

Reading Gateway

Specifications

Relevant Part 5 – Car Showrooms

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D
Groundwork

D20
Excavating and filling

D20 Excavating and filling

To be read with Preliminaries/General conditions

GENERALLY/THE SITE

145 VARIATIONS IN GROUND WATER LEVEL

- Give notice: If levels encountered are significantly different from levels in the site investigation report or previously measured.

150 EXISTING SERVICES, FEATURES AND STRUCTURES

- Services: See relevant Services drawings for locations.
- Site features to be retained: See contract drawings for details.
-

CLEARANCE/EXCAVATING

370 UNDERGROUND STRUCTURES IN LANDSCAPE AREAS

- Generally: Remove walls, roads, foundations, disused services, drains, manholes and the like to minimum depth.
- Minimum depth below finished levels:
 - Grass, ground cover and perennial planting: 500 mm.
 - Shrub planting: 750 mm.
 - Within 2 m of tree planting: 1000 mm.
- Walls and slabs remaining: In every 10 m² of wall or slab, make a drainage hole at least 600 mm diameter.

450 WATER

- Generally: Keep all excavations free from water until:
 - Formations are covered.
 - Below ground constructions are completed.
 - Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
- Drainage: Form surfaces of excavations and fill to provide adequate falls.
- Removal of water: Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

Paving/Planting/Fencing/Site furniture

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General Conditions.

- 110 NATURALLY OCCURRING TOPSOIL SYSTEM All planting areas
- Topsoil: Site sourced topsoil unless quality/quantity insufficient, see 315A.
 - Ameliorants: Sanitized and stabilized compost for shrub areas see 360.
 - Accessories: Mycorrhizal inoculant and Gel root dip.

PRODUCTS

300 PREPARATION MATERIALS GENERALLY

- Purity: Free of pests and disease.
- 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.
- Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable.
 - Hazardous to human or animal life.
 - Detrimental to healthy plant growth.
- Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
- Objectionable odour: None.
- Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

305 PERMITTED MATERIALS

- Materials: Bark and Composted green/ food waste certified to PAS 100.
- Give notice: before ordering or using.
- Declaration of compliance: Required.

310 MATERIALS NOT PERMITTED

- Materials: Products containing peat.

315A IMPORTED TOPSOIL TO BS 3882-2007

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Classification: Multipurpose.
 - Grade: Within the parameters of 'sandy loam' textural class.
- Source: Local, within a 30 mile radius.
 - Product reference: Submit proposals.

360 SANITISED AND STABILISED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR FLOWERING SHRUBS

- Standard: In accordance with PAS 100.
- Source: Local, within a 30 mile radius.
 - Product reference: -.
- Horticultural parameters:
 - pH (1:5 water extract): 7.0-8.7.
 - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
 - Moisture content (m/m of fresh weight): 35-55%.
 - Organic matter content (minimum): 25%.
 - Grading (air dried samples): 99% passing 25 mm screen, and 90% passing 10 mm screen mesh aperture.
 - Carbon: Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.

- 380 MYCORRHIZAL INOCULANT: To tree pits
- Manufacturer: Plantworks Ltd <http://www.rootgrow.co.uk> (Tel: 01795 411 527) or equal and approved by overseeing organisation. If alternative supplier is sought, the product must meet the following criteria: UK origin mycorrhizal fungi including bio-additives. Mycorrhizal fungi component to contain spores, mycelium, dried plant root containing mycelium and attapulgate clay, colonised by mycelium. Product should not contain fertilisers. Additives should be proven to enhance mycorrhizal colonisation. .
 - Product reference: Rootgrow Professional.
- 385 GEL WATER RETENTION SYSTEMS: For bare root trees
- Type: Root dip.
 - Manufacturer: Green-Tech.
 - Product reference: Broadleaf P4 root dip or equal and approved. Mix at manufacturer's recommended rate and as Section Q31.
 - Accessories: None.

EXECUTION

- 620 IMPORTING TOPSOIL
- Give notice: Before stripping topsoil for transfer to site.
 - Notice period: 7 days.
- 625 SAMPLE LOADS FOR IMPORTED TOPSOIL
- Deliver to site a sample load: of 5 kg.
 - Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 7 days.
- 630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR SHRUB BEDS
- Timing: Submit at handover.
 - Contents:
 - Full description of all soil components.
 - Record of source for all soil components.
 - Record drawings showing the location and depth of all soils by type and grade.
 - Declaration of analysis: in accordance with BS 3882, Annex E.
 - Number of copies: 2.
- 635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR COMPOST
- Timing: Submit at handover.
 - Contents:
 - Full description of all compost components.
 - Record of source for all compost components.
 - Analyst's report for each test carried out.
 - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
 - Quality Compost Protocol certification: Required.
 - Number of copies: 2.
- 655 MECHANICAL TOOLS
- Restrictions: Do not use within 100 mm of tree and plant stems.
- 660 GRADING SUBSOIL
- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
 - Areas of thicker topsoil: Excavate locally.
 - Avoid over compaction.
- 665 SUBSOIL SURFACE PREPARATION
- General: Excavate and/ or place fill to required profiles and levels, as section D20.
 - Loosening:
 - Light and non-cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.

- Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
 - Rock and chalk subgrades: Lightly scarify to promote free drainage.
 - Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
 - Remove from site: Arisings, contaminants and debris and builders' rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for grass areas and planting beds.
 - Notice period: 7 days.
- 680 SURPLUS TOPSOIL TO BE RETAINED
- Generally: Spread and level on site:
 - Locations: Any areas where topsoil is required for new planting.
- 685 SURPLUS MATERIALS TO BE REMOVED
- Topsoil: Remove from site topsoil remaining after completion of all landscaping work (only if not possible to use around site).
 - Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.
- 691A TOPSOIL STORAGE HEAPS
- Location: to be agreed.
 - Height (maximum): 2.0 m.
 - Width (maximum): 4.0 m.
 - Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
 - Protection:
 - Do not place any other material on top of storage heaps.
 - Do not allow construction plant to pass over storage heaps.
 Prevent compaction and contamination, by fencing and covering as appropriate.
- 695 CULTIVATION
- Compacted topsoil: Break up to full depth.
 - Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
 - Depth: 150 mm.
 - Particle size (maximum): 10 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 75 mm.
 - Soil within root spread of trees and shrubs to be retained: N/A
- 700 GRADING OF TOPSOIL
- Topsoil condition: Reasonably dry and workable.
 - Contours: Smooth and flowing, with falls for adequate drainage.
 - Hollows and ridges: Not permitted.
 - Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
 - Give notice: If required levels cannot be achieved by movement of existing soil.
- 705 HANDLING TOPSOIL
- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
 - Plant: Select and use plant to minimize disturbance, trafficking and compaction.
 - Contamination: Do not mix topsoil with:
 - Subsoil, stone, hardcore, rubbish or material from demolition work.
 - Other grades of topsoil.
 - Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
 - Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after

heavy rainfall or when it is wetter than the plastic limit less than 3%.

710 SPREADING TOPSOIL

- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Depths after firming and settlement (minimum): 400 mm for plant beds, none for wildflower grass.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

- General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: 25 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 50 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

810 APPLYING COMPOST FOR SHRUBS

- Locations: All planting areas.
- Other requirements: Submit 5kg sample before ordering.
- Application rate for trees and shrubs: 50 mm thick.
 - Timing: Apply prior to cultivation.
- Application rate for grass: N/A.
 - Timing: Apply prior to cultivation.

840 APPLYING MYCORRHIZAL INOCULANT: To Tree Pits.

- Depth: 5 to 10 litre plastic tub for use as a dry granule on container grown stock or to be mixed with a bag of hydrogel on site to form a root dipping treatment for bare root plants.
Application rate: to manufacturer's/ supplier's recommendation. Ensure contact with root system is maintained.

COMPLETION

905 APPLYING MAINTENANCE FERTILIZER

- Time of year: March or April.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: 10 g/m². Do not apply fertiliser to wildflower grass areas.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115A SEEDED AREAS

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

120 CLIMATIC CONDITIONS

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

145 WATERING

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

150 WATER RESTRICTIONS

- 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.

160 NOTICE

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Preparing seed bed.
 - Seeding or turfing.
 - Visiting site during maintenance period.
- Period of notice: 1 week.

170 SETTING OUT

- Boundaries: Mark clearly.
- Delineation: In straight lines or smoothly flowing curves as shown on drawings.

PREPARATION

210 HERBICIDE FOR ALL SEEDED AREAS

- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
Duration: 1 week.

212 SEED BED CLEANING BEFORE SOWING - ALL SEEDED AREAS

- Operations: As seed supplier's recommendations.

