Chester Road Hostel, Camden Landscape Specification June 2024 Ref: 2497-TFC-00-XX-SP-L-6001

To be read in conjunction with all terra firma drawings and documentation

Project reference:		2497	7	
Date	Rev	By	Chk	Comments
17.06.2024	01	AS	AS	Stage 4 issue
31.07.2024	02	AS	AS	Updated in line with comments

NOTES

Other documents

This specification is to be read in conjunction with all relevant terra firma drawings and documentation, and in conjunction with engineering and architectural drawings and specifications.

If there is any ambiguity and/or contradiction between other drawings or specifications and the Landscape proposals specification and or product type, firstly obtain clarification from the Project Engineer / Architect before proceeding.

Alternative equivalent products

Where specific products or systems are referenced within the specification section, alternative equivalent products may be proposed for consideration. However where alternative products or systems are proposed, the contractor / manufacturer / supplier must provide sufficient evidence, including an alternative NBS specification, technical details and any necessary BREEAM certification / documentation to demonstrate that the alternative proposals can be incorporated & that it / they provide equivalent or improved technical, and where necessary, aesthetic performance characteristics to that of the product / system originally specified.

NOTE: No alternative equivalent product(s) may be used until full approval of the Design Team is granted in writing.

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Q10 Kerbs/ edgings/ channels/ paving accessories

Types of kerbs/edgings and channels

110 Pin Kerb Edging

- 1. Description: EDGINGS
- 2. Standard: To BS EN 1340.
- 3. Manufacturer: Contractor's choice
- 4. Designations: EF Edging, flat top
- 5. Size (width x height x length): 50 x 150 x 915 mm
- 6. Finish: Black fleck
- 7. Colour: Natural
- 8. Bedding: As drawing 2496-TFC-00-00-DR-L-4001
- 9. Joints generally: Dry, 2-3 mm gap

110 Concrete kerbs Type A

- 1. Manufacturer: Marshalls plc
 - 1.1. Contact details
 - 1.1.1. Address: Landscape House Lowfields Business Park Elland West Yorkshire HX5 9HT
 - 1.1.2. Telephone: +44 (0)330 0574472
 - 1.1.3. Web: www.marshalls.co.uk
 - 1.1.4. Email: info@marshalls.co.uk
 - 1.2. Product reference: Conservation X Kerb
- 2. Standard: To BS 7533-6:1999.
- 3. Physical properties
 - 3.1. Colour: Silver grey.
 - 3.2. Finish: Textured.
 - 3.3. Dimensions: 145 x 255 x 915 mm.
 - 3.4. Weathering resistance: ≤1.0 kg/m² as a mean with no individual value >1.5 kg/m² (freeze thaw durability).
 - 3.5. Abrasion resistance: ≤23 mm (Wide Wheel Abrasion Test).
 - 3.6. Bending strength: Characteristic bending strength of 3.5 MPa with no individual result less than 2.8 MPa
 - 3.7. Unpolished Slip Resistance Value (USRV) (minimum): >45.

112 Flush Kerb

- 1. Description: KERBS
- 2. Standard: To BS EN 1340.
- 3. Designations: CS1 Channel, square
- 4. Size (width x height x length): 145 x 255 x 915
- 5. Finish: Black fleck
- 6. Colour: Natural
- 7. Bedding: As drawing 2496-TFC-00-00-DR-L-4001

8. Joints generally: Dry, 2-3 mm gap

Roads/paving accessories/ marking/ demarcation

395 Road marking MMA

- 1. Standard: Road Safety Markings Association standard specification document for road marking and road studs (StanSpec).
- 2. Manufacturer: Contractor's choice
 - 2.1. Product reference: Contractor's choice
- 3. Colour: White
- 4. Retroreflectivity to BS EN 1436: Not required (Class R0)

Laying

510 Laying kerbs, edgings and channels

- 1. Cutting: Neat, accurate and without spalling. Form neat junctions.
 - 1.1. Long units (450 mm and over) minimum length after cutting: 300 mm.
 - 1.2. Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- 2. 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.
- 3. 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

1. 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.

530 Concrete for foundations, races and haunching

- 1. Standard: To BS 8500-2.
- 2. Designated mix: Not less than GEN0 or Standard mix ST1.
- 3. Workability: Very low.

540 Cement mortar bedding

- 1. General: To section Z21.
- 2. Mix (Portland cement:sand): 1:3.
 - 2.1. Portland cement: Class CEM I 42.5 to BS EN 197-1.
 - 2.2. Sand: to BS EN 12620, grade 0/4 or 0/2 (MP).
- 3. Bed thickness: 12-40 mm.

