

LANDSCAPE SPECIFICATION:

Planting, Planting Schedules

Section A: Seeding.

- 1. GENERAL INFORMATION / REQUIREMENTS:** all work to be undertaken in accordance with the requirements of BS 4428 : 1989 Code of practice for general landscape operations.

- 1.1 **PROGRAMME - SEEDING:** undertake to the agreed programme.
- 1.2 **TOPSOIL AREAS:**
The seeding areas will all have been topsoiled to give a minimum depth of topsoil following settlement of 250mm, and will be ready for final cultivation.
- 1.3 **TOPSOIL:**
At the time of starting the work the areas to be seeded will be covered by:
 - Topsoil prepared as necessary by the Main Contractor so that it is in a suitable state for the cultivation operations specified in this section.
- 1.4 **CLIMATIC CONDITIONS:**
Carry out the work during appropriate seasons and while soil and weather conditions are suitable for the relevant operations.
- 1.5 **MACHINES AND TOOLS:** Use only machinery and tools suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces where it is impracticable to use machinery.
- 1.6 **WATER:**
Water will be provided by the Main Contractor up to Practical Completion of the Main Contract Works and/or thereafter by the Employer, in each case subject to availability of supply.
- 1.7 **WATER**
 - Quantity: Wet to the full depth of topsoil.
 - Application: Even and without displacing seed, seedlings or soil.
 - Use a fine sprinkler, oscillating spray or equal approved method of watering.
 - Frequency: As necessary to ensure the establishment and continued thriving of all seeding/turfing.

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1.8 DROUGHT CONDITIONS

- Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

1.9 SETTING OUT: Clearly mark boundaries of seeding areas. Obtain approval before starting work.

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1.10 CHEMICALS GENERALLY:

- Use only where specified or approved and then only products on the current list authorised by The Chemicals Regulation Directorate (CRD) of Health and Safety Executive (HSE - pesticides.gov.uk).
- Where work is near water, drainage ditches or land drains, comply with the HSE's Chemicals Regulation Directorate requirements.
- Observe all precautions recommended by the manufacturer and remove containers from site immediately they have been emptied or are no longer required immediately they have been emptied or are no longer required.

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2. PREPARATION / CULTIVATION:

2.1 HERBICIDE:

- A type recommended for the purpose in the current list of The Chemicals Regulation Directorate (CRD) of Health and Safety Executive (HSE - pesticides.gov.uk), Glyphosate based systemic herbicide.
- Manufacturer: Inform LANDSCAPE ARCHITECT of Manufacturer.
- Apply to perennial weeds; allow a period of time to elapse as recommended by the manufacturer before cultivation.

2.2 COMPOST TO GRASSED AREAS - not applicable.

2.3 CULTIVATION:

- Break up any compacted topsoil to full depth.
- Undertake cultivation when the soil surface is dry. Do not cultivate if there is frost or if the ground is frozen.
- Relieve surface compaction by shallow cultivation to produce an open fissured texture immediately prior to seeding.

2.4 GRADING:

- When topsoil is reasonably dry and workable grade to smooth, flowing contours with falls for adequate drainage.

2.5 FERTILISER TO SEEDED AREAS: apply fertiliser to all areas to be grassed in accordance with the seed manufactures / turf suppliers recommendations.

3. SEEDING:

3.1 SEEDING: to all grassed areas noted on the drawings and also any areas disturbed during the works

- Rate of application: 35g per m².
- Sowing: Sow in accordance with Germinal Seeds GB recommendations.

3.2 MIXTURE BREAKDOWN

- CORAIL Strong Creeping Red Fescue 40%
- RAISA Chewings Fescue 30%
- ABERFLEECE Sheeps Fescue 25%
- HIGHLAND Bent Grass 5%

3.3 QUALITY OF SEED:

- Purchase fresh seed for each growing season and do not use seed purchased for previous seasons.
- Germination capacity: Not less than 80%.
- Purity of mixture: Not less than 90%.
- Total weed seed content: Not more than 0.5%.
- Total content of other crop seeds: Not more than 1%.
- When requested submit results of testing for germination, purity and composition carried out by an Official Seed Testing Station.

