Land to the East of Tilletts Lane, Warnham

Landscape Specification

April 2025

Ref: 2516-TFC-XX-XX-SP-L-7001

To be read in conjunction with all terra firma drawings and documentation

The terra firma Consultancy Ltd.
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LANDSCAPE ARCHITECTS

Project reference:		2516		
Date	**Rev**	**By**	**Chk**	**Comments**
17.03.2025	01	NC	LC	First Issue
25.04.2025	02	NC	LC	Addition of Specifications for Silva Cell

NOTES

Other documents

This specification is to be read in conjunction with all relevant terra firma drawings and documentation, and in conjunction with engineering and architectural drawings and specifications.

If there is any ambiguity and/or contradiction between other drawings or specifications and the Landscape proposals specification and or product type, firstly obtain clarification from the Project Engineer / Architect before proceeding.

Alternative equivalent products

Where specific products or systems are referenced within the specification section, alternative equivalent products may be proposed for consideration. However where alternative products or systems are proposed, the contractor / manufacturer / supplier must provide sufficient evidence, including an alternative NBS specification, technical details and any necessary BREEAM certification / documentation to demonstrate that the alternative proposals can be incorporated & that it / they provide equivalent or improved technical, and where necessary, aesthetic performance characteristics to that of the product / system originally specified.

NOTE: No alternative equivalent product(s) may be used until full approval of the Design Team is granted in writing.

Contents

D20
Excavating and filling

Generally/the site

112 Site investigation report

1. Refer to Ground Investigation report before commencing work.

Clearance/excavating

164 Tree roots

1. Protected area: Do not cut roots within precautionary protection area.
2. Outside protected area: Give notice of roots exceeding 25 mm and do not cut without approval.
3. Cutting
    3.1. Make clean smooth cuts with no ragged edges.
    3.2. Pare cut surfaces smooth with a sharp knife.

168 Site clearance

1. Timing: Before topsoil stripping, if any.
2. General: Clear site of rubbish, debris and vegetation. Do not compact topsoil.
3. Treatment: Apply a suitable non-residual herbicide to areas to receive planting

170 Removing small trees, shrubs, hedges and roots

1. Identification: Clearly mark trees to be removed.
2. Small trees, shrubs and hedges: Cut down.
3. Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
4. Safety: Comply with Forest Industry Safety Accord safety leaflets.

175 Felling large trees

1. Definition: Girth over 600 mm.
2. Identification: Clearly mark trees to be removed.
3. Safety: Comply with Forest Industry Safety Accord safety leaflets.
4. Felling: As close to the ground as possible.
5. Stumps:
6. Work near retained trees: Take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained, where tree canopies overlap and in confined spaces generally.

180 Chipping and shredding

1. General: Permitted, remove arisings from site

220 Stripping topsoil

1. General: Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/ roads and other areas shown on drawings.
2. Depth
    2.1. Give notice where the depth of topsoil is difficult to determine.
3. Handling: Handle topsoil for reuse or sale in accordance with clause 225.
4. Around trees: Do not remove topsoil from below the spread of trees to be retained.

221 Treating topsoil

1. Treatment: Apply a suitable translocated nonresidual herbicide.
2. Timing: Not less than two weeks before excavating topsoil.

225 Handling topsoil

1. Standard: To BS 3882.
2. Aggressive weeds
   - 2.1. Species: Notify the presence of species included in the Weeds Act, section 2, or the appropriate Wildlife and Countryside Act for the relevant jurisdiction.
   - 2.2. Give notice: Obtain instructions before moving topsoil.
3. Contamination: Do not mix topsoil with:
   - 3.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
   - 3.2. Other soil or material containing aggressive weeds, sharps, plastics and non soil forming materials and notifiable animal or plant diseases.
   - 3.3. Oil, fuel, cement or other substances harmful to plant growth.
   - 3.4. Other classifications of topsoil.
4. Multiple handling: Keep to a minimum. Use topsoil immediately after stripping.

Disposal of materials

421 Topsoil storage heap treatment

1. Treatment: Apply a suitable herbicide at appropriate times to prevent seeding of weeds

Filling

500 Proposed fill materials

1. Details: Submit full details of proposed fill materials to demonstrate compliance with specification, including:
   - 1.1. Type and source of imported fill.
   - 1.2. Proposals for processing and reuse of material excavated on site.
   - 1.3. Test reports as required elsewhere.
2. Timing: At least 21 days before starting filling

510 Hazardous, aggressive or unstable materials

1. General: Do not use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:
   - 1.1. Frozen or containing ice.
   - 1.2. Organic.
   - 1.3. Contaminated or noxious.
   - 1.4. Susceptible to spontaneous combustion.
   - 1.5. Likely to erode or decay and cause voids.
   - 1.6. With excessive moisture content, slurry, mud or from marshes or bogs.
   - 1.7. Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
   - 1.8. Unacceptable, class U2 as defined in the 'Specification for highway works', clause 601.