280A FINAL CULTIVATION

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
 - Depth: 25 mm.
 - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
 - Remove surface stones/earth clods exceeding:
Wildflower areas: 40 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

SEEDING

312 SEED MIXTURE FOR WILD FLOWER GRASSLAND

- Supplier: Emorsgate Seeds Ltd. 01553 829028
- Mixture reference: EM4 - Meadow Mixture for Clay Soils: 50.3 m²: 1 part wildflower seeds to 4 parts grass seed mix

20% WILD FLOWERS

%	Latin name	Common name
0.5	<i>Achillea millefolium</i>	Yarrow
2	<i>Betonica officinalis</i> - (<i>Stachys officinalis</i>)	Betony
3.5	<i>Centaurea nigra</i>	Common Knapweed
1	<i>Filipendula ulmaria</i>	Meadowsweet
2.5	<i>Galium verum</i>	Lady's Bedstraw
0.4	<i>Lathyrus pratensis</i>	Meadow Vetchling
0.5	<i>Leucanthemum vulgare</i>	Oxeye Daisy
0.5	<i>Lotus corniculatus</i>	Birdsfoot Trefoil
1	<i>Plantago lanceolata</i>	Ribwort Plantain
1	<i>Primula veris</i>	Cowslip
1	<i>Prunella vulgaris</i>	Selfheal
2	<i>Ranunculus acris</i>	Meadow Buttercup
2	<i>Rhinanthus minor</i>	Yellow Rattle
1.4	<i>Rumex acetosa</i>	Common Sorrel
0.4	<i>Silaum silaus</i>	Pepper Saxifrage
0.2	<i>Silene flos-cuculi</i> - (<i>Lychnis flos-cuculi</i>)	Ragged Robin
0.1	<i>Trifolium pratense</i>	Wild Red Clover

80% GRASSES

10	<u><i>Agrostis capillaris</i></u>	<u>Common Bent</u>
2	<u><i>Alopecurus pratensis</i></u>	<u>Meadow Foxtail (w)</u>
2	<u><i>Anthoxanthum odoratum</i></u>	<u>Sweet Vernal-grass (w)</u>
1	<u><i>Briza media</i></u>	<u>Quaking Grass (w)</u>
36	<u><i>Cynosurus cristatus</i></u>	<u>Crested Dogtail</u>
24	<u><i>Festuca rubra</i></u>	<u>Slender-creeping Red-fescue</u>
1	<u><i>Hordeum secalinum</i></u>	<u>Meadow Barley (w)</u>
4	<u><i>Phleum bertolonii</i></u>	<u>Smaller Cat's-tail</u>

- Origin (as defined in the National Plant Specification): Locally collected.
- Application rate: 4 g/m².

319 QUALITY OF SEED FOR WILD FLOWER GRASSLAND

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations.
 - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- Samples of mixtures: Submit when requested.

330 SOWING

- General: Establish good seed contact with the root zone.
- Method: Manually broadcast, raked and rolled.
 - Distribution: 2 equal sowings at right angles to each other and diagonally to main axis.

336 WILDFLOWER MIX SOWING SEASON

- Wildflower seed mix generally: March to May or August to October.

340 PRE-EMERGENT HERBICIDE FOR WILD FLOWER MEADOWS

- Standard: Pesticide Safety Directorate approved.
- Application rate: In accordance with manufacturer's written recommendation.
 - Timing: Immediately after sowing.

352 EDGES TO SEEDED AREAS ADJACENT TO PLANTING BEDS AND TREE PITS

- Timing: After seeded areas are well established.
- Edges: Clean straight lines or smooth curves.
 - Mulch and soil: Draw back to permit edging.
- Arisings: Remove.
- Completion: Re-spread soil and mulch.

540 FIRST CUT OF WILD FLOWER MEADOWS

- Height of initial growth: 75 mm.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 50 mm and see supplier's recommendations.
- Mower type: Contractor's choice.
- Arisings: Remove from site.

550 AREAS NOT TO BE CUT

- None

590 CLEANLINESS

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

MAINTENANCE

610A FAILURES OF SEEDING

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Defective materials or workmanship: Areas that have failed to thrive.
 - Exclusions: Theft or malicious damage.
- Method of making good: Re-cultivation and reseedling/ re-turfing.
- Timing of making good: The next suitable planting season.

650A MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Preparation: Before each cut remove all litter and debris.
- Height and frequency of cut in first growing season:
 - Time of first cut: March/ April to remove a flush of annual weeds from the seed bank in the soil.
 - Height of first cut: 50 mm.
 - Frequency of subsequent cutting (minimum): Once in late summer (late August) after flowering.
 - Height of growth permitted (maximum): 150 mm.
- Height and frequency of cut in second growing season:
 - Time of cut: Mow or graze the re-growth through to late autumn/winter and again in spring if needed.
 - Height of cut: 50 mm.
- Trimming: All edges.
 - Arisings: Leave on site for 7 days then remove.
- Watering: As necessary to ensure establishment of the sward.

Q31 External planting

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: 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.

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.

160 NOTICE

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Delivery of plants/ trees.
 - Planting shrubs.
 - Planting trees into previously dug pits.
 - Watering.
 - Visiting site during maintenance period.
- Period of notice: One week.

