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Q

Paving/Planting/Fencing/Site furniture

Q20

Granular sub-bases to roads/pavings

Q20 Granular sub-bases to roads/pavings

To be read with Preliminaries/ General conditions.

110 THICKNESSES OF SUB-BASE/ SUBGRADE IMPROVEMENT LAYERS

- Thicknesses: See sections:
 - Q22 Coated macadam/asphalt roads/pavings and Q23 Gravel/hoggin/woodchip roads/pavings.

120 CHECKING OF SUBGRADES

- Anticipated subgrade conditions:
 - Soil type: stony.
 - Plasticity index: Refer to ground investigation report.
 - CBR (minimum): Refer to ground investigation report.
 - Depth below formation level to groundwater table: Refer to ground investigation report.
- Subgrade variation: If material appears to vary from anticipated conditions, or if there are extensive soft spots, report condition and await instruction before proceeding.
- Submit: Results and obtain instructions before proceeding.

130 HERBICIDES

- Type: Contact, non-selective.
- Application: To subgrade of maintenance tracks.

140 EXCAVATION OF SUBGRADES

- Final excavation to formation or subformation level: Carry out immediately before compaction of subgrade.
- Soft spots and voids: Give notice.
- Old drainage and service trenches: Give notice.
- Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilized.

145 PREPARATION AND COMPACTION OF SUBGRADES

- Timing: Immediately before placing sub-base.
- Soft or damaged areas: Obtain instructions.
- Compaction: Thoroughly, by roller or other suitable means, adequate to resist subsidence or deformation of the subgrade during construction and of the completed roads/ paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

150 SUBGRADES FOR VEHICULAR AREAS

- Preparation and treatment: To Highways Agency 'Specification for highway works', clauses 616 and 617.

- 170 GEOTEXTILE FILTER/ SEPARATOR MEMBRANE Laid on compacted sub-grade
- Manufacturer: Submit proposals .
 - Product reference: Submit proposals .
 - Jointing: 300 mm overlap .
 - Protect from:
 - Exposure to light, except during laying (maximum five hours).
 - Contaminants.
 - Materials listed as potentially deleterious by geotextile manufacturer.
 - Damage, until fully covered by fill.
 - Wind uplift, by laying not more than 15 m before covering with fill.
 - Preparation: Remove humps and sharp projections and fill hollows before laying.
- 180 NOTICE
- Give notice:
 - After preparation and compaction of subgrades;
 - For inspection of granular sub-base material before spreading; and
 - On completion of compaction of sub-base.
 Period of notice: 2 working days.
- 210 HIGHWAYS AGENCY TYPE 1 UNBOUND MIXTURE FOR SUB-BASE
- Material: Type 1 unbound mixture to Highways Agency 'Specification for highway works', clauses 801 and 803.
 - Recycled aggregate: Permitted.
- 211 GRANULAR MATERIAL
- Quality: Of a known suitability for use in sub-bases, free from excessive dust, well graded, all pieces less than 75 mm in any direction, minimum 10% fines value of 50 kN when tested in a soaked condition to BS 812-111 or a resistance to fragmentation of LA50 for the Los Angeles test to BS EN 1097-2, and in any one layer only one of the following:
 - Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
 - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
 - Natural gravel.
 - Natural sand.
 - Filling: Spread and levelled in 150 mm maximum layers, each layer thoroughly compacted.
- 220 FROST SUSCEPTIBLE GRANULAR MATERIAL
- Definition (non frost susceptible material): To Highways Agency 'Specification for highway works' clause 801.8.
 - Depth of frost susceptible material below final surface of paving (minimum): 350 mm.
 - Testing: Test materials used if required and supply certificates.
- 230 PLACING GRANULAR MATERIAL GENERALLY
- Preparation: Loose soil, rubbish and standing water removed.
 - Structures, membranes and buried services: Ensure stability and avoid damage.
- 240 LAYING GRANULAR SUB-BASES FOR VEHICULAR AREAS
- General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
 - Standard: To Highways Agency 'Specification for highway works' clause 802.
 - At drainage fittings, inspection covers, perimeters and where local excavation and backfilling has taken place: Take particular care to compact fully.

241 LAYING GRANULAR SUB-BASES FOR VEHICULAR AREAS

- Proposals: Well in advance of starting work submit details of:
 - Maximum depth of each compacted layer.
 - Type of plant.
 - Minimum number of passes per layer.
- General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
- At drainage fittings, inspection covers, perimeters and where local excavation and backfilling has taken place: Take particular care to compact fully.
- Defective areas: Remove loose, segregated or otherwise defective areas to the full thickness of the layer and lay and compact new material.
- Sub-base surface after compaction and immediately before overlaying: Uniformly well closed and free from loose material, cracks, ruts or hollows.