Ω End of Section

Q28
Topsoil and soil ameliorants

System outline

115 Topsoil system for turfing and seeding

1. Description: FOR ALL GRASSED AREAS
2. Composition
   2.1. Topsoil: Imported topsoil to clause 315, depth to clause 640 B
   2.2. Ameliorants: Imported topsoil to clause 315 A, depth to clause 640 B

135 Planting bed topsoil system

1. Description: FOR ORNAMENTAL PLANTING BEDS
2. Composition
   2.1. Topsoil: Imported topsoil to clause 315, depth to clause 640 B
   2.2. Ameliorants: Imported topsoil to clause 320, depth to clause 640 B

155 Mulching and top dressing system

1. Description: To trees planted in grass and urbanscape
2. Composition
   2.1. Material: Well composted bark mulch. Samples to be approved.

Products

300 Preparation materials generally

1. Purity: Free of pests and disease.
2. Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
   3.1. Corrosive, explosive or flammable.
   3.2. Hazardous to human or animal life.
   3.3. Detrimental to healthy plant growth.
4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
5. Objectionable odour: None.
6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

310 Materials not permitted

1. Materials: Peat

315 Imported topsoil to BS 3882

1. Description: FOR TREE PITS AND ORNAMENTAL PLANTING BEDS
2. Quantity: Provide as necessary to make up any deficiency of good quality topsoil existing on site and to complete the work.
3. Standard: To clause 610B
4. Classification: Multipurpose

Execution

610 Topsoil analysis

1. Soil to be analysed: Existing topsoil and subsoil on site and imported topsoil
2. Soil analyst: Tim O'Hare Associates,
   Howbery Park,
   Wallingford,
   Oxon
   OX10 8BA,
   Tel: 01491 822653,
   Email: info@toha.co.uk, www.toha.co.uk
3. Samples: Collect in accordance with BS 3882.
4. Submit
   - 4.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
   - 4.2. Additional analysis: Chemical analysis
   - 4.3. Report detailing soil analyst's recommendations.

610 A Topsoil Parameters

1. Topsoil for general landscapes, sample of imported topsoil to be sent for testing to check compliance with parameters below and to inform any necessary amelioration.
2. Existing topsoil is to be stripped and re-used, provided soil is within the parameters given below when analysed. Imported topsoil to be good quality sandy loam or manufactured topsoil (from an approved source, meeting parameters given below). Topsoil (site-won or imported) is to be tested to determine suitability for the proposed use and should be free from commonly tested contaminants, including asbestos; the test report is to be submitted to Landscape Architect for approval and to enable amelioration recommendations to be made:
3. Parameters
   - 3.1. Clay (<0.002mm) Unit: % Lower Limit: 5 Upper limit: 18
   - 3.2. Silt (0.002-0.05mm) Unit: % Lower Limit: 0 Upper limit: 35
   - 3.3. Sand (0.05-2.0mm) of which at least 40% shall fall into fine to medium sand range Unit: % Lower Limit: 50 Upper limit: 85
   - 3.4. Stones (2-20mm) Unit: % dry wt. Lower Limit: 0 Upper limit: 20
   - 3.5. Stones (20-50mm) Unit: % dry wt. Lower Limit: 0 Upper limit: 15
   - 3.6. Stones (>50mm) None
   - 3.7. pH value Lower Limit: 5.5 Upper limit: .8.5
   - 3.8. Electrical Conductivity (1:2.5 water extract) Unit: µS/cm Lower Limit: 0 Upper limit: 1500
   - 3.9. Electrical Conductivity (CaSO4 extract) Unit: µS/cm Lower Limit: 0 Upper limit: 2800
   - 3.10. Exchangeable Sodium Percentage Unit: % Lower Limit: 0 Upper limit: 15
   - 3.11. Organic Matter Unit: % Lower Limit: 4.0 Upper limit: 8.0
   - 3.12. Total Nitrogen Unit: % Lower Limit: 0.15 Upper limit: n/a
   - 3.13. Carbon: Nitrogen Ratio Upper limit: 20:1
   - 3.14. Extractable Phosphorus Unit: mg/l Lower Limit: 26 Upper limit: 100
   - 3.15. Extractable Potassium Unit: mg/l Lower Limit: 240 Upper limit: 1200
   - 3.16. Extractable Magnesium Unit: mg/l Lower Limit: 50 Upper limit: 600

610 B Subsoil Parameters

1. Subsoil for general planted areas, a sample of site-won and/or imported subsoil to be sent for testing to check compliance with parameters below and to inform any necessary amelioration.

