

Turing House

Landscape Specification NBS

FS0136-ALA-00-XX-SP-L-0001

Suitability CP, Revision P02

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B

Complete buildings/ structures/ units

B91
Buildings in the landscape

B91 Buildings in the landscape

To be read with Preliminaries/ General conditions.

PRODUCTS

- 340 CYCLE SHELTER TO COVERED CYCLE STANDS REF:S1
- Manufacturer: Broxap or similar.
 - Product reference: New Sheffield Cycle Shelter.
 - Size: 4100mm (l) x 2140mm (w) x 2150mm (h).
 - Frame: steel.
 - Panels: Plastics and composite materials.
 - Roof covering: Glazing plastics.
 - Accessibility: No requirement.
 - Accessories/ Special requirements: Concealed, vandal proof fixings.
 - Method of fixing to ground or base: Base plates bolted to concrete bases.

MATERIALS

COMPLETION

- 930 DOCUMENTATION
- Contents:
 - General product information.
 - Installation information.
 - Inspection and maintenance reports.
 - Number of copies: 2.
 - Submission: Contractor's choice.

Q

Paving/Planting/Fencing/Site furniture

Q10

Kerbs/ edgings/ channels/ paving accessories

Q10 Kerbs/ edgings/ channels/ paving accessories

To be read with Preliminaries/General conditions.

TYPES OF KERBS/EDGINGS AND CHANNELS

- 110 PROPRIETARY PRECAST CONCRETE BULL NOSE KERB REF: K1
- Standard: To BS EN 1340.
 - Manufacturer: Marshalls plc or equal approved..
 - - Product reference: RK0150000.
 - Recycled content: As Manufactured.
 - Designations: BN Kerb, bullnosed.
 - Size (width x height x length): 125 x 255 x 915 mm.
 - Special shapes:
 - Dropper kerbs 125x255/150 left hand Ref No. RK4350010
 - Dropper kerbs 125x255/150 right hand Ref No. RK4350020
 - Centre Kerb 125x150 Ref No. RK0550000
 - Concave Internal angle Ref No.RK5150100
 - Convex External angle Ref No.RK5150000.
 - .
 - Finish: As cast.
 - Colour: Grey.
 - Bedding: Proprietary.
 - Joints generally: Dry, 2-3 mm gap.
 - Sealant movement joints: Not required.
 - Accessories: None.
- 110A PROPRIETARY PRECAST CONCRETE FLAT TOP EDGE REF:K2
- Standard: To BS EN 1340.
 - Manufacturer: Marshalls plc or equal approved..
 - - Product reference: 50x200 EF.
 - Recycled content: As Manufactured.
 - Designations: EF Edging, flat top.
 - Size (width x height x length): 50 x 200x 915 mm.
 - Special shapes: none
 - .
 - Finish: As cast.
 - Colour: Grey.
 - Bedding: Proprietary.
 - Joints generally: Dry, 2-3 mm gap.
 - Sealant movement joints: Not required.
 - Accessories: None.

110C PROPRIETARY PRECAST CONCRETE FLUSH CONCRETE CHANNEL REF: K3

- Manufacturer: Marshalls plc.
 - Web: www.marshalls.co.uk.
 - Email: MarshallsWM@web-response.co.uk.
 - Product reference: Half Battered Kerb
- Size: 150w x 150H x 915Lmm.
- Finish: [As cast].
Colour: [Grey].
Bedding: [Proprietary].
Joints generally: [Dry, 2-3 mm gap].
Sealant movement joints: [Not required].
Accessories: [None].

200B TIMBER EDGING REF:E1

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Size: 35W X 150H X 2400L mm.
- Type/ Material: Timber.

LAYING

510 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat, accurate and without spalling. Form neat junctions.
 - Long units (450 mm and over) minimum length after cutting: 300 mm.
 - Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- Bedding of units: Positioned true to line and levelled along top and front faces, in a mortar bed on accurately cast foundations or on a race of fresh concrete.
- Securing of units: After bedding has set, secured with a continuous haunching of concrete or on a race of fresh concrete with backing concrete cast monolithically.

520 ADVERSE WEATHER

- Conditions: Do not construct if the temperature is below 3°C on a falling thermometer or 1° C on a rising thermometer. Adequately protect foundations, bedding and haunching against frost and rapid drying by sun and wind.

610 ANGLE KERBS

- Usage: Internal and external 90° changes of direction.
- Cutting of mitres: Not permitted.

620 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

625 REGULARITY OF PAVED SURFACES

- Maximum undulation of (non-tactile) paving surface: 3 mm.
 - Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
 - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
 - Recessed, filled joints: 2 mm.
 - Recess depth (maximum): 5 mm.
 - Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.

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

110A SELF BINDING GRAVEL REF:P7

- Manufacturer: DCM Surfaces.
- Product reference: Self Binding Gravel.
- Colour: Gold.
- Size: 50-100mm self-binding gravel.
- Compacted thickness: min 100mm MOT type 1.
- 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.

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.

