PLANNING NOTES (SOFT LANDSCAPE):

1. SOILS: Subgrade / subsoil to be prepared in accordance with BS 8601:2013 and BS 4428:1989 and scarified or ripped to 300mm depth (excluding root protection areas of retained trees refer to Tree Protection Plan) prior to spreading topsoil to alleviate compaction and promote drainage. Imported and as saved topsoil to be in accordance with BS 3882: 2015 'Multipurpose Grade' with minimum soil organic matter contents 1% greater than the minima value (or as approved). Imported topsoil (and 'as saved' if requested) is to be laboratory tested to BS 3882:2015 and ameliorated as required to meet the required characteristics as detailed within Table 1 of BS 3882:2015 specification. Wildflower areas to be unimproved topsoil or low fertility topsoil to BS 3882:2015. Grass areas to be a minimum depth of 150mm, Shrub beds 450mm depth and forestry / transplants 300mm depth. Any weed / grass growth to be sprayed out with appropriate herbicide at least 10 days prior to cultivation. All areas to be cultivated to a minimum depth of 150mm removing weeds and rubbish / stones greater than 20mm in size. Incorporate proprietary non peat compost to BSI PAS 100 to 50mm depth evenly worked into soil during cultivation.

N.B Proposed services (electric, water, gas etc) in landscape areas should be installed as a minimum below the required topsoil depths and clearly identified in accordance with service / utility requirements.

2. BUILDING FOUNDATION DESIGN: All landscape proposals are to be referred to by the structural engineer during foundation design.

3. PLANT STOCK: Unless agreed otherwise all trees and shrubs are to be of UK provenance where plants have been propagated and/or grown on for a minimum of 5 years in the UK for trees and 2 years for shrubs. All plants are to comply with the requirements of all current British Standards including BS3936 'Specifications for Nursery Stock' and BS8545 'Trees from nursery to independence in the landscape' and be supplied in accordance with the Plant Schedule. Should planting be required outside of the planting season (November - March) any bare root or rootballed stock specified is to be replaced with containerised stock to an appropriate or similar specification to the approval of the landscape architect prior to ordering.

4. TREE PLANTING: All trees to be in accordance with BS 3936, BS8545 and The National Plant Specification – 'Rootballed Trees' recommendations. Trees to be planted in accordance with BS 4428:1989 and double staked (10-12cm - 14-16cm girth trees) or triple staked (16-18cm - 18-20cm girth trees) and tied braced with flexible webbing loops/belts and spacer collars/sleeves (NB not with a timber cross bar) in prepared pits. Semi mature trees to be underground guyed and securely anchored using Platipus Tree System. Tree pits in open field / un-compacted ground conditions or shrub beds to be 1000mm x 1000mm (at least 75mm greater than that of the root system) with pit depth to be based on the planting depth of the tree (distance from root flare to underside of rootball) in accordance with BS 8545:2012. Topsoils and subsoils to be excavated and stored separately for reuse. Tree pit to be backfilled with stored subsoil and topsoil at depths to replicate the existing soil horizons. Topsoil to be mixed enriched with 40L of peat free tree planting compost, incorporating 'Rootgrow' professional mycorrhizal fungi granules (RGPro as supplied by Empathy) and Sierrablen N Mag Pre-planter Fertiliser in accordance with manufacturers recommendations. Root balls to be encircled by Root Rain Metro or similar irrigation pipe. Well water after planting. The base of trees to planted in grass areas are to be covered with 75mm amenity grade bark mulch such as Melcourt 'Amenity' Bark Mulch (or similar approved by the landscape architect) to 1.0 metre diameter and kept weed free.

Generally all trees are to be planted as shown ensuring a minimum of 5 metres from buildings and 3 metres from drainage or services. Suitable foundations are to be provided to accommodate proposed tree planting and retained trees in accordance with the NHBC Standards. The NHBC radii are illustrated as a guide only; based on an assumed medium soil type and minimum foundation depths and should not be relied upon for construction purposes. In locations close to footpaths and roadways linear root barriers Greenblue Urban, ReRoot or similar are to be installed in accordance with manufacturers instructions. Where proposed tree locations conflict with services, trees are to be relocated in accordance with the appropriate utilities guidance notes subject to client / local authority approval. Proprietary root barrier Greenblue Urban, ReRoot or similar to be installed in accordance with manufacturers instructions where relocation is not considered appropriate.