2. Provide subsoil as necessary to make up deficiency on site. Natural or manufactured subsoil (from an approved source) will be acceptable (within the parameters given below). The subsoil is to be tested to determine suitability for proposed use for planting; a test report is to be submitted for approval and to enable amelioration recommendations. Subsoil should be free from commonly tested contaminants, including asbestos. Subsoil parameters to be within the following:
3. Parameters
    3.1. Clay (<0.002mm) Unit: % Lower Limit: 5 Upper limit: 35
    3.2. Silt (0.002-0.05mm) Unit: % Lower Limit: 0 Upper limit: 35
    3.3. Sand (0.05-2.0mm) of which at least 40% shall fall into fine to medium sand range Unit: % Lower Limit: 50 Upper limit: 90
    3.4. Stones (20-50mm) Unit: % dry wt. Lower Limit: 0 Upper limit: 50
    3.5. Stones (>50mm) None
    3.6. pH value Lower Limit: 5.5 Upper limit: .8.5
    3.7. Electrical Conductivity (1:2.5 water extract) Unit: µS/cm Lower Limit: 0 Upper limit: 1500
    3.8. Electrical Conductivity (CaSO4 extract) Unit: µS/cm Lower Limit: 0 Upper limit: 2800
    3.9. Exchangeable Sodium Percentage Unit: % Lower Limit: 0 Upper limit: 15
    3.10. Organic Matter Unit: % Lower Limit: 0 Upper limit: 1.5

610 C Bioretention Soil for Silva Cell **Subsoil Parameters**

1. Refer to Silva Cells guidance on planting soil - Bioretention soil for stormwater applications
2. A mixture of Topsoil, Coarse Sand and Compost in proportions to achieve the requirements of this paragraph.
3. Bioretention Soil shall be loosely mixed with a loader bucket to provide for the retention of soil peds in the final mix. Mix the required coarse sand and compost together first and then mix into the topsoil by pushing and dragging the materials together. Do not over mix. It is understood that after the initial mixing, further mixing shall take place during the transporting and installation of the material.
4. Do not utilize soil screening of blending equipment in the process of mixing or processing the soil mix.
5. Quantity: Provide as necessary to complete the work. Make due allowance for settlement after laying.
6. The bioretention soil shall comply with the following lower and upper limits:
7. **Parameters**
    7.1. Clay (<0.002mm) Unit: % **Lower Limit**: 15 **Upper limit**: 30
    7.2. Silt (0.002-0.05mm) Unit: % **Lower Limit:** 15 **Upper limit:** 30
    7.3. Sand (0.05-2.0mm) of which at least 40% shall fall into fine to medium sand range **Unit:** % **Lower Limit**: 70 **Upper Limit**: 85
    7.4. Stones (2-20mm) Unit: % dry wt. **Lower Limit**: 0 **Upper limit**: 0
    7.5. Stones (>20mm) Unit: % dry wt. **Lower Limit:** 0 **Upper limit**: 0
    7.6. pH value **Lower Limit:** 5.5 **Upper limit:** .7.5
    7.7. Electrical Conductivity (1:2.5 water extract) **Unit:** µS/cm **Lower Limit:** 0 **Upper limit:** 1500
    7.8. Electrical Conductivity (CaSO4 extract) **Unit:** µS/cm **Lower Limit:** 0 **Upper limit:** 2800
    7.9. Exchangeable Sodium Percentage **Unit:** % **Lower Limit:** 0 **Upper limit**: 15
    7.10. Organic Matter **Unit**: % **Lower Limit**: 3.0 **Upper limit:** 5.0
    7.11. Total Nitrogen **Unit**: % **Lower Limit:** 0.15 **Upper limit**: n/a
    7.12. Carbon: Nitrogen Ratio **Upper limit:** 20:1
    7.13. Extractable Phosphorus **Unit:** mg/l **Lower Limit**: 12 **Upper limit**: 36
    7.14. Extractable Potassium **Unit:** mg/l **Lower Limit**: 240 **Upper limit:** 1200
    7.15. Extractable Magnesium **Unit:** mg/l **Lower Limit**: 50 **Upper limit**: 600

650 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Spreading topsoil.
    1.3. Applying herbicide.
    1.4. Applying fertilizer.
    1.5. Visiting site during maintenance period.
2. Period of notice: 1 week

655 Mechanical tools

1. Restrictions: Do not use within 100 mm of tree and plant stems. Do not damage adjacent planting.

665 Subsoil surface preparation for:

1. Description: GRASSED AREAS, WILDFLOWER AREAS, ORNAMENTAL PLANTING BEDS, AMENITY PLANTING AREAS, WOODLAND PLANTING AREAS
2. Standard: In accordance with BS 3882.
3. General: Excavate and/ or place fill to required profiles and levels, as section D20.

670 Inspecting formations

1. Give notice: Before spreading topsoil for planting beds.
2. Notice period: 14 days

680 Surplus topsoil to be retained

1. Generally: Spread and level on site:
    1.1. Locations: As directed by landscape architect
    1.2. Protected areas: Do not raise soil level within root spread of trees that are to be retained.

690 Topsoil storage heaps

1. Location: Contractor's choice
2. Protection
    2.1. Do not place any other material on top of storage heaps.
    2.2. Do not allow construction plant to pass over storage heaps.
    2.3. Prevent compaction and contamination, by fencing and covering as appropriate.