250 LAYING GRANULAR SUB-BASES FOR VEHICULAR AREAS

- General: Spread and levelled.
- Compaction:
 - Timing: As soon as possible after laying.
 - Method: By roller or other suitable means, adequate to resist subsidence or deformation of the sub-base during construction and of the completed paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

310 ACCURACY

- Permissible deviation from required levels, falls and cambers (maximum):
 - Subgrades:
 - Roads and parking areas: +20 -30 mm.
 - Footways and recreation areas: \pm 20 mm.
 - Sub-bases:
 - Roads and parking areas: +10 -10 mm.
 - Footways and recreation areas: +10 -30 mm.

330 COLD WEATHER WORKING

- Frozen materials: Do not use.
- Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.

340 PROTECTION

- Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.
- Subgrades and sub-bases: Prevent degradation by construction traffic, construction operations and inclement weather.

Q23

**Gravel/ Hoggin/ Woodchip/ Resin bound roads/ paving/
overlays**

Q23 Gravel/ Hoggin/ Woodchip/ Resin bound roads/ paving/ overlays

To be read with Preliminaries/ General conditions.

TYPES OF SURFACING

- 110 HARD BINDING GRAVEL Recycled material
- Subgrade improvement layer: Not required.
 - Compacted thickness: Not applicable.
 - Geotextile: Sheet.
 - Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
 - Granular sub-base: Highways Agency Type 1 unbound mixture, as section Q20.
 - Compacted thickness: 200 mm.
 - Blinding to sub-base: Not required.
 - Surface course: Angular gravel, free from clay, with sufficient grit to enable compaction.
 - Type: Brick dust or similar.
 - Source: Contractor's choice.
 - Colour: Grey.
 - Size: Graded 6-20 mm.
 - Compacted thickness: 50 mm.
 - Completion: Compact to produce a firm, regular surface, stable in use.

LAYING

- 315 MATERIALS
- Compatibility: Chippings suitable for use with respective binders/ emulsions/ resin/ epoxy.
- 320 SAMPLES
- Submit: Representative samples of all aggregates.
- 330 HERBICIDE TO PAVING Q23/Glyphosate Pro-Biactive
- Type: Suitable for the application, location and conditions of use.
 - Weeds and moss: Grub up.
 - Application: As section A34, before surfacing.
- 340 LAYING GENERALLY
- Channels, gullies, etc: Keep clear.
 - Finished surfaces:
 - Lines and levels: To prevent ponding.
 - Overall texture: Even.
 - State at completion: Clean.
- 350 COLD WEATHER WORKING
- Frozen materials: Do not use.
 - Freezing conditions: Do not lay pavings.
 - Cold bituminous surface dressings: Do not apply when ambient temperature is below 10°C.
 - Other dressings or overlays: As manufacturers' recommendations.

360 DRAINAGE FALLS

- Sealed surfaces:
 - Falls and cross falls (minimum): 1:40.
 - Camber (minimum): 1:50.
- Unsealed surfaces (minimum): 1:30.

370 LAYING GRANULAR SURFACES IN VEHICULAR AREAS

- Permissible deviation from required levels, falls and cambers (maximum): ± 20 mm.
- General: Spread and level in 150 mm maximum layers. As soon as possible compact each layer.
- Dry weather: Lightly water layers during compaction.

390 PROTECTION FROM TRAFFIC AND PLANT

- Paved areas: Restrict access to prevent damage.

Q28

Topsoil and soil ameliorants

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

- 115 SOIL SYSTEM FOR GRASS SWARDSFOR ALL GRASSED AREAS
- Composition:
 - Soil: Site sourced topsoil and Imported topsoil to BS 3882.
 - Ameliorants: Fertilizer to be incorporated into topsoil.
 - Accessories: None.
- 145 PLANT PIT BACKFILLING SOIL SYSTEMFOR TREE PITS
- Composition:
 - Topsoil: Site sourced topsoil.
 - Ameliorants: Organic materials and Sanitized and stabilized composted materials.
 - Accessories: None.

PRODUCTS

- 300 PREPARATION MATERIALS GENERALLY
- Purity: Free of pests and disease.
 - Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
 - Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable.
 - Hazardous to human or animal life.
 - Detrimental to healthy plant growth.
 - Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
 - Objectionable odour: None.
 - Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.
- 305 PERMITTED MATERIALS
- Materials:
 - Bark;
 - Composted bark; and
 - Composted green waste.
 - Give notice: before ordering or using.
 - Declaration of compliance in accordance with BS EN 13650: Required.
- 310 MATERIALS NOT PERMITTED
- Materials:
 - Peat;
 - Products containing peat; and
 - River and canal dredgings.

