

Neath Abbey Primary Soft Works Specification

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Q Paving/Planting/Fencing/Site furniture

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

- 115 SOIL SYSTEM FOR GRASS SWARDS FOR LAWNS
 Å Composition:
 - Soil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Sanitized and stabilized composted materials and fertilizer.
 Accessories: None.
- 115A SOIL SYSTEM FOR GRASS SWARDS FOR SPORTS FIELDS
 Å Composition:
 - Soil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Aggregates.
 Accessories: None.
- 115B SOIL SYSTEM FOR GRASS SWARDS FOR CONSERVATION GRASS AREAS
 Å Composition:
 - Soil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: None.
 - Accessories: None.
- 135 PLANTING BED SOIL SYSTEM FOR HEDGING, SHRUBS AND HERBACEOUS
 Å Composition:
 - Topsoil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Sanitized and stabilized composted materials, aggregates and fertilizer.
 - Accessories: Mycorrhizal inoculant.
- 145 PLANT PIT BACKFILLING SOIL SYSTEM FOR SHRUB PITS & TREE PITS
 Å Composition:
 - Topsoil:
 - Excavated material;
 - Site sourced topsoil; and
 - Imported topsoil to BS 3882.
 - Ameliorants: Sanitized and stabilized composted materials, aggregates and fertilizer.
 - Accessories: Mycorrhizal inoculant.
- 155A TOP DRESSING FOR ALL GRASSED AREAS not conservation grass areas
 Å Composition:
 Material: Sanitized and stabilized composted materials.
- 155B MULCHING FOR HEDGING, SHRUBS & TREES
 Å Composition:
 Material: Organic materials i amenity grade bark mulch 15-65mm grade.

PRODUCTS

- 300 PREPARATION MATERIALS GENERALLY
 Å Purity: Free of pests and disease.
 Å 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.
 Å 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.

Å Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.

Å Objectionable odour: None.

Å 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

Å Materials: Composted green / food waste certified to PAS 100.

Å Give notice: before ordering or using.

Å Declaration of compliance in accordance with BS EN 13650: Required.

310 MATERIALS NOT PERMITTED

Å Materials: Peat and products containing peat, river and canal dredgings

315 IMPORTED TOPSOIL TO BS 3882 FOR PLANTING BEDS, GRASS AREAS & TREE PITS

Å Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.

Å Standard: To BS 3882:2015.

Å Classification: Multipurpose.

- Grade: Within the parameters of 'sandy loam' textural class.

Å Source: Submit proposals.

Product reference: Submit proposals.

345 AGGREGATES FOR PLANTING BEDS & TREE PITS

Å Source: Submit proposals.

- Product reference: Submit proposals.

Å Reference, description and grading:

- Sand: Coarse grained, sharp sand with neutral pH.
- Grit: 2-5mm horticultural grit.
- Crushed materials: none.
- Other aggregates or particles: none.

Å Recycled content: None permitted.

345A AGGREGATES FOR GRASS SEEDING / TURFING

Å Source: Submit proposals.

- Product reference: Submit proposals.

Å Reference, description and grading:

- Sand: Silica sand.
- Grit: none.
- Crushed materials: none.
- Other aggregates or particles: none.

Å Recycled content: None permitted.

360 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR PLANTING BEDS, GRASS AREAS & TREE PITS

Å Standard: In accordance with PAS 100.

Å Source: Contractor's choice.

- Product reference: Submit proposals.

Å 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: 5 mm screen mesh aperture.
- Carbon:Nitrogen ratio (maximum): 20:1.

- Å Texture: Friable.
- Å Objectionable odour: None.
- Å Composting Association certification: Required.
- Å Declaration of analysis: Submit.
- Å Additional analyses: Phytotoxic elements.
- Å Samples: Supply 5 kg sample before ordering.

380 MYCORRHIZAL INOCULANT ALL TOPSOIL TO PLANTING BEDS AND TREE PITS

- Å Manufacturer: Submit proposals.
- Product reference: Submit proposals.

405 INORGANIC FERTILIZERS GRASS AREAS PLANTING BEDS AND TREE PITS

- Å Manufacturer/ source: Submit proposals.
- Product reference: Submit proposals.
- Å Standard: In accordance with the Fertiliser Industry Assurance Scheme (FIAS).
- Å Purpose: Establishment fertilizer.
- Å Type: NPK (macronutrient).
- Å Availability to plants: Slow release.

405A INORGANIC FERTILIZERS GRASS AREAS NOT CONSERVATION GRASS

- Å Manufacturer/ source: Submit proposals.
- Product reference: Submit proposals.
- Å Standard: In accordance with the Fertiliser Industry Assurance Scheme (FIAS).
- Å Purpose: Maintenance fertilizer - March application (15:10:10 spring turf fertilizer / 5:10:10 autumn fertilizer).
- Å Type: NPK (macronutrient).
- Å Availability to plants: Slow release.

EXECUTION

605 SITE INVESTIGATION

- Å Report: See section SEE PROJECT MANAGER / LEAD CONSULTANT

610 TOPSOIL ANALYSIS

- Å Soil to be analysed: Imported topsoil and Topsoil stockpile.
 - Å Soil analyst: Submit proposals.
 - Å Samples: Collect in accordance with BS 3882.
 - Å Submit:
 - Declaration of analysis:
 - Maximum stone content, stone size and pH value;
 - Nutrient content, pH value and textural classification; and
 - Phytotoxic and CLEA elements.
- Report detailing soil analyst's recommendations.

