

oobe

NBS Landscape Specification

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Blindwells

Planning

Hargreaves Ltd

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PREAMBLE

For the purposes of describing design intent, this specification gives reference to specific product suppliers and manufacturers.

OOBE Ltd certify that they have carried out the work with due care and diligence to their best belief and knowledge based on the information available. Thus any reliance placed on the advice and/or information given in the specification should be considered in the light of the information available and/or accessible at the time of preparation.

To be read in conjunction with Engineer's specification for all Civil and Structural works including bedding, jointing and groundwork.

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Table of Contents

Title		Page
Q28	Topsoil and growing media	3
Q30	Seeding/turfing	6
Q31	External planting	11
Q35	Landscape maintenance	19

Q28 Topsoil and growing media

To be read with Preliminaries/ General conditions.

200 GRADING SUBSOIL

- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
- Areas of thicker topsoil: Excavate locally.

250A SUBSOIL SURFACE PREPARATION

- General: Excavate and/ or place fill to required profiles and levels, as Engineer's specification.
- Loosening:
 - Light and noncohesive 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 75 mm.
- Remove Arisings, contaminants and debris.
 - Ensure at least 500mm of subsoil below all plant beds and grass areas.
 - Quality of subsoil: to be general purpose sandy clay loam. Soil analysis detailing pH, texture classification, salinity, organic content, phytotoxic and zootoxic element contents with certification and samples required for approval.
 - To be reviewed on site with landscape architect to determine if existing sub soil is suitable.

260 INSPECTING FORMATIONS

- Give notice: Before spreading topsoil for planting beds and grass areas.
- Notice period: 14 days.

300 TOPSOIL ANALYSIS

- Soil to be analysed: Imported topsoil and sub soil.
- Soil analyst: contractors choice.
- Samples: Collect in accordance with BS 3882, Annex A.
- Submit:
 - Declaration of analysis: Chemical analysis and contaminants, Nutrient content, pH value and textural classification and Textural classification and maximum stone content .
 - Report detailing soil analyst's recommendations.

310 PREPARATION OF UNDISTURBED TOPSOIL

- Standard: In accordance with BS 4428
 - Grading and cultivation: To suit cultivation operations specified in Q30 & Q31.
- Hard ground: Break up thoroughly.
- Clearing: Remove visible roots and large stones with a diameter greater than 50 mm.
- Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
- Fallow period (minimum): Two months.
- Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide

330A SURPLUS TOPSOIL TO BE RETAINED

- Generally: Spread and level on site:
 - Locations: to be agreed on site with the Landscape Architect.
 - Protected areas: Do not raise soil level within root spread of trees that are to be retained.
 - Screen soil prior to re-use to ensure no potentially harmful materials.
- Protect topsoil during works to avoid contamination from building materials.

340 IMPORTED TOPSOIL TO BS 3882

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Grade: Premium, free draining sandy loam. No topsoil to be supplied for wildflower areas, nutrient low soil to be used.
- Source: Submit proposals.
- Submit: Declaration of analysis including information detailing each of the relevant parameters given in BS 3882, clause 6 and table 2.
- Additional analyses: To be screened prior to spreading to ensure that all potentially harmful materials are removed, and to be inspected prior to handover to ensure all potentially harmful builders waste has been removed (glass, nails, screws etc).

395 PEAT

- Peat or products containing peat: Do not use.

660 SAMPLE LOAD OF IMPORTED TOPSOIL

- General: Deliver to site a sample load of not less than 5 m³.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 14 days.

670 CONTAMINATION

- General: 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, do not use subsoil contaminated with the above materials.
- Give notice: If any evidence or symptoms of soil contamination are discovered on the site, or in topsoil to be imported.

680 TOPSOIL STORAGE HEAPS

- Location: TBA.
- Height (maximum): 1.5 m.
- Width (maximum): 4.0 m.
- 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.

690 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 as defined by BS 3882, Annex N2.

700A 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): 150 mm for grass areas, 450mm for planting beds. NOTE: 200mm for 'pitch' areas.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

710 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.
- Depths after settlement (minimum): 150 mm.

910 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Above adjoining paving or kerbs: 00 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 25 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

920 DOCUMENTATION

- Timing: Submit at handover.
- Contents:
 - Full description of all soil components.
 - Record of source for all soil components.
 - Analyst's report for each test carried out.
 - Record drawings showing the location of all soils by type and grade.
- Number of copies: 2.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS**115 SEEDED AND TURFED 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**205 PREPARATION 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: Composted animal manures, Composted horticultural waste, Sanitized and stabilized compost and Spent mushroom compost.
- Give notice: before ordering or using.