700 Grading of topsoil

1. Topsoil condition: Reasonably dry and workable.
2. Contours: Smooth and flowing, with falls for adequate drainage.
    2.1. Hollows and ridges: Not permitted.
3. Give notice: If required levels cannot be achieved by movement of existing soil.

705 Handling topsoil

1. Standard: In accordance with BS 3882.
2. Aggressive weeds: Give notice and obtain instructions before moving topsoil.
3. Plant: Select and use plant to minimize disturbance, trafficking and compaction.
4. Contamination: Do not mix topsoil with:
    4.1. Subsoil, stone, hardcore, rubbish or material from demolition work.

4.2. Other grades of topsoil.

5. Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
6. Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall, or when the moisture content is greater than the plastic limit.

718 Final cultivation

1. Description: FOR GRASS SEEDING, FOR PLANTING BEDS
2. Compacted topsoil: Break up to full depth.
3. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. Depth: 150 mm for grass areas, 300mm for planting areas
5. Timing: Within a few days before planting
6. Weather and ground conditions: Suitably dry.
7. Surface: Leave regular and even.
8. Levels: As drawing 2516-TFC-00-XX-D-L-3000s
9. Undesirable material brought to the surface
   9.1. Remove visible weeds.

720 Finished levels of topsoil after settlement

1. In relation to adjoining paving, kerbs or hard surfaces: 25 mm above
2. In relation to adjacent grass areas: 25 mm below
3. Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
4. Thickness of turf or mulch: Included.

820 Applying general fertilizer

1. Description: TO ALL SEEDED AND PLANTED AREAS
2. Application: Spread evenly, carefully incorporating below mulch materials.
   2.1. Timing: Immediately before cultivation.
   2.2. Application rate: To soil scientist recommendations

845 Applying loose mulch

1. Description: For Tree pits and ornamental planting beds
2. Timing: Immediately after planting
3. Preparation: Clear all weeds. Ensure that soil is thoroughly moistened, applying water where necessary
4. Coverage of mulch (minimum)
   4.1. Planting beds (depth): 75 mm depth
   4.2. Trees: 75 mm depth in a circular area of 500 mm radius measured from the tree stem

Completion

920 Applying mulch

1. Timing: At end of the rectification period
2. Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
3. Planting beds: Re-mulch.
   3.1. Depth (minimum): 75 mm
4. Trees: Remulch.
   4.1. Depth (minimum): 75 mm

Q30
Seeding/ turfing

General information/requirements

115 Seeded and turfed areas

1. Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
2. Appearance: A closely knit, continuous ground cover of even density, height and colour.

120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable.

145 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without displacing seed, seedlings or soil.
3. Frequency: As necessary to ensure the establishment and continued thriving of all seeding/turfing.

150 Water restrictions

1. 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.

Preparation

210 Herbicide

1. Description: FOR ALL GRASSED AREAS
2. Type: Suitable for suppressing perennial weeds.
3. Timing: Allow fallow period before cultivation.
    3.1. Duration: As manufacturer's recommendation

Seeding

312 Wildflower seed mixture Amenity Grass

1. Description: FOR AMENITY GRASS
2. Supplier: Emorsgate
    2.1. Mixture reference: EL1F Mix
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): British Native

312 Wildflower seed mixture Meadow Grass

1. Description: FOR WILDFLOWER MEADOWS
2. Supplier: Emorsgate
    2.1. Mixture reference: EM2F Mix
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): British Native

312 Wildflower seed mixture SuDs Basin Grass

1. Description: FOR SUDS BASINS
2. Supplier: Emorsgate

2.1. Mixture reference: EM8F Mix

3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): British Native

330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing

335 Grass sowing season

1. Grass seed generally: April to June or August to October

336 Wildflower sowing season

1. Wildflower seed generally: March to May or August to October

352 Edges to seeded areas

1. Description: ADJACENT TO PLANTING BEDS AND TREE PITS
2. Timing: After seeded areas are well established.
3. Edges: Clean straight lines or smooth curves.
   3.1. Mulch and soil: Draw back to permit edging.
4. Arisings: Remove.
5. Completion: Respread soil and mulch.

Protecting/cutting

510 Protective fencing

1. Fencing type: Temporary plastic mesh/ netting with metal stakes at suitable centres
   1.1. Height: 0.9m
2. Erection: On completion of seeding/ turfing.
3. Removal: After grass is well established. Fencing will remain the property of the Contractor

590 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

Maintenance

610 Failures of seeding/ turfing

1. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
2. Defective materials or workmanship: Areas that have failed to thrive.
   2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Recultivation and reseeding/ returfing.
4. Timing of making good: The next suitable planting season

620 Maintaining Amenity Grass

1. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
2. Maximum height of growth at any time: 100 mm
3. Preparation: Before each cut remove all litter and debris.