547 Bedding/ Backing of units on fresh concrete races

1. Standard: To BS 7533-6.

610 Angle kerbs

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

620 Accuracy

1. Deviations (maximum)

- 1.1. Level: ± 6 mm.
- 1.2. Horizontal and vertical alignment: 3 mm in 3 m.

625 Regularity of paved surfaces

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

Q22 Asphalt roads/ pavings

Types of paving

110 Stone mastic asphalt (SMA) surface courses Ulticolour

- 1. Geotextile: To engineers specification
 - 1.1. Manufacturer: Tarmac
 - 1.1.1. Contact details
 - 1.1.1.1. Address: Ground Floor, T3 Building, Trinity Park Bickenhill Lane Solihull Birmingham West Midlands United Kingdom B37 7ES
 - 1.1.1.2. Telephone:
 - 1.1.1.3. Web: https://tarmac.com/contact/
 - 1.1.1.4. Email: centralwestsales@tarmac.com
 - 1.1.2. Product reference: ULTICOLOUR (ULTICOLOUR Porous 10 mm.)
 - 1.2. Standard: To BS EN13108.
 - 1.3. Third party certification: BBA HAPAS Certified (16/H254).
 - 1.4. Colour: Light grey.
 - 1.5. Thickness: 30-45 mm.
 - 1.6. Depth: Not applicable.
 - 1.7. Porosity: 5000 mm/hour.

Preparatory work/ requirements

220 Bituminous materials generally

- 1. Suppliers' names: Submit.
 - 1.1. Timing (minimum): Two weeks before starting work.
- 2. Test certificates: At the time of delivery for each manufacturing batch submit certificate:
 - 2.1. Confirming compliance with this specification and the relevant standard.
 - 2.2. Stating full details of composition of mix.

240 Acceptance of surfaces

- 1. Surface: Sound, clean and suitably close textured.
- 2. Level tolerances: To BS 594987.
- 3. Kerbs and edgings: Complete, adequately bedded and haunched and to the required levels.

Laying

310 Laying generally

- 1. Preparation: Remove all loose material, rubbish and standing water.
- 2. Adjacent work: Form neat junctions. Do not damage.
- 3. Channels, kerbs, inspection covers etc: Keep clean.

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Q22 Asphalt **roads/ pavings** Page 4 of 40

4. New paving

- 4.1. Keep traffic free until it has cooled to prevailing atmospheric temperature.
- 4.2. Do not allow rollers to stand at any time.
- 4.3. Prevent damage.
- 4.4. Lines and levels: With regular falls to prevent ponding.
- 4.5. Overall texture: Smooth, even and free from dragging, tearing or segregation.
- 4.6. State on completion: Clean.

320 Adverse weather

- 1. Frozen materials: Do not use.
- 2. Suspend laying
 - 2.1. During freezing conditions
 - 2.2. If the air temperature reaches 0°C, or in calm dry conditions -3°C, on a falling thermometer.
 - 2.3. Hot rolled asphalt: During periods of continuous or heavy rain or if there is standing water on the base.

330 Levels

1. Permissible deviation from the required levels, falls and cambers (maximum): In accordance with BS 594987, clause 5.2.

350 Contractor's use of pavements

- 1. Before use
 - 1.1. Timing: allow newly laid sections to cool before trafficking.
 - 1.2. Open-grained surface: Fill with 0/4 mm size coated grit. Remove surplus.
 - 1.3. Finish: Uncoated chipping and binder surface treatment.
- 2. Preparation for final surfacing
 - 2.1. Timing: Defer laying until as late as practicable.
 - 2.2. Immediately before laying final surfacing: Clean and make good the base/ binder course. Allow to dry.
 - 2.3. Finishing: Allow emulsion to break completely before applying surface.

Completion - Not Used

Q23 Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays

Types of surfacing

170 Loose gravel overlay

- 1. Description: Gravel strips around buildings
- 2. Gravel: Loose laid and raked to uniform thickness:
 - 2.1. Type: 20mm proprietary stone
 - 2.2. Source: Contractor's choice
 - 2.3. Colour: Mixed
 - 2.4. Thickness: 400mm

225 Resin-bound mixed aggregate surfacings Type A

- 1. Geomembrane:
 - 1.1. Manufacturer: SureSet Resin Systems
 - 1.1.1. Contact details

1.1.1.1. Address: 32 Deverill Road Trading Estate

Sutton Veny Warminster Wiltshire United Kingdom BA12 7BZ

- 1.1.1.2. Telephone: +44 (0)1985 841180
- 1.1.1.3. Web: www.sureset.co.uk
- 1.1.1.4. Email: sales@sureset.co.uk
- 1.1.2. Product reference: Natural Aggregate Resin Bound Permeable Paving
- 1.2. Aggregate
 - 1.2.1. Type: Resin bound aggregate.
 - 1.2.2. Size (nominal): 6 mm.
 - 1.2.3. Colour: Blue granite.
- 1.3. Binder
 - 1.3.1. Type: Polyurethane resin.
 - 1.3.2. Colour: Clear.
- 1.4. Depth: 16 mm.