- 210 HERBICIDE FOR ALL GRASSED AREAS
- Type: Suitable for suppressing perennial weeds.
 - Timing: Allow fallow period before cultivation.
 - Duration: As manufacturer's recommendation.
- 212 SEED BED CLEANING BEFORE SOWING ALL GRASSED AREAS
- Operations: Kill pernicious weeds with selective contact herbicide.
- 226 COMPOST FOR ALL GRASSED AREAS
- Type: Sanitized and stabilized compost.
 - Standard: In accordance with PAS 100.
 - Supplier: Submit proposals.
 - Product reference: Submit proposals.
 - Standard: To PAS 100.
 - 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.
 - Composting Association certification: Not required.
 - Declaration of analysis: Submit
 - Samples: Supply 5 kg sample before ordering.
 - Application rate: 50 mm thick layer.
 - Timing: Apply prior to cultivation.
- 231 PEAT
- Peat or products containing peat: Do not use.
- 250 CULTIVATION
- Compacted topsoil: Break up to full depth.
 - Soil ameliorant/ Conditioner/ Fertilizer: Fully incorporate into topsoil to a depth of 100 mm.
 - Tilth: Reduce topsoil to a tilth suitable for blade grading.
 - Depth: 100 mm.
 - Particle size (maximum): 10 mm.
 - Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.
- 260 GRADING
- 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.
 - Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150 mm.
 - Give notice: If required levels cannot be achieved by movement of existing soil.

270 FERTILIZER FOR ALL GRASSED AREAS

- Types: Apply both:
 - Superphosphate with a minimum of 18% water soluble phosphoric acid.
 - A sulfate of ammonia with a minimum of 20% nitrogen.
- Application: Before final cultivation and three to five days before seeding/turfing.
- Coverage: Spread evenly, each type at 70 g/m², in transverse directions.

280 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:
 - General areas: 20 mm.
 - Fine lawn areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

SEEDING

311C GRASS SEED FOR GENERAL PURPOSE

- Supplier: Emorsgate Seeds or similar.
 - Mixture reference: EG22 Strong Lawn Grass Mixture.
- Application rate: 25 g/m².

312 SEED MIXTURE FOR WILD FLOWER AREAS

- Supplier: Scotia Seeds or similar.
 - Mixture reference: MG5 Meadow Mix.
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 3 g/m².

312 SEED MIXTURE FOR SUDS EMBANKMENTS

- Supplier: Barenbrug Seeds or similar.
 - Mixture reference: E16 Landscape and Embankments
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 25 g/m².

319 QUALITY OF SEED FOR ALL GRASSED AREAS

- 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: To suit soil type, proposed usage, location and weather conditions during and after sowing.
 - Distribution: 2 equal sowings at right angles to each other and diagonally to main axis.

335 GRASS SOWING SEASON

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

336 WILDFLOWER SOWING SEASON

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

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: Respread soil and mulch.

PROTECTING/CUTTING

530 FIRST CUT OF GRASSED AREAS

- Timing: When grass is reasonably dry.
 - Height of initial growth: 40-75 mm.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 25 mm.
- Mower type: Contractor's choice.
- Arisings: Remove from site.

540A FIRST CUT OF WILDFLOWER MEADOWS

- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: Autumn sown: in March cut to 4-7cm if there is sufficient material.
Spring sown: 6 weeks after sowing cut to 4-7cm.
- Mower type: Contractor's choice.
- Arisings: Remove from site.

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

605 MAINTENANCE

- Duration: Carry out the following operations from completion of seeding/ turfing until the end of the defects liability period .

610 FAILURES OF SEEDING/TURFING

- Defective materials or workmanship: Areas that have failed to thrive.
 - Exclusions: Theft or malicious damage.
- Method of making good: Recultivation and reseeded/ returfing.
- Timing of making good: within 21 days of instruction.

620 MAINTAINING GENERAL GRASSED AREAS

- Maximum height of growth at any time: 50 mm.
- Preparation: Before each cut remove all litter and debris.
- Cutting: As and when necessary to a height of 25 mm.
 - Arisings: Spread evenly over cut areas.
- Bulb planting areas: Do not cut until bulb foliage has died down.
- Trimming: All edges.
 - Arisings: Remove.
- Weed control: Substantially free of broad leaved weeds.
 - Method: Application of a suitable selective herbicide.
- Stones brought to the surface: Remove regularly.
 - Size: Exceeding 25 mm in any dimension.
- Areas of settlement: Make good.
- Watering: as required to ensure grass thrives.