Trees to be Semi mature (20-25cm) to internal access road with Extra Heavy Standards (14-16cm) to the site perimeter, with non berrying native tree species to be selected from the following;

Acer campestre	Alnus cordata
Betula pendula	Carpinus betulus
Fagus sylvatica	Quercus robur
Tilia cordata	

5. SHRUB & HERBACEOUS PLANTING: plants to be in accordance with BS 3936 and handled in accordance with NPS 'Handling & Establishment' guidelines and planted in accordance with BS 4428:1989. Nursery stock supplier to be approved by the Landscape Architect. All shrubs to have a minimum of three breaks, except Hedera with a minimum of two. Shrubs to be pit planted incorporating Rootgrow professional in accordance with manufacturers recommendations and Agroblen 'Yellow' tablets evenly distributed around the plant at 200mm depth with 2 tablets for plants up to 3 ltrs, 3 tablets for plants up to 5 ltrs and 4 ltrs for plants up to 10ltrs. Well water plants immediately after planting and prior to spreading of mulch. Planting areas to be covered with 75mm depth amenity grade bark mulch such as Melcourt 'Ornamental Bark Mulch' (or similar approved by the landscape architect) and kept weed free; on slopes greater than 1:3 a biodegradable geotextile i.e Ecomatt Weed Control Fabric to be laid and securely pegged in place. Shrubs supplied container grown in 3L to 7L pots, between 30-40cm to 40-60cm in height and planted at 3 to 4 plants per metre square depending on species. Shrubs to be non / low berrying wildlife attracting species such as :

Brachyglottis 'Sunshine'	Berginia cordifolia
Berberis thunbergii 'Atropurpurea'	Ceanothus thyrsiflorus 'Repens'
Cornus 'Elegantissima'	Eleagnus ebbengei
Escallonia (var)	Hedera helix
Hebe rakiensis	Hebe 'Midsummer Beauty'
Hypericum x moserianum	Lavandula 'Hidcote'
Mahonia aquifolium 'Apollo'	Prunus 'Otto Luyken'
Potentilla fruticosa	Rosmarinus officinalis
Skimmia japonica	Spiraea japonica (Var)
Viburnum 'Eve Price'	

6. SPECIMEN PLANTING: plants to be in accordance with BS 3936 and handled in accordance with NPS 'Handling & Establishment' guidelines. To be supplied container grown in 10-12L to 15-20L pot sizes and 60-80 or 90-120cm depending on species. All plants to have a minimum of three breaks. Shrubs to be pit planted incorporating Rootgrow professional in accordance with manufacturers recommendations and Agroblen 'Yellow' tablets evenly distributed around the plant at 200mm depth with 2 tablets for plants up to 3 ltrs, 3 tablets for plants up to 5 ltrs and 4 ltrs for plants up to 10ltrs. Well water plants immediately after planting and prior to spreading of mulch. Shrub areas to be covered with 75mm depth bark mulch and kept weed free. Specimen planting to be wildlife attracting to include the following;

Amelanchier lamarckii	Cornus (Var)
Corylus avellana	Eleagnus 'Gilt Edge'
Euonymus alatus	Mahonia 'Winter Sun'

7. ORNAMENTAL HEDGE PLANTING: plants to be in accordance with BS 3936 and handled in accordance with NPS 'Handling & Establishment' guidelines and planted in accordance with BS 4428:1989. Hedge plants to be 60-80cm in height with a minimum of three breaks, planted in double staggered rows 350mm apart at 450mm centres (or as scheduled). Shrubs to be pit planted incorporating Rootgrow professional in accordance with manufacturers recommendations and Agroblen 'Yellow' tablets evenly distributed around the plant at 200mm depth with 2 tablets for plants up to 3 ltrs, 3 tablets for plants up to 5 ltrs and 4 ltrs for plants up to 10ltrs. Well water plants immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch and kept weed free. Where necessary plants to be protected from rabbits with rabbit fence and / or individual rabbit mesh guards securely staked. Species to be selected from the following wildlife attracting species;