3.4 SOWING:

- Do not sow seed in January, February or late May to the end of September. Do not sow if the ground is frozen, very wet or during periods of drought.
- Spread seed evenly at the specified rate(s) applied in two equal sowings in transverse directions.
- Do not incorporate or cover the seed but firm in with a roll using a lightweight roller, or by treading, to give good soil/seed contact.
- On light soils roll and cross roll after seeding.

3.5 PRE-EMERGENT HERBICIDE: None required.

4. PROTECTING / WATERING / CUTTING (BEFORE & AFTER PRACTICAL COMPLETION).

4.1 FIRST CUT OF NEW SEEDED AREAS:

- When grass is approximately 60mm high remove debris, litter and all stones and clay balls larger than 25mm in any dimension.
- When grass is reasonably dry, cut to approximately 30mm high. Remove arisings from grass areas.

4.2 GRASS CUTTING EQUIPMENT:

- The Contractor is to advise the CA of the type of grass cutting equipment he is proposing to use on site. This will be subject to the approval of the CA. Where Strimmers are proposed these must be fitted with a guard and the operator must be fully experienced.

All plant material and tree guards damaged by poor strimming or mower damage will be replaced by the Landscape Contractor at his cost.

4.3 MAINTENANCE CUTTING: Signing in.

- At the commencement of each visit the Contractor shall sign in at the service station shop /site office and shall sign out prior to leaving.
- Visits not so recorded will be deducted from the contract sum.

4.4 GRASS CUTTING - NEW & EXISTING GRASS AREAS:

- Between the first cut and the end of the maintenance period the Contractor shall allow for cutting the new and existing grassed areas noted on the drawing as follows:

All grass areas: cut 12 times between March and October. Additional cuts may be instructed by the CA.

- Cut with machinery and to heights as specified for the first cut.

4.5 CLEANLINESS: Remove soil / cuttings from all hard surfaces and leave the works in a clean, tidy condition following each visit.

Section B: Planting Specification

- 1. GENERAL INFORMATION / REQUIREMENTS:** all work to be undertaken in accordance with the requirements of BS 4428 : 1989 Code of practice for general landscape operations.

- 1.1 **PROGRAMME - PLANTING:** to be agreed and subject to confirmation by the Contract Administrator (CA).

Planting to take place within the first planting season following the completion of building and hard landscape works.

- 1.2 **CLIMATIC CONDITIONS / PLANTING PERIODS**

Carry out the work while soil and weather conditions are suitable for the relevant operations.

Transplant only during the following periods:

- Deciduous trees & bare rooted stock - November to 31 February.
- Container grown Shrubs, Conifers and Evergreens - October to 31 February.
- Containerised, pot grown and root balled plants: October to 31 February.

- 1.3 **MACHINES AND TOOLS**

Use only machinery and tools suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces where it is impracticable to use machinery

- 1.4 **WATER**

This will be provided by the Employer subject to availability of supply.

- 1.5 **DROUGHT CONDITIONS**

If water supply is or is likely to be restricted by emergency legislation:

- Inform without delay and ascertain availability and additional cost of second class water from a sewage works or other approved source.
- If planting has not been carried out, do not do so until instructed.
- If planting has been carried out, obtain instructions on supply of water.

1.6 SETTING OUT

- A number of key setting out dimensions for soft landscaping are illustrated on the drawing. Please refer to the CA prior to setting out.
- Clearly mark boundaries of shrub and hedge planting areas and the location of individual on-site tree planting.
- Clearly mark the locations of tree planting within paved areas (6 no. trees) where it is required to install the GreenBlue Urban 'StradaCell' Modules.
- Obtain approval before starting work.