- 315 IMPORTED TOPSOIL TO BS 3882 FOR GRASS SEEDING, PLANTING BEDS and TREE PITS
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
 - Standard: To BS 3882.
 - Classification: Multipurpose.
 - Grade: Within the parameters of 'sandy loam' textural class.
 - Source: Submit proposals.
 - Product reference: Submit proposals.
- 360 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR TREE PITS
- Standard: In accordance with PAS 100.
 - Source: Submit proposals.
 - Product reference: Submit proposals.
 - 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: Required.
 - Declaration of analysis: Submit.
 - Additional analyses: Not required.
 - Samples: Supply 5 kg sample before ordering.
- 401 ORGANIC FERTILIZERS FOR SITE TOPSOIL
- Manufacturer/ source: Submit proposals.
 - Product reference: Submit proposals.
 - Standard: In accordance with the Fertiliser Industry Assurance Scheme (FIAS).
 - Purpose: General purpose fertilizer.
 - Type: Sanitized and stabilized compost.
 - Availability to plants: Slow release.
- 405 INORGANIC FERTILIZERS FOR SITE TOPSOIL
- Manufacturer/ source: Submit proposals.
 - Product reference: Submit proposals.
 - Standard: In accordance with the Fertiliser Industry Assurance Scheme (FIAS).
 - Purpose: General purpose fertilizer.
 - Type: ????
 - Availability to plants: Slow release.

EXECUTION

610 TOPSOIL ANALYSIS

- Soil to be analysed: Samples from locations shown on drawing ???.
 - Soil analyst: Staffordshire Highways Labs.
 - Samples: Collect in accordance with BS 3882.
 - Submit:
 - Declaration of analysis:
 - Chemical analysis and contaminants;
 - Maximum stone content, stone size and pH value;
 - Nutrient content, pH value and textural classification;
 - Phytotoxic and CLEA elements; and
 - Textural classification and maximum stone content.
- Report detailing soil analyst's recommendations.

620 IMPORTING TOPSOIL

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

630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR GRASS SEEDING and PLANTING BEDS and TREE PITS

- Timing: Submit at handover.
- Contents:
 - Full description of all soil components.
 - Record of source for all soil components.
 - Record drawings showing the location and depth of all soils by type and grade.
 - Declaration of analysis: in accordance with BS 3882, Annex E.
- Number of copies: Two.

635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR IMPORTED SOIL IMPROVERS

- Timing: Submit at handover.
- Contents:
 - Full description of all compost components.
 - Record of source for all compost components.
 - Analyst's report for each test carried out.
 - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
 - Quality Compost Protocol certification: Required.
- Number of copies: Two.

650 NOTICE

- Give notice before:
 - Setting out.
 - Spreading topsoil.
 - Applying herbicide.
 - Applying fertilizer.
 - Visiting site during maintenance period.
- Period of notice: 1 week.

655 MECHANICAL TOOLS

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

660 GRADING SUBSOIL

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

665 SUBSOIL SURFACE PREPARATION

- General: Excavate and/ or place fill to required profiles and levels, as section D20.
- Loosening:
 - Light and non-cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
 - Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
 - Rock and chalk subgrades: Lightly scarify to promote free drainage.
- Stones: Immediately before spreading topsoil, remove stones larger than 75 mm.
- Remove from site: Arisings, contaminants and debris.

670 INSPECTING FORMATIONS

- Give notice: Before spreading topsoil for areas to receive forestry planting and planting beds.
- Notice period: 7 days.

675 PREPARATION OF UNDISTURBED TOPSOIL

- Standard: In accordance with BS 4428.
 - Grading and cultivation: Category C.
- Hard ground: Break up thoroughly.
- Clearing: Remove visible roots and large stones with a diameter greater than 75 mm.
- Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
- Fallow period (minimum): One month.
 - Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

680 SURPLUS TOPSOIL TO BE RETAINED

- Generally: Spread and level on site:
 - Locations: As drawing ???.
 - Protected areas: Do not raise soil level within root spread of trees that are to be retained.

690 TOPSOIL STORAGE HEAPS

- Location: As drawing ???.
 - Height (maximum): 1.0 m.
 - Width (maximum): 5.0 m.
 - Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
 - Protection:
 - Do not place any other material on top of storage heaps.
 - Do not allow construction plant to pass over storage heaps.
- Prevent compaction and contamination, by fencing and covering as appropriate.

700 GRADING OF TOPSOIL

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
 - Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Give notice: If required levels cannot be achieved by movement of existing soil.

701 LOOSEN SUBSOIL

- Plant: Crawler tractor.
- Loosen subsoil with winged tine ripper driven 500mm deep at 500mm centres in one direction only at 20° to the angle of slope.
Each pass to run continually from the top of batter to the toe.