4. Cutting: As and when necessary to a height of 35 mm.
    4.1. Arisings: Spread evenly over cut areas
5. Bulb planting areas: Do not cut until bulb foliage has died down.
6. Trimming: All edges.
    6.1. Arisings: Remove.
7. Weed control: Substantially free of broad leaved weeds.
    7.1. Method: Application of a suitable selective herbicide.
8. Stones brought to the surface: Remove regularly.
    8.1. Size: Exceeding 25 mm in any dimension.
9. Areas of settlement: Make good.
10. Watering: Sufficient to ensure good establishment and healthy growth

Ω End of Section

Q31
External planting

General information/ requirements

112 Site clearance generally

1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil
2. Stones: Remove those with any dimension exceeding 50 mm
3. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life
4. Vegetation: Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings
5. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas

118 Soil conditions

1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged
2. Frozen or snow-covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing

120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable
    1.1. Strong winds: Do not plant

125 Times of year for planting

1. Deciduous trees and shrubs: Late October to late March
2. Herbaceous plants (including marginal): September/ October or March/ April

130 Mechanical tools

1. Restrictions: Do not use within 100 mm of tree and plant stems

150 Water restrictions

1. General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering

160 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Applying herbicide.
    1.3. Applying fertilizer.
    1.4. Delivery of plants/ trees.
    1.5. Planting shrubs.
    1.6. Planting trees into previously dug pits.
    1.7. Watering.
    1.8. Visiting site during maintenance period.
2. Period of notice: Two weeks

170 Soil requirements

1. Type
   1.1. Planted beds: Planting bed soil system, as section Q28
   1.2. Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28
   1.3. Mulch applied after planting: Mulching and top dressing system, as section Q28

200 Plants/ trees – general

1. Condition: Materially undamaged, sturdy, healthy and vigorous
2. Appearance: Of good shape and without elongated shoots
3. Hardiness: Grown in a suitable environment and hardened off
4. Health: Free from pests, diseases, discoloration, weeds and physiological disorders
5. Root system and condition: Balanced with branch system
   5.1. Standard:: The relevant parts of BS 3936
6. Species: True to name
7. Origin/ provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved
8. Definition: Origin and provenance have the meaning given in the National Plant Specification

215 Plants/ trees – specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.

260 Plant/ tree substitution

1. Plants/ trees unobtainable, or likely to be unobtainable at time of ordering. Submit alternatives, stating:
2. Approval: Obtain before making any substitution

265 Plant handling, storage, transport and planting

1. Standard: To Committee of Plant Supply and Establishment (CPSE) Recommendations for Plant Handling.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect them from mechanical damage and do not subject them to shock, e.g. by dropping them from a vehicle.
4. Planting: Upright or well balanced, with best side to front.

280 Treatment of tree wounds

1. Cutting: Keep wounds as small as possible.
   1.1. Cut cleanly back to sound wood using sharp, clean tools.
   1.2. Leave branch collars. Do not cut flush with stem or trunk.
   1.3. Set cuts so that water will not collect on cut area.
2. Fungicide/ sealant: Do not apply unless instructed.

285 Protection of existing grass

1. General: Protect areas affected by planting operations using boards/ tarpaulins.
   1.1. Excavated or imported material: Do not place directly on grass.
   1.2. Duration: Minimum period.

290 Surplus material

1. Subsoil: Remove
2. Stones: Remove

3. Debris: Remove
4. Wrapping material: Remove
5. Canes: Remove
6. Ties: Remove
7. Temporary labels: Remove
8. Rubbish: Remove
9. Prunings and other arisings: Remove

Preparation of planting beds/ planting materials

300 Herbicide

1. Locations: All planting areas
2. Type: Suitable for supressing perennial weeds

305 Weed control

1. Description: FOR INVASIVE NON-NATIVE WEEDS
2. Locations: Whole site
3. General: Prevent weeds from seeding and perennial weeds from becoming established: By hand-weeding.

Planting shrubs/ herbaceous plants/ bulbs

405 Shrub planting pits

1. Timing: Excavate One to two days (maximum) before planting.
2. Sizes: As plant schedule
3. Pit bottom improvement Break up to a depth of 150 mm.

471 Hedges

1. Planting: In trenches large enough to take the full spread of roots. Set plants out evenly.

472 Fencing support for new hedges

1. Type: As drawing 2516-TFC-XX-00-DR-L-4001
2. Timing: Before planting hedge.
3. Support: Lightly secure hedge plants to fence wires at appropriate intervals.

Planting trees

500 Tree planting

1. Standard: Prepare trees and transplant in accordance with BS 8545

505 Tree pits

1. Sizes: As drawing 2516-TFC-XX-00-DR-L-4001
2. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout
3. Excavated material: As drawing 2516-TFC-XX-00-DR-L-4001
4. Pit sides: Scarify
5. Backfilling material: As drawing 2516-TFC-XX-00-DR-L-4001

510 Tree pit root barriers

1. Location:: Wherever the installed rootball will be within 3 m of an existing underground service route
2. Manufacturer: Submit proposals
3. Thickness: Submit proposals
4. Barrier depth: Submit proposals
5. Foil liner:
6. Top of root barrier in relation to finished topsoil level: 10 mm above ground level
7. Installation: With sides vertical. Remove all sharp objects adjacent to barrier

520 Geocellular modular plastics structured soil units Type A

1. Manufacturer: DEEPROOT URBAN SOLUTIONS LIMITED
   - 1.1. Contact details
     - 1.1.1. Address: Suite 51 101 Clapham High Street
       London
       United Kingdom
       SW4 7TB
     - 1.1.2. Telephone: (+44) 020 3848 4230
     - 1.1.3. Web: https://www.deeproot.com/en_uk/
     - 1.1.4. Email: enquiries@deeproot.com
   - 1.2. Product reference: Silva Cell
2. Material: Polypropylene.
3. Unit size:
4. Components: Deck, base and posts.