Carpinus Betulus
Escallonia (Var)
Prunus lusitanica
Viburnum 'Eve Price'

8. NATIVE HEDGE PLANTING: plants to be in accordance with BS 3936 and handled in accordance with NPS 'Handling & Establishment' guidelines and planted in accordance with BS 4428:1989. Hedge plants to be 40-60cm to 60-80cm in height depending on species and pit planted in double staggered rows 300mm apart at 450mm centres (or as scheduled) with the growing tip (top 100mm) of the hedge plant removed to encourage spreading growth. Bare root transplants to be root dipped with 'Broadleaf Root Dip' with 'Rootgrow' mycorrhizal fungi granules (RGPro as supplied by Empathy) and Sierrablen N Mag Pre-planter Fertiliser sprinkled evenly into prepared planting pit in accordance with manufacturers recommendations prior to Planting. In mixed species hedges; shrub species to be planted randomly throughout the length of hedge. Well water plants immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch and kept weed free. Where necessary plants to be protected from rabbits with rabbit fence and / or individual rabbit mesh guards securely staked. To include the following species;

Acer campestre	Crataegus monogyna
Cornus sanguinea	Corylus avellana
Ilex aquifolium	Ligustrum vulgare
Viburnum opulus	

9. NATIVE SHRUB PLANTING: plants to be in accordance with BS 3936 and planted in accordance with BS 4428:1989. Transplants to be pit planted at 1 metre centres (or as scheduled) in random groupings of 3-5 and 7-10 shrub species depending on numbers of plants. Bare root transplants to be root dipped with 'Broadleaf Root Dip' with 'Rootgrow' mycorrhizal fungi granules (RGPro as supplied by Empathy) and Sierrablen N Mag Pre-planter Fertiliser sprinkled evenly into prepared planting pit in accordance with manufacturers recommendations prior to planting. Well water plants immediately after planting and prior to spreading of mulch. Planting areas to be covered with 75mm depth amenity grade bark mulch such as Melcourt 'Ornamental Bark Mulch' (or similar approved by the landscape architect) and kept weed free; on slopes greater than 1:3 a biodegradable geotextile i.e Ecomatt Weed Control Fabric to be laid and securely pegged in place. Plants to be protected from rabbits, with rabbit fence and / or individual mesh tree guards securely fixed to timber stake(s).To include the following species;

Crataegus monogyna (< 15%)	Cornus sanguinea
Corylus avellana	Euonymous europaeus
Ilex aquifolium (< 15%)	Ligustrum vulgare
Rosa canina (<15%)	Viburnum opulus (<15%)

10. WOODLAND ENHANCEMENT PLANTING: plants to be to BS 3936 and planted in accordance with BS 4428:1989. Transplants to be planted at 2 or 5 metre centres in random groupings of 3-5 evenly distributed throughout the planted area. Bare root transplants to be root dipped with 'Broadleaf Root Dip' with 'Rootgrow' mycorrhizal fungi granules (RGPro as supplied by Empathy) and Sierrablen N Mag Pre-planter Fertiliser sprinkled evenly into prepared planting pit in accordance with manufacturers recommendations prior to planting. Plants to be protected from rabbits with individual mesh tree guards securely fixed to timber stake(s). Trees to be planted at 60-80cm to 80-100cm in height. Species to include:

Acer campestre	Alnus cordata
Betula pendula	Corylus avellana
Carpinus betulus	Quercus robur
Tilia cordata	

16. WILDFLOWER SEEDING: grass areas to be seeded in accordance with BS 4428:1989 during March, April or September. Unimproved or low fertility topsoil to be imported, cultivated and leveled to remove all minor hollows or ridges as required with any debris or stones greater than 20mm diameter removed to provide a fine weed free tilth . Do not apply fertiliser. Weeds to be eradicated by herbicide or repeated cultivation prior to sowing. Lightly rake areas after sowing and keep well watered. Areas to be kept free from unwanted plants and mown every 6 - 8 weeks during establishment year removing arisings. In subsequent years cut in early spring and autumn after setting seed (in accordance with manufacturers recommendations) removing arisings. A minimum 1.5 metre close mown margin is to be maintained abutting buildings and hard surfacing (i.e road, car park and footpath edges). Seed mixes to be supplied by Emorsgate Seeds and include the following sown in accordance with suppliers recommendations.