680 MAINTENANCE FERTILIZER FOR ALL GRASSED AREAS EXCEPT WILDFLOWER MEADOWS

- March application: 15:10:10 Spring turf fertilizer at 35 g/m².
- September application: 5:10:10 Autumn turf fertilizer at 50 g/m².

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; retain and protect trees indicated on drawings.
 - 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 and any concrete bases, concrete footing overflows resulting from hardworks to ensure full planting depth is achievable to every bed. Advise Colour urban design limited when unsure.
- 118 SOIL CONDITIONS
- Soil for cultivating and planting: Moist, friable and (excepting 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.

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: 2 weeks.

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: all compost materials.
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 for at least one growing season, 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.

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.

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: Coextruded polyethylene bags with black interior and white exterior.
- 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 with reference code (to be provided).

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

- 300 HERBICIDE TO CLEAR OVERGROWN BEDS
- 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 FOR INVASIVE NON-NATIVE WEEDS
- Locations: All planting areas.
 - General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding.
- 341 PEAT
- Peat or products containing peat: Do not use.
- 361 COMPOST PLANTING BEDS
- Locations: All planting areas.
 - Type: Sanitized and stabilized compost.
 - Manufacturer/ Supplier: Submit proposals.
 - Product reference: Submit proposals.
 - Standard: To PAS 100.
 - Horticulture 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.
 - Composting Association certification: Required.
 - Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: 50 mm thick layer.
 - Other requirements:

Note: The goal of adding compost is to create a soil that closely resembles a loam soil and possesses a minimum of 5% organic matter by content (dry weight). Therefore the amount of compost to be applied may be increased or decreased as instructed by the landscape architect dependant upon the condition of the topsoil to be used - topsoil testing is covered under Q28..
- 375 CULTIVATION
- Compacted topsoil: Break up to full depth.
 - Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
 - Depth: initial cultivation to 300mm, then cultivate the top 200mm (min) after the soil ameliorant is applied.
 - 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.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

- 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 10 kg compost.
 - Backfilling material: as clause 476.
- 435 CLIMBING PLANTS USED AS GROUND COVER
- Planting:
 - Canes or other supports: Remove.
 - Arrangement: Spread stems.
 - Fixing: Pinned to ground to ensure good contact.
- 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.
- 476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL
- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:
 - Ameliorant/ Conditioner: as clause 361.
 - Application rate: mix topsoil: compost at 3:1.
 - Fertilizer: Not required.
 - Application rate: -.
- 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: Not required during the 1st growing season. Apply a slow release fertiliser at beginning of the second growing season..
- 485 MULCHING PLANTING BEDS
- Material: Fine grade 100% bark mulch free from any foreign matter or other timbers .
 - Purity: Free of pests, disease, fungus and weeds.
 - Preparation: Clear all weeds. Water soil thoroughly.
 - Coverage: 50 mm depth.
 - Finished level of mulch: 0 mm below adjacent grassed or paved areas.

PLANTING TREES**505 TREE PITS**

- Sizes: 1000x1000x1000.
- 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 and as per the tree pit planting detail.
- Pit sides: Scarify.
- Backfilling material: as clause 586.
- Accessories: As detail drawings for tree pits including
 - 1) to specimen tree pits in entrance areas: Perforated plastics irrigation/ ventilation pipe, Root barrier, Tree pit drainage layer and Underground guying.
 - 2) scattered trees around rest of site: Perforated plastics irrigation/ ventilation pipe, double staking and tree pit drainage layer. .

510A TREE PIT ROOT BARRIERS

- Locations: To tree pits adjacent to buildings, along main roads, back of kerb lines and to protect underground services.
- Manufacturer: GreenBlue Urban 01424 717797 or similar approved.
 - Product reference: Reroot linear barrier. Depth to be chosen to suit location.
- Depth of top of root barrier below finished soil level: 25 mm.
- Installation: With sides vertical.
 - Install with ribs facing the tree.
 - Barriers should extend at least 1m beyond the eventual mature tree canopy.

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): 75mm.

565 LOW DOUBLE STAKING FOR ALL TREES UP TO HEAVY STANDARD SIZE

- 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 off just below lowest branch of tree.
- Cross bar: Wood, as stake.
 - Firmly fix on windward side of tree and as close as possible to stem.
- Ties: Naturetie or rubber tie and flat back spacer.
- Tying: Secure tree firmly but not rigidly to cross bar.

