secured in place.

Root Barrier Membranes

Where trees are proposed in close proximity to hard paved areas or proposed service runs, a root barrier membrane is to be installed as prescribed below.

For all proposed trees centred in a location within 3m of an adjacent hard standing/footpath or carriageway kerb line, a proprietary root barrier membrane will be installed to protect the hard standing and any underground services located beneath from future damage by tree roots.

Root barrier membrane(s) to be installed on the tree side along the back edge of the kerb / edging restraint to the adjacent hard standing and to be extended a minimum 3m in each direction from a point taken perpendicular from the tree trunk to the kerb/edging face.

Root barrier membranes are to be extended to a depth as outlined below:-

- For trees adjacent to hard standings only (no underground services): install Renocor 3007 by GreenBlue Urban (01424 717797) or equal and approved, ribbed root barrier membrane, to a depth of 300mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

- For trees adjacent to hard standings incorporating underground services: install the following dependent on the depth of underground services:
 - o 'Renocor 600' by GreenBlue Urban (01424 717797) or equal and approved, ribbed root barrier membrane, to a depth of 600mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

For services 450mm deep

- o 'Renocor 600' by GreenBlue Urban (01424 717797) or equal and approved, ribbed root barrier membrane, to a depth of 600mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

For services 800mm deep

- o 'Renocor 1000' by GreenBlue Urban (01424 717797) or equal and approved, ribbed root barrier membrane, to a depth of 1000mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

For services deeper than 800mm

- o 'Renocor 2007' by GreenBlue Urban (01424 717797) or equal and approved, ribbed root barrier membrane, to a depth of 2000mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

For locations where a hard standing with or without underground services exists on both sides of the tree e.g. grass verge, then a root barrier is to be installed against both kerbs / edging faces.

For trees located within hard surfaces themselves i.e. surrounded by hard paved surfaces, install 'Root Director' by GreenBlue Urban (01424 717797) or equal and approved, ref: RD1400; 1400mm x 1400mm x 450mm, plastic root director with integral ribs.

Ornamental Hedge Planting (incl. single species native hedges)

Plant hedges into pre-prepared planting trenches, 500-600mm wide for double rows. Planting strips to consist of topsoil to a depth of 350-400mm, mixed with soil conditioner as specified below.

Topsoil to be either: existing retained site-sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2015; sandy loam) or a combination of the two as necessary.

Incorporate a soil conditioner/ameliorant in the form of peat-free general-purpose shrub compost or well-rotted spent mushroom compost along planting trench in a 50mm layer at the rate of 300g per m², and incorporate to a depth of 225mm.

Install a proprietary weed suppressant membrane onto the surface of the pre-prepared trench, with minimum 300mm laps. Plant hedge plants into pre-prepared planting strips which are deep enough to be to 200mm greater than the root depth of the planted plant stock.

All hedge planting areas to be dressed with a minimum 75mm mulch layer, consisting of medium chipped bark, composted for 2-4 weeks, particle size 15-50mm, laid directly on weed suppressant membrane.

Where not planted against a proposed fence-line or wall, hedges to be supported by min. 1000 high timber post and wire fence, consisting of min. 75mm diameter x 2000mm long, rounded timber posts, driven in at 2000mm centres with 3No. galvanised wire supports evenly spaced along the vertical axis of the post. Corner posts and/or staking posts are to be additionally supported by 45° angled, 50mm diameter timber stakes.

Thicket Planting / Woodland Planting

Where existing vegetation is to be removed, clear any surface vegetation in proposed woodland and thicket areas, utilising proprietary herbicide where appropriate and install plants into isolated pre-prepared planting pits, generally 300 x 300 x 450mm deep or 200mm greater than the rootstock, whichever is greater, backfilling with either existing retained site sourced topsoil (free from weeds) or imported topsoil (sandy loam). General Purpose grade to BS3882:2015; or a combination of the two as necessary.

Where planting occurs into a retained sward, then planting pits shall be excavated locally for each plant, with the surface vegetation removed.

Incorporate a soil conditioner/ameliorant in the form of peat-free free and shrub compost or well-rotted spent mushroom compost into backfill material at the rate of 5L per pit, incorporating a slow release fertiliser e.g. Ermag (or similar approved) at a rate of 5g per pit.