535 Tree stakes

1. Stakes: Softwood, peeled chestnut, larch or oak; straight, free from projections and large or edge knots, and with pointed lower end
2. Stake size (minimum): Refer to drawing: 2516-TFC-00-00-DR-L-4001
3. Stake length (minimum): Refer to drawing: 2516-TFC-00-00-DR-L-4001

550 Double staking

1. General:: Refer to drawing: 2516-TFC-00-00-DR-L-4001
2. Description: All trees, also refer to terra firma planting details.
3. Staking
   - 3.1. Position: Either side of tree position, and perpendicular to wind direction
   - 3.2. Driving: Vertically at least 300 mm into bottom of pit before planting
   - 3.3. Backfilling: Consolidate material around stake
   - 3.4. Firming: Sufficiently firm to prevent movement of the root ball/ rootstock
4. Height of stakes: 1.2m above ground level unless this interferes with lowest branch. If this occurs cut off just below lowest branch of tree.
5. Horizontal bracing: Timber cross bar, 75 mm x 38 mm x wide enough to avoid rootball.
   - 5.1. Fixing: Firmly fix using nails on windward side of tree and as close as possible to the stem without making contact with the bark. Position cross bar horizontally and 25 mm from top of stakes.
6. Ties: Adjustable rubber tree tie
7. Tying: Secure tree firmly but not rigidly to cross bar. Prevent tree from touching cross bar using spacer blocks or cushions if required

8. Nails for fixing ties, belts and webbing: To BS 1202-1, galvanized; a minimum of 25 mm long and with 10 mm diameter heads
9. Nails for fixing cross bars: To BS 1202-1, galvanized round wire; a minimum of 75 mm long and 3.75 mm gauge

Woodland/ matrix/ buffer zone planting

600 Woodland work generally

1. Services: Check for below-ground and above-ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding
2. Safety: Comply with The Forest Industry Safety Accord (FISA) Guidance on Managing Health and Safety in Forestry

Protecting/ maintaining/ making good defects

710 Maintenance

1. Duration: Carry out the operations in the following clauses from completion of planting until Practical completion.
2. Frequency of maintenance visits: In accordance with the agreed maintenance schedule

720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the contract: Plants/ trees/ shrubs that have failed to thrive
    1.1. Exclusions: Theft or malicious damage after completion.
    1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
2. Replacements: To match size of adjacent or nearby plants of the same species or to match the original specification: whichever is the greater
3. Timing of making good: In accordance with an agreed defects rectification programme

740 Cleanliness

1. Soil and arisings: Remove from hard surfaces and grassed areas
2. General: Leave the works in a clean, tidy condition at completion and after any maintenance operations

750 Planting maintenance generally

1. Remove all rubbish and debris from planting beds
2. Weed control: Maintain weed-free area around each tree and shrub
3. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch
4. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools
5. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs
6. Trees: Spray crown when in leaf during warm weather.
    6.1. Timing: After dusk.
7. Tree accessories: Check condition of stakes, ties, guys, guards, and irrigation and ventilation systems
    7.1. Broken or missing items: Replace.
    7.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
    7.3. Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
    7.4. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
    7.5. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
8. Watering: As required for healthy establishment, depending on weather conditions

780 Maintenance instructions

1. General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the employer for the maintenance of the planting work for one full year: Provide details of any special procedures to be carried out.
2. All maintenance to be in accordance with the Landscape Management Plan '2516-TFC-00-00-RE-L-8001'

Ω End of Section

Q35
Landscape maintenance

Generally

105 Maintenance objectives

1. Location: All planting, grass and tree planting
    1.1. Duration: One year
2. Aims: Improved landscape visual amenity. Provide wildlife habitat and increase biodiversity. To encourage natural woodland regeneration

130 Reinstatement

1. Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.