380 LAYING GRANULAR SURFACES IN PEDESTRIAN AREAS

- Permissible deviation from required levels, falls and cambers (maximum): ± 12 mm.
- General: Spread and level in 100 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.

Q24

Interlocking brick/block roads/pavings

Q24 Interlocking brick/block roads/pavings

To be read with Preliminaries/ General conditions

TYPES OF PAVING

110A CONVENTIONAL CONCRETE BLOCK PAVING TO PEDESTRIAN AREAS REF P5/P6

- Blocks: To BS EN 1338.
 - Manufacturer: Marshalls or similar.
Product reference: Piora or similar.
 - Sizes: 240 x 160 x 60 mm.
 - Special blocks: None.
 - Arrises: No requirement.
 - Colour/ Finish: Graphitem, Light or Dark.
- Jointing:
 - Material: In accordance with BS 7533-3.
 - Joint width: 2-5 mm.
- Sealer/ Stabilizer: Not required.
- Setting out:
 - Bond: Running.
 - Features: none.
- Refer to Civil Engineers drawings and specification for laying course and build up

110B CONVENTIONAL CONCRETE BLOCK PAVING TO CAR PARK REF P4

- Blocks: To BS EN 1338.
 - Manufacturer: Marshalls or similar.
Product reference: Piora or similar.
 - Sizes: 240 x 160 x 60 mm.
 - Special blocks: None.
 - Arrises: No requirement.
 - Colour/ Finish: Graphitem, Light or Dark.
- Jointing:
 - Material: In accordance with BS 7533-3.
 - Joint width: 2-5 mm.
- Sealer/ Stabilizer: Not required.
- Setting out:
 - Bond: 90° herringbone.
 - Features: Mortar bedded edge restraint and White marker blocks defining parking bays.
- Refer to AKSWard drawings and specification for laying course and build up

EXECUTION

200 EXECUTION GENERALLY - CONCRETE BLOCK AND CLAY PAVER PAVING

- Standard: In accordance with BS 7533-3.

211 COLOUR BANDING

- General: Unless premixed by manufacturer, select blocks/ pavers/ setts vertically from at least 3 separate packs in rotation to avoid colour banding.

- 220 SAMPLES
- General: Before ordering, submit samples of concrete blocks/ pavers/ setts that are representative of colour and appearance.
- 230 CONTROL SAMPLES
- General: Carry out sample area of finished work:
 - Location: within completed works.
 - Size (minimum): 3.0 x 3.0 m.
 - Features to be included:
 - Edging;
 - Kerb;
 - Recessed manhole cover infill;
 - Junction with building facade; and
 - Cutting to base of light column.
 - Give notice: When ready for inspection.
 - Timing: Obtain approval of appearance before proceeding.
- 240 ADVERSE WEATHER
- General: Do not use frozen materials or lay bedding on frozen or frost covered sub-bases.
- 485 LAYING BLOCKS/ PAVERS/ SETTS
- Setting out: Start from an edge restraint.
 - Cutting: Cleanly, accurately and vertically, without spalling. Do not mark or damage visible surfaces.
 - Cut edges: Turn inwards where possible; do not position against edge restraints or other features.
 - In situ mortar or concrete infill: Do not use.
 - Compaction: Vibrate to produce thoroughly interlocked paving of even overall appearance with regular joints and accurate to line, level and profile. Do not mark or damage paving units, kerbs and adjacent work.
 - Concrete blocks and clay pavers: In accordance with BS 7533-3, Annex F, to site category required for laying course material.
- 495 IN SITU SURROUNDS TO OBSTRUCTIONS
- Locations: At circular street furniture bases.
 - Material: Concrete to AKS Ward Specification.
 - Shape and size: Rectangular, 100 mm (minimum) all round obstruction.
 - Thickness (minimum): Combined depth of blocks/ pavers/ setts and sand laying course.
 - Colour: To match paving units.
 - Timing: Lay and allow to cure in advance of laying blocks/ pavers/ setts.
- 500 REGULARITY OF PAVED SURFACES
- Maximum variation in gap under a 3 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface):
 - Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
 - Difference in level between adjacent paving units (maximum): 2 mm.
 - Sudden irregularities: Not permitted.

COMPLETION

615 COMPLETION OF PAVING

- Final compaction of the surface course: In accordance with BS 7533-3.
- Vacuum cleaning machines: Not allowed.