1.7 CHEMICALS GENERALLY:

- Use only where specified or approved and then only products on the current list authorised by The Chemicals Regulation Directorate (CRD) of Health and Safety Executive (HSE - pesticides.gov.uk).
- Where work is near water, drainage ditches or land drains, comply with the HSE's Chemicals Regulation Directorate requirements.
- Observe all precautions recommended by the manufacturer and remove containers from site immediately they have been emptied or are no longer required immediately they have been emptied or are no longer required.

1.8 TOPSOIL:

- Prior to commencing planting the areas to be planted will be covered by topsoil spread to give a minimum depth of 350mm following settlement.
- All provided and spread by the Main Contractor.

2. TREES / PLANTS GENERALLY

2.1 PLANTS:

- Plants shall have soil and have been grown in climatic conditions similar to those prevailing on site.
- Packed and protected against mechanical damage, extremes of temperature and drying out.

2.2 PRE-CONTRACT QUOTATIONS / PLANT SUBSTITUTIONS:

- If plants of a particular species are not available substitutions should be suggested, however these must be selected with reference to the proposed planting locations and to fit in with the logic of the design and location.

2.3 PLANT ORDERING - PLANTING LOCATIONS ON SITE

- Plants shall be ordered as soon as the Contractor has been appointed.
- Verify planting locations and areas on site prior to ordering plants. Adjust plant numbers to suit actual planting areas in accordance with the planting densities where given in the planting schedules.
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2.4 CONDITION

- Trees and shrubs shall be free from any pest or disease and shall be materially undamaged.
- Roots shall not have been subjected, between lifting & delivery, to adverse conditions such as water logging and prolonged exposure to drying winds and frost.
- The root ball or the compost in the container shall be free from perennial weeds.
- Plants in pots shall not be pot bound.

2.5 PACKAGING

- Packaging shall be adequate to protect the plants and prevent their heating or drying out.

2.6 LABELLING

- On arrival to site each plant, or each bundle of a single species or cultivar, shall be legibly labelled with its botanical name.
- At completion of planting each individually planted plant and each group of plants of the same species shall be legibly labelled with its botanical name.
- Each consignment shall be accompanied by the following particulars, so as to provide easy and adequate identification at the point of acceptance of delivery.
 - (a) Names of the plants;
 - (b) Name of the supplier.
 - (c) The number of this British Standard, i.e. BS3936:Part 1.
- The supplier shall state, either on the labels or with the information provided, that the plants are UK-grown.

2.7 PLANT DELIVERY TO SITE - WATERING:

- Water all container grown plants immediately upon delivery to site, plunge dry pots in water until saturated.
- Plunge all root-balled stock into a water filled container to the top of the root-ball. Leave until the root-ball is fully saturated and remove.
- Bare-rooted stock, place plants in plastic bags, spray water into bags to keep moist.
- Store all plants prior to planting in a location that is out of the sun, keep all root-balls covered at all times.
- Plants delivered to site in a dry condition or found to be dry prior to planting will be rejected to be replaced by the Contractor at his cost.

2.8 STORAGE

- Plants which are not to be planted on day of delivery to site to be stored as follows or by other approved methods.
- Store plants prior to planting out of the sun, keep all root-balls covered at all times.
- Root balled plants: Place close together and cover root balls with sand, moist planting compost or wet straw.
- Bare rooted plants: Heel in prepared trenches, cover with soil and water thoroughly.

2.9 SURPLUS MATERIAL

- Spread all surplus topsoil within planting beds evenly on site.
- Remove all other surplus material, debris and wrapping material from site.

2.10 PLANT/ TREE HANDLING, STORAGE AND TRANSPORT, PLANTING GENERALLY

- This shall comply with CPSE 'Handling and establishing landscape plants' that is obtainable from the Horticultural Trades Association.