586 TREE BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Ameliorant/ Conditioner: as clause 361.
 - Application rate: 4:1 ratio topsoil: compost.
- Fertilizer: Bonemeal / slow release fertiliser.
 - Application rate: 135gm/m².

590 MULCHING TREES

- Material: Fine grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: In a circular area of 500 mm radius measured from the tree stem at 50mm depth.
- Finished level of mulch: 0 mm below adjacent grassed or paved areas.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

- Duration: Carry out the operations in the following clauses from completion of planting until end of defects liability period.
- Frequency of maintenance visits: Fortnightly during growing season.

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: By 31 December of the year in which the defect is identified.

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 maintaining full thickness of mulch and hand weeding.
- 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 required to ensure all trees and shrubs thrive and as instructed.

755 PLANTING MAINTENANCE - FERTILIZER

- Time of year: March or April.
- Fertilizer: safe organic slow release.
 - Manufacturer: Contractor's choice.
 - Product reference: Bonemeal 4+19+0.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: 135 grams per m2.

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 a schedule of any ongoing maintenance problems experienced during the defects liability period and 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): 50 mm.
- Trees: Remulch.
 - Depth (minimum): 50 mm.

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

105 MAINTENANCE OBJECTIVES

- Location: All planting areas.
 - Duration: As per maintenance contract.
- Aims:
 - Enhanced landscape quality;
 - Improved landscape visual amenity; and
 - Provide wildlife habitat and increase biodiversity.
- Restrictions: None.
- Results: Adequate establishment of all planting areas.

110A NOTICE

Give notice before:

- Each site maintenance visit providing a summary of works to be undertaken.
- Implementation of any additional works - quotations to be approved in writing by client
- 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.

140 CONTROL OF MAMMALIAN PESTS

- Specialist firms: Submit proposals.
 - Method: Submit proposals.

155 WATERING

- Supply: Potable mains 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: Spread over native shrub planted areas to biodegrade on site or remove to recycling facility..
 - Grass cuttings: Spread over native shrub planted areas to biodegrade on site or remove to recycling facility..
 - Tree roots and stumps: Remove from site.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and nonbiodegradable arisings: Remove from site.

180 CHIPPING OR SHREDDING

- General: Not permitted on site.

181 MECHANICAL EQUIPMENT

- General: Minimize.
- Prohibited equipment: None.
- Timing: To be agreed with client to minimise disturbance - may also require notification to local planning authority..

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.

GRASSED AREAS

210 MAINTENANCE OF GRASSED AREAS

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

220 GRASS CUTTING GENERALLY

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

225 TREE STEMS

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

235 BULBS AND CORMS IN GRASSED AREAS

- Before flowering: Do not cut.
- Interval between end of flowering and start of grass cutting (minimum): Six weeks.

250 LEAF REMOVAL

- Operations: Collect fallen leaves.
- Special requirements: None.
- Disposal: Spread over native shrub planted areas to biodegrade on site or remove to recycling facility..

- 255 FIRST CUT OF ALL GRASSED AREAS
- Height of initial growth: 50 mm.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 25 mm.
 - Mower type: Contractor's choice.
 - Arisings: Spread over native shrub planted areas to biodegrade on site or remove to recycling facility..
- 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 edges.
 - Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.
- 320 LEVELLING HOLLOWES AND BUMPS IN TURF
- Standard: To BS 7370-3, clauses 12.4 and 12.5.
- 325 RELIEVING SURFACE COMPACTION IN TURF
- Standard: To BS 7370-3.
 - Method: Spiking.
 - Top dressing: Not required.
 - Depth: 2-3 mm.
- 350 FERTILIZER - SPRING APPLICATION
- Type: Organic.
 - Application rate: 60 g/m².
- 360 FERTILIZER - AUTUMN APPLICATION
- Type: Organic.
 - Application rate: 60 g/m².
- 380 REINSTATEMENT OF DAMAGED LAWNS
- Damaged turf: Remove to a depth of 40 mm.
 - Preparation: Cultivate substrate to a fine tilth.
 - Reinstatement: Contractor's choice of returving or topsoiling and reseeding:
 - Returving: Quality and appearance to match existing.
 - Reseeding: Fill with fine topsoil to BS 3882 multi purpose class, free from stones, debris and weeds. Reseed with a seed mix to match existing grass in quality and appearance.
 - Protection and watering: Provide as necessary to promote successful germination and/or establishment.
- 381 REINSTATEMENT OF WORN OR DAMAGED LAWNS
- Worn or damaged areas: Make good by returving or reseeding:
 - Returving standard: To BS 7370-3, Clause 12.2.
 - Reseeding standard: To BS 7370-3, Clause 12.6.
 - Turf or seed: To match existing in appearance and quality.
 - Protection and watering: Provide as necessary to promote successful germination and/or establishment.