615 TESTING OF MATERIALS

- Å Material to be analysed: Imported aggregates and organic materials.
 - Å Soil analyst: Submit proposals.
 - Å Samples: Collect in accordance with PAS 100.
 - Å Submit:
 - Declaration of analysis:
 - Phytotoxic and CLEA elements.
- Report detailing soil analyst's recommendations.

620 IMPORTING TOPSOIL

- Å Give notice: Before stripping topsoil for transfer to site.
- Notice period: 7 days.

625 SAMPLE LOADS FOR IMPORTED TOPSOIL

- Å Deliver to site a sample load: of 5 kg.
- Å Give notice: Allow inspection before making further deliveries to site. Retain for comparison

with subsequent loads.

- Notice period: 7 days.

625A SAMPLE LOADS FOR IMPORTED SOIL IMPROVERS / COMPOST

Å Deliver to site a sample load: of 5 kg.

Å Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.

- Notice period: 7 days.

630 DOCUMENTATION FOR IMPORTED SOIL IMPROVERS / COMPOST

Å Timing: Submit at handover.

Å 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.

Å Number of copies: Two.

635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR IMPORTED SOIL IMPROVERS

Å Timing: Submit at handover.

Å 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.

Å Number of copies: Two.

640 DOCUMENTATION FOR PREPARATION MATERIALS FOR ORGANIC MATERIALS

Å Timing: Submit at handover.

Å Contents:

- Full description of all components.
- Record of source for all components.
- Analyst's report for each test carried out.
- Supplier's declaration of compliance with BSI PD CR 13456.
- Quality Compost Protocol certification: Required.

Å Number of copies: Two.

650 NOTICE

Å Give notice before:

- Setting out.
- Spreading topsoil.
- Applying herbicide.
- Applying fertilizer.
- Visiting site during maintenance period.

Å Period of notice: 3 working days.

655 MECHANICAL TOOLS

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

660 GRADING SUBSOIL

Å General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.

Å 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.

Å Areas of thicker topsoil: Excavate locally.

Å Avoid over compaction.

665 SUBSOIL SURFACE PREPARATION

Å General: Excavate and/ or place fill to required profiles and levels, as section D20.

Å 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.

Å Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.

Å Remove from site: Arisings, contaminants and debris and Builders rubble.

670 INSPECTING FORMATIONS

Å Give notice: Before spreading topsoil for lawn areas and planting beds.

Å Notice period: 7 days.

675 PREPARATION OF UNDISTURBED TOPSOIL

Å Standard: In accordance with BS 4428.

- Grading and cultivation: Category C.

Å Hard ground: Break up thoroughly.

Å Clearing: Remove visible roots and large stones with a diameter greater than 50 mm.

Å Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.

Å Fallow period (minimum): One month.

- Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

680 SURPLUS TOPSOIL TO BE RETAINED

Å Generally: Spread and level on site:

- Locations: To be agreed.
- Protected areas: Do not raise soil level within root spread of trees that are to be retained.

685 SURPLUS MATERIALS TO BE REMOVED

Å Topsoil: Remove from site excess topsoil remaining after completion of all landscaping work.

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

690 TOPSOIL STORAGE HEAPS

Å Location: Throughout the site.

Å Height (maximum): 1.5 m.

Å Width (maximum): 3.0 m.

- Formation: Loose tip in layers max 150mm deep, and shape from the side only, without running machinery on the heap at any time.

Å 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.

700 GRADING OF TOPSOIL

Å Topsoil condition: Reasonably dry and workable.

Å Contours: Smooth and flowing, with falls for adequate drainage.

- Hollows and ridges: Not permitted.

Å Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.

Å Give notice: If required levels cannot be achieved by movement of existing soil.

705 HANDLING TOPSOIL

Å Aggressive weeds: Give notice and obtain instructions before moving topsoil.

Å Plant: Select and use plant to minimize disturbance, trafficking and compaction.

Å Contamination: Do not mix topsoil with:

- Subsoil, stone, hardcore, rubbish or material from demolition work.

- Other grades of topsoil.
- Å Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Å 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 3%, to BS 1377-2.

710 SPREADING TOPSOIL

- Å Temporary roads/ surfacing: Remove before spreading topsoil.
- Å Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Å Depths after firming and settlement (minimum): Planting areas 350mm, Lawn areas 200mm, Sports grass areas 200mm, Conservation grass areas 150mm
- Å Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

- Å 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.

718 FINAL CULTIVATION FOR GRASS SEEDING & TURFING

- Å Compacted topsoil: Break up to full depth.
- Å Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Å Depth: 100 mm.
- Å Particle size (maximum): 5 mm.
- Å Timing: After grading and fertilizing, and within a few days before seeding.
- Å Weather and ground conditions: Suitably dry.
- Å Surface: Leave regular and even.
- Å Levels: 30 mm above adjoining paving or kerbs and Minimum 150 mm below dpc of adjoining buildings.
- Å Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 10 mm.

718A FINAL CULTIVATION FOR PLANTING AREAS

- Å Compacted topsoil: Break up to full depth.
- Å Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Å Depth: 350 mm.
- Å Particle size (maximum): 2-8 mm.
- Å Timing: After grading and fertilizing, and within a few days before seeding.
- Å Weather and ground conditions: Suitably dry.
- Å Surface: Leave regular and even.
- Å Levels: 25 mm above adjoining paving or kerbs, 50mm above adjoining lawns and Minimum 150 mm below dpc of adjoining buildings.
- Å Undesirable material brought to the surface:
 - Remove visible weeds.
 - Remove roots and large stones with any dimension exceeding 20 mm.