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: Sanitized and stabilized compost.
 - Give notice before ordering or using.
- 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: Grown in the United Kingdom, unless otherwise approved.
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.
- 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:
 - Country of origin;
 - Date supplied and consignment details or reference;
 - Impact of pest/ disease;
 - Name or designation of rootstock of budded or grafted plants;
 - Potting dates;
 - Propagation method and dates;
 - Pruning dates; and
 - Type of container.
- 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 HTA '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: May alternatively use pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

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.

290 SURPLUS MATERIAL

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

PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS

300 HERBICIDE: Non-residual

- Locations: All planting areas.
- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
 - Duration (minimum): As manufacturer's recommendation.

305 WEED CONTROL

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established. If Japanese Knotweed is found on site, control should be in accordance with the Environment Agency 'Managing Japanese Knotweed on development sites. The Knotweed Code of Practice'.

375 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
 - Depth: 350 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;
 - 50 mm above adjoining wildflower grass; 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.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

401 REGULAR PLANT LAYOUT TO SHRUB PLANTING

- Spacing: In regular, staggered rows and as drawing.
- Density: As plant schedule.

405 SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: 150 mm wider than roots when fully spread and 200 mm deep.
- Pit bottom improvement Break up to a depth of 150 mm, incorporating 25 g of slow release organic fertiliser per planting pit.
- Backfilling material: Reuse excavated material.

435 CLIMBING PLANTS USED AS GROUND COVER

- Planting:
 - Canes or other supports: Remove.
 - Arrangement: Spread stems.
- Fixing: Pinned to ground to ensure good contact.

470A ORNAMENTAL 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. Plant in two staggered rows at 400mm centres. Set out plants evenly.

471A NATIVE HEDGES

- Planting: In trenches large enough to take full spread of roots. Plant in two staggered rows at 400mm centres. Species to be spread evenly along length of hedge, with not more than 7 of any species planted adjacent to each other. Set out plants evenly.

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: Sanitized and stabilized compost.
Depth: 25-30 mm.

485 MULCHING PLANTING BEDS

- Material: Coarse grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: None permitted.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PLANTING TREES

500 ANTIDESICCANT FOR CONIFERS/ EVERGREENS

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Application: Dip in or thoroughly spray before delivering to site. Spray again soon after planting.
 - Do not apply in wet or frosty weather.
- Ensure full coverage of underside of foliage.

505B TREE PITS - SOFT AREAS

- Sizes: 1500 mm diameter x 600 mm deep.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up and de-compact base to depth of 250mm.
 - Treatment: None required.
- Pit sides: Scarify.
- Backfilling material: Reuse excavated material to total depth 600mm.
- Accessories: Tree stakes and ties as Clause 575.

510 TREE PIT ROOT BARRIERS

- Locations: At boundaries of planting beds where narrow, as shown on drawings for CS1 62241015-004-P1012 and CS2 62241015-004-P1013.
- Manufacturer: GreenBlue Urban or similar to be approved.
 - Product reference: Re-Root 450.
- Depth of top of root barrier below finished soil level: 50 mm.
- Installation: With sides vertical.

512 TREE PIT ACCESSORIES

- Locations: As Detail 4 on drawings 6224015-004-P1014 and 6224015-004-P1015.
- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Type: Perforated plastics irrigation pipe, e.g. Wavincoil or equal approved, 80 mm diameter, in circle above and around sides of rootball, with square 100x100mm stainless steel inlet cover (Arborvent or equal approved).

515A TREE PIT DRAINAGE

- Do not excavate base of tree pit unless drainage problems have been identified. In the case of drainage problems only: break up the base to a depth of 250mm and create a slightly raised centre so water drains away from the rootball.
- Completed pits: Test for free drainage before planting.

535 STAKING GENERALLY

- Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - Preservative treatment: To provide a 20 year service life.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum): 50 mm diameter.

575 SHORT DOUBLE STAKING FOR ALL TREES IN SOFT GROUND

- Staking: Drive stakes vertically at least 300 mm into bottom of pit on either side of tree position before planting.
 - Backfilling: Consolidate material around stakes.
- Height of stakes: Cut to approximately 600 mm above ground level.
- Cross bar: Flexible webbing within 25 mm of top of stake.
 - Firmly fix on windward side of tree and as close as possible to stem.
- Ties: Cushioned ties.
- Tying: Secure tree firmly but not rigidly to cross bar.