Q25

Slab/brick/sett/cobble pavings

Q25 Slab/brick/sett/cobble pavings

- 320 TACTILE FLAGS AND SLABS HAZARD WARNING PAVING TO STEPS REF: P8
- Standard: To DD CEN/TS 15209.
 - Material: Precast concrete.
 - Manufacturer: Manufacturer: Marshalls or equal approved...
Product reference: Contractor's choice.
 - Recycled content: Not applicable.
 - Nominal sizes: 400 x 400 mm.
 - Colour: Grey.
- 620 ADVERSE WEATHER
- General:
 - Temperature: Do not lay or joint paving if the temperature is below 3°C on a falling thermometer or below 1°C on a rising thermometer.
 - Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.
 - Paving with mortar joints and/ or bedding:
 - Protect from frost damage, rapid drying out and saturation until mortar has hardened.
 - Paving laid and jointed in sand:
 - Stockpiled bedding sand: Protect from saturation.
 - Exposed areas of sand bedding and uncompacted areas of sand bedded paving: Protect from heavy rainfall.
 - Saturated sand bedding: Remove and replace, or allow to dry before proceeding.
 - Laying dry-sand jointed paving in damp conditions: Brush in as much jointing sand as possible. Minimize site traffic over paving. As soon as paving is dry, top up joints and complete compaction.
- 625 LAYING PAVINGS - GENERAL
- Appearance: Smooth and even with regular joints and accurate to line, level and profile.
 - Falls: To prevent ponding.
 - Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
 - Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.
 - Slopes: Lay paving units upwards from the bottom of slopes.
 - Paving units: Free of mortar and sand stains.
 - Cutting: Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

COMPLETION

- 915 COMPLETION OF PAVING WITH DRY SAND OR FINE AGGREGATE FILLED JOINTS
- Sand dressing: Leave a thin layer of dry jointing sand over the paving.
 - Final compaction of the surface course: In accordance with BS 7533-3.
 - Vacuum cleaning machines: Not allowed.

Q26

Special surfacings/ pavings for sport/ general amenity

Q26 Special surfacings/ pavings for sport/ general amenity

To be read with Preliminaries/ General conditions.

SPORTS SURFACING

110 INFORMATION TO BE PROVIDED BY THE CONTRACTOR

- Submit:
 - Reference samples: Materials, seams and line markings.
 - Additional information: Essential information in accordance with BS 7044-4.

150 SUITABILITY OF BASE/ SUB-BASE

- Preparation: Before starting work ensure the following:
 - Accuracy: Base/ sub-base will permit specified flatness/ regularity of finished surfacing.
 - Falls/ camber: Accurately incorporated in the base/ sub-base.

IMPACT ABSORBING SURFACINGS FOR PLAY AREAS

301 EXTENT OF IMPACT ABSORBING SURFACING

- General: Lay impact absorbing surfacing as indicated on drawings.

360A IN SITU SYNTHETIC SURFACING REF:P3

- Sub-base: Submit proposals.
 - Thickness: To Engineers Specification and as required by Critical Fall Height (CFH).
- Base: Submit proposals.
 - Thickness: To Engineers Specification and as required by CFH.
- Surface course: Wet pour, in situ laid polyurethane bound EPDM rubber crumb surface.
 - Standard: To BS 7188.
 - Manufacturer: Contractor's choice.
Product reference: Submit proposals.
 - Colour: Submit proposals.
 - Critical fall height when tested to BS EN 1177: For Legacy Play Equipment to be defined by Survey. For new equipment as manufacturers recommendations.
 - Health and safety:
Substance known to be toxic or carcinogenic on skin contact or released as vapour or dust during normal use: Not permitted.
- Submit:
 - Resistance to abrasive wear, slip resistance, resistance to indentation and ease of ignition: Evidence of testing to BS 7188.
 - Critical fall height: Evidence of testing to BS EN 1177.

ASSOCIATED ACCESSORIES

COMPLETION

920 PLAY SURFACE TESTING

- Standard: To BS EN 1177 and BS 7188, where applicable.
- Testing body: A United Kingdom Accreditation Service (UKAS) independent laboratory.
- Timing: Within ten days of completing the surfacing works.
- Test results: Submit.

930 DOCUMENTATION

- General: For all types of surfacing, provide the following:
 - Name and contact details of installer.
 - Date of installation.
 - Name and contact details of manufacturer.
 - Type/ description/ reference of products used.
 - Manufacturer's recommended inspection and maintenance procedures to maintain safety and impact absorbing performance.
 - Manufacturer's recommended cleaning and maintenance methods, where relevant.

940 LABELLING

- Signs: Provide permanent labelling in approved locations on all types of surfacing stating: Critical fall height and Manufacturer's name and contact details.

Q28

Topsoil and soil ameliorants

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

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

310 MATERIALS NOT PERMITTED

- Materials:
 - Peat;
 - Products containing peat; and
 - River and canal dredgings.

EXECUTION

610 TOPSOIL ANALYSIS

- Soil to be analysed:
 - Existing soil in area of the demolished building;
 - Imported topsoil; and
 - Manufactured topsoil.
- Soil analyst: contractor's choice.
- Samples: Collect in accordance with BS 3882.
- Submit:
 - Declaration of analysis:
 - Chemical analysis and contaminants;
 - Maximum stone content, stone size and pH value; and
 - Nutrient content, pH value and textural classification.
 - Report detailing soil analyst's recommendations.

630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR SHRUB BEDS

- Timing: Submit at handover.
- Contents:
 - Full description of all soil components.
 - Record of source for all soil components.
 - Record drawings showing the location and depth of all soils by type and grade.
 - Declaration of analysis: in accordance with BS 3882, Annex E.
- Number of copies: 2.