720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- Å Above adjoining paving or kerbs: 30 mm.
- Å Below dpc of adjoining buildings: Not less than 150 mm.
- Å Planting beds: Higher than adjoining grass areas by not less than 30 mm.
- Å Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
- Å Sportsfields: To even levels and within the following permitted deviations:
 - From levels or gradients shown on drawings: ± 75 mm.
 - From line between boning rods 30 m apart: ± 25 mm.
- Å Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
- Å Adjoining soil areas: Marry in.
- Å Thickness of turf or mulch: Included.

800 SOWING TEMPORARY CROPS

- Å Locations: All topsoil storage heaps.
- Å Sowing rate: As seed supplier's recommendations.
- Å Maintenance: Cut to a height of 50 mm when growth reaches 150 mm, re-cultivate sward one month prior to final planting.

805 APPLYING SOIL AMELIORANT

- Å Type: Horticultural grit to Q28:345.
- Å Locations: All planting areas.
- Å Fully incorporate into topsoil to a depth of 300 mm.
- Å Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: 15kg/m2.
- Å Timing: Prior to cultivation.
- Å Other requirements: n/a

805A APPLYING SOIL AMELIORANT

- Å Type: Coarse sand to Q28:345.
- Å Locations: All planting areas.
- Å Fully incorporate into topsoil to a depth of 300 mm.
- Å Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: 50-75 mm thick layer.
- Å Timing: Prior to cultivation.
- Å Other requirements: Submit 5 kg sample before ordering.

810 APPLYING COMPOST TO SEEDED AREAS

- Å Type: Organic materials, PAS 100 Compost to Q28:360.
- Å Locations: Whole site.
- Å Fully incorporate into topsoil to a depth of 100 mm.
- Å Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: 25mm thick layer.
- Å Timing: Prior to cultivation.
- Å Other requirements: Submit 5 kg sample before ordering.

810 APPLYING COMPOST TO PLANTING AREAS

- Å Type: Organic materials, PAS 100 Compost to Q28:360.
- Å Locations: All planting areas.
- Å Fully incorporate into topsoil to a depth of 300 mm.
- Å Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: 50-75 mm thick layer.
- Å Timing: Prior to cultivation.
- Å Other requirements: Submit 5 kg sample before ordering.

815 APPLYING LIME PLANTING BEDS - To be confirmed and subject to topsoil testing.

- Å Spread evenly.
 - Timing: Immediately before cultivation.
 - Rate: As Soil analyst's recommendations.

820 APPLYING GENERAL FERTILIZER PLANTING AREAS

- Å Application: Spread evenly, carefully incorporating below mulch materials.
 - Timing: Immediately before cultivation.
 - Application rate: At Manufacturer's recommended rates
 - Other requirements: none.

825 APPLYING FERTILIZER TO PROPOSED TO GRASS AREAS

- Å Application: Before final cultivation and three to five days before seeding/ turfing.

- Å Coverage:
- Å Spread evenly, in transverse directions.
Rate: At Manufacturer's recommended rates.

830 APPLYING TOP DRESSING TO SPORTS FIELD

- Å Type: Coarse sharp silica sand to Q28:345.
- Å Rate: 5 kg/m².
- Å Timing: Apply prior to cultivation.

840 APPLYING MYCORRHIZAL INOCULANT TREE, HEDGE & SHRUB PLANTING.

- Å Depth: To manufacturer's/ supplier's recommendations.

845 APPLYING LOOSE MULCH PLANTING AREAS & TREES

- Å Timing: Following planting.
- Å Preparation: Ensure that soil is thoroughly moistened, applying water where necessary.
- Å Coverage of mulch (minimum):
 - Planting beds (depth): 50 mm depth.
 - Trees: In a circular area of 500 mm radius measured from the tree stem. .
- Å Finished level of mulch: 75 mm above adjacent grassed or paved areas.

COMPLETION

905 APPLYING MAINTENANCE FERTILIZER TO SOIL TO PLANTING BEDS

- Å Duration: Carry out the following operations from completion of seeding/ turfing until the end of the rectification period.
- Å Time of year: During April and May.
- Å Application: Evenly spread, carefully incorporating below mulch materials.
- Å Rate: At Manufacturer's recommended rates

910 APPLYING MAINTENANCE FERTILIZER TO ALL GRASSED AREAS EXCEPT CONSERVATION GRASS

- Å Duration: Carry out the following operations from completion of seeding/turfing until the end of the rectification period.
- Å Time of year: March or April.
- Å Application: Evenly spread, carefully incorporating below mulch materials.
- Å Rate: At Manufacturer's recommended rates

920 APPLYING MULCH

- Å Timing: At end of the rectification period.
- Å Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Å Planting beds: Re-mulch.
 - Depth (minimum): 50 mm.
- Å Trees: Re-mulch.
 - Depth (minimum): 50 mm.
- Å Container planting: Re-mulch.
Depth (minimum): 50 mm.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115 SEEDED AND TURFED AREAS

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

120 CLIMATIC CONDITIONS

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

145 WATERING

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

150 WATER RESTRICTIONS

- Å 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

- Å Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Preparing seed bed.
 - Seeding or turfing.
 - Visiting site during maintenance period.
- Å Period of notice: 3 working days.