Ensure planting conforms to planting matrix where appropriate and in all other areas appears random / natural and not formal in accordance with the planting proposal layouts.

Plant Protection

Where rabbits are a known issue, all woodland and thicket areas are to be fully enclosed by min. 200mm high rabbit proof fencing, supplied as min. 19 Gauge (1.2mm) galvanised mesh with max. 31mm openings, nailed with galvanised 20mm staples to 50-75mm diameter treated timber stakes at 1.5m centres, incorporating 3No. horizontal galvanised straining wires. Mesh fence to be heeled into ground 150mm below ground level. Straining posts of 100mm diam. timber should be installed every 50m or at every turn of direction 90 degrees

or greater.

If additional deer protection fencing is required, all woodland and thicket areas are to be fully enclosed by min. 1.8m proprietary plastic mesh fencing (50mm x 45mm gauge) secured to min. 100mm rounded, treated softwood posts, driven min. 750mm below ground level at 3.5m centres. Mesh fence to be heeled into ground 150mm below ground level. NB: In areas where rabbits are also a known problem, an additional 300mm high section of min. 19 Gauge galvanised mesh (chicken wire) with max. 31mm openings to be fixed to the lower portion of the deer fencing and attached using proprietary plastic cable ties.

Any standard trees in the woodland/thicket areas to be protected by min. 450mm high x 38mm diam. proprietary biodegradable plastic spiral guards, by Green-Tech Ltd. or equal and approved.

All small / feathered trees within woodland/thicket areas to be protected by biodegradable Nature Tube Tree Shelter by Green-Tech Ltd. or equal and approved, and secured in place with min. 25mm square treated softwood timber stake and fixed with plastic cable ties. NB: Should red or fallow deer reside in the locality the tree guards/shelters should be increased in height to 1.8m.

Any coniferous trees and/or beech transplants (Fagus sylvatica) within woodland/thicket areas must only be protected by open mesh wire guards.

All bushy thicket shrubs to be protected by min. 750mm high x 200mm diam. proprietary biodegradable plastic shrub shelters / spiral guards, by Green-Tech Ltd. or equal and approved, and secured in place with treated softwood timber stake and plastic cable ties.

All single stem thicket transplants to be protected by min. 600mm high x 50mm proprietary biodegradable plastic spiral guards, by Green-Tech Ltd. or equal and approved, secured with min. 12-14x x 500mm long bamboo cane. Cane to be fully inserted into the ground by 300mm.

All woodland and thicket plants to be installed with a min. 500mm square, proprietary 'Treebio Biodegradable Weed Mat' mulch mat, by Green-Tech Ltd. or equal and approved, securely pegged in place and weighted down with bark mulch.

Where woodland / thicket areas are created from freshly cultivated ground i.e. not into the existing sward, then the planting areas should be over-seeded with a proprietary meadow grass mix ('M4' mix by Germinal Seeds Ltd) at a rate of 50g/m² between planting dates.

Amenity Grass Seeding

Areas to be seeded are to be finely graded to bring to a uniform and even grade at the correct finished level and to remove all minor hollows and ridges. All stones and debris greater than 50mm in size to be removed and disposed of off-site.

Seeded areas are to consist of min. 150mm topsoil, either existing retained site sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2015; sandy loam) or a combination of the two as necessary, overlying min. 150mm layer of clean, free-draining subsoil. Subsoil should be prepared as per shrub stippling, ensuring full decomposition and free-drainage.

Unless otherwise stated, finished levels of seeded areas to be 30mm above adjoining paving and beds; 150mm below the top of adjoining buildings.

Final preparation of the seeded areas shall be carried out as to create a fine tilth surface suitable for seeding.

For amenity grass areas only, a pre-seeding fertiliser shall be applied at a rate of 250g/ha approx. 7 days prior to seeding and rolled into top surface e.g. GmRight Lawn Establishment fertiliser by Rollam Ltd, slow-release granular fertiliser, 7-10-10 NPK, or equal and approved by Landscape Architect.

The area(s) is to be seeded between April and October with approved

grass seed mix, as specified in the planting schedules at the specified rate. Following seeding, areas are to be hand raked and lightly rolled.