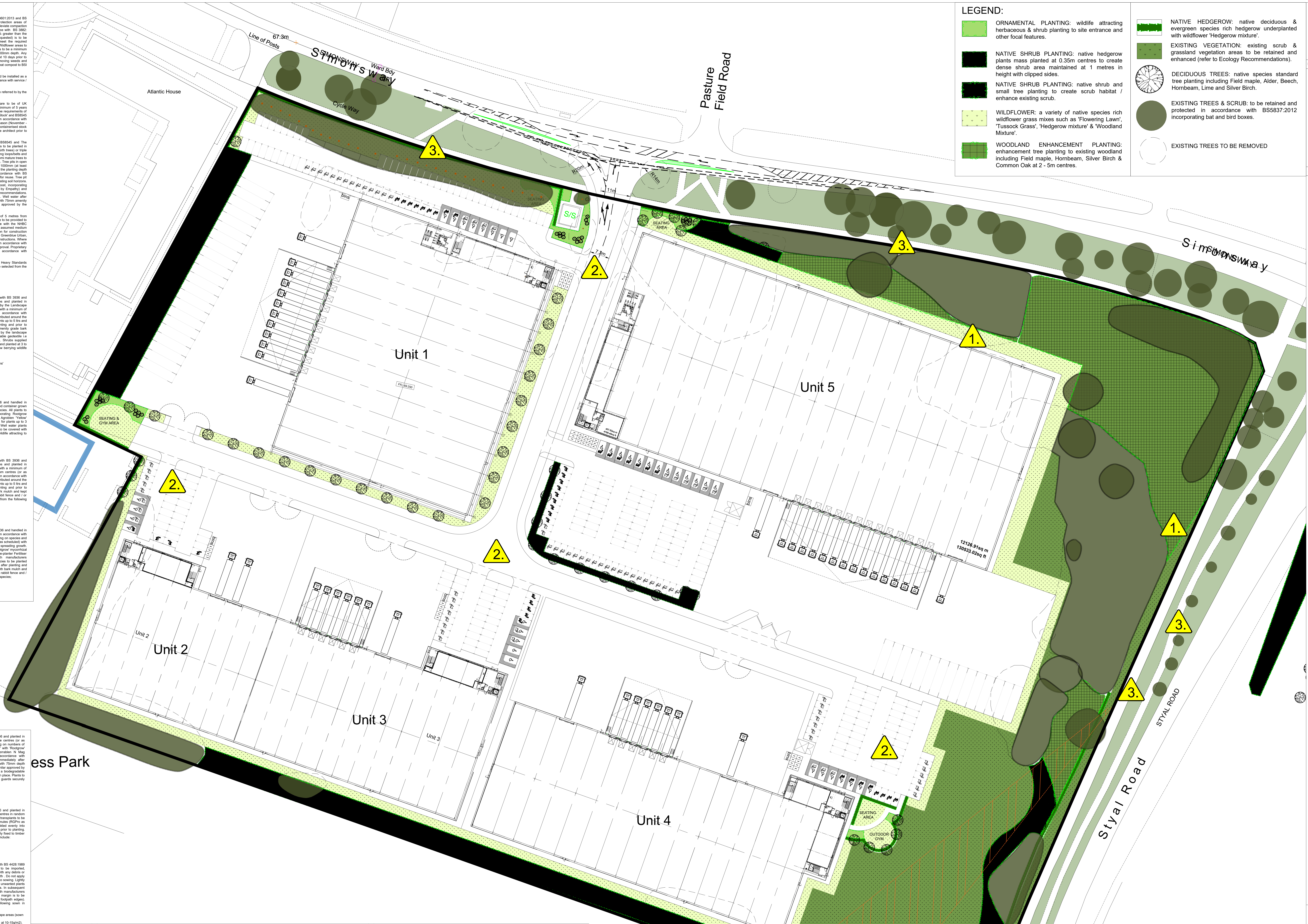
EM2	'Standard General Purpose Meadow Mixture' to general landscape areas (sown at 4g/m2).
EG10	'Tussock Grass Mixture' to smaller areas within main site (sown at 10-15g/m2).
EH1	'Hedgerow mix' to woodland edges (sown at 4g/m2).
EG9	'Grass mix for hedges and woodland' to woodland planting areas (sown at 10-15g/m2)
EL1	'Flowering Lawn Mixture' (sown at 4g/m2).
EW1	'Woodland Mixture' to shrub planting areas (sown at 4g/m2).