170 SETTING OUT

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

PREPARATION

210 HERBICIDE FOR ALL GRASSED AREAS

- Å Type: Suitable for suppressing perennial weeds.
- Å Timing: Allow fallow period before cultivation.
 - Duration: As manufacturer's recommendation.

212 SEED BED CLEANING BEFORE SOWING LAWN GRASSED AREAS

- Å Operations: Kill pernicious weeds with selective contact herbicide, as seed supplier's recommendations.

250 SOIL REQUIREMENTS

- Å Type:
 - Seeded areas: Soil for grass swards, as section Q28.
 - Turfed areas: Soil for grass swards, as section Q28.

SEEDING

311 GRASS SEED FOR CONSERVATION GRASS

- Å Supplier: Germinal.
- Mixture reference: WFG20 Eco Species Rich Lawn.
- Å Application rate: 10-15 g/m².

311A GRASS SEED FOR CONSERVATION GRASS

- Å Supplier: Germinal.
- Mixture reference: WFG8 Hedgerow and Shaded Areas.
- Å Application rate: 5-10 g/m².

311B GRASS SEED FOR LAWNS

- Å Supplier: Germinal.
- Mixture reference: A24 Wear and Tear.
- Å Application rate: 50 g/m².

311C GRASS SEED SPORTS FIELD

- Å Supplier: Germinal.
- Mixture reference: A9 General Outfield.
- Å Application rate: 35 g/m².

319 QUALITY OF SEED FOR ALL GRASSED AREAS

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

330 SOWING

- Å General: Establish good seed contact with the root zone.
- Å 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.

335 GRASS SOWING SEASON

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

336 WILDFLOWER SOWING SEASON

- Å Wildflower seed generally: March to May.

340 PRE-EMERGENT HERBICIDE FOR ALL GRASSED AREAS

- Å Standard: Pesticide Safety Directorate approved.
- Å 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

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

TURFING

405 CULTIVATED TURF FOR ALL GRASSED AREAS

- Å Supplier: Turfgrass Growers Association (TGA) member, to TGA quality standards.
- Å Seed mixture: Submit proposals.

Å Properties of soil used for turf production: Peat-free, well drained sandy loam.

410 TURF TO BS 3969 FOR ALL LAWN AREAS TBA

Å Standard: To BS 3969, free from undesirable grasses and weeds.

- Grade: General purpose utility turf with no perennial ryegrass.

Å Source: Submit proposals.

Å Herbicide treatment: Apply not less than four weeks and not more than three months before lifting.

Å Dimensions: 1640 x 610 mm.

420 DELIVERY AND STORAGE

Å Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.

Å Frosty weather or waterlogged ground: Do not lift turf.

Å Delivery: Arrange to avoid need for excessive stacking.

Å Stacking height (maximum): 1 m.

Å Dried out or deteriorated turf: Do not use.

Å Certification:

- Standard: To BS 3969.

Declaration: Species mix, including percentage of specified species.

423 INSPECTION OF TURF FOR ALL GRASSED AREAS

Å Sampling method: To BS 3969.

Å Give notice: Before lifting turf.

Period of notice: 1 week.

430 TURFING GENERALLY

Å Time of year: To be agreed.

Å Timing of laying:

- Spring and summer: Within 18 hours of delivery.

- Autumn and winter: Within 24 hours of delivery.

Å Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.

Å Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.

Å Jointing: Laid with broken joints, well butted up. Do not stretch turf.

Å Edges: Whole turfs, trimmed to a true line.

Å Adjusting levels: Remove high spots and fill hollows with fine soil.

Å Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.

Å Dressing, brushed well in to completely fill all joints: Mulching and top dressing system, as section Q28.

Å Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

450 TRIMMING TURF

Å Newly planted tree pits: Neatly cut away around individual trees.

- Diameter: 800 mm.

Tree pit surface: Respread existing mulch.

PROTECTING/CUTTING

510 PROTECTIVE FENCING

Å Fencing type: Chestnut pale fencing to BS 1722-4.

- Height: 1.1 m.

Å Erection: On completion of seeding/ turfing.

Å Removal: After grass is well established. Fencing will remain the property of the Contractor.

530 FIRST CUT OF GRASSED AREAS

- Å Timing: When grass is reasonably dry.
 - Height of initial growth: 75 mm.
- Å Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Å Height of first cut: 50 mm.
- Å Mower type: Contractor's choice.
- Å Arisings: Remove from site.

590 CLEANLINESS

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

MAINTENANCE

610 FAILURES OF SEEDING/TURFING

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

620 MAINTAINING GENERAL GRASSED AREAS

- Å Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Å Maximum height of growth at any time: 75 mm.
- Å Preparation: Before each cut remove all litter and debris.
- Å Cutting: As and when necessary to a height of 35 mm.
 - Arisings: Remove.
- Å Bulb planting areas: Do not cut until bulb foliage has died down.
- Å Trimming: All edges.
 - Arisings: Remove.
- Å Weed control: Substantially free of broad leaved weeds.
 - Method: Application of a suitable selective herbicide.
- Å Stones brought to the surface: Remove regularly.
 - Size: Exceeding 25 mm in any dimension.
- Å Areas of settlement: Make good.
- Å Watering: Contractor's choice.