705 HANDLING TOPSOIL

- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- Contamination: Do not mix topsoil with:
 - Subsoil, stone, hardcore, rubbish or material from demolition work.
 - Other grades of topsoil.
- Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.

711 SPREADING TOPSOIL

- Plant: Long carriage 360° tracked excavator ie 'hydraulic backactor'.
Unloaded weight of not less than 20 tonnes with a full reach of 7m giving an effective working reach of 6m.
Equipment to remain in serviceable condition for the entire period of working.
Machines prone to breakdown are to be removed from site. The Contractor will provide any and all additional equipment required for the proper execution of the works.
Digging bucket: digging buckets will be used to carry out the work (topsoil spreading).
These will have a width of not less than 1m. The cubic capacity will not exceed 1m³. The front edge of the bucket will be furnished with 150mm long armoured teeth fixed at no greater than 200mm centres. These will be replaced when worn to 100mm or less.
- Temporary roads/ surfacing: Remove before spreading topsoil.
- Operation:
 - Topsoil will be transported to the top of the batter using dump trucks and end tipped onto the batter. A tracked hydraulic 360° excavator will spread and roughly level topsoil to prevent rises and falls greater than 150mm above or below the general surface. Overall depth of topsoil to be not less than 300mm and not not greater than 500mm. The excavator will carry out the works standing level on the existing ground at the toe of the bank with tracks parallel with the batter. Topsoil will be spread from the top of the batter downwards. The excavator will at no time cross or stand on topsoil.
Where the requirement to spread topsoil exceeds the reach of the machine, the machine may move onto the batter for the minimum distance required to complete the works. On completion the Operator will dig through the subsoil to a depth of 500mm prior to spreading topsoil across the toe of the bank.
- Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Depths after firming and settlement (minimum): 150 mm.
- For batters which are to receive grass seed only do not rip prior to spreading topsoil.
Spread and roughly level topsoil to a depth of 150mm. Track over topsoil once only using the tracked excavator.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

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

718 FINAL CULTIVATION FOR PLANTING BEDS

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- Depth: 150 mm.
- Particle size (maximum): 20 mm.
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: Free from localised depressions, high spots and abrupt angles.
Avoid the creation of steps between successive strips downslope behind which water may pond..
- Undesirable material brought to the surface:
 - Remove visible weeds.
Remove roots and large stones with any dimension exceeding 75 mm.

- 720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT
- Above adjoining paving or kerbs: 30 mm.
 - Below dpc of adjoining buildings: Not less than N/A.
 - Planting beds: Higher than adjoining grass areas by 50 mm.
 - Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
 - 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.
 - Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
 - Adjoining soil areas: Marry in.
 - Thickness of turf or mulch: Included.
- 805 APPLYING SOIL AMELIORANT????
- Type: ?????.
 - Locations: ?????.
 - Fully incorporate into topsoil to a depth of ?????.
 - Application: Spread evenly.
 - Timing: Apply prior to cultivation.
 - Rate: ?????.
 - Timing: Prior to cultivation.
 - Other requirements: ?????.
- 810 APPLYING COMPOST????
- Application rate for trees and shrubs: ?????.
 - Timing: Apply prior to cultivation.
 - Application rate for grass: ?????.
 - Timing: Apply prior to cultivation.
 - Application rate for planters: ?????.
 - Timing: Apply prior to cultivation.
 - Other requirements: ?????.
- 815 APPLYING LIME????.
- Spread evenly.
 - Timing: Immediately before cultivation.
 - Rate: ?????.
- 820 APPLYING GENERAL FERTILIZER????
- Application: Spread evenly, carefully incorporating below mulch materials.
 - Timing: Immediately before cultivation.
 - Application rate: ?????.
 - Other requirements: ?????.
- 825 APPLYING FERTILIZER TO PROPOSED GRASS AREAS????
- Application: Before final cultivation and three to five days before seeding/ turfing.
 - Coverage:
 - Spread evenly, in transverse directions.
 - Rate: ?????.

845 APPLYING LOOSE MULCH FOR CORNUS BEDS

- Timing: Immediately after planting.
- Preparation: Ensure that soil is thoroughly moistened, applying water where necessary.
- Coverage of mulch (minimum):
 - Planting beds (depth): 75 mm depth.
 - Trees: Over an area of 1.2 x.1.2 m with the tree in the centre.
 - Container planting: N/A.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

COMPLETION

905 APPLYING MAINTENANCE FERTILIZER TO SOIL????

- Duration: Carry out the following operations from completion of seeding/ turfing until ????.
- Time of year: ????.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: ????.

910 APPLYING MAINTENANCE FERTILIZER TO GRASS SWARDS????

- Duration: Carry out the following operations from completion of seeding/turfing until ????.
- Time of year: ????.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: ????.