635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR COMPOST

- Timing: Submit at handover.
- Contents:
 - Full description of all compost components.
 - Record of source for all compost components.
 - Analyst's report for each test carried out.
 - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
 - Quality Compost Protocol certification: Not required.
- Number of copies: 2.

650 NOTICE

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

655A MECHANICAL TOOLS

- Restrictions: Do not use within 100 cm 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 50 mm.
- Remove from site: Arisings, contaminants and debris and Builders rubble.

670 INSPECTING FORMATIONS

- Give notice: Before spreading topsoil for 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 50 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.

685 SURPLUS MATERIALS TO BE REMOVED

- Topsoil: Remove from site excess topsoil.
- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

695 CULTIVATION

- Compacted topsoil: Break up to full depth.
- Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
 - Depth: 150 mm.
 - Particle size (maximum): 2-8 mm.
 - Timing: Within a few days before planting.
 - Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: 25 mm above adjoining paving or kerbs.
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

700 GRADING OF TOPSOIL

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

705 HANDLING TOPSOIL

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

710 SPREADING TOPSOIL

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

715 LOOSE TIPPING OF TOPSOIL

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

720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

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

725 SPORTSFIELDS

- Grading: 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.

Q30
Seeding/turfing

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115A SEEDED AREAS

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

120 CLIMATIC CONDITIONS

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

145 WATERING

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

146 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without displacing seed, seedlings or soil.
- Frequency: As required and when instructed.

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: 2 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: 1 week.
- 212A SEED BED CLEANING BEFORE SOWING GRASS AREAS
- Operations: As seed supplier's recommendations..
- 280 FINAL CULTIVATION
- Timing: After grading and fertilizing.
 - Seed bed: Reduce to fine, firm tilth with good crumb structure.
 - Depth: 25 mm.
 - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
 - Remove surface stones/earth clods exceeding:
 - General areas: 30 mm.
 - Fine lawn areas: 10 mm.
 - Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

SEEDING

- 310 GRASS SEED FOR ALL GRASSED AREAS
- Mixture: 35% Chewings fescue, 35% Slender red fescue, 20% Smooth stalked meadow grass, 10% Brown top bent.
 - Application rate: 20–35 g/m².
- 319 QUALITY OF SEED FOR ALL GRASSED AREAS
- Freshness: Produced for the current growing season.
 - Certification: Blue label certified varieties.
 - Standard: EC purity and germination regulations.
 - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
 - Samples of mixtures: Submit when requested.
- 330 SOWING
- General: Establish good seed contact with the root zone.
 - Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
 - Distribution: 2 equal sowings at right angles to each other.
- 335 GRASS SOWING SEASON
- Grass seed generally: April to October.
- 340 PRE-EMERGENT HERBICIDE FOR ALL GRASSED AREAS
- Standard: Pesticide Safety Directorate approved.
 - Application rate: In accordance with manufacturer's written recommendation.
 - Timing: Immediately after sowing.

PROTECTING/CUTTING

510 PROTECTIVE FENCING

- Fencing type: Chestnut pale fencing to BS 1722-4.
 - Height: 0.9 m.
- Erection: On completion of seeding/ turfing.
- Removal: After grass is well established. Fencing will remain the property of the Contractor.

540 FIRST CUT OF ALL GRASSED AREAS

- Height of initial growth: As schedule.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: As schedule.
- Mower type: As schedule.
- Arisings: Spread evenly over cut areas.

590 CLEANLINESS

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

MAINTENANCE

610A FAILURES OF SEEDING

- Duration: Carry out the following operations from completion of seeding 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.
- Timing of making good: The next suitable planting season.

620A MAINTAINING GENERAL GRASSED AREAS

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

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 (excepting aquatic/ marginal planting) not waterlogged.
- Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

120 CLIMATIC CONDITIONS

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

125 TIMES OF YEAR FOR PLANTING

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

130 MECHANICAL TOOLS

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

145 WATERING

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

150 WATER RESTRICTIONS

- General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

- 160 NOTICE
- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Delivery of plants/ trees.
 - Planting shrubs.
 - Planting trees into previously dug pits.
 - Watering.
 - Visiting site during maintenance period.
 - Period of notice: Three working days.
- 165 PREPARATION, PLANTING AND MULCHING MATERIALS
- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
 - Certification of source, analysis, suitability for purpose and absence of harmful substances: Submit.
 - Certified materials:
 - Composted horticultural waste;
 - Sanitized and stabilized compost; and
 - Wood waste.
 - Give notice before ordering or using.
- 200 PLANTS/ TREES - GENERAL
- Condition: Materially undamaged, sturdy, healthy and vigorous.
 - Appearance: Of good shape and without elongated shoots.
 - Hardiness: Grown in a suitable environment and hardened off.
 - Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
 - Budded or grafted plants: Bottom worked.
 - Root system and condition: Balanced with branch system.
 - Standard: The National Plant Specification.
 - Species: True to name.
 - Origin/ Provenance: British grown.
Definition: Origin and Provenance have the meaning given in the National Plant Specification.
- 215 PLANTS/ TREES - SPECIFICATION CRITERIA
- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.
- 235 CONTAINER GROWN PLANTS/ TREES
- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
 - Plants: Centred in containers, firmed and well watered.
 - Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
 - Hardiness: Grown in the open for at least two months before being supplied.
 - Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