620 MAINTAINING CONSERVATION GRASSED AREAS

- Å Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Å Maximum height of growth at any time: 100 mm.
- Å Preparation: Before each cut remove all litter and debris.
- Å Cutting: As and when necessary to a height of 50 mm.
 - Arisings: Remove.
- Å Bulb planting areas: Do not cut until bulb foliage has died down.
- Å Trimming: All edges.
 - Arisings: Remove.
- Å Stones brought to the surface: Remove regularly.
 - Size: Exceeding 25 mm in any dimension.
- Å Areas of settlement: Make good.
- Å Watering: Contractor's choice.

680 MAINTENANCE FERTILIZER FOR ALL GRASSED AREAS EXCEPT WILDFLOWER MEADOWS

- Å Duration: Carry out the following operations from completion of seeding/ turfing until: the

end of the rectification period.

Å March application: 15:10:10 Spring turf fertilizer at 35 g/m².

Å 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

Å General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.

Å Stones: Remove those with any dimension exceeding 50 mm.

Å Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Å Vegetation: Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings.

Å Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

Å Additional requirements: none.

118 SOIL CONDITIONS

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

Å 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

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

- Strong winds: Do not plant.

125 TIMES OF YEAR FOR PLANTING

Å Deciduous trees and shrubs: Late October to late March.

Å Conifers and evergreens: September/ October or April/ May.

Å Herbaceous plants (including marginal): September/ October or March/ April.

Å Container grown plants: At any time if ground and weather conditions are favourable.

- Watering and weed control: Provide as necessary.

Å Dried bulbs, corms and tubers: September/ October.

Å Colchicum (crocus): July/ August.

Å Green bulbs: After flowering in spring.

Å Wildflower plugs: Late August to mid November or March/ April.

Å Aquatic plants: May/ June or September/ October.

130 MECHANICAL TOOLS

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

145 WATERING

Å Quantity: Wet full depth of topsoil.

Å Application: Even and without damaging or displacing plants or soil.

Å Frequency: As necessary to ensure establishment and continued thriving of planting.

150 WATER RESTRICTIONS

Å 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

- Å 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.
- Å Period of notice: Three working days.

170 SOIL REQUIREMENTS

- Å Type
 - Planted beds: Planting bed soil system, as section Q28.
 - Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28.
 - Mulch applied after planting: as section Q28 - 50mm depth bark mulch.

200 PLANTS/ TREES - GENERAL

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

215 PLANTS/ TREES - SPECIFICATION CRITERIA

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

225 BULBS/ CORMS/ TUBERS

- Å Condition: Firm, entire, not dried out or shrivelled.
- Å Health: Free from pests, diseases and fungus.
- Å Handling: Remove from packaging immediately.
- Å 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

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

245 LABELLING AND INFORMATION

- Å 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.

Å Additional information: Submit on request:

- Country of origin;
- Potting dates;
- Type of container.

260 PLANT/ TREE SUBSTITUTION

Å Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:

- Price.
- Difference from specified plants/ trees.

Å Approval: Obtain before making any substitution.

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

Å Standard: To CPSE 'Handling and establishing landscape plants'.

Å Frost: Protect plants from frost.

Å Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.

Å Plant packaging: Coextruded polyethylene bags with black interior and white exterior.

Å Packaging of bulk quantities: pallets or bins sealed with polyethene and shrink wrapped.

Å Planting: Upright or well balanced with best side to front.

280 TREATMENT OF TREE WOUNDS

Å 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.

Å Fungicide/ Sealant: Do not apply unless instructed.

285 PROTECTION OF EXISTING GRASS

Å 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

Å 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

Å Locations: All planting areas.

Å Type: Suitable for suppressing perennial weeds.

Å Timing: Allow fallow period before cultivation.

- Duration (minimum): As manufacturer's recommendations.

305 WEED CONTROL FOR INVASIVE WEEDS

Å Locations: Whole site.

Å General: Prevent weeds from seeding and perennial weeds from becoming established, by contractor's choice of herbicide.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

400 RANDOM PLANT LAYOUT Native Hedge Mix

Å Spacing: Random groups of 3-7 plants of the same species..

Å Density: As plant schedule: 4/m double staggered row.

401 REGULAR PLANT LAYOUT TO ALL BEDS

- Å Spacing: As drawings.
- Å Density: As plant schedule.

405 SHRUB PLANTING PITS

- Å Timing: Excavate 1-2 days (maximum) before planting.
- Å Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Å Pit bottom improvement Break up to a depth of 150 mm, incorporating 25g of slow release fertiliser.

415 ANTIDESICCANT FOR CONIFERS/ EVERGREENS

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

435 CLIMBING PLANTS USED AS GROUND COVER

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

445 PLANTING BULBS/ CORMS/ TUBERS

- Å Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
- Å Backfilling: Finely broken soil. Lightly firm to existing ground level.
- Å 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

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

471 NATURALIZED HEDGES

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

472 FENCING SUPPORT FOR NEW HEDGES

- Å Type: Timber post and general pattern wire mesh, to BS1722-2 height 600mm.
- Å Timing: Before planting hedge.
- Å Support: Lightly secure hedge plants to fence wires at appropriate intervals.

480 AFTER PLANTING

- Å Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Å 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.
- Å Top dressing: Mulching and top dressing system, as section Q28.
 - Depth: 50 mm.

486 HEDGE PLANTING PROTECTION

- Å Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Å Type: Spiral.
- Å Material: Biodegradable
- Å Size: Contractor's choice.
- Å Colour: Contractor's choice.
- Å Support: Single timber stake.