915 APPLYING MAINTENANCE FERTILIZER AS A FOLIAR FEED????

- Time of year: ????.
- Application: Evenly spread. Do not damage or contaminate adjacent surfaces or equipment.
 - Rate: ????.
- Method: ????.

920 APPLYING MULCH

- Timing: At end of the rectification period.
- Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Planting beds: Re-mulch.
 - Depth (minimum): 75 mm.
- Trees: Remulch.
 - Depth (minimum): 75 mm.
- Container planting: Remulch.
 - Depth (minimum): N/A.

Q30
Seeding/turfing

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: 3 working days.

170 SETTING OUT

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

PREPARATION

210 HERBICIDE FOR ALL GRASSED AREAS

- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
Duration: 2 weeks.

212 SEED BED CLEANING BEFORE SOWING ALL GRASSED AREAS

- Operations: Kill pernicious weeds with selective contact herbicide. Finish by hand weeding and hoeing.

250 SOIL REQUIREMENTS

- Type:
 - Seeded areas: Soil for grass swards, as section Q28.
 - Turfed areas: N/A.
 - Reinforced grass areas: N/A.

290 PREPARATION FOR HYDRAULIC SEEDING

- Clearance: Remove rubbish, and stones with any dimension exceeding: 50 mm.
- Herbicide:
 - General weeds: Selective contact herbicide.
 - Pernicious weeds: Selective hormone herbicide.
- Grading: Smooth, flowing levels.
 - Cultivation: Ensure grass roots can penetrate substrate.
- Finished surface: Ribbed or rough textured.
- Reinforcement: As specialist contractor's recommendation.
 - Fixing: As specialist contractor's recommendation.

SEEDING

311 GRASS SEEDFOR ROAD VERGES

- Supplier: Emorsgate Seeds. Tel 01553 829028. email: enquires@emorsgateseeds.com.
 - Mixture reference: EG22C Wear Tolerant Turfgrass Mixture with Clover.
- Application rate: 250kg/Ha 25g/m².

312 SEED MIXTUREFOR NATIVE TREE & SHRUB PLANTING ON EMBANKMENTS

- Supplier: Emorsgate Seeds. Tel 01553 829028. email: enquires@emorsgateseeds.com.
 - Mixture reference: ESF3 Legume, Pollen & Nectar Flowers.
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 4kg/Ha 0.4g/m².

313 SEED MIXTUREFOR SuDS AREA

- Supplier: Emorsgate Seeds. Tel 01553 829028. email: enquires@emorsgateseeds.com.
 - Mixture reference: EG8 Meadow Grass Mixture.
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 50kg/Ha 5g/m².

314 SEED MIXTUREFOR WOODLAND ADJACENT TO SuDS AREA

- Supplier: Emorsgate Seeds. Tel 01553 829028. email: enquires@emorsgateseeds.com.
 - Mixture reference: EW1 Woodland Mixture.
- Origin (as defined in the National Plant Specification): Native UK.
- Application rate: 40kg/Ha 4g/m².

320 QUALITY OF SEEDFOR ALL GRASSED AREAS

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations and Department for Environment, Food and Rural Affairs Higher Voluntary Standard.
 - 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 AROUND 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.
- 370 HYDRAULIC SEEDING FOR STEEP SLOPES
- Proposed land use: Forestry style planting and grass seeding.
 - Existing substrate: ????
 - Soil analysis report: ????
 - Erosion conditions: Roadside batters at 1:2.5 gradient. Batters on south side of Link Road 1 facing the SuDS area and on west side of Link Road 3 will be exposed to prevailing wind.
 - Stabilization: Not required.
 - Slurry application: Suitable for soil type, proposed use, location, and weather conditions during and after application.
 - Slurry constituents: Submit proposed constituents and application rates.

PROTECTING/CUTTING

- 540 FIRST CUT OF ROAD VERGES
- Height of initial growth: 75 mm.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 40 mm.
 - Mower type: Contractor's choice.
 - Arisings: Spread evenly over cut areas.
- 541 FIRST CUT OF GRASSED BANKS excluding planted areas
- Height of initial growth: 100 mm.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 40 mm.
 - Mower type: Contractor's choice.
 - Arisings: Spread evenly over cut areas.