586A TREE BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required. If excavated material not acceptable, use subsoil in bottom 200mm then imported topsoil to BS 3882 to upper 400mm.
- Place in layers 150-230mm depth, firming in to eliminate air pockets but with care not to excessively compact the soil.
- The final layer should not be consolidated, but should be of a sufficient depth to allow for settlement and (in soft ground) mulching.
- Ameliorant/ Conditioner: Water retention gel such as Broadleaf P4 granules.
 - Application rate: To manufacturer's/ supplier's recommendations, typically 250gm into top 400mm of topsoil.
- Fertilizer: Not required.

590 MULCHING TREES

- Material: Medium grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: None permitted.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 litres per tree position for trees in soft ground only, 75 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE UP TO PRACTICAL COMPLETION

- Duration: Carry out the operations in the following clauses from completion of planting until practical completion.
- Frequency of maintenance visits: Fortnightly during growing season.
- For wildflower grass maintenance, see Section Q35 below.

720 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: In accordance with an agreed defects rectification programme.

730 PROTECTIVE FENCING

- Fencing type: Cleft chestnut pale fencing to BS 1722-4.
 - Height: 1050 mm.
- Erection: On completion of planting.
- Removal: After planting is well established.

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.

750 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 use of hoeing or approved non-residual herbicides. Where easier, hand-pull individual weed plants.
- 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:** at sufficient frequency to ensure healthy plant growth is maintained.

755 PLANTING MAINTENANCE - FERTILISER

- Time of year: March or April.
- Fertilizer: Organic.
 - Manufacturer: Contractor's choice.
 - Product reference: Submit proposals.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: 50 g/m².

760 PLANTING MAINTENANCE - PRUNING

- General: Prune to promote healthy growth and natural shape.
 - Dead, dying, diseased wood and suckers: Remove.
 - Timing: In accordance with the agreed maintenance indicated on the planting schedule.

- Allow hedges to grow 100mm annually and trim in July (if no birds nesting in them).
 - 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 a schedule of any ongoing maintenance problems experienced during the rectification period.

790 FINAL MULCHING

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

Q35 Landscape maintenance

To be read with Preliminaries/ General Conditions.

GENERALLY

105 MAINTENANCE OBJECTIVES

- Location: Car Showrooms 1 and 2.
 - Duration: Five years.
- Aims: Enhanced landscape quality.

110 NOTICE

- Give notice before:
 - Application of herbicide.
 - Application of fertiliser.
 - Watering.
 - Each site maintenance visit.
- Period of notice: 7 days.

130 REINSTATEMENT

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

155 WATERING

- Supply: Recycled, treated grey water.
- Quantity: Wet full depth of topsoil.
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to rootzone.
- Frequency: As necessary for the continued thriving of all planting.

160 WATER RESTRICTIONS

- 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 ARISING

- General: Unless specified otherwise, dispose of arisings as follows:
 - Biodegradable arisings: Remove to recycling facility.
 - Grass cuttings: Remove to recycling facility.
 - Tree roots and stumps: Remove to recycling facility.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and non-biodegradable arisings: Remove off site.

180 CHIPPING OR SHREDDING

- General: Not permitted on site.

181 MECHANICAL EQUIPMENT

- General: Minimise.
- Prohibited equipment: Litter vacuums.
- Timing: 08:00 to 18:00 Monday to Friday. Outside these hours by agreement.

190 LITTER

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

195 PROTECTION OF EXISTING GRASS

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

197 CLEANLINESS

- Soil and arisings: Remove from hard surfaces.

- General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.
- 226 TREE STEMS
- Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
 - Operations close to stems: Complete using hand tools.
- 250 LEAF REMOVAL
- Operations: Collect fallen leaves.
 - Special requirements: Remove by hand raking.
 - Disposal: Remove from site for recycling.
- 255 FIRST CUT OF: ALL SHRUB AREAS
- Height of initial growth: As schedule.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: As schedule.
 - Mower type: Contractor's choice.
 - Arisings: Remove.
- 272 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS
- General: Refer to seed supplier's management recommendations.
 - Preparation: Before each cut remove litter and debris.
 - Height and frequency of cut in first growing season: Mow to a height of 40-60mm in first year of establishment to control annual weeds.
 - Time of first cut: (Avoid cutting in spring and early summer if autumn sown)
 - Height of first cut: 40-60mm.
 - Height and frequency of cut in second growing season:
 - Time of cut: take a 'hay cut' after flowering in late July or August.
 - Height of cut: Approximately 50mm.
 - Trimming: All edges.
 - Arisings: Remove from first cut. In second and subsequent years, leave arisings to dry and shed seed for 1-7 days then remove from site, to recycling facility.
 - Watering: As necessary to ensure healthy development of plants.
- 295 SPIKING OR HOLLOW TINING
- Location: Wildflower grass area.
 - Timing: Spring or autumn (hollow tining Autumn only), if soil consolidated and/or retaining water.
 - Operations: Aerate the soil and improve surface water penetration.
 - Depth (minimum): 100mm.
- 309 EDGES TO SEEDED AREAS
- Location: Planting beds and around newly planted trees.
 - Timing: After seeded areas are well established.
 - Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
 - Arisings: Remove.
- 310 RE-FORMING GRASS EDGES
- Location: All grass edges.
 - Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.
 - Standard: To BS 7370-3.
- 320 LEVELLING HOLLOWS AND BUMPS IN TURF
- Standard: To BS 7370-3, clauses 12.4 and 12.5.
- 330 HERBICIDE SPRAY
- Areas not to be sprayed: Do not spray grass areas.

