

Q31
External planting

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To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

112 SITE CLEARANCE GENERALLY

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 50 mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Vegetation: Clear scrub to ground level by flail mowing and remove arisings.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: Remove remnants of old fence posts and mesh.

118 SOIL CONDITIONS

- Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
- 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

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

125 TIMES OF YEAR FOR PLANTING

- Deciduous trees and shrubs: Late October to late March.
- Conifers and evergreens: September/ October or April/ May.
- Herbaceous plants (including marginal): September/ October or March/ April.
- Container grown plants: At any time if ground and weather conditions are favourable.
 - Watering and weed control: Provide as necessary.
- Dried bulbs, corms and tubers: September/ October.
- Colchicum (crocus): July/ August.
- Green bulbs: After flowering in spring.
- Wildflower plugs: Late August to mid November or March/ April.
- Aquatic plants: May/ June or September/ October.

130 MECHANICAL TOOLS

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

145 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

150 WATER RESTRICTIONS

- 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.

165 PREPARATION, PLANTING AND MULCHING MATERIALS

" General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

" Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.

- Certified materials: mulching materials, fertilizers, weed killers, and all chemical substances..
- Give notice before ordering or using.

170 SOIL REQUIREMENTS

- Type
 - Planted beds: Existing topsoil.
 - Tree pits, shrub pits and other backfilling: Existing topsoil.
 - External container planting: Existing topsoil.
 - Mulch applied after planting: Mulching and top dressing system, as section Q28.

200 PLANTS/ TREES - GENERAL

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
 - Standard: The National Plant Specification.
- Species: True to name.
- Origin/ Provenance: British grown.
Definition: Origin and Provenance have the meaning given in the National Plant Specification.

215 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification (available on CS Design Software Limited's website).

225 BULBS/ CORMS/ TUBERS

- Condition: Firm, entire, not dried out or shrivelled.
- Health: Free from pests, diseases and fungus.
- Handling: Remove from packaging immediately.
- Storage: Permitted only when necessary.
 - Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
 - Duration: Minimum period.
 - Temperature: 18-21°C.

235 CONTAINER GROWN PLANTS/ TREES

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

245 LABELLING AND INFORMATION

- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
 - Full botanical name.
 - Total number.
 - Number of bundles.
 - Part bundles.
 - Supplier's name.
 - Employer's name and project reference.
 - Plant specification, in accordance with scheduled National Plant Specification categories.
- Additional information: Submit on request: Date supplied and consignment details or reference.

246 LABELLING AND INFORMATION

- Standard: To BS 3936.

255 PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES

- Types/ Species: As plant schedule.
- Predelivery inspection: Give notice.
- Labelling: Identify inspected plants/ trees as reserved for use on this project.

260 PLANT/ TREE SUBSTITUTION

- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
 - Price.
 - Difference from specified plants/ trees.
- Approval: Obtain before making any substitution.

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To CPSE 'Handling and establishing landscape plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: Black polyethylene bags.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

275 PERMANENT IDENTIFICATION OF PLANTS

- Location: All trees.
- Labels: Black plastics 75 mm x 100 mm with white weatherproof lettering attached to tree trunks at 1.5 m from ground level.
- Wording: Genus, species, variety, common name and month/ year date planted.

280 TREATMENT OF TREE WOUNDS

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

285 PROTECTION OF EXISTING GRASS

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

290 SURPLUS MATERIAL

- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS

359 PROPRIETARY SOIL CONDITIONER/AMELIORANT

- " Manufacturer and reference: Contractors choice - submit proposals
- " Apply evenly over all planting beds at a rate of 1.5 kg/m³.

375 CULTIVATION

- " Compacted topsoil: Break up to full depth.
- " Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
 - Depth: 450 mm.
 - Timing: Within a few days before planting.
 - Weather and ground conditions: Suitably dry.
- " Surface: Leave regular and even.
- " Levels: 25 mm above adjoining paving or kerbs and Minimum 150 mm below dpc of adjoining buildings.
- " Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm.
- " Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate. Refer to arboriculturalist drawings and report.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

Note: All topsoil depths specified for pit planting for shrubs, hedge plants and herbaceous plants apply to the whole planting bed area as shown on the drawing. Topsoil to be 300mm topsoil to at least 300mm (minimum) subsoil.

Topsoil depths to tree pits: see tree planting section 505.

400 RANDOM PLANT LAYOUT TO ALL BEDS

- Spacing: Random groups of 3-11 plants of the same species..
- Density: As plant schedule.

405A SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Pit bottom improvement Break up to a depth of 300 mm, incorporating 25 g of slow release fertilizer per planting pit.
- Backfilling material: Reuse excavated material.

445 PLANTING BULBS/ CORMS/ TUBERS

- Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
- Backfilling: Finely broken soil. Lightly firm to existing ground level.
- Naturalized planting in existing grassed areas:
 - Scattering: Random. Plant bulbs/ corms/ tubers where they fall.
 - Planting: Neatly remove a plug of turf and replace after planting.

470 FORMAL HEDGES

- Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

471 NATURALIZED HEDGES

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

472 FENCING SUPPORT FOR NEW HEDGES

- Type: Timber post and general pattern wire mesh, as section Q40.
- Timing: Before planting hedge.
- Support: Lightly secure hedge plants to fence wires at appropriate intervals.