155 Watering

1. Supply: Potable mains water
2. Quantity: Wet full depth of topsoil
3. Application: Do not damage or loosen plants.
4. Compacted soil: Loosen or scoop out, to direct water to rootzone.
5. Frequency: As necessary for the continued thriving of all planting

160 Water restrictions

1. General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

170 Disposal of arisings

1. General: Unless specified otherwise, dispose of arisings as follows:
    1.1. Grass cuttings: Spread evenly
    1.2. Tree roots and stumps: Remove from site
    1.3. Shrub and tree prunings: Remove to recycling facility
    1.4. Litter and nonbiodegradable arisings: Remove from site

190 Litter

1. Extraneous rubbish not arising from the contract work: Collect and remove from site.

195 Protection of existing grass

1. General: Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on grass.

197 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

Grassed areas

210 Performance-based maintenance of grassed areas

1. General: Maintain turf in a manner appropriate to the intended use.
2. Soil and grass
    2.1. Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
    2.2. Waterlogging and compaction: Prevent.
    2.3. Damage: Repair trampling, abrasion or scalping.
3. Ornamental lawns: Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts and mole hills.
    3.1. Edges: Neat and well defined, in clean, straight lines or smooth-flowing curves.
4. Litter and fallen leaves: Remove regularly to maintain a neat appearance.

220 Grass cutting generally

1. Before mowing: Remove litter, rubbish and debris.
2. Finish: Neat and even, without surface rutting, compaction or damage to grass.
3. Edges: Leave neat and well defined. Neatly trim around obstructions.
4. Adjoining hard areas: Sweep clear and remove arisings.
5. Drought or wet conditions: Obtain instructions.

225 Tree stems

1. Precautions: Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other handheld mechanical tools carefully to avoid damage to bark

255 First cut of

1. Description: ALL GRASSED AREAS
2. Height of initial growth: 75 mm
3. Preparation
    3.1. Debris and litter: Remove.
    3.2. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 50 mm
5. Mower type:
6. Arisings: Spread evenly over cut areas

260 Mowing lawns

1. Grass height: Maintain between 25 and 50 mm

265 Mowing general areas

1. Grass height: 100 mm maximum

Shrubs/ trees/ hedges

510 Tree stakes and ties

1. Inspection/ maintenance times: As scheduled and immediately after strong winds
2. Stakes
    2.1. Replace loose, broken or decayed stakes to original specification.

2.2. If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.

3. Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
   3.1. Where chafing has occurred, reposition or replace ties to prevent further chafing.
4. Removal of stakes and ties: When instructed
   4.1. Fill stake holes with lightly compacted soil.

520 Refirming of trees and shrubs

1. Timing: After strong winds, frost heave and other disturbances.
2. Refirming: Tread around the base until firmly bedded.
3. Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

525 Tree guards

1. Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing.

540 Pruning generally

1. Pruning: In accordance with good horticultural and arboricultural practice.
   1.1. Removing branches: Do not damage or tear the stem or bark.
   1.2. Wounds: Keep as small as possible and cut cleanly back to sound wood.
   1.3. Cutting: Make cuts above and sloping away from an outward-facing healthy bud, angled so that water will not collect on cut area.
   1.4. Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
2. Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well-balanced natural appearance.
3. Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
4. Disease or infection: Give notice if detected.
5. Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

575 Pruning ornamental shrubs

1. General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
2. Suckers: Remove by cutting back level with the source stem or root.

580 Pruning flowering species of shrubs and roses

1. Time of year
   1.1. Winter flowering shrubs: Spring.
   1.2. Shrubs flowering between March and July: Immediately after the flowering period.
   1.3. Shrubs flowering between July and October: Back to old wood in winter.
   1.4. Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.

600 Trimming rapidly establishing hedges

1. General: Allow to reach planned height as rapidly as possible.
   1.1. Form: Trim back lateral branches moderately.

605 Trimming slowly establishing hedges

1. Operations
    1.1. Timing: Cut back hard in June and September to encourage bushy growth down to ground level.
    1.2. Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

620 Removal of dead plant material

1. Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

625 Climbing plants

1. Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
2. Insecure growth: Attach to supporting wires or structures using Stainless steel wire.
3. Supporting structures: Check and repair as necessary.

635 Reinstatement of shrub/ herbaceous areas

1. Dead and damaged plants: Remove.
2. Mulch/ matting materials
    2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting.
3. Do not disturb roots of adjacent plants.
4. Replacement plants
    4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
5. Dressing: Slow-release fertilizer:
    5.1. Type: Organic

645 Weed control generally

1. Weed tolerance: Weed to clear ground every two weeks
2. Adjacent plants, trees and grass: Do not damage.

650 Hand-weeding

1. General: Remove weeds entirely, including roots.
2. Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
3. Completion: Rake area to a neat, clean condition.
4. Mulch: Reinstate to original depth.

655 Weed cutting by hand or machine

1. Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 50 mm.
2. Herbicides: Do not use

675 Digging over

1. General: Dig over beds. Do not damage existing plants, bulbs and roots.
    1.1. Depth of dig (minimum): 150 mm

680 Soil aeration

1. Compacted soil surfaces
    1.1. Prick up: To aerate the soil of root areas and break surface crust.

1.2. Size of lumps: Reduce to crumb and level off.

1.3. Damage: Do not damage plants and their roots.

685 Soil level adjustment

1. Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
   1.1. Arisings (if any): Spread evenly over the bed.