- 340 **HAND WEEDING OR SPOT WEED-KILLING IN WILDFLOWER GRASS AREAS**
- If possible, pull coarse weeds by hand in preference to use of chemicals. See Clause 650.
 - Herbicide: Systemic herbicide such as Glyphosate.
 - Operations: If coarse weeds cannot be removed by hand, use systemic herbicide such as glyphosate to spot-kill individual weed plants.
- 345 **CONTROL OF JAPANESE KNOTWEED**
- Operations: Spot treat as soon as identified, ideally in June and September during suitable weather conditions and when plants are growing vigorously. Repeat as necessary until eliminated.
 - Herbicide: Systemic herbicide such as Glyphosate.
 - Application: To supplier's recommendations
 - Arisings: Follow current guidance as Q31/305 for disposal of contaminated material.
- 381 **REINSTATEMENT OF WORN OR DAMAGED WILDFLOWER GRASS**
- Worn or damaged areas: Make good by re-seeding:
 - Preparation: Cultivate substrate to a fine tilth.
 - Re-seeding standard: To BS 7370-3, Clause 12.6. Fill with low fertility soil or subsoil, free from stones, debris and weeds. Reseed with a seed mix to match existing grass in quality and appearance
 - Seed mix: To match existing in appearance and quality.
 - Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

SHRUBS/TREES/HEDGES

- 500 **ESTABLISHMENT OF NEW PLANTING**
- Duration: 5 growing seasons from the date of planting.
 - Weed control:
 - Method: Keep planting beds clear of weeds by maintaining full thickness of mulch and hoeing.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
 - Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
 - Watering: When required to ensure health of plants is maintained.
- 502 **ESTABLISHMENT OF NEW PLANTING - FERTILISER**
- Time of year: March or April.
 - Type: Organic.
 - Spreading: Spread evenly. Carefully lift and replace any mulch materials.
 - Application rate: to manufacturer's recommendations.
- 510 **TREE STAKES AND TIES**
- Inspection/ Maintenance times: As scheduled and immediately after strong winds.
 - Stakes:
 - Replace loose, broken or decayed stakes to original specification.
 - 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.
 - Ties: Adjust, re-fix or replace loose or defective ties, allowing for growth and to prevent chafing.
 - Where chafing has occurred, reposition or replace ties to prevent further chafing.
 - Removal of stakes and ties: When trees are established or at end of maintenance period, whichever is sooner.
 - Fill stake holes with lightly compacted soil.
- 520 **RE-FIRMING OF TREES AND SHRUBS**
- Timing: After strong winds, frost heave and other disturbances.
 - Re-firming: Tread around the base until firmly bedded.
 - Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and re-firm.

540 PRUNING GENERALLY

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

545 PRUNING OF EXCESSIVE OVERHANG

- Timing: As instructed.
- Operations: Remove growth encroaching onto grassed areas, paths (if lower than 2m in height), roads, signs, sightlines and road lighting luminaires.
- Special requirements: None.

550 PRUNING OF EXCESSIVE HEIGHT

- Timing: Annually.
Operations: Remove excessive height: As instructed.

555 PRUNING TREES AND SHRUBS

- Standard: To BS 7370-4.
- Special requirements: None.

570 FORMATIVE PRUNING OF YOUNG TREES

- Standard: Type and timing of pruning operations to suit the plant species.
- Time of year: Do not prune during the late winter/ early spring sap flow period.
- Young trees up to 4 m high:
 - Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well-balanced head and ensure the development of a single strong leader.
 - Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
- Whips or feathered trees: Do not prune.
- Operatives: Approved specialist contractor.

575 PRUNING ORNAMENTAL SHRUBS

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

580 PRUNING FLOWERING SPECIES OF SHRUBS AND ROSES

- Time of year:
 - Winter flowering shrubs: Spring.
 - Shrubs flowering between March and July: Immediately after the flowering period.
 - Shrubs flowering between July and October: Back to old wood in winter.