The contractor shall take the necessary precautions to ensure all grass areas are protected throughout the establishment period, with the use of chestnut pale fencing where appropriate.

The contractor shall ensure that all seeded and turfed areas are watered fully at the time of installation to the full cultivated depth, and that sufficient subsequent watering is carried out to ensure healthy establishment of the grass sward.

Wildflower / Wet Meadow / Meadow Grass Seeding

Kill off any existing vegetation by spraying off with proprietary herbicide and allow a time to elapse as recommended by the manufacturer before commencing any cultivation works.

If time permits, a 'state seed bed' is to be established, by allowing the graded meadow area to colonise with weeds from the existing soil seed bank following initial cultivation / rotation and an additional application of proprietary herbicide applied to remove any weed growth.

Areas to be seeded are to be finely graded to bring to a uniform and even grade at the correct finished level and to remove all minor hollows and ridges. All stones and debris greater than 50mm in size to be removed and disposed of off-site.

Wildflower seeded areas are to consist of min. 150mm deep existing retained topsoil (free from weeds) subsoil mix (50:50) over existing site subsoil layer. No imported topsoil should be used in the formation of wildflower meadows. Where feasible/practicable, topsoil should be fully stripped and seeding conducted into pre-prepared subsoil layer however subsoil analysis will be required first to determine the need for any soil enhancement or enrichment in lieu of the topsoil strip.

Final preparation of the seeded areas shall be carried out as to create a medium tilth surface suitable for seeding.

No pre-seeding fertiliser shall be applied.

Wildflower seeded is to be undertaken preferably in Spring (Early March to late June) or if not feasible in Autumn (Mid August to October). Where sowing rates are low and sowing is to be undertaken by hand broadcast seeding, the contractor should mix the seed evenly with a fine, dry sand to bulk up the sowing mixture. Seeding by this method should only be undertaken on calm days with no wind. After seeding, areas are to be hand raked and lightly rolled. Seed to be thoroughly mixed before seeding to ensure even distribution of different seed weights.

For sloped areas e.g. SuDS, consideration by the contractor should be given to the use of Hydroseeding techniques to improve establishment.

The contractor shall take the necessary precautions to ensure all grass areas are protected throughout the establishment period, with the use of chestnut pale fencing where appropriate.

The contractor shall ensure that all seeded areas are watered fully at the time of installation to the full cultivated depth, and that sufficient subsequent watering is carried out to ensure healthy establishment of the grass sward.

Wildflower Plug Planting (into existing grassland sward)

In the locations shown on the landscape plan, stirs down any existing vegetation to a 300mm diameter area.

Dig the 300mm diameter sod of earth with the existing vegetation left intact to a depth of approx. 200mm, keeping the entire sod intact. The earth sod should then be inverted on itself so the earth surface is exposed and firmed in place.

Install plug plants into the inverted sod by hand using a trowel, 3No. per plug, equally spaced across the surface and firm in place.

Plant Sourcing

All plant and seed material will be UK sourced and grown and wherever feasible, sourced from local suppliers in close proximity to the Site.

All plant material to be sourced from reputable suppliers with all necessary biosecurity and phytosanitary procedures in accordance with DEFRA guidelines.

General Planting Maintenance

All soft landscape areas to be maintained to BS7370-4:1993.

Sufficient watering should be undertaken by the contractor to establish and maintain healthy plant growth.

The first cut / mow of all amenity grass seeded / turf areas should be undertaken when the established sward reaches 35-50mm in height down to a height of 25mm, after which all amenity grass areas should be maintained at a nominal height of 25mm (March to October). All arisings are to be removed from site and composted.

The first cut / mow of all meadow and wet meadow (wildflower) areas to be undertaken when the established sward reaches 50mm in height or weeds colonise to a height of 300mm (whichever is sooner), to a nominal height of 25-35mm.

For spring sown meadows/wet meadows, the second cut should take place about 6 weeks after sowing, after which establishing meadow should be cut monthly down to 100mm during the first growing season to control weed growth, after which all meadow grass areas should be cut twice annually (June and September), to a nominal height of 100mm, once any wildflowers have set seed.

For autumn sown meadows/wet meadows, the second cut should take place in April