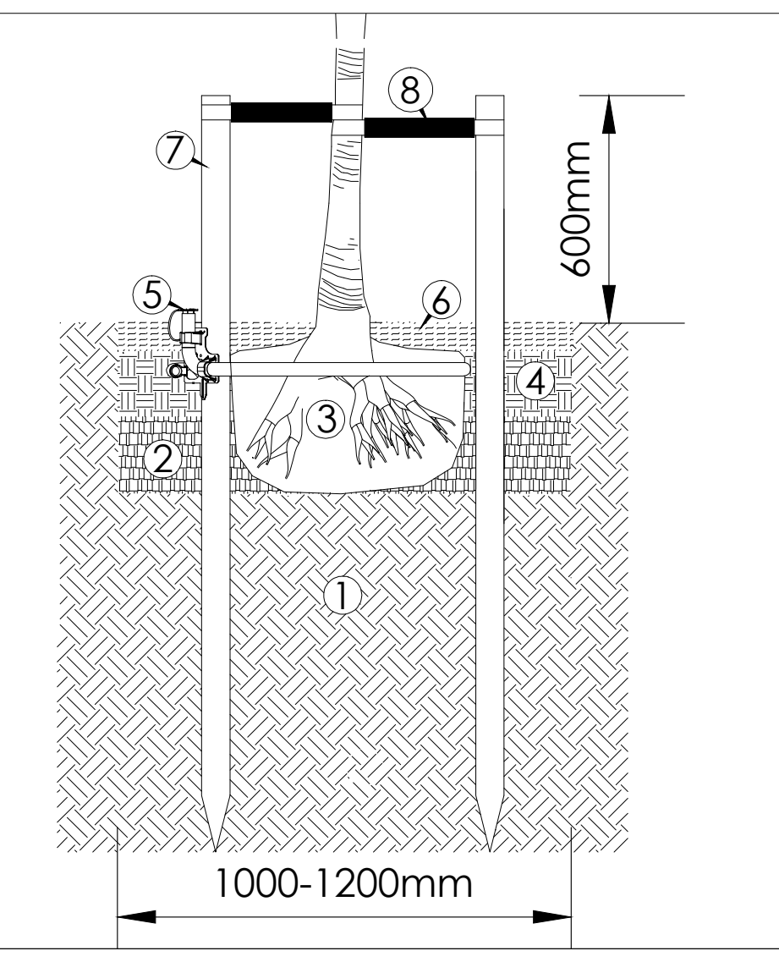
17. GRAVEL: Gravel areas to be ornamental gravel, from local source 10-20mm, laid on geotextile membrane to a depth of 50-75mm.