- 245 LABELLING AND INFORMATION
- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
 - Full botanical name.
 - Total number.
 - Number of bundles.
 - Part bundles.
 - Supplier's name.
 - Employer's name and project reference.
 - Plant specification, in accordance with scheduled National Plant Specification categories.
 - Additional information: Submit on request: Country of origin.
- 255 PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES
- Types/ Species: As plant schedule.
 - Predelivery inspection: Give notice.
 - Labelling: Identify inspected plants/ trees as reserved for use on this project.
- 260 PLANT/ TREE SUBSTITUTION
- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
 - Price.
 - Difference from specified plants/ trees.
 - Approval: Obtain before making any substitution.
- 265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING
- Standard: To HTA 'Handling and establishing landscape plants'.
 - Frost: Protect plants from frost.
 - Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
 - Plant packaging: Coextruded polyethylene bags with black interior and white exterior.
 - Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
 - Planting: Upright or well balanced with best side to front.
- 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

305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by contractor's choice of herbicide.

375 CULTIVATION

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

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

400 RANDOM PLANT LAYOUT TO ALL BEDS

- Spacing: Evenly, avoiding straight lines.
- Density: As plant schedule.

405 SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: As plant schedule.
- Pit bottom improvement Break up to a depth of 150 mm, incorporating 25 g of slow release fertilizer per planting pit.
- Backfilling material: Reuse excavated material..

471 NATURALIZED HEDGES

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

476A SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL FOR TREE PITS

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:
- Ameliorant/ Conditioner: Not required.
- Fertilizer: Slow release.
 - Application rate: 25 g/m².

480 AFTER PLANTING

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- Top dressing: Sanitized and stabilized compost.
 - Depth: 25 mm.

485 MULCHING PLANTING BEDS

- Material: Play grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: Submit proposals.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PLANTING TREES

505 TREE PITS

- Sizes: Minimum 1200 mm diameter x 750 mm deep. Refer to construction detail drawings.
- 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:
 - Perforated plastics irrigation/ ventilation pipe as Q31/512F; and
 - Underground guying to BS 4043 or staking as Q31/555A.

512F TREE IRRIGATION AND AERATION SYSTEM ALL TREES

- Manufacturer: GreenBlue Urban Ltd or equal approved
 - Web: www.greenblueurban.com.
 - Email: enquiries@greenblueurban.com.
 - Product reference: RRURb2A.

512G ROOT BALL SECURING SYSTEM FOR SEMI MATURE TREES UPTO 20cm Girth

- Manufacturer: GreenBlue Urban Ltd or equal.
 - Web: www.greenblueurban.com.
 - Email: enquiries@greenblueurban.com.
 - Product reference: SASMP or equal.

515A 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.
- Geotextile filter:
 - Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
 - Position: Lay over aggregate before installing tree or backfill.
- Completed pits: Test for free drainage before planting.

525 SEMIMATURE TREES

- Standard: Prepare roots and transplant to BS 4043.
- Backfilling material: As clause 585.
- Support: Underground guying to BS 4043.
- Protection: Not required.

555A SHORT SINGLE STAKING FOR ALL TREES IN PLANTING OR GRASS AREAS, UP TO HEAVY STANDARD SIZE

- 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
- Height of stakes: Cut to approximately 1/3 height of clear stem above ground level.
- Ties: Cushioned ties.
- Tying: Secure tree firmly but not rigidly to stake with two ties within 25 mm of top of stake.

586A TREE BACKFILLING MATERIAL

- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required.
- Fertilizer: Slow release.
 - Application rate: To manufacturer's/ supplier's recommendations.

590 MULCHING TREES

- Material: Fine grade bark mulch.
 - Purity: Free of pests, disease, fungus and weeds.
 - Recycled content: Submit proposals.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: In a circular area of 500 mm radius measured from the tree stem.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE

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

720 FAILURES OF PLANTING

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

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: As schedule.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Trees: Spray crown when in leaf during warm weather.
 - Timing: After dusk.
- Watering: As required to ensure continued thriving of plants.

755 PLANTING MAINTENANCE - FERTILIZER

- Time of year: March or April.
- Fertilizer: Slow release.
 - Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: To manufacturer's recommendations.

760 PLANTING MAINTENANCE - PRUNING

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

780 MAINTENANCE INSTRUCTIONS

- General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide a schedule of any ongoing maintenance problems experienced during the rectification period.