476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL for all planting areas

" Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:

" Ameliorant/ Conditioner: as per clause 359.

- Application rate: as per clause 359.

" Fertilizer: Slow release.

- Application rate: To manufacturer's/ supplier's recommendations.

480 AFTER PLANTING

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- Top dressing: Mulching and top dressing system, as section Q28.
 - Depth: 75 mm.

485 MULCHING PLANTING BEDS

- " Material: Medium grade bark mulch.
- Purity: Free of pests, disease, fungus and weeds.
- Recycled content: Contractor's choice.
- " Preparation: Clear all weeds. Water soil thoroughly.
- " Coverage: 75 mm depth.
- " Finished level of mulch: 50 mm below adjacent grassed or paved areas.

PLANTING TREES

503 TREE LOCATIONS

All tree pits to be set out and agreed in good time with the Main Contractor to avoid new and existing services, with approval for excavation. Trees in locations near services will require root barrier insulation before tree installation, to be agreed with Project Manager.

504 TREE PIT DRAINAGE

Before installation the Main Contractor is to test all subsoil and made up ground for natural drainage of ground water to the planting areas, in good time so rectification measures can be installed to the base of the tree pits before the tree planting commences. If water is obstructed from flow, suitable land drainage will be required to be agreed with the Project Manager and installed by the Main Contractor, in addition to a granular drainage layer as clause 505.

505A TREE PITS

- Sizes: 500 mm wider than, and the same depth as the rootball.
- 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 depth of 150 mm.
 - Treatment: Soil ameliorant worked into pit bottoms.
- Pit sides: Scarify.
- Backfilling material: Plant pit backfilling soil system, as section Q28.
- Accessories:
 - Underground guying;
 - Perforated plastics irrigation/ ventilation pipe; and
 - Root barrier.

510A TREE PIT ROOT BARRIERS

- Locations: As shown on drawing 1327-401-33.
- " Manufacturer: BlueGreenUrban.
 - Product reference: ReRoot 600.
- Depth of top of root barrier below finished soil level: 50 mm.
- Installation: With sides vertical.

511 TREE ROOT PROTECTION Read in conjunction with the arboricultural report: Rep BS5837 TPP AMS MJC-16-0216 rev 1 St. Helen's, Mackenzie Claremount _ Lund 23 11 16

- Locations: As shown on drawing 1327-401-33.
- " Manufacturer: Cellweb TRP.
 - Product reference: Cellweb TRP Tree Root protection System AND filled with angular, reduced-fines sub-base stones.
- Depth of top of root barrier below finished soil level: as per manufacturer's instructions.
- Installation: Refer to manufacturer's guidance .

512A TREE PIT ACCESSORIES

- Locations: All tree pits.
- Manufacturer: BlueGreenUrban.
 - Product reference: RRURB1A Roottrain.
- Type: Perforated plastics irrigation pipe, 50 mm diameter, in circle above and around sides of rootball, with plastics cap.

512B TREE PIT ACCESSORIES

- Locations: All tree pits.
- Manufacturer: BlueGreenUrban.
 - Product reference: EGSA EcoGuy.
- Type: Underground guying system with ground anchors..

590 MULCHING TREES

- Material: bark mulch, as specified in Q31, clause 485.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: Contractor's choice.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: Over an area of 1.2 x 1.2 m with the tree in the centre. 75 mm deep.
- Finished level of mulch: 50 mm below adjacent grassed or paved areas.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710A MAINTENANCE

- Duration: Carry out the operations in the following clauses from completion of planting until the end of the rectification period.
- Frequency of maintenance visits: monthly during the growing season and as necessary to fulfil the requirements of this specification.

720A FAILURES OF PLANTING

- Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
 - Exclusions: Theft or malicious damage after completion.
 - Rectification: Replace with equivalent plants/ trees/ shrubs.
- Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- Timing of making good: During the next suitable planting season in accordance with an agreed defects rectification programme.

740 CLEANLINESS

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

750A PLANTING MAINTENANCE GENERALLY

- Weed control: Maintain weed free area around each tree and shrub.
 - Diameter (minimum): The larger of 1 m or the surface of original planting pit.
 - Keep planting beds clear of weeds: By weeding and maintaining full thickness of mulch..
- 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.
- Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Staking: Check condition of stakes, ties, guys and guards.
 - Broken or missing items: Replace.
 - Rubbing: Prevent.
 - Ties: Adjust to accommodate growth.
 - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
 - Frequency of checks: At each scheduled maintenance visit.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Trees: Spray crown when in leaf during warm weather.
 - Timing: After dusk.
- Watering: as necessary to ensure establishment and continued thriving of planting.

755 PLANTING MAINTENANCE - FERTILIZER

- Time of year: March or April.
- Fertilizer: Slow release.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: 25g per plant/100g per feathered, standard or larger tree.

760 PLANTING MAINTENANCE - PRUNING

- General: Prune to promote healthy growth and natural shape.
 - Dead, dying, diseased wood and suckers: Remove.
 - Timing: As appropriate to the species.
 - Trees: Favour a single central leading shoot.
- Arisings: Remove.

780 MAINTENANCE INSTRUCTIONS

- General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide details of any special procedures to be carried out.

790 FINAL MULCHING

- Timing: At end of the maintenance period.
- Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
- Planting beds: Remulch.
Depth (minimum): 75 mm.
- Trees: Remulch.
Depth (minimum): 75 mm.