18. MAINTENANCE: To be carried out in perpetuity, for the lifetime of the development at approximately monthly intervals (or as prescribed within a landscape management plan) including replacement of any tree, hedge, shrub or grassed area which die, has been damaged, vandalised or stolen within a period of five years from practical completion. Operations to include the following:

a. Eradicate weeds by hand or appropriate chemical means.
b. Cut out dead or / and damaged stock or branches, prune as required.
c. Ensure all shrubs and trees are firmed in, securely staked and tied with guards where applicable.
d. Collect litter, sweep and tidy site.
e. Apply suitable non-residual herbicides, pesticides and water as required.
f. Carry out mowing to grass areas when attained 100mm, cut to 35mm (50mm for shaded areas) approximately 2 week intervals during the growing season.
f. Carry out mowing to wildflower areas as per Emorsgate Seeds Ltd aftercare First year & Established sward guidance.
g. Carry out mowing of wildflower area margins 1.5 - 2.0m wide when attained 200mm (approximately monthly during the gowing season) where abutting buildings or hard surfacing (i.e road, car park or footpath edges).
h. All hedges to be maintained at a max height of 1.5m. Woodland planting to be maintained free from perennial weeds, self set shrub and tree species.
i. At final visit apply granular fertiliser to all planted areas and top up bark mulch depth to 75mm.

20. WATERING: all plant material (including turf) to be watered in dry periods until established during April through to September with a fine rose until the water penetrates the topsoil to at least 5cm depth and achieves field capacity. Frequency of watering regime to be determined by weather conditions, soil conditions and underlying geology, all plant beds to be watered to ensure soil is consistently moist to promote successful establishment. During hot, dry periods, plants are to be watered every six to ten days. For individual trees a minimum of 18 watering visits per year are to be carried out commencing late March (prior to budburst) and utilising a minimum of 50 litres of water per tree. Soil probe to be used to determine soil saturation to full depth of root ball..





TYPICAL TREE PIT DETAIL (UNCOMPACTED GROUND CONDITIONS):

1.0 SOILS: subsoil and topsoil to be excavated to form tree pit, depth to be based on the planting depth of the tree (distance from root flare to underside of rootball), with soils retained and placed separately for backfilling pit .

2.0 SUBSOIL: as dug subsoil to be used to backfill the tree pit to depth to match the existing soil profile.

3.0 ROOT BALL / BARE ROOTS: tree pits sizes to be at least 75mm wider than the tree root system or rootball.

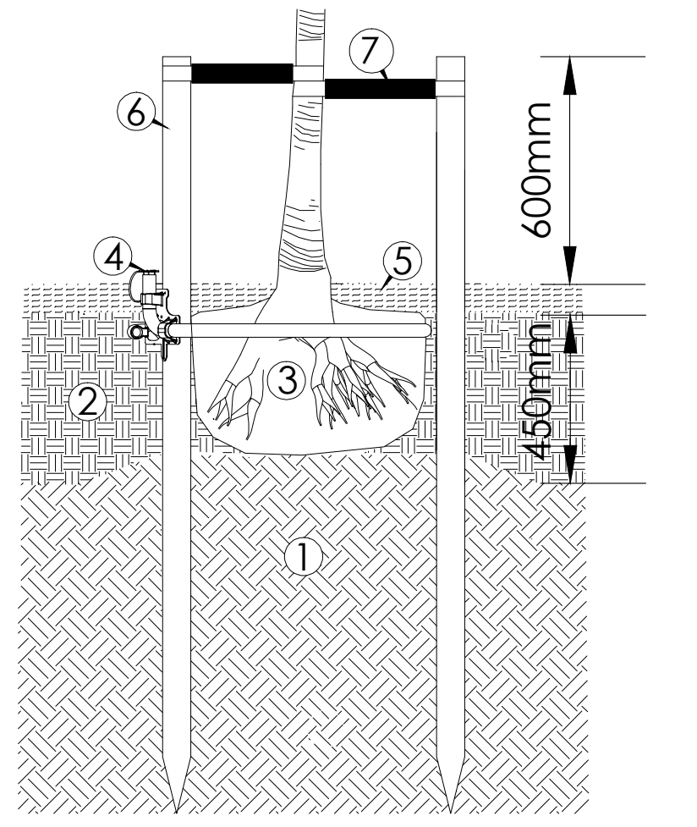
4.0 TOPSOIL: existing topsoil enriched with 40L peat free tree planting compost and used to backfill the upper part of the tree pit to match the existing soil profile.