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.
- 155 WATERING
- Supply: Potable mains water.
 - Quantity: Wet full depth of topsoil .
 - Application: Do not damage or loosen plants.
 - Compacted soil: Loosen or scoop out, to direct water to rootzone.
 - Frequency: As necessary for the continued thriving of all planting.
- 160 WATER RESTRICTIONS
- General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 170 DISPOSAL OF ARISING
- General: Unless specified otherwise, dispose of arisings as follows:
 - Biodegradable arisings: 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
- General: Not permitted on 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.

250 LEAF REMOVAL

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

255 FIRST CUT OF ALL GRASSED AREAS

- Height of initial growth: As per agreed maintenance schedule.
- Preparation:
 - Debris and litter: Remove.
 - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: As per agreed maintenance schedule.
- Mower type: Contractor's choice.
- Arisings: As per agreed maintenance schedule.

262 MOWING SPORTS FIELDS

- Grass height: As per agreed maintenance schedule.
- Arisings: As per agreed maintenance schedule.

265 MOWING GENERAL AREAS

- Grass height: As per agreed maintenance schedule.
- Arisings: As per agreed maintenance schedule.

309 EDGES TO SEEDED AREAS

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

310 RE-FORMING GRASS EDGES

- Location: All edges 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.

320 LEVELLING HOLLOWES AND BUMPS IN TURF

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

FLOWER BEDS/ SEASONAL BEDDINGS

470 FLOWER BEDS GENERALLY

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

SHRUBS/TREES/HEDGES

500 ESTABLISHMENT OF NEW PLANTING

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

502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER

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

510 TREE STAKES AND TIES

- Inspection/ Maintenance times: As scheduled and immediately after strong winds.
- Stakes:
 - Replace loose, broken or decayed stakes to original specification.
 - If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
- Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
 - Where chafing has occurred, reposition or replace ties to prevent further chafing.
- Removal of stakes and ties: During spring when no longer required to support the tree.
 - Fill stake holes with lightly compacted soil.

515 TREE GUY WIRES

- Inspection/ Maintenance times: Immediately after strong winds.
- Operations:
 - Replace or resecure loose or missing guy wires.
 - Adjust to suit stem growth and to provide correct and uniform tension.
- Removal: In spring.

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.

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.

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: Within two weeks.

- 635 REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS
- Dead and damaged plants: Remove.
 - Mulch/ matting materials:
 - Carefully move to one side and dig over the soil, leaving it fit for replanting.
 - Do not disturb roots of adjacent plants.
 - Replacement plants:
 - Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
 - Additional requirements: None.
 - Dressing: Slow release fertilizer:
 - Type: Organic.
 - Application rate: As manufacturer's recommendations.
- 645 WEED CONTROL GENERALLY
- Weed tolerance: Weed to clear ground every two weeks.
 - Adjacent plants, trees and grass: Do not damage.
- 650 HAND WEEDING
- General: Remove weeds entirely, including roots.
 - Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
 - Completion: Rake area to a neat, clean condition.
 - Mulch: Reinstate to original depth.
- 655 WEED CUTTING BY HAND OR MACHINE
- Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 25 mm.
 - Herbicides: Give notice before use.
- 657 HERBICIDE TO KILL REGROWTH
- Type: Suitable foliar acting herbicide to kill regrowth.
 - Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.
- 680 SOIL AERATION
- Compacted soil surfaces:
 - Prick up: To aerate the soil of root areas and break surface crust.
 - Size of lumps: Reduce to crumb and level off.
 - Damage: Do not damage plants and their roots.
- 685 SOIL LEVEL ADJUSTMENT
- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
 - Arisings (if any): Spread evenly over the bed.
- 690 MAINTENANCE OF LOOSE MULCH
- Thickness (minimum): 75 mm.
 - Top up: As per agreed maintenance schedule.
 - 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.

705 WINTER LEAF REMOVAL

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

TREE WORK

810 TREE WORK GENERALLY

- Identification: Before starting work agree 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.

835 CUTTING AND PRUNING GENERALLY

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
 - Chainsaws: Do not use on branches of less than 50 mm diameter.
 - Hand saws: Form a smooth cut surface.
 - Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
Large branches: Remove only with prior approval.
 - Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

855 CUTTING TREE ROOTS

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

860 REMOVING TREES, SHRUBS AND HEDGES

- Standards: To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
- Existing services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and smaller trees: Cut down and grub up roots.
- Tree stumps:
 - Removal: Remove mechanically to a minimum depth of 300 mm below ground level.
 - Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
- Filling holes:
 - Material: Use as-dug material and/ or imported soil as required.
 - Finishing: Consolidate and grade to marry in with surrounding ground level.

865 BARK DAMAGE

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

870 CAVITIES IN TREES

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

HARD LANDSCAPE AREAS/FENCING

910 HARD SURFACES AND GRAVEL AREAS

- Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
- Hard surfaces: Remove litter, leaves and other debris.
- Surface gutters and channels: Remove mud, silt and debris.
- Drainage gullies: Empty traps and flush clean.
- Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
- Repairs to flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
- Stain removal: In accordance with BS 7370-2, table 4.

920 FENCING

- Fences: Inspect and repair to maintain protection against intruders.