- 542 FIRST CUT OF CLOVER MIX IN TREE & SHRUB PLANTED AREAS
- Height of initial growth: No higher than 150 mm.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 30-40 mm.
 - Mower type: Strimmer.
 - Arisings: Spread evenly over cut areas.
- 543 FIRST CUT OF WOODLAND MIX GRASS
- Height of initial growth: No higher than 150 mm.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 30-40 mm.
 - Mower type: Strimmer.
 - Arisings: Spread evenly over cut areas.
- 544 FIRST CUT OF WETLAND MIX GRASS
- Height of initial growth: Cut once in September to maintain capacity of SuDS basin.
 - Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
 - Height of first cut: 50 mm.
 - Mower type: Contractor's choice.
 - Arisings: Spread evenly over cut areas. Remove all arisings from around outfalls.
- 550 AREAS NOT TO BE CUT
- Do not cut:
 - Cornus beds, marsh areas that may form in the SuDS area, flowering meadow grass, hedgelines.
- 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**
- 610 FAILURES OF SEEDING/TURFING
- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
 - Defective materials or workmanship: Areas that have failed to thrive.
 - Exclusions: Theft or malicious damage.
 - Method of making good: Recultivation and reseeded/ returfing.
 - Timing of making good: The next suitable planting season.

620 MAINTAINING ROAD VERGES

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Maximum height of growth at any time: 75 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: When instructed.

650 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Preparation: Before each cut remove all litter and debris.
- Height and frequency of cut in first growing season:
 - Time of first cut: March/ April.
 - Height of first cut: 100 mm.
 - Frequency of subsequent cutting (minimum): Every 6-8 weeks until autumn.
 - Height of growth permitted (maximum): 150 mm.
- Height and frequency of cut in second growing season:
 - Time of cut: October, March and August.
 - Height of cut: 100 mm.
- Trimming: All edges.
 - Arisings: Remove.
- Watering: When instructed.

Q31

External planting

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

- 118 SOIL CONDITIONS
- Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
 - Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.
- 120 CLIMATIC CONDITIONS
- General: Carry out the work while soil and weather conditions are suitable.
 - Strong winds: Do not plant.
- 125 TIMES OF YEAR FOR PLANTING
- Deciduous trees and shrubs: Late October to late March.
 - Conifers and evergreens: September/ October or April/ May.
 - Herbaceous plants (including marginal): September/ October or March/ April.
 - Container grown plants: At any time if ground and weather conditions are favourable.
 - Watering and weed control: Provide as necessary.
 - Dried bulbs, corms and tubers: September/ October.
 - Colchicum (crocus): July/ August.
 - Green bulbs: After flowering in spring.
 - Wildflower plugs: Late August to mid November or March/ April.
 - Aquatic plants: May/ June or September/ October.
- 130 MECHANICAL TOOLS
- Restrictions: Do not use within 100 mm of tree and plant stems.
- 145 WATERING
- Quantity: Wet full depth of topsoil.
 - Application: Even and without damaging or displacing plants or soil.
 - Frequency: As necessary to ensure establishment and continued thriving of planting.
- 150 WATER RESTRICTIONS
- General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.
- 160 NOTICE
- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Delivery of plants/ trees.
 - Planting shrubs.
 - Planting trees into previously dug pits.
 - Watering.
 - Visiting site during maintenance period.
 - Period of notice: One week.

170 SOIL REQUIREMENTS

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

200 PLANTS/ TREES - GENERAL

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
 - Standard: The relevant parts of BS 3936.
- Species: True to name.
- Origin/ Provenance: British provenance.
Definition: Origin and Provenance have the meaning given in the National Plant Specification.

216 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions and other criteria: To the relevant part of BS 3936.

235 CONTAINER GROWN PLANTS/ TREES

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

245 LABELLING AND INFORMATION

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

246 LABELLING AND INFORMATION

- Standard: To BS 3936.

260 PLANT/ TREE SUBSTITUTION

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

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To CPSE 'Handling and establishing landscape plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: 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.

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): Two weeks.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

401 REGULAR PLANT LAYOUT TO CORNUS BEDS

- Spacing: In regular, staggered rows.
- Density: At 1 plant per m².

406 SHRUB PLANTING PITS

- Timing: Excavate immediately prior to planting.
- Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Pit bottom improvement Not required.

471 NATURALIZED HEDGES

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

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

- 486 SHRUB PROTECTION
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Type: Round.
 - Material: Plastics mesh.
 - Size: 0.6 m high x 150 mm diameter.
 - Colour: Green.
 - Support: Two timber stakes.
 - General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

PLANTING TREES

- 505 TREE PITS
- Sizes: 900 mm diameter x 600 mm deep.
 - Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
 - Pit bottoms: With slightly raised centre. Break up to a depth of 200 mm.
 - Treatment: Soil ameliorant worked into pit bottoms.
 - Pit sides: Scarify.
 - Backfilling material: Plant pit backfilling soil system, as section Q28.
 - Accessories:
 - Tree pit drainage layer as drawing ???;
 - Perforated plastics irrigation/ ventilation pipe; and
 - Underground guying to BS 4043.