690 Maintenance of loose mulch

1. Thickness (minimum): 75 mm
   1.1. Top up: Annually
2. Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
3. Weeding: Remove weeds growing on or in mulch by Hand-weeding.

710 Woodland planting maintenance

1. Watering: In exceptional circumstances to prevent plants dying.
2. Loose plants: Refirm surrounding soil, without compacting.
3. Vegetation: Except trees and coppice shoots to be retained, cut down to 50 mm above ground level within the plantation area.
   3.1. Arisings: Leave between rows.
4. Ditches and drains: Keep clear.

Tree work

810 Tree work generally

1. Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
2. Protection: Avoid damage to neighbouring trees, plants and property
3. Standard: To BS 3998.
4. Removing branches: Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
5. Appearance: Leave trees with a well-balanced natural appearance.
6. Chain saw work: Operatives must hold a certificate of competence.
7. Tree work: To be carried out by an approved member of the Arboricultural Association.

820 Prevention of wound bleeding

1. Standard: To BS 3998.

825 Prevention of disease transmission

1. Standard: To BS 3998.

835 Cutting and pruning generally

1. Tools: Appropriate, well maintained and sharp.
2. Final pruning cuts
   2.1. Chainsaws: Do not use on branches of less than 50 mm diameter.
   2.2. Hand saws: Form a smooth cut surface.
   2.3. Anvil type secateurs: Do not use.
3. Removing branches: Do not damage or tear the stem.

4. Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
5. Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
6. Large branches:
    6.1. Remove in small sections and lower to ground with ropes and slings.
7. Dead branches and stubs: When removing, do not cut into live wood.
8. Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
9. Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

855 Cutting tree roots

1. Excavating: Use hand tools only.
2. Protected area: Do not cut roots within an area which is the larger of:
    2.1. The branch spread of the tree.
    2.2. An area with a radius of half the tree's height, measured from the trunk.
3. Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
4. Cutting
    4.1. Cutting: Make clean smooth cuts with a hand saw.
    4.2. Wounds: Minimize. Avoid ragged edges.
    4.3. Finishing: Pare cut surfaces smooth with a sharp knife.
5. Backfilling
    5.1. Protection: Cover cut roots with clean sharp sand.
    5.2. Material: Backfill with original topsoil.

Hard landscape areas/ fencing

910 Hard surfaces and gravel areas

1. Herbicide: Apply a suitable foliar-acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
2. Hard surfaces: Remove litter, leaves and other debris.
3. Surface gutters and channels: Remove mud, silt and debris.
4. Drainage gullies: Empty traps and flush clean.
5. Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
6. Repairs to flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
7. Stain removal: In accordance with BS 7370-2, Table 4.

920 Fencing

1. Fences: Inspect and repair to maintain:
    1.1. Post & Rail with shock proof fence
    1.2. Wattle Fences
    1.3. Timber Picket Fence
2. Refer to drawing: 2516-TFC-00-00-DR-L-4000s for further details

Ω End of Section

Q50
Site/ street furniture/ equipment

Gates, barriers and parking controls

190 Bollards

1. Description: TBC
2. Manufacturer:
   2.1. Product reference:
3. Material:
   3.1. Finish as delivered:
   3.2. Colour:
4. Height above ground:
5. Sectional size:
6. Top:
7. Special features:
8. Method of fixing:

191 Knee Rail Fence

1. Description: TBC
2. Manufacturer:
   2.1. Product reference:
3. Material:
   3.1. Finish as delivered:
   3.2. Colour:
4. Height above ground:
5. Sectional size:
6. Top:
7. Special features:
8. Method of fixing:

Site and street furniture

220 Benches

1. Description: TBC
2. Manufacturer:
   2.1. Product reference:
3. Material:
   3.1. Finish:
   3.2. Colour:
4. Size:
5. Accessories/ Special requirements:
6. Method of fixing:

Installation - Not Used

Ω End of Section

Q52
Play and sports equipment

General

115 Playground

1. Description: TBC
2. Equipment:
   2.1. System manufacturer:
3. Surfacing:
4. Containment:
5. Accessories:

System performance

215 Playground design

1. Design criteria: TBC
   1.1. Age range:
   1.2. Population served:
   1.3. Frequency of use:

Products - Not Used

Execution

710 Play equipment installation generally

1. Standard: To manufacturer's written instructions provided in accordance with BS EN 1176-1.

720 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Concrete: Designated, not less than GEN 1 or Standard prescribed, not less than ST2.
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

725 Setting components in concrete

1. Holes:
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Fully compacted as filling proceeds.
4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

730 Setting components in earth

1. Holes: As small as practicable.
2. Components being fixed: Accurately positioned and securely supported.
3. Buried depth (minimum):

4. Earth refilling: Well rammed as filling proceeds.

740 Preservative treated timber

1. Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

Completion

910 Inspection

1. Standard:
2. Timing:
3. Period of notice (minimum): 3 working days.

920 Cleaning

1. General: Leave the works in a clean, tidy condition.
2. Surfaces: Clean immediately before handover.

Ω End of Section