Q40
Fencing

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

125A OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING 1.8m HIGH INTERNAL SECURITY FENCE REF: F1

- Manufacturer: CLD Fencing or equal approved.
 - Product reference: CLD Dulok Double Wire, flat panel system.
- Standard: To BS 1722-14, category 1.
- Height: 1800mm.
- Mesh and wire: 200 x 50 mm mesh; 2 x 8mm horizontal wires either side of a 6mm wire.
- Posts: 60 x 40 mm RHS, galvanised after manufacture and polyester powder-coated with 40 x 5 mm steel clamp bar galvanised and polyester powder-coated to match fencing.
- Maximum centres of posts: 2.52m
- Method of setting posts: Set posts in holes 300 mm diameter x 750** mm deep, filled not less than half the depth with concrete, as clause 720.
- Bottom of fencing: max. 50 mm above final ground level. If site levels undulate along fence lines the fence panel is to be burried.
- Accessories: Single and Double Leaf Gates .
Integral locking mechanisms
Tamper proof fixings to fence and gate..
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-14 to ensure 15year product guarantee is honored from Manufacturer
- Colour: Green RAL 6005

125B OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING 2.4m HIGH PERIMETER SECURITY REF: F2 FENCE

Manufacturer: CLD Fencing or equal.

- Product reference: CLD Dulok Double Wire, flat panel system.
 - Standard: To BS 1722-14, category 1.
 - Height: 2400 mm.
 - Mesh and wire: 200 x 50 mm mesh; 2 x 8mm horizontal wires either side of a 6mm wire..
 - Posts: 60 x 40 mm RHS, galvanised after manufacture and polyester powder-coated with 40 x 5 mm steel clamp bars galvanised and polyester powder-coated to match fencing.
 - Maximum centres of posts: 2.52m
 - Method of setting posts: Set posts in holes 300 mm diameter x 750** mm deep, filled not less than half the depth with concrete, as clause 720.
 - Bottom of fencing: max. 50 mm above final ground level. If site levels undulate along fence lines the fence panel is to be burried.
 - Accessories: Single and Double Leaf Gates .
Integral locking mechanisms
Tamper proof fixings to fence and gate..
 - Conformity: Submit manufacturer's and installer's certificates, to BS 1722-14.
 - Colour: Green RAL 6005

- 125D OPEN MESH STEEL PANEL GENERAL PURPOSE FENCING 3.0M WELDMESH TO MUGA [REF: F3]
 Manufacturer: [CLD Fencing or equal].
 - Product reference: [CLD Dulok Rebound Double Wire Panel System with Dulok 8-SR1].
 Standard: To BS 1722-14, category 1.
 Height: [3000 mm].
 Mesh and wire: [Up to 1.2m 50 x 66.5 mm mesh; One 6 mm vertical wire between two 8 mm horizontal wires at 66.5 mm centres. From 1.2m up to 3060mm on sides and 4060mm high at goal ends: 200 x 50 mm mesh; One 6 mm vertical wire between two 8 mm horizontal wires at 200 mm centres, galvanised and polyester powder-coated to minimum 60 microns].
 Posts: [60 x 40 mm RHS, hot dip galvanised after manufacture and polyester powder-coated with 40 x 5 mm flat clamp bars hot dip galvanised and polyester powder coated to match posts].
 Fixings: M8 x 40mm stainless steel pin hex dome-head security screws
 Colour: PPC Colour Green RAL 6005
 Maximum centres of posts: [2.52m].
 Method of setting posts: [Set posts in holes 300 mm diameter x 1200 mm deep, filled not less than half the depth with concrete, as clause 620.].
 Bottom of fencing to be: max. 50 mm above final ground level.
 Other requirements:
 - Shear drive fixing if required instead of pin hex
 - Where located between playing courts fence is to be double skinned.
 Conformity: Submit manufacturers and installers certificates, to BS1722-14
- 310A CLOSE BOARDED FENCING REF: F4
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Standard: To BS 1722-5, type BW 180B.
 - Height: 2400mm.
 - Wood: Contractor's choice.
 - Treatment: To provide a 30 year service life.
 - Finish: Contractor's choice.
 - Boards: 100x22mm tongue and groove soft wood
 - rails: 75x75mm aris with chamfered edge.
 - Posts: 150x100x2550mm Sawn timber with once weathered top.
 - Centres of posts (maximum): 2.4 m.
 - Method of setting posts: To engineers specification.
 - Accessories:
 - Wood gravel board;
 - Wood panel capping; and
 - central wind post to lower rail if required.
 - Conformity: Submit manufacturer's and installer's certificates, to BS 1722-5.

310B CLOSE BOARDED FENCING REF: F5

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Standard: To BS 1722-5, type BW 180B.
- Height: 3000mm.
- Wood: Contractor's choice.
 - Treatment: To provide a 30 year service life.
 - Finish: Contractor's choice.
- Boards: 100x22mm tongue and groove soft wood
- rails: 75x75mm aris with chamfered edge.
- Posts: 150x100x2550mm Sawn timber with once weathered top.
- Centres of posts (maximum): 2.4 m.
- Method of setting posts: To engineers specification.
- Accessories:
 - Wood gravel board;
 - Wood panel capping; and
 - central wind post to lower rail if required.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-5.