- 515 TREE PIT DRAINAGE
- Depth of excavation: Increase from specified size to allow for aggregate layer, with base slightly falling to outlet.
 - Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm.
 - Depth: 200 mm.
 - Drainage pipes:
 - Type: Perforated plastics.
 - Diameter: 60 mm.
 - Position: Lay around perimeter of pit within aggregate layer.
 - Discharge: Connect into filter drain system.
 - Geotextile filter:
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Position: Lay over aggregate before installing tree or backfill.
 - Completed pits: Test for free drainage before planting.

- 535 STAKING GENERALLY
- Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - Preservative treatment: Not required.
 - Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
 - Stake size (minimum): 75 mm diameter.

- 565 LONG DOUBLE STAKING FORFEATHERED AND HEDGEROW TREES
- 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, 75mm x 25mm.
 - Firmly fix on windward side of tree and as close as possible to stem.
 - Ties: Cushioned ties.
 - Tying: Secure tree firmly but not rigidly to cross bar.

- 595 TREE PROTECTION
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Type: Round.
 - Material: Plastics mesh.
 - Size: 600mm high x 80mm diameter .
 - Colour: Green.
 - Support: Single timber stake.
 - General: Ensure that protection methods do not impede natural movement of trees or restrict growth.

WOODLAND/ MATRIX/ BUFFER ZONE PLANTING

- 600 WOODLAND WORK GENERALLY
- Services: Check for below and above ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding.
 - Safety: Comply with Arboriculture and Forestry Advisory Group Safety leaflets.

- 635 NOTCH PLANTING IN UNCULTIVATED GROUND
- Notching: Make a vertical 'I', 'L', 'T' or 'H' notch.
 - Depth: To accommodate full depth of roots.
 - Planting: Plant tree, close notch with root collar at ground level and firm the soil.

- 665 SETTING OUT
- Distance between trees: 1.5 m.
 - Distance between rows: 1.5 m.
 - Plant in staggered rows.

- 680 SETTING OUT
- Planting density: 1 per 1.5 m².
 - Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

- 710 MAINTENANCE
- Duration: Carry out the operations in the following clauses from completion of planting until the end of the rectification period.
 - Frequency of maintenance visits: 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: During the next suitable planting season.

740 CLEANLINESS

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

750 PLANTING MAINTENANCE GENERALLY

- Weed control: Maintain weed free area around each tree and shrub.
 - Diameter (minimum): The larger of 1 m or the surface of original planting pit.
 - Keep planting beds clear of weeds: By use of approved non-residual herbicides.
- 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: Every two weeks.
- 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: When instructed.

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.

770 WOODLAND PLANTING MAINTENANCE

- Watering: Only as necessary to prevent plants wilting.
- Loose plants: Refirm surrounding soil, without compacting.
- Weed control: Cut down and remove weeds prior to setting seed in a 1 m diameter area around each tree.
- Vegetation except trees and coppice shoots to be retained: Cut within the plantation area.
 - Height (maximum): 75 mm.
 - Arisings: Leave between rows.
- Mechanical, chemical or mulching methods of vegetation control: Submit proposals.
- Ditches and drains: Keep clear.
- Watering: When instructed.

790 FINAL MULCHING

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

Q35

Landscape maintenance

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

- 110 NOTICE
- Give notice before:
 - Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
 - Period of notice: 7 days.
- 130 REINSTATEMENT
- Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.
- 140 CONTROL OF MAMMALIAN PESTS
- Specialist firms: Submit proposals.
 - Method: Submit proposals.
- 155 WATERING
- Supply: No site supply available, submit proposals.
 - Quantity: Wet full depth of topsoil .
 - Application: Do not damage or loosen plants.
 - Compacted soil: Loosen or scoop out, to direct water to rootzone.
 - Frequency: As necessary for the continued thriving of all planting.
- 160 WATER RESTRICTIONS
- General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 170 DISPOSAL OF ARISING
- General: Unless specified otherwise, dispose of arisings as follows:
 - Biodegradable arisings: Remove to recycling facility.
 - Grass cuttings: Spread evenly.
 - Tree roots and stumps: Remove from site.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and nonbiodegradable arisings: Remove from site.
- 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.

226 TREE STEMS

- Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
 - Operations close to stems: Complete using hand tools.

256 FIRST CUT OF ALL GRASSED AREAS

- See specification clauses Q30/540 - 544.

261 MOWING ROAD VERGES

- Grass height: Maintain between 25 and 50 mm.
- Arisings: Spread evenly over cut areas.

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:
 - Path edges;
 - Service access cover edges; and
 - Where damage occurs.
- Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.

340 SPOT WEEDKILLING IN ROUGH GRASS AREAS

- Herbicide: Contractor's choice.
- Operations: Spot treat
 - docks (*Rumex* spp);
 - nettles (*Urtica* spp);
 - ragworts (*Senecio* spp); and
 - thistles (*Cirsium* spp).

