

#### Soft landscape implementation programme

Planting will be carried out at the end of the contract period. No planting will however take place at times of frost or if ground conditions are waterlogged or if the weather conditions are unfavourable, therefore should this occur, the planting will take place as soon as the weather conditions are suitable.

Soft landscape works will all be carried out in phases to accord with the build programme, and after hard landscape works are completed to avoid damage. The rectification period will be 12 months from date of completion of each phase, the landscape contractor installing the soft landscape works will be responsible for carrying out the maintenance operations for this 12 month period.

All trees will be supplied bare root or in airpots except the and native plants as bare root transplants. If the bare root season is late to start, due to a warm dry autumn for example, then they will be supplied in containers to meet the programme. Marginal planting will be in p9's.

#### Landscape specification

##### Preparatory operations

Areas to be grassed / turfed and private rear gardens to have a minimum depth of 150mm. Amenity shrub beds and garden hedges to have a minimum depth of 450mm topsoil. Formation to be ripped through to a minimum depth of 300mm, or as necessary to relieve compaction and provide positive drainage, prior to topsoiling. Finished topsoil levels to be 25mm below (for planted areas) and level with (for turfed areas) adjoining paving and kerbs. Topsoil to be 150 mm (min) below dpc of adjoining buildings.

Obtain an independent analysis of existing topsoil in accordance with BS 3882, Annex E, and ameliorate soil in accordance with recommendations. Imported topsoil used to make up any deficit to conform to BS 3882: 2007 'Multipurpose Grade'. Clear weeds by hand weeding. Pernicious weeds to be treated with selective contact herbicide.

**Meadow grass**  
General Meadow grass areas to be cultivated, graded, and sown with Emorsgate EM1 seed mix 'Basic General Purpose Meadow Mixture'. Sow in two transverse operations at the rate of 35 g/m<sup>2</sup>. Cut the new sward in May / early June to a height of 100mm and repeat monthly throughout the Summer. Balancing ponds to be sown with EM8 'Meadow Mixture for Wetlands' and riparian banks to watercourse to be sown with Emorsgate EG8 'Meadow Grass Mixture for Wet Soils'

##### Turf

Turf to be laid ideally in Spring or Autumn, or may be laid at other times if weather conditions are suitable. Do not lay when persistent cold or dry winds are likely to occur or when soil is frost bound, waterlogged or excessively dry. Cultivate to smooth flowing contours and remove stones over 25mm dia.. Incorporate a slow release pre-seed fertilized into the top 25mm 3-5 days before turfing. Bring to a fine tilth immediately prior to turfing.

Turf to be Rolawn 'Medallion' or equal approved and laid within 24 hours of delivery. Turf to be laid from planks and placed with broken joints, well butted up. Do not stretch turf. Edges to be formed with whole turfs, trimmed to a true line. Laid turf to be lightly firmed without using rollers. Fill any joints with fine soil or sandy loam. Completed turf to be thoroughly watered immediately after laying. First cut to take place when grass is reasonably dry and height of initial growth is 40-75 mm. Arisings to be collected and removed from site. Cut and maintain to a height of 25-50mm. Collect and remove arisings from site.

##### Planting - general

Planting to take place at the correct time of year, i.e late October to late March, and when the weather conditions are suitable and the ground is moist and friable. Do not plant when the ground is waterlogged, frozen or snow covered, or during strong winds.

Plants to be true to name and specification, and to the relevant part of BS 3936. Substitutions will not be accepted unless agreed in writing. Plant handling to be to the HTA's Standard 'Handling and establishing landscape plants'. Plants shall be covered during transport. Bulk deliveries shall be in pallets or sealed containers with the plants kept upright and protected to avoid damage.

##### Marginal and aquatic planting

Plant in species groups of 3-5 into heavy loam soil. Where plants are to be in water, place them in aquatic baskets filled with aquatic compost and a layer of pea gravel on top to prevent soil loss and keep them in place. Position the plants on the pond's shallow shelves, ensuring the planting depth matches each plant's specific requirements, and secure the baskets with bricks or stones if needed.

##### Amenity shrub and garden hedge planting

Planting areas to be cleared of weeds by hand weeding. Pernicious weeds to be treated with selective contact herbicide prior to cultivation. Planting areas to be cultivated to a depth of 250mm incorporating 50mm depth of organic compost to PAS 100. Do not use peat based products. Cultivate to loosen, aerate and break up soil into particles of 2-8 mm and leave surface regular and even. Remove visible weeds, roots, and large stones with any dimension exceeding 50 mm. Do not dig or cultivate soil within root spread of trees and shrubs to be retained. Incorporate a slow release fertilizer (Scotts Enmag CRF or similar) into the top 25mm at the rate of 40g/m<sup>2</sup> 3-5 days before planting.