GATES, POSTS AND STILES

570A GATES REF: G1, G2, G3, G4

- Manufacturer: CLD Fencing.
 - Product reference: Lockmaster Swing Gates.
- Single, double, Single leaf for vehicular, pedestrian gates as shown on drawing FS0316-ALA-00-XX-DR-L-0024 Fencing General Arrangment
- Sizes: Single leaf Pedestrian gate 1200 mm clear opening. Double leaf pedestrian gates 3000mm. Double leaf vehicle gate width to be advised by Civil Engineer .
- Posts: As per Manufacturer Specification.
- Finish as delivered: Powder coated to BS 13438.
- Fittings: Two tee hinges, locinox lock and samson gate closer
 - Finish: Polyester powder coated, as section Z31, black.
- Method of fixing: Posts set in 450 mm square x 750 mm deep concrete.
- 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.

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.

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.

Q41
Barriers/ guardrails

Q41 Barriers/ guardrails

To be read with Preliminaries/ General conditions.

TYPES OF BARRIERS/ GUARDRAILS

INSTALLATION

405 COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Qualifications: Submit certification of training.
 - UKAS Sector Scheme 2A sub categories: Contractors choice.
 - UKAS Sector Scheme 2C sub categories: Contractors choice.

410 WORK ON OR ADJACENT TO HIGHWAYS

- Requirement: Comply with the Department for Transport's 'Safety at street works and road works. A code of practice'. Retain a copy of this document on site at all times during the course of the works.

420 ALIGNMENT

- Erection: Fences/ barriers to present a flowing alignment. Tops of posts to follow ground profile.
- Tolerance: ± 30 mm of prescribed alignment and, within any 10 m length, ± 15 mm from the straight or required radius.

430 ERECTION GENERALLY

- Protection: Coat all internal and external surfaces of aluminium and steel posts below and up to 150 mm above ground level, with two coats of bituminous paint to BS 6949 type 2, unless other applied surface finish is specified.
- Prevention of electrolytic corrosion: Isolate dissimilar metals.
- Steel components: Do not drill, cut or weld after galvanizing.

900 DOCUMENTATION

- Contents:
 - General product information.
 - Installation information.
 - Inspection and maintenance reports.
- Number of copies: 2.
- Submission: Two weeks prior to date when principal contractor expects work to be practically complete.

Q50
Site/street furniture/equipment

Q50 Site/street furniture/equipment

To be read with Preliminaries/ General conditions.

SITE AND STREET FURNITURE

210C CYCLE STANDS REF:S1

- Manufacturer: Kensington Systems Ltd. or similar..
 - Product reference: Elk Ervine Traditional style Sheffield type Stand.
 - Size: [700mm Wide x 1100mm High].
- Material: Steel.
 - Finish: Stainless Steel Ref: ELK90009.
 - Colour: None.
- Number of stands: As required.
- Accessories: None.
- Method of fixing: Root Fixed Ref: ELK90009.

210D DOOR PROTECTION HOOPS REF:S2

- Manufacturer: Kensington Systems Ltd. or similar..
 - Product reference: Elk Door Restrainer ELK90068-B&K - Refer to Configure Detail ALA277-300-D11.
 - Size: [1020mm Above Ground x 500mm wide. (300mm below ground)].
- Material: Steel.
 - Finish: Polished Stainless Steel ELK90068.
 - Colour: None.
- Accessories: 150mm high tapping rail.
- Method of fixing: Root, 300 mm below ground, set in concrete base.

220E BENCHES WITHOUT BACK REST CONCRETE REF:S3

- Manufacturer: Artform Urban. or similar.
 - Product reference: Loop Line.
- Material: Precast concrete.
 - Finish: Smooth Finish, as cast.
 - Colour: Grey.
- Size: Refer to Ares' drawing
- Accessories/ Special requirements: Anti-graffiti coating.
- Method of fixing: Benches fixed level.

INSTALLATION

515 SETTING COMPONENTS IN CONCRETE

- Holes: 250 x 250 x minimum 300 mm deep.
- Components: Accurately positioned and securely supported.
- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

520 SETTING IN EARTH

- Holes: As small as practicable.
- Components being fixed: Accurately positioned and securely supported.
- Buried depth (minimum): 600 mm.
- Earth refill: Well rammed as filling proceeds.

530 PRESERVATIVE TREATED TIMBER

- Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
- Heavily worked sections: Re-treat.

540 BUILDING IN TO MASONRY WALLS

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

550 DAMAGE TO GALVANIZED SURFACES

- Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - Material: 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: Sufficient to provide a zinc coating at least equal to the original layer.

560 SITE PAINTING

- Timing: Prepare surfaces and apply finishes as soon as possible after fixing.