3. TREE PLANTING: within soft landscape areas.

3.1 STANDARD TREES. Plant trees as follows:

- Check for underground services prior to excavating tree pits.
- Sizes: planting pit size will depend on size of the container / root-ball / 'Air Pot'; allow for a 800 x 800 x 700 mm deep planting pit to each tree planting location adjusted as required to give a radius of at least 300 mm larger than the radius of the root-ball or container and at least 300 mm deeper than the root-ball/root system. Where necessary increase these dimensions to ensure that pits are deeper than root-ball and wide enough to accommodate the root-ball / the roots when fully spread.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a minimum depth of 300 mm.
- Pit sides: Scarify.
- Backfilling material:

Top 400 mm of planting pit: This shall comprise a previously prepared thorough mixture of:

- I. 70% by volume topsoil excavated from the pit and additional topsoil as required.
 - II. 30% Peat Free Tree Planting Compost.
 - III. 500g/cu m bonemeal of medium fine texture, containing not less than 20% soluble potash and 3-5% nitrogen.
 - IV. Broadleaf P4 Polymer Granules: Broadleaf P4 water-storing polymer granules to be homogeneously mixed when dry into the planting medium at the rate of 1 gram per litre of the planting pocket capacity / planting soil. (NB: Where P4 is to be pre-blended with a tree-planting compost, the P4 should be incorporated into the compost at the rate of 3 grams per litre in order to achieve the required rate of 1 gram per litre of pocket capacity. If the compost backfill ratio is to be 25:75 then the pre-blend rate should be 4 grams of P4 per litre of compost).
- **Bottom of planting pit:** Below 400 mm this shall comprise as dug subsoil - no organic matter/compost to be added.
 - **Accessories:** Perforated tree watering pipe as clause 3.2, underground guying as clause 3.3 and strimmer guard as clause 3.4.

3.2 TREE PIT ACCESSORIES - PERFORATED TREE WATERING PIPE

- Standard Trees: Supply and fix one to each tree, a 'Root-Rain Tree Waterer', sized to be appropriate to the size of tree, to be installed in accordance with the manufactures instructions.
- Pipe Sizes: Prior to ordering the Contractor is to confirm with the supplier the appropriate sizes for the stock being planted.

3.3 TREE STAKING

- Standard Trees - Underground Guying: The Contractor shall allow for the underground securing of all standard/feathered trees to BS 4043: 1989. The underground anchoring system shall be the type designed to secure root balled / container grown trees

Important note: it is imperative that root-balled and container grown trees have root-balls and containers that are correctly sized to work with the underground guying system. This must be checked with the supply nursery at the time of plant ordering. Trees with small root balls below those specified in the planting schedules will be rejected.

3.4 MULCHING TREES

- Following planting supply and evenly spread coarse grade wood chip mulch over planting soil, to a minimum depth of 80mm allowing for 5% settlement.
- Mulching Area: In grass areas this shall comprise a circular area having a diameter of 1.2 metres and/or as illustrated on the drawings.

5. SHRUB & HEDGE PLANTING

5.1 WORKS TO EXISTING TREES -

5.2 WORKS TO EXISTING SHRUB /HEDGES:

5.3 WEEDING & CULTIVATION - EXISTING PLANTING AREAS:

- Remove all weeds, ivy, bramble and any self-sown sapling trees from existing areas to be planted.
- Dig over or ease planting soil (where density or roots prevent the soil being turned) in the beds to the depth of a fork.

5.4 HERBICIDE - NEW PLANTING AREAS:

- New top soiled areas to be planted shall be kept weed free prior to planting.
- Existing grassed areas and existing planting beds to be re-planted shall be sprayed off with herbicide and shall be completely weed/grass free prior to cultivation and planting.
- Once the grass/weeds has died off they shall be cultivated as detailed below.
- Herbicide shall be a type recommended for the purpose in the current list authorised by The Chemicals Regulation Directorate (CRD) of Health and Safety Executive (HSE - pesticides.gov.uk).
- Where work is near water, drainage ditches or land drains, comply with the HSE's Chemicals Regulation Directorate requirements.
- Observe all precautions recommended by the manufacturer and remove containers from site immediately they have been emptied or are no longer required immediately they have been emptied or are no longer required.
- Apply to perennial weeds and allow period of time to elapse as recommended by manufacturer before cultivation.