PLANTING TREES

500 ANTIDESICCANT FOR CONIFERS/ EVERGREENS

- Å Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Å 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.

505 TREE PITS

- Å Sizes: As topsoil drawing.
- Å Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Å Pit bottoms: With slightly raised centre. Break up to a depth of 150 mm.
 - Treatment: Soil ameliorant worked into pit bottoms.
- Å Pit sides: Scarify.
- Å Backfilling material: as Q28.
- Å Accessories: Perforated plastics irrigation/ ventilation pipe and Root barrier.

510 TREE PIT ROOT BARRIERS

- Å Locations: Wherever the installed rootball will be within 3.0 m of a building foundation & as drawings.
- Å Manufacturer: As topsoil drawing.
 - Product reference: As topsoil drawing.
- Å Depth of top of root barrier below finished soil level: Flush.
- Å Installation: With sides vertical.

512 TREE PIT ACCESSORIES

- Å Locations: As schedule.
- Å Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Å Type: Perforated plastics irrigation pipe, 50 mm diameter, in circle above and around sides of rootball, with plastics cap.

515A TREE PIT DRAINAGE As required to minimise risk of waterlogging

- Å Depth of excavation: Increase from specified size to allow for aggregate layer, with base slightly falling to outlet.
- Å Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm.
 - Depth: 200 mm.
- Å Drainage pipes:
 - Type: Perforated plastics.
 - Diameter: 80 mm.
 - Position: Lay around perimeter of pit within aggregate layer.
 - Discharge: Connect to soakaway / Drainage system - subject to approval.
- Å Geotextile filter:
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Position: Lay over aggregate before installing tree or backfill.
- Å Completed pits: Test for free drainage before planting.

535 STAKING GENERALLY

- Å Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - Preservative treatment: Not required.
- Å Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Å Stake size (minimum): 50 mm diameter.

555 SHORT SINGLE STAKING FOR STANDARD TREES 8-10cm girth

- Å Staking: Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting.
 - Backfilling: Consolidate material around stake
- Å Height of stakes: Cut to approximately 600 mm above ground level.
- Å Ties: Submit proposals.
- Å Tying: Secure tree firmly but not rigidly to stake with one tie within 25 mm of top of stake.

575 SHORT DOUBLE STAKING FOR SELECTED STANDARD AND HEAVY STANDARD TREES

- Å 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.
- Å Height of stakes: Cut to approximately 600 mm above ground level.
- Å 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.
- Å Ties: Submit proposals.
- Å Tying: Secure tree firmly but not rigidly to cross bar.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

- Å Duration: Carry out the operations in the following clauses from completion of planting until the end of the rectification period.
- Å Frequency of maintenance visits: In accordance with the agreed maintenance schedule.

720 FAILURES OF PLANTING

- Å 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.
- Å Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- Å Timing of making good: During the next suitable planting season.

730 PROTECTIVE FENCING

- Å Fencing type: General pattern wire mesh fencing.
- Å Erection: On completion of planting.
- Å Removal: Fencing will remain the property of the Contractor. Remove and refill post holes following acceptance of rectified defects.

740 CLEANLINESS

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

750 PLANTING MAINTENANCE GENERALLY

- Å 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 hoeing.
- Å 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.
- Å Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Å 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.

- Å Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Å Trees: Spray crown when in leaf during warm weather.
 - Timing: After dusk.
- Å Watering: Contractor's choice.

760 PLANTING MAINTENANCE - PRUNING

- Å 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.
- Å Arisings: Remove.

790 FINAL MULCHING

- Å Timing: At end of the maintenance period.
- Å Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
- Å Planting beds: Remulch.
 - Depth (minimum): 50 mm.
- Å Trees: Remulch.
 - Depth (minimum): 50 mm.

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

110 NOTICE

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

130 REINSTATEMENT

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

140 CONTROL OF MAMMALIAN PESTS

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

155 WATERING

- Å Supply: No site supply available, submit proposals.
- Å Quantity: Wet full depth of topsoil .
- Å Application: Do not damage or loosen plants.
- Å Compacted soil: Loosen or scoop out, to direct water to rootzone.
- Å Frequency: As necessary for the continued thriving of all planting.

160 WATER RESTRICTIONS

- Å 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

Å 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 from site.
- Shrub and tree prunings: Remove to recycling facility.
- Litter and nonbiodegradable arisings: Remove from site.

180 CHIPPING OR SHREDDING

Å General: Not permitted on site.

190 LITTER

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

195 PROTECTION OF EXISTING GRASS

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

197 CLEANLINESS

Å Soil and arisings: Remove from hard surfaces.

Å General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

GRASSED AREAS

210 MAINTENANCE OF GRASSED AREAS

Å General: Maintain turf in a manner appropriate to the intended use.

Å 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.

Å 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.

Å Litter and fallen leaves: Remove regularly to maintain a neat appearance.

220 GRASS CUTTING GENERALLY

Å Before mowing: Remove litter, rubbish and debris.

Å Finish: Neat and even, without surface rutting, compaction or damage to grass.

Å Edges: Leave neat and well defined. Neatly trim around obstructions.

Å Adjoining hard areas: Sweep clear and remove arisings.

Å Drought or wet conditions: Obtain instructions.

226 TREE STEMS

Å 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.

235 BULBS AND CORMS IN GRASSED AREAS

Å Before flowering: Do not cut.

Å Interval between end of flowering and start of grass cutting (minimum): Six weeks.