Planting densities to be as plant schedule and plants set out evenly across beds. Hedges to be planted as a staggered double row 5 plants per m. Rows to be 300mm apart, the plants in each row to be @ 400mm ccs.

Planting pits for shrubs to be 150mm wider than roots when fully spread and 200mm deep, and backfilled using previously excavated material and lightly firmed in.

Mulching: Planting beds to be mulched with chopped bark mulch to a depth of 75mm..

##### Tree planting

All ANS trees to be provided with a perforated plastic irrigation pipe, 50 mm diameter, positioned to form a circle above and around sides of rootball, and fitted with a plastic end cap.

Tree pits for Advanced Nursery Stock trees to be 1200x1200x600mm deep and for Heavy Standard Trees to be 900x900x600mm deep. Tree stakes to be peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with a pointed lower end. Advanced Nursery Stock trees to be double staked with two stakes 1.8m long x 75mm dia (min) driven into the ground to either side of the rootball. Heavy Standard trees to be single staked with single stake 1.8m long x 75mm dia (min) driven into the ground to side of the rootball. Top of stakes to be 750mm above finished soil level. Tree stems to be attached to stakes / cross bars with a 'Toms' tree tie or similar approved. Ties to be secured to stakes / cross bars with galvanized flat headed nails.

Tree pits to be backfilled using previously excavated material mixed three parts to one with TPMC, or similar approved, and firmed in 150mm layers, ensuring tree and stakes remain vertical.

Trees in grass areas to have a neat tree ring formed 1.0m diameter, and to be mulched to a depth of 75mm on completion.

##### Native shrub and hedge planting:

Native planting areas to be set out in a 1m grid and planted in drifts of 5-7 of the same species. Native hedges to be planted as a staggered double row and grouped in 3-5 of the same species, 5 plants per m. Rows to be 300mm apart, the plants in each row to be @ 400mm ccs. Transplants to be notch planted. Container grown plants to be planted in an excavated planting pocket backfilled with previously excavated soil. Native plants to be protected with a Tubex 'shrub shelter' (or equal approved) installed in accordance with the manufacturer's recommendations. 1m high post and wire fence to be erected on centre line of native hedges to prevent them from damage during establishment period to be removed when hedges are established.

##### Maintenance and defects liability period

All landscaped areas to be maintained for a period of 12 months following practical completion and to be subject to a 12 months defects liability period. Advanced Nursery Stock, Heavy Standard and Semi-mature trees to be subject to a 24 months defects liability period. Maintenance visits to be carried out weekly during the growing season and fortnightly during the winter.

Turfed lawns: Ensure that trees and shrubs are not damaged by use of mowers. Arisings to be collected and removed from site. Lawns to be cut on a weekly basis during the summer and fortnightly during the spring and autumn - frequency may vary depending on prevailing weather conditions. Collect clippings and remove from site. Trim edges abutting hard areas, shrub beds, manholes, etc.. Reform edge annually as required. Weed control as necessary. Reseed / rejuvenate thin areas as required.

Meadow areas: Mowing regime (frequency and heights of cutting) to be agreed with the Employer. Ideally mowing regimes should be varied depending on the desired effect, ranging from frequent cuts, i.e monthly, to twice yearly in spring and autumn to encourage a mixed flora to develop.

Amenity shrub areas and garden hedges: Maintain in a weed free condition by hand weeding taking care not to displace the mulch. Remove litter.

Native shrub planting areas and native hedges: Control weed growth by strimming taking great care not to damage plants. Use herbicides on with the approval of the Employer.

Tree planting: Check condition of tree stakes, ties, and guards twice a year in Spring and Autumn. Replace broken or missing items and adjust to prevent rubbing and to accommodate growth. Check for wind rock particularly after strong winds and firm in / adjust stakes. All tree stakes and ties to be removed 24 months after planting. In the case of replacement trees, or trees requiring continuing support, these are to remain and checked again after 12 months. All stakes and ties are to be removed as soon as the trees are able to support themselves.

Watering: All trees and planting areas to be thoroughly watered as required at each maintenance visit. In the event of water restrictions seek guidance from the employer.

Mulch: Mulch to be topped up to 75mm depth at the end of the defects liability period.

Leave the works in a clean tidy condition at completion and remove all arisings after each maintenance visit.