600 TRIMMING RAPIDLY ESTABLISHING HEDGES

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

605 TRIMMING SLOWLY ESTABLISHING HEDGES

- Operations:
 - Timing: Cut back hard in June and September to encourage bushy growth down to ground level.

- Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.
- 620 REMOVAL OF DEAD PLANT MATERIAL
- 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
- Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
 - Insecure growth: Attach to supporting wires or structures using 1 mm diameter black plastics coated steel wire.
 - Supporting structures: Check and repair as necessary.
- 630 DEAD AND DISEASED PLANTS
- Removal: As soon as possible.
 - Replacement: In the next suitable planting season.
- 635 REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS
- Dead and damaged plants: Remove.
 - Mulch/ matting materials:
 - Carefully move to one side and dig over the soil, leaving it fit for replanting.
 - Do not disturb roots of adjacent plants.
 - Replacement plants:
 - 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.
 - Additional requirements: Submit details and cost of plants before ordering.
 - Dressing: Slow release fertiliser:
 - Type: Organic.
 - Application rate: 50 g/m² or to supplier's recommendations.
- 640 THINNING BY REMOVAL OF SURPLUS PLANTS
- Plants to be thinned: Shrub beds, if required.
 - Standard: BS 7370-4.
 - Timing: Spring
 - Roots:
 - Disturbance to adjacent plants: Minimise.
 - Soil: Refill holes with topsoil to leave an even graded surface.
 - Mulch: Maintain mulch as original specification.
 - Adjacent plants: Make good any minor damage immediately.
 - Plants for retention: Select plants with a strong healthy habit.
 - Mature planting density: No bare ground and to allow plants to grow to natural spread.
- 645 WEED CONTROL GENERALLY
- Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.
 - Adjacent plants, trees and grass: Do not damage.
- 650 HAND WEEDING
- General: Remove weeds entirely, including roots.
 - Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
 - Completion: Rake area to a neat, clean condition.
 - Mulch: Reinstate to original depth.
- 655 WEED CUTTING BY HAND OR MACHINE
- Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 25 mm.
 - Herbicides: Do not use.

NOTE: Use of herbicides is to be avoided wherever alternative methods are practicable.

- 657 HERBICIDE TO KILL REGROWTH
- Type: Suitable foliar acting herbicide to kill regrowth.
 - Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.
- 665 WEED CONTROL WITH WINTER HERBICIDE
- Type: Suitable residual soil acting herbicide.
 - Time of year: Unless otherwise agreed, complete before end of March.
- 670 WEED CONTROL WITH SUMMER HERBICIDE
- Type: Suitable foliar acting herbicide.
- 675 DIGGING OVER
- General: Dig over beds where bare soil remains only. Do not damage existing plants, bulbs and roots.
 - Depth of dig (minimum): 150mm.
- 680 SOIL AERATION
- Compacted soil surfaces:
 - Prick up: To aerate the soil of root areas and break surface crust.
 - Size of lumps: Reduce to crumb and level off.
 - Damage: Do not damage plants and their roots.
- 685 SOIL LEVEL ADJUSTMENT
- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
 - Arisings (if any): Spread evenly over the bed.
- 690 MAINTENANCE OF LOOSE MULCH
- Thickness (minimum): 75 mm.
 - Top up: Twice per year.
 - Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
 - Weeding: Remove weeds growing on or in mulch by hand weeding.
- 695 FERTILISING ESTABLISHED TREES AND SHRUBS
- Time of year: During April or May.
 - Type of fertiliser: Slow release organic.
 - Application: Spread evenly.
 - Rate: 70 g/m² and to supplier's recommendation.
- 700 SNOW REMOVAL FROM SHRUBS/ TREES
- Standard: To BS 7370-4.
 - Plants subject to snow removal: All evergreens.
 - Timing: When instructed.
- 705 WINTER LEAF REMOVAL
- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
 - Arisings: Remove to recycling facility.

TREE WORK

- 810 TREE WORK GENERALLY
- Identification: Before starting work agree whether any trees are to be removed or pruned.
 - Protection: Avoid damage to neighbouring trees, plants and property.
 - Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
 - Removing branches: Cut as Arboricultural Association Leaflet 'Mature tree management'.
Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
 - Appearance: Leave trees with a well-balanced natural appearance.
 - Chain saw work: Operatives must hold a Certificate of Competence.