380A REINSTATEMENT OF DAMAGED VERGES

- Damaged turf: Remove to a depth of 40 mm.
- Preparation: Cultivate substrate to a fine tilth.
- 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.
- Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

SHRUBS/TREES/HEDGES

500 ESTABLISHMENT OF NEW PLANTING

- Duration: One year.
- Weed control:
 - Method: Keep planting beds clear of weeds by use of suitable herbicides.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: When instructed.

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: N/A.
 - 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.

530 TREE SHELTERS

- Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
- Removal: N/A.

540 PRUNING GENERALLY

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

555 PRUNING TREES AND SHRUBS

- Standard: To BS 7370-4.
- Special requirements: Growth retardants not permitted.

615 TRIMMING FIELD HEDGES

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

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.

630 DEAD AND DISEASED PLANTS

- Removal: As soon as possible.
- Replacement: In the next suitable planting season.

645 WEED CONTROL GENERALLY

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

650 HAND WEEDING

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

657 HERBICIDE TO KILL REGROWTH

- Type: Suitable foliar acting herbicide to kill regrowth.
-

670 WEED CONTROL WITH SUMMER HERBICIDE

- Type: Suitable foliar acting herbicide.
-

690 MAINTENANCE OF LOOSE MULCH

- Thickness (minimum): 75 mm.
 - Top up: Twice per year.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by hand weeding.

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 N/A.

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 if unavoidable.
 - 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.

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.

865 BARK DAMAGE

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

HARD LANDSCAPE AREAS/FENCING

921 FENCING

- Fences: Inspect monthly and repair following vandalism.

Q40
Fencing

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

211 WOODEN POST AND RAIL FENCING

- Manufacturer: Jacksons Fencing. Tel: 0800 408 2234. www.jacksons-fencing.co.uk.
 - Product reference: Agricultural Fencing - Post & Rail Special Heavy 3 Rail Fencing.
- Standard: To BS 1722-7, type MPR 11/3.
- Height: Approx 1015mm.
- Wood: Softwood.
 - Treatment: To provide a 25 year service life.
 - Finish: None required.
- Posts: 1830mm 125mm Face half round 3 mortice posts. Mortices 38x87mm centred at 125mm, 500mm and 850mm from top of post allowing 3 rails.
- Corner Posts: 1980mm All round peeled corner post 3 mortice. Minimum 125mm diameter with galvanised fitting embedded to prevent splitting. Post morticed two ways.
- Rails: 2000mm long. Irregular sawn sections with a minimum girth of 250mm peeled, with end of rail tapered to fit mortices.
(Girth measurement around outside round edge).
- Maximum centres of posts: 1.85m.
- Method of setting posts: 300 mm square or round holes, 700 mm deep filled to not less than half the depth with concrete.
- Rails:
- Accessories: None.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.

GATES, POSTS AND STILES

511 FIELD GATES AND POSTS

- Manufacturer: Contractor's choice.
 - Product reference: Timber 5-bar field gate.
- Size: 1270mm height, 3000mm long x 75mm depth. Heavy top rail over the full length .
- Materials: Wood gate and posts.
 - Treatment: To provide a 25 year service life.
 - Finish: Planed.
- Hanging System: 1 Heavy galvanised adjustable hinge set.
 - 1 Spring catch set.
 - 1 Anti-theft device (suitable for taking padlock)
 - 1 Gate post: 2100mm x 175mm square hanging post
 - 1 Gate post: 2100mm x 150mm square slam post
- - Finish to metal fittings: Hot dip galvanized to BS EN ISO 1461.
- Method of setting posts: Concrete foundation, 450 mm square x 750 mm deep.
- Accessories: None.

EXECUTION

710 INSTALLATION GENERALLY

- Set out and erect:
 - Alignment: Straight lines or smoothly flowing curves.
 - Tops of posts: Following profile of the ground.
 - Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
- Fixings: All components securely fixed.

715 COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Qualifications: Submit certification of training.
 - NHSS Sector Scheme 2A sub categories: (a) and (g).
 - NHSS Sector Scheme 2C sub categories: Not required.

720 SETTING POSTS IN CONCRETE

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

730 EXPOSED CONCRETE FOUNDATIONS

- Filling: Compact until air bubbles cease to appear on the upper surface.
- Finishing: Weathered to shed water and trowelled smooth.

740 SETTING POSTS IN EARTH

- Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
- Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

750 DRIVEN POSTS

- Damage to heads: Minimize.
 - Repair: Neatly finish post tops after installation.

770 SITE CUTTING OF WOOD

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

780 MAKING GOOD GALVANIZED SURFACES

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

COMPLETION

910 CLEANING

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

920 FIXINGS

- All components: Tighten.
Timing: Before handover.

930 GATES

- Hinges, latches and closers: Adjust to provide smooth operation. Lubricate where necessary.
Timing: Before handover.