Any defects, other than theft or malicious damage, occurring during the defects liability period to be made good.

Any plants that die or fail to establish in the first five years after planting should be reported to the employer and replaced with identical species. Failures occurring after satisfactory making good at the end of the defects liability period are the Employer's responsibility.

#### Typical Planting Schedule

Species	Form	size/height (cm girth / metres high)	Condition	Density
<b>Native trees throughout development</b>				
Acer campestre	ANS	16-18cm girth / 2.0m clear stem	Rb / air pot	n/a
Alnus cordata	ANS	16-18cm girth / 2.0m clear stem	Rb / air pot	n/a
Betula pendula	ANS	16-18cm girth / 2.0m clear stem	Rb / air pot	n/a
Carpinus betulus	ANS	16-18cm girth / 2.0m clear stem	Rb / air pot	n/a
Prunus avium	EHS	14-16cm girth 4.5m high	Rb / air pot	n/a
Sorbus aucuparia	EHS	12-14cm girth 3m high	Rb / air pot	n/a
Tilia cordata	EHS	14-16cm girth 4.5m high	Rb / air pot	n/a
<b>Native mixed hedges with Tubex Easywrap with 90cm cane</b>				
Acer campestre (20%)	Transplant	60-90cm	Br	Planted as a staggered double. Rows 300mm apart, the plants in each row at 400mm ccs. Density = 5 plants per m.
Carpinus betulus (2%)	Transplant	60-90cm	Br	
Cornus sanguinea (1%)	Transplant	60-90cm	Br	
Corylus avellana (10%)	Transplant	60-90cm	Br	
Crataegus monogyna (60%)	Transplant	60-90cm	Br	
Euonymus europaeus (1%)	Transplant	60-90cm	Br	
Ilex aquifolium (1%)	Transplant	60-90cm	cg	
Malus sylvestris (1%)	Transplant	60-90cm	Br	
Prunus padus (2%)	Transplant	60-90cm	Br	
Prunus spinosa (1%)	Transplant	60-90cm	Br	
Rosa canina (15%)	Transplant	60-90cm	Br	<b>Beech Hedge</b>
Fagus sylvatica	Transplant	60-90cm	Br	

#### BALANCING POND PLANTING

native planting to edge of balancing pond				
Acer campestre (20%)	Transplant 1+1	40-60cm high	br	planted in drifts of 5-7 of each species @0.69/m <sup>2</sup>
Cornus sanguinea (5%)	Transplant 1+1	40-60cm high	br	
Corylus avellana (5%)	Transplant 1+1	40-60cm high	br	
Crataegus monogyna (10%)	Transplant 1+1	40-60cm high	br	
Euonymus europaeus (5%)	Transplant 1+1	40-60cm high	br	
Ilex aquifolium (5%)	Bush	40-60cm high	cg	
Ligustrum vulgare (5%)	Transplant 1+1	40-60cm high	br	
Prunus spinosa (10%)	Transplant 1+1	40-60cm high	br	
Rosa canina (10%)	Transplant 1+1	40-60cm high	br	
Salix caprea (5%)	Transplant 1+1	40-60cm high	br	
Sambucus nigra (5%)	Transplant 1+1	40-60cm high	br	
Viburnum lantana (5%)	Transplant 1+1	40-60cm high	br	
Viburnum opulus (10%)	Transplant 1+1	40-60cm high	br	

#### Marginal Planting 0-50mm depth:

Caltha Palustris	Clump	n/a	9cm pot	3/m <sup>2</sup>
Veronica Beccabunga	Clump	n/a	9cm pot	5/m <sup>2</sup>
Mentha Aquatica	Clump	n/a	9cm pot	5/m <sup>2</sup>
Juncus Effusus	Clump	n/a	9cm pot	3/m <sup>2</sup>
Filipendula ulmaria	Clump	n/a	9cm pot	3/m <sup>2</sup>

#### Marginal Planting 50-100mm depth:

Lythrum Salicaria	Clump	n/a	9cm pot	3/m <sup>2</sup>
Alisma Plantago	Clump	n/a	9cm pot	5/m <sup>2</sup>
Potentilla palustris	Clump	n/a	9cm pot	5/m <sup>2</sup>
Ranunculus Lingua	Clump	n/a	9cm pot	3/m <sup>2</sup>

#### Marginal planting 100-200mm depth:

Iris Pseudacorus	Clump	n/a	9cm pot	3/m <sup>2</sup>
Sagittaria Sagittifolia	Clump	n/a	9cm pot	5/m <sup>2</sup>