5.5 ORGANIC BASED SLOW RELEASE FERTILISER: NPK 7:7:7 - NEW PLANTING AREAS

- Supply and spread over all planting areas immediately before final cultivation at the rate of 150gms per square metre or at the rate recommended by the manufacturer. Cultivate into the top 100 mm.
- Fertiliser to be approved by the CA prior to delivery to site.

5.6 SEANURE SOIL IMPROVER - not applicable.

5.7 SOIL AMELIORANT/ CONDITIONER - WOODCHIP PLANTING COMPOST - NEW PLANTING AREAS

- Locations: Supply and spread over all the planting areas.
- Type: to be previously approved by the CA, well composted woodchip compost of medium grade.
- Supplier/ Source: Contractor to source.
- Reference/ Description/ Grading: The compost shall be pest, disease and weed free and be free of Methyl Bromide contamination.

- Coverage: Supply and spread to a minimum even depth of **80 mm** and cultivate to a depth of 200 mm of planting soil.
 - Timing: Apply prior to final cultivation.
 - Supply a sample of compost for approval by the LA prior to delivery to site.
- 5.8 BROADLEAF P4 - NEW PLANTING AREAS:
- Supply and spread as follows over all shrub and hedge planting areas.
- Application Rate: supply and spread Broadleaf P4 Polymer Granules at the rate of 100gms per square metre cultivated into the top 300mm of all planting topsoil.
- 5.9 CULTIVATION - PLANTING AREAS:
- Break up any compacted topsoil to full depth.
 - Within a few days before planting cultivate top 300mm of all planting beds by rotavating and/or double digging. Leave surface regular and even.
 - Remove undesirable material brought to the surface including stones and clay balls larger than 50mm in any dimension, roots, tufts of grass and foreign matter.
 - Cultivated to the depth of the top soil to achieve a medium tilth.
- 5.10 PLANT LAYOUT - RANDOM / NATURALISED
- Spacing: Evenly, avoiding straight lines unless otherwise stated on the drawings or within the planting schedules.
 - Density: Plant to the densities given in the Planting Schedules at the end of this document.
- 5.11 PLANTING GENERALLY
- Before planting remove any non-perishable containers and carefully prune any badly damaged roots.
 - Set plants out evenly within each planting area.
 - Plant upright or well balanced with best side to front. Carefully return excavated topsoil, packing around evenly spread roots or root ball and heel well in.
 - Finished level to be at original soil mark on shrubs and 30 mm above surrounding level to allow for settlement.
 - Water plants thoroughly immediately after planting using a fine rose.
 - Immediately after planting shrubs carefully cut back any damaged, dead or diseased branches and remove any weak, thin or malformed growth. Where and to the extent appropriate for the species, cut back to encourage growth.
 - After planting fork and/or rake soil to a fine tilth with approved cambers and no hollows.
 - Mulch the whole surface of planting beds as clause 5.16.
- 5.12 SHRUB PLANTING PITS
- Timing: Excavate on the day of planting.
 - Sizes: a minimum of 150 mm wider and deeper than the root spread / root ball / pot size.
 - Additional requirements: Finished level to be at the original soil mark on the shrubs main stem(s) and 30 mm above adjacent soil levels to allow for settlement.
 - Pit bottom improvement: N/A.
 - Backfilling material: as dug previously prepared planting soil incorporated soil additives.

5.13 SHRUB MIX

- In previously prepared planting beds as illustrated on the drawing set out plants randomly and evenly within the planting area at approximately 2 plants per square metre.
- Plant specific species in group of three as noted in the planting schedules.
- Plant specific species to the rear, or centrally or to the front of planting beds as noted in the planting schedules.

5.14 NEW HEDGES - DOUBLE LINE PLANTING:

- Shrubs for hedges: To BS 3936 : Part 1, consistent in species, cultivar and clone to ensure a uniform hedge.
Refer to planting schedule.
- In a previously prepared planting bed 1.5 metres wide as noted on the drawings, prepared and cultivated as specified plant centrally a **double** staggered row, **500 mm** between plants, **650 mm** between rows.
- Ensure plants are planted to the correct depth to correspond to the soil mark on main stems.
- Prune back to the heights specified in the planting schedules.