240 MOWING STRIPS

Å Location: Along the base of walls, fences and hedges.

Å Width (approximate): 150 mm.

Å Operations: Maintain by applying a suitable herbicide twice during the growing season.

240A MOWING STRIPS

- Å Location: Around tree trunk.
- Å Width (approximate): 500 mm.
- Å Operations: Maintain by hand weeding and cultivation.

250 LEAF REMOVAL

- Å Operations: Collect fallen leaves.
- Å Special requirements: None.
- Å Disposal: Remove from site for recycling.

255 FIRST CUT OF ALL GRASSED AREAS

- Å Height of initial growth: 75 mm.
- Å Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Å Height of first cut: 40 mm.
- Å Mower type: Contractor's choice.
- Å Arisings: Remove for composting on site.

260 MOWING LAWNS

- Å Grass height: 50 mm maximum.
- Å Arisings: Remove for composting on site.

265 MOWING GENERAL AREAS

- Å Grass height: Maintain between 50 and 75 mm.
- Å Arisings: Remove for composting on site.

270 MOWING ROUGH GRASSED AREAS

- Å Grass height: 100 mm maximum.
- Å Arisings: Remove for composting on site.

295 SPIKING

- Å Location: All lawns.
- Å Timing: As necessary to relieve compaction.
- Å Operations: Aerate the soil and improve surface water penetration.
- Å Depth (minimum): 100 mm into soil.

300 SCARIFYING

- Å Location: All lawns.
- Å Timing: February or March, before first cut.
- Å Operations: Relieve thatch conditions and remove dead grass.
- Å Depth (maximum): 15 mm into soil.
- Å Arisings: Remove.

309 EDGES TO SEEDED AREAS

- Å Location: Planting beds and around newly planted trees.
- Å Timing: After seeded areas are well established.
- Å Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
- Å Arisings: Remove.

310 RE-FORMING GRASS EDGES

- Å Location: All edges.
- Å 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

- Å Standard: To BS 7370-3, clauses 12.4 and 12.5.

325 RELIEVING SURFACE COMPACTION IN TURF

- Å Standard: To BS 7370-3.
- Å Method: Surface slitting.
- Å Top dressing: Medium to fine sand. Depth: 2-5 mm.

330 SELECTIVE HERBICIDE

- Å Location: All lawns.
- Å Herbicide: Combined weed and feed mix.
- Å Areas not to be sprayed: Conservation grass areas.

350 FERTILIZER - SPRING APPLICATION

- Å Type: Organic.
- Å Application rate: At manufacturer's recommended rates.

360 FERTILIZER - AUTUMN APPLICATION

- Å Type: Organic.
- Å Application rate: At manufacturer's recommended rates.

380 REINSTATEMENT OF DAMAGED LAWNS

- Å Worn or damaged turf: Remove to a depth of 30 mm.
- Å Preparation: Cultivate substrate to a fine tilth.
- Å Reinstatement: Contractor's choice of returfing or topsoiling and reseeding:
 - Returfing: 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.
- Å Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

381 REINSTATEMENT OF WORN OR DAMAGED LAWNS

- Å Worn or damaged areas: Make good by returfing or reseeding.
 - Returfing standard: To BS 7370-3, Clause 12.2.
 - Reseeding standard: To BS 7370-3, Clause 12.6.
- Å Turf or seed: To match existing in appearance and quality
- Å Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

SHRUBS/TREES/HEDGES

500 ESTABLISHMENT OF NEW PLANTING

- Å Duration: One year.
- Å Weed control:
 - Method: Keep planting beds clear of weeds by maintaining full depth of mulch and hand weeding.
 - 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.
- Å Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Å Watering: Contractor's choice.

502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER

- Å Time of year: March or April.
- Å Type: Slow release.
- Å Spreading: Spread evenly. Carefully lift and replace any mulch materials.
 - Application rate: As manufacturer's recommendations.

510 TREE STAKES AND TIES

- Å Inspection/ Maintenance times: As scheduled and immediately after strong winds.
- Å 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.
- Å 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.
- Å 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

- Å Timing: After strong winds, frost heave and other disturbances.
- Å Refirming: Tread around the base until firmly bedded.
- Å 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.

530 SPIRAL SHELTERS

- Å Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
- Å Removal: During spring when no longer required to protect the hedge plant.

520 REFIRMING OF TREES AND SHRUBS

- Å Timing: After strong winds, frost heave and other disturbances.
- Å Refirming: Tread around the base until firmly bedded.
- Å 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.

540 PRUNING GENERALLY

- Å 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.
- Å Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
- Å Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
- Å Disease or infection: Give notice if detected.
- Å Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 PRUNING OF EXCESSIVE OVERHANG

- Å Timing: As instructed.
- Å Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
- Å Special requirements: None.

550 PRUNING OF EXCESSIVE HEIGHT

- Å Timing: Annually.
- Operations: Remove excessive height as instructed.

555 PRUNING TREES AND SHRUBS

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

570 FORMATIVE PRUNING OF YOUNG TREES

- Å Standard: Type and timing of pruning operations to suit the plant species.
- Å Time of year: Do not prune during the late winter/ early spring sap flow period.

Å 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.

Å Whips or feathered trees: Do not prune.

Å Operatives: Approved specialist contractor.

575 PRUNING ORNAMENTAL SHRUBS

Å General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.

Å Suckers: Remove by cutting back level with the source stem or root.