FLOWER BEDS/ SEASONAL BEDDINGS

470 FLOWER BEDS GENERALLY

- Operations:
 - Remove: Dead flower heads, fallen leaves, litter and debris.
 - Weeds: Thoroughly hand weed.
 - Cultivate: Lightly hoe.
 - Trim: Clip grass edges.
- Fungicide: Not required.
- Insecticide: Not required.

490 THINNING BY REMOVAL OF SURPLUS PLANTS

- Plants to be thinned: To be reviewed and identified by contractor for client approval..
- Standard: BS 7370-4, clause 3.5.17.1.
- Timing: Thin when foliage of adjacent plants has begun to touch.
- 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: To provide carpet of cover to planting bed - density may vary to achieve this..

SHRUBS/TREES/HEDGES

500 ESTABLISHMENT OF NEW PLANTING

- Duration: Two full growing seasons from the date of planting.
- Weed control:
 - Method: Keep planting beds clear of weeds by maintaining full thickness of mulch as specified, hoeing and screening as required. .
 - 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: As required to ensure continued thriving of planting..

502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER

- Time of year: March or April.
- Type: Organic.
- Spreading: Spread evenly. Carefully lift and replace any mulch materials.
 - Application rate: 300 g per m².

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, refix 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: During spring when no longer required to support the tree.
 - Fill stake holes with lightly compacted soil.

- 520 REFIRMING OF TREES AND SHRUBS
- Timing: After strong winds, frost heave and other disturbances.
 - Refirming: 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 refirm.
- 540A 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. Pruning works to be programmed to avoid disruption to nesting birds/ roosting bats etc. - all trees/ shrubs to be pruned to be assessed for the presence of these species prior to the commencement of any works on site.
- 545 PRUNING OF EXCESSIVE OVERHANG
- Timing: Annually.
 - Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
 - Special requirements: Allow ground cover plants to partially overlap paths and lawns.
- 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: Growth retardents not permitted.
- 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: Member of the Arboricultural Association.
- 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.
 - Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.
- 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: Within one week of notification.
 - 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 fertilizer:
 - Type: Organic.
 - Application rate: 70 g/m².
- 640 THINNING BY REMOVAL OF SURPLUS PLANTS
- Plants to be thinned: Shrub beds.
 - Standard: BS 7370-4.
 - Timing: To be proposed by contractor for client approval..
 - 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: To provide continuous shrub cover to planting beds..

- 645 WEED CONTROL GENERALLY
- Weed tolerance: Weed to clear ground every two weeks.
 - 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.
- 675 DIGGING OVER
- General: Dig over beds. Do not damage existing plants, bulbs and roots.
 - Depth of dig (minimum): 100 mm.
- 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.
- 690 MAINTENANCE OF LOOSE MULCH
- Thickness (minimum): 50 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 FERTILIZING ESTABLISHED TREES AND SHRUBS
- Time of year: During February or March.
 - Type of fertilizer: Organic.
 - Application: Spread evenly.
 - Rate: 70 g/m².
- 700 SNOW REMOVAL FROM SHRUBS/ TREES
- Standard: To BS 7370-4.
 - Plants subject to snow removal: All evergreens.
 - Timing: Within 24 hours of snowfall.
- 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.
- 710 WOODLAND PLANTING MAINTENANCE
- Watering: In exceptional circumstances to prevent plants dying.
 - Loose plants: Refirm surrounding soil, without compacting.
 - Vegetation: Except trees and coppice shoots to be retained, cut down to 100 mm above ground level within the plantation area.
 - Arisings: Leave between rows.
 - Ditches and drains: Keep clear.

TREE WORK

- 810 TREE WORK GENERALLY
- Identification: Before starting work agree which trees, shrubs and hedges 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, e.g. tree houses, swings.
 - Climbing plants as required..

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 sublateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations: As instructed..

845 CROWN LIFTING

- Clearances: Remove branch systems to give clearance.
 - Height: As instructed..
- Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral 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: As instructed..
- Cutting: Make no cuts of more than diameter instructed by qualified arboriculturalist..
 - Branches: Cut back to lateral or sublateral 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: Remove mechanically to a minimum depth of 300 mm below ground level.
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Protection: Avoid damage to neighbouring trees, plants and property.
- 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.

870 CAVITIES IN TREES

- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.
- Cavity openings: treat as instructed by qualified arboriculturalist.