5.15 NEW HEDGES - TRIPLE LINE PLANTING : n/a

5.16 MULCH - TO ALL TREE & SHRUB PLANTING AREAS:

Supply and spread the following Biomulch at the completion of planting:

- Biomulch to all Shrub and hedge planting areas and to tree pits: Supply and evenly spread to a minimum depth of 80 mm allowing for 5% settlement, a mulch consisting of natural British forest biomass with 1-45 mm particle size and 70%+ wood content.
- The mulch shall be pest, disease and weed free and be free of Methyl Bromide contamination. It shall have a pH of between 7.5 and 8.5.

5.17 WATERING:

- Water each plant thoroughly immediately following planting.

Section C: Planting Schedules

All to BS 3936: Part 1, consistent in species, cultivar and clone to ensure a uniform tree/shrub/hedge, size designation as schedule.

The following is to be read with drawing 13016/200 Planting Plan and 13016/210 Street Tree Planting Detail.

1. GENERAL PLANT SPECIFICATION

i. Standard Trees

- These shall be container grown or root-balled as specified in the planting schedules.
- All shall have strong straight stems. Bottom-worked trees may have no more than a slight bend at the union.
Temporary feathering shall have been removed flush with the stem.
- Heads shall be well developed for their type and evenly balanced, with no main branch crossing the crown.
- All shall have a strong central leader, but some species may alternatively be supplied with a branched head or be multi-stemmed.
- Size shall be designated by the size of the stem circumference, measured 1m from the ground level and the overall height shall also be stated.
- The designation and dimensions of all Standard Trees are detailed in the planting schedules.
- Underground Guying & Irrigation System: for on-site tree planting refer to section 3 and for tree planting in hard landscaped areas refer to section 4.

ii. Feathered Trees - not applicable.

iii. Transplants - plants for hedging:

- A transplant shall have been transplanted or undercut as specified in the planting schedules. The age and height shall be as detailed in the planting schedules.
- All shall have a well-developed fibrous root system.

iv. Container-grown shrubs & hedging plants (including pot-grown shrubs)

- Container-grown shrubs shall, at whatever time of year they are sold, have been established in the container long enough for substantial new root growth to have been produced within the container.
- The shrubs shall have been cut back or trimmed (according to species) and grown with sufficient space to have encouraged bushiness.
- The size of the container shall be in reasonable proportion to the size and mass of the plant. Climbers shall be adequately staked and tied.

2. PLANTING SCHEDULES

2.1 STANDARD TREES:

No	Plant Reference	Botanical Name
1	PA	Wild Cherry <i>Prunus avium</i>
2	SA	Rowan <i>Sorbus aucuparia</i>
1	IA	Holly <i>Ilex aquilinum</i>
1	PT	Aspen <i>Populus tremula</i>
1	BP	Silver Birch <i>Betula pendula</i>

2.2 SHRUB MIX

- All to be strong multi-stemmed plants with a good well balanced form.
- Set out plants randomly and evenly within the planting area at approximately 2 plants per m2.
- Plant in groups of 3 of the same species being planted together.
- All to be strong multi-stemmed plants.
- All MUST HAVE a good well balanced layout.

%	Botanical Name	Size / Description
20	Hawthorn <i>Crataegus monogyna</i>	30-40cm, 3 LP, Bushy, 3 breaks
15	Holly <i>Ilex aquilinum</i>	80-100cm, 10-12 LP, Branched, 6 breaks
15	Hazel <i>Corylus avellana</i>	40-60, 3 LP, Branched, 4 breaks
20	Common Gorse <i>Ulex europaeus</i>	30-40cm, 3 LP, Bushy, 4 breaks
15	Guelder-rose <i>Viburnum opulus</i>	30-40cm, 3 LP, Bushy, 4 breaks
15	Native Dogwood <i>Cornus sanguinea</i>	30-40cm, 3 LP, Bushy, 4 breaks