580 PRUNING FLOWERING SPECIES OF SHRUBS AND ROSES

Å 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

Å General: Allow to reach planned height as rapidly as possible.

- Form: Trim back lateral branches moderately.

605 TRIMMING SLOWLY ESTABLISHING HEDGES

Å Operations:

- Timing: Cut back hard in July 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.

610 TRIMMING TAPERING ESTABLISHED HEDGES

Å Time of year: Regular trimming from July to September.

Å Operations:

- Form: Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.
- Trim: Remove current growth rather than old wood.

Å Tools/ Cutting: Suitable mechanical cutters.

611 TRIMMING NONTAPERING ESTABLISHED HEDGES

Å Time of year: Regular trimming from July to September.

Å Operations:

- Form: Trim carefully and neatly to regular line and shape with vertical sides.
- Trim: Remove current growth rather than old wood.

Å Tools/ Cutting: Suitable mechanical cutters.

615 TRIMMING FIELD HEDGES

Å Operations: Trim to specified height and profile using suitable mechanical cutters.

620 REMOVAL OF DEAD PLANT MATERIAL

Å 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.

630 DEAD AND DISEASED PLANTS

Å Removal: As soon as possible.

Å Replacement: In the next scheduled round of replacement planting.

635 REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS

- Å Dead and damaged plants: Remove.
- Å Mulch/ matting materials:
 - Carefully move to one side and dig over the soil, leaving it fit for replanting.
- Å - Do not disturb roots of adjacent plants.
- Å 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 proposals.
- Å Dressing: Slow release fertilizer:
 - Type: Submit proposals.
 - Application rate: As manufacturer's recommendations.

645 WEED CONTROL GENERALLY

- Å Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.
- Å Adjacent plants, trees and grass: Do not damage.

650 HAND WEEDING

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

655 WEED CUTTING BY HAND OR MACHINE

- Å Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 25 mm.
- Å Herbicides: Give notice before use.

657 HERBICIDE TO KILL REGROWTH

- Å Type: Suitable foliar acting herbicide to kill regrowth.
- Å Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

665 WEED CONTROL WITH WINTER HERBICIDE

- Å Type: Suitable residual soil acting herbicide.
- Å Time of year: Unless otherwise agreed, complete before end of March.
- Å Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 WEED CONTROL WITH SUMMER HERBICIDE

- Å Type: Suitable foliar acting herbicide.
- Å Timing: Allow recommended period for herbicide to take effect before clearing dead weeds

675 DIGGING OVER

- Å General: Dig over beds. Do not damage existing plants, bulbs and roots.
Depth of dig (minimum): 75 mm.

680 SOIL AERATION

- Å 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

- Å 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

- Å Thickness (minimum): 50 mm.
 - Top up: twice per year.
- Å Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Å Weeding: Remove weeds growing on or in mulch by hand weeding.

695 FERTILIZING ESTABLISHED TREES AND SHRUBS

- Å Time of year: During April or May.
- Å Type of fertilizer: Slow release.
- Å Application: Spread evenly.
 - Rate: As manufacturer's recommended rates

700 SNOW REMOVAL FROM SHRUBS/ TREES

- Å Standard: To BS 7370-4.
- Å Plants subject to snow removal: All evergreens.

- Å Timing: Within 24 hours of snowfall.

705 WINTER LEAF REMOVAL

- Å Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Å Arisings: Remove to recycling facility.

TREE WORK

810 TREE WORK GENERALLY

- Å Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Å Protection: Avoid damage to neighbouring trees, plants and property.
- Å Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Å 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.
- Å Appearance: Leave trees with a well balanced natural appearance.
- Å Chain saw work: Operatives must hold a Certificate of Competence.
- Å Tree work: To be carried out by an approved member of the Arboricultural Association.

815 ADDITIONAL WORK

- Å Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 PREVENTION OF WOUND BLEEDING

- Å Standard: To BS 3998, clause 8.

825 PREVENTION OF DISEASE TRANSMISSION

- Å Standard: To BS 3998, clause 9 and Appendix B.

835 CUTTING AND PRUNING GENERALLY

- Å Tools: Appropriate, well maintained and sharp.
- Å 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.
- Å Removing branches: Do not damage or tear the stem.
- Å 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.
- Å Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
 - Large branches: Remove only if unavoidable.
 - Remove in small sections and lower to ground with ropes and slings.
- Å Dead branches and stubs: When removing, do not cut into live wood.

- Å Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Å Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

855 CUTTING TREE ROOTS

- Å Excavating: Use hand tools only.
- Å 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.
- Å Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
- Å Cutting:
 - Cutting: Make clean smooth cuts with a hand saw.
 - Wounds: Minimize. Avoid ragged edges.
 - Finishing: Pare cut surfaces smooth with a sharp knife.
- Å Backfilling:
 - Protection: Cover cut roots with clean sharp sand.
 - Material: Backfill with original topsoil.

860 REMOVING TREES, SHRUBS AND HEDGES

- Å Standards: To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
- Å Existing services: Check for below and above ground services. Give notice if they may be affected.
- Å Shrubs and smaller trees: Cut down and grub up roots.
- Å Tree stumps:
 - Removal: Cut as close to ground as possible and kill by applying ammonium sulfamate into drilled holes immediately after felling.
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Å Protection: Avoid damage to neighbouring trees, plants and property.
- Å 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.
- Å 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

- Å 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.
- Å Liquid or flux oozing from apparently healthy bark: Give notice.

870 CAVITIES IN TREES

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