230 Woodchip surfaces

- 1. Description: To play area
- 2. Granular sub-base: Coarse graded aggregate for permeable paving, as section Q20
 - 2.1. Compacted thickness: 150 mm
- 3. Geotextile: Edging strip, 500 mm wide
 - 3.1. Manufacturer: Contractor's choice
- 4. Surface course
 - 4.1. Manufacturer: Contractor's choice
 - 4.1.1. Product reference:

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Q23 Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays Page 6 of 40

- 4.2. Type: Hardwood free from pests, disease, weeds, and any additives.
- 4.3. Particle size: Evenly graded, 5-30 mm
- 4.4. Dust and fine content (maximum): 5%
- 4.5. Wood content (minimum): 100%
- 4.6. Thickness after at least 10% settlement and 30 days: 75 mm

Laying

310 Timber edging

- 1. Softwood board
 - 1.1. Size: 150 x 38 mm.
 - 1.2. Fixing: Galvanized nails into softwood pegs.
- 2. Softwood pegs
 - 2.1. Size: 50 x 50 x 450 mm long
 - 2.2. Fixing: Drive into ground.
 - 2.3. Centres: 1200 mm
- 3. Preservative treatment: To provide 15 year service life.

340 Laying generally

- 1. Channels, gullies, etc: Keep clear.
- 2. Finished surfaces
 - 2.1. Lines and levels: To prevent ponding.
 - 2.2. Overall texture: Even.
 - 2.3. State at completion: Clean.

350 Cold weather working

- 1. Frozen materials: Do not use.
- 2. Freezing conditions: Do not lay pavings.
- 3. Cold bituminous surface dressings: Do not apply when ambient temperature is below 10°C.
- 4. Other dressings or overlays: As manufacturers' recommendations.

360 Drainage falls

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

390 Protection from traffic and plant

1. Paved areas: Restrict access to prevent damage.

Completion - Not Used

Q24 Interlocking brick/ block roads/ pavings

Types of paving

112 Concrete paving blocks Lunar

- 1. Blocks: To BS EN 1338.
 - 1.1. Manufacturer: Marshalls plc
 - 1.1.1. Contact details
 - 1.1.1.1. Address: Landscape House Lowfields Business Park Elland West Yorkshire HX5 9HT
 - 1.1.1.2. Telephone: +44 (0)330 0574472
 - 1.1.1.3. Web: www.marshalls.co.uk
 - 1.1.1.4. Email: info@marshalls.co.uk
 - 1.1.2. Product reference: Lunar (400 x 200 x 80 mm)
 - 1.2. Standard: To BS EN 1338.
 - 1.3. Physical properties
 - 1.3.1. Colour: Lunar Ice.
 - 1.3.2. Finish: Smooth.
 - 1.3.3. Profile
 - 1.3.3.1. Paver type: Regular plan form.
 - 1.3.3.2. Arrises: Chamfered.
 - 1.3.4. Dimensions and associated tolerances
 - 1.3.4.1. Nominal sizes: 400 x 200 x 80 mm.
 - 1.3.5. Arrises: Chamfered.
 - 1.3.6. Weathering resistance:
 - 1.3.7. Abrasion resistance: <23 mm.
 - 1.3.8. Slip resistance: USRV/ PSRV to BS EN 1338 of >45.
 - 1.4. Dimensions and tolerances: ±2 mm (length); ±2 mm (width); ±3 mm (thickness).
 - 1.5. Unit weight: 15 kg.
 - 1.6. Coverage: 13 per m².
 - 1.7. Material density: 2300 kg/m³.
 - 1.8. Durability: <1.0 kg/m².
 - 1.9. Surfacing layer: 4 mm (minimum)
 - 1.10. Reaction to fire: Class A1.
 - 1.11. TensileStrength: Not applicable.
 - 1.12. BendingStrength: Class 3, 5.0 MPa.