- Tree work: To be carried out by an approved member of the Arboricultural Association.
- 815 ADDITIONAL WORK
- Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.
- 820 PREVENTION OF WOUND BLEEDING
- Standard: To BS 3998, clause 8.
- 825 PREVENTION OF DISEASE TRANSMISSION
- Standard: To BS 3998, clause 9 and Appendix B.
- 830 CLEANING OUT AND DEADWOODING
- Remove:
 - Dead, dying, or diseased wood, broken branches and stubs.
 - Fungal growths and fruiting bodies.
 - Rubbish, wind-blown or accumulated in branch forks.
 - Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - Other unwanted objects.
 - Climbing plants to be cut back if grown over high fences / into buildings or are obscuring views.
- 835 CUTTING AND PRUNING GENERALLY
- Tools: Appropriate, well maintained and sharp.
 - Final pruning cuts:
 - Chainsaws: Do not use on branches of less than 50 mm diameter.
 - Hand saws: Form a smooth cut surface.
 - Anvil type secateurs: Do not use.
 - Removing branches: Do not damage or tear the stem.
 - 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.
 - Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
Large branches: Remove only with prior approval.
 - Remove in small sections and lower to ground with ropes and slings.
 - Dead branches and stubs: When removing, do not cut into live wood.
 - Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
 - Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.
- 840 CROWN REDUCTION/ SHAPING
- General: Cut back selectively to lateral or sub-lateral buds or branches to retain flowing branch lines without leaving stumps.
- 845 CROWN LIFTING
- Clearances: Remove branch systems to give clearance.
 - Height: 3m.
 - Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sub-lateral buds or branches. Do not leave stumps.
- 850 CROWN THINNING
- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
 - Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown.
 - Quantity: 20%
 - Cutting: Make no cuts of more than 50mm diameter
 - Branches: Cut back to lateral or sub-lateral buds or branches without leaving stumps.
 - Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 CUTTING TREE ROOTS

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

860 REMOVING TREES, SHRUBS AND HEDGES

- Standards: To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
- Existing services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and smaller trees: Cut down and grub up roots.
- Tree stumps:
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
- Filling holes:
 - Material: Use as-dug material and/ or imported soil as required.
 - Finishing: Consolidate and grade to marry in with surrounding ground level.

865 BARK DAMAGE

- Wounds:
 - Do not attempt to stop sap bleeding.
 - Bark: Remove ragged edges using a sharp knife.
 - Wood: Remove splintered wood from deep wounds.
 - Size: Keep wounds as small as possible.
- Liquid or flux oozing from apparently healthy bark: Give notice.

HARD LANDSCAPE AREAS/FENCING

910 HARD SURFACES AND GRAVEL AREAS

- As architects' hard landscape specifications.

920 FENCING

- Fences and knee-rails: Inspect and repair to match existing.

Q40 Fencing

To be read with Preliminaries/ General Conditions

210 WOODEN POST AND RAIL FENCING

- Manufacturer: Contractor's choice.
 - Product reference: Knee-rail fence.
- Standard: To BS 1722-7.
- Height: 500mm.
- Wood: Oak and/ or sweet chestnut.
 - Treatment: To provide a 30 year service life.
 - Finish: None required.
- Maximum centres of posts: 1500mm, as drawing ref 62241015-004-P1001 Detail 1.
- Method of setting posts: 300 mm square or round holes, 350 mm deep filled to not less than two thirds the depth with concrete and as drawing.
- Accessories: As drawing 62241015-004-P1001 Detail 1.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.

720 SETTING POSTS IN CONCRETE

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

760 NAILED WOOD RAILS

- Length (minimum): Two bays, with joints in adjacent rails staggered.
- Fixing: Nail each length of rail to each post with two 100 mm galvanized nails.
- Rails with split ends: Replace.

770 SITE CUTTING OF WOOD

- General: Kept to a minimum.
- Below or near ground level: Cutting prohibited.
- Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

780 MAKING GOOD GALVANIZED SURFACES

- Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
- Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

COMPLETION

910 CLEANING

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

920 FIXINGS

- All components: Tighten.
 - Timing: Before handover.

Q50 Site/street furniture/equipment

To be read with Preliminaries/ General Conditions

510 CONCRETE FOUNDATIONS GENERALLY

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

515 SETTING COMPONENTS IN CONCRETE

- Holes: As shown in detail 2.
- Components: Accurately positioned and securely supported.
- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

530 PRESERVATIVE TREATED TIMBER

- 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.
- Heavily worked sections: Re-treat.

540 BUILDING IN TO MASONRY WALLS

- Components being built in: Accurately positioned and securely supported. Set in mortar and pointed neatly to match adjacent walling.
- Temporary support: Maintain for 48 hours (minimum) and prevent disturbance.

545 ERECTION OF TIMBER AND PREFABRICATED STRUCTURES

- Checking: 5 days (minimum) before proposed erection date, check foundations, holding down bolts, etc.
- Inaccuracies or defects in prepared bases or supplied structures: Report immediately. Obtain instructions before proceeding.