5.0 IRRIGATION: RR3A RootRain Metro irrigation system with plastic cap and fixing bracket. Secure to stake with 50mm galvanised nail. Ensure cap finishes slightly above finished surface level

6.0 MULCH LAYER: finished with Melcourt amenity grade bark mulch to a minimum depth of 75mm.

7.0 STAKES: softwood timber rounds, peeled chestnut, larch or oak, free from projections and large or edge knots and with pointed lower end; 75mm diameter, 2000mm height. 600mm above ground.

8.0 TIES: tree held to stakes with 35mm flexible webbing and 40mm spacer sleeves fixed to stake with galvanized clout nails.



TYPICAL TREE PIT DETAIL (SHRUB BED AREAS):

1.0 SOILS: subsoil / topsoil to be excavated to form tree pit, depth to be based on the planting depth of the tree (distance from root flare to underside of rootball), with soils retained and placed separately for backfilling pit .

2.0 TOPSOIL: multi-purpose imported or as dug topsoil to 450mm depth for shrub planting areas.

3.0 ROOT BALL / BARE ROOTS: tree pits sizes to be at least 75mm wider than the tree root system or rootball.

4.0 IRRIGATION: RR3A RootRain Metro irrigation system with plastic cap and fixing bracket. Secure to stake with 50mm galvanised nail. Ensure cap finishes slightly above finished surface level

5.0 MULCH LAYER: finished with Melcourt amenity grade bark mulch to a minimum depth of 75mm.

6.0 STAKES: softwood timber rounds, peeled chestnut, larch or oak, free from projections and large or edge knots and with pointed lower end; 75mm diameter, 2000mm height. 600mm above ground.

7.0 TIES: tree held to stakes with 35mm flexible webbing and 40mm spacer sleeves fixed to stake with galvanized clout nails.

LEGEND:

🟩	ORNAMENTAL PLANTING: wildlife attracting herbaceous & shrub planting to site entrance and other focal features.
■	NATIVE SHRUB PLANTING: native hedgerow plants mass planted at 0.35m centres to create dense shrub area maintained at 1 metres in height with clipped sides.
■	NATIVE SHRUB PLANTING: native shrub and small tree planting to create scrub habitat / enhance existing scrub.
▨	WILDFLOWER: a variety of native species rich wildflower grass mixes such as 'Flowering Lawn', 'Tussock Grass', 'Hedgerow mixture' & 'Woodland Mixture'.
▦	WOODLAND ENHANCEMENT PLANTING: enhancement tree planting to existing woodland including Field maple, Hornbeam, Silver Birch & Common Oak at 2 - 5m centres.
▬	NATIVE HEDGEROW: native deciduous & evergreen species rich hedgerow underplanted with wildflower 'Hedgerow mixture'.
▨	EXISTING VEGETATION: existing scrub & grassland vegetation areas to be retained and enhanced (refer to Ecology Recommendations).
⊛	DECIDUOUS TREES: native species standard tree planting including Field maple, Alder, Beech, Hornbeam, Lime and Silver Birch.
●	EXISTING TREES & SCRUB: to be retained and protected in accordance with BS5837:2012 incorporating bat and bird boxes.
◌	EXISTING TREES TO BE REMOVED

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Refer any query to office of origination.

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cdm 2015; designers residual risk information

LEGEND: CDM RESIDUAL RISKS

1.	1. LEVEL CHANGES: changes in level across the site including ramped access, steps, slopes or ditches, restricting access with risk of operatives falling from height.
2.	2. PEDESTRIAN & VEHICULAR TRAFFIC: car park, road and pavement within or adjacent to working areas; risk of collision with operatives, risk of harm to pedestrians.
3.	3. PUBLIC FOOTPATH: pedestrians within or adjacent to working areas. Risk of injury to the general public.

It is assumed that works will be carried out by competent landscape subcontractor working, where appropriate to a risk assessment and method statement approved by the Principal Contractor.

bea landscape design ltd

client:
AVIVA

project:
ATLAS BUSINESS PARK
MANCHESTER

title:
SOFT LANDSCAPE PROPOSALS

status:
PLANNING

date:	drawn:	number:
MAY'23	E.C.H	22-103-P-03
scale@A0:	**checked:**	**revision:**
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