112 Concrete paving blocks Conservation X

- 1. Blocks: To BS EN 1338.
 - 1.1. Manufacturer: Marshalls plc
 - 1.1.1. Contact details

1.1.1.1. Address: Landscape House Lowfields Business Park Elland West Yorkshire HX5 9HT

- 1.1.1.2. Telephone: +44 (0)330 0574472
- 1.1.1.3. Web: www.marshalls.co.uk
- 1.1.1.4. Email: info@marshalls.co.uk
- 1.1.2. Product reference: Conservation X Block (240 x 160 x 80 mm)
- 1.2. Standard: To BS EN 1338:2003.
- 1.3. Physical properties
 - 1.3.1. Colour: Silver grey.
 - 1.3.2. Finish: Textured riven.
 - 1.3.3. Profile
 - 1.3.3.1. Paver type: Regular plan form.
 - 1.3.3.2. Arrises: Square.
 - 1.3.4. Dimensions and associated tolerances
 - 1.3.4.1. Nominal sizes: 240 x 160 x 80 mm.
 - 1.3.4.2. Tolerances on diagonals:
 - 1.3.5. Arrises: Square.
 - 1.3.6. Weathering resistance:
 - 1.3.7. Abrasion resistance: ≤ 23 mm.
 - 1.3.8. Slip resistance: >45.
 - 1.3.9. Skid resistance: >45.
- 1.4. Material density: 2300 kg/m³.
- 1.5. Reaction to fire: Class A1 when used for internal flooring.
- 1.6. ThermalConductivity: To BS EN 13369:2013.
- 1.7. Unit weight: 7.1 kg.
- 1.8. Third-party certification: Breeam rated.
- 1.9. TensileStrength: 3.6 MPa.

Execution

200 Execution generally – concrete block and clay paver paving

1. Standard: In accordance with BS 7533-3.

205 Execution generally – natural stone paving

- 1. Standard: In accordance with BS 7533-7, as relevant to flexible (non-rigid) laying and construction.
- 2. Subgrade, sub-base and roadbase presentation: Tight and dense surface, to prevent loss of laying course material into it during construction and use.
- 3. Joint filling: Do not work in damp conditions. Top joints up at the earliest opportunity.

211 Colour banding

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

240 Adverse weather

1. General: Do not use frozen materials or lay bedding on frozen or frost covered sub-bases.

350 Granular layer over existing bases

- 1. Material: To engineers specification
- 2. Thickness: To engineers specification
- 3. Compaction: To engineers specification
- 4. Blinding: To engineers specification

452 Prepared existing and new bound bases (roadbases)

1. Condition before placing laying course: Sound, clean, free from rutting or major cracking and cleared of sharp stones, projections or debris.

485 Laying blocks/ pavers/ setts

- 1. Setting out: Start from an edge restraint.
- 2. Cutting: Cleanly, accurately and vertically, without spalling. Do not mark or damage visible surfaces.
- 3. Cut edges: Turn inwards where possible; do not position against edge restraints or other features.
- 4. 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.
 - 4.1. Concrete blocks and clay pavers: In accordance with BS 7533-3, Annex F, to site category required for laying course material.

500 Regularity of paved surfaces

- 1. 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)
 - 1.1. Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
- 2. Difference in level between adjacent paving units (maximum): 2 mm.
- 3. Sudden irregularities: Not permitted.

505 Regularity of paved surfaces

- 1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
- 2. Joints between paving units or utility access covers
 - 2.1. Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
 - 2.2. Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
 - 2.3. Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.
- 3. Sudden irregularities: Not permitted.

Completion

615 Completion of paving

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

Ω End of Section

Q25 Slab/ brick/ sett/ cobble pavings

General

185 Geocell sheets CellWeb TRP

1. Geomembrane: Geotextile membrane

- 1.1. Manufacturer: Geosynthetics Limited
 - 1.1.1. Contact details
 - 1.1.1.1. Address: Unit 3, Avery Way, Hinckley Park, Hinckley Leicestershire United Kingdom LE10 3FF
 - 1.1.1.2. Telephone: +44 (0)1455 617139
 - 1.1.1.3. Web: www.geosyn.co.uk
 - 1.1.1.4. Email: sales@geosyn.co.uk
 - 1.1.2. Product reference: Cellweb Cellular Confinement System (TRP) Geocells (75 mm Cell Height)
- 1.2. Material: High-density polyethylene (HDPE).
- 1.3. Cell dimensions (expanded)
 - 1.3.1. Cell size (nominal): 259 x 224 mm.
 - 1.3.2. Cell depth: 75 mm.
- 1.4. Properties
 - 1.4.1. UV resistance: Carbon Black Content (ASTM D 1603), 1.5% (minimum % by weight).
- 1.5. Recycled content: None permitted.
- 1.6. Accessories: J pins.
- 1.7. Underlay: Treetex[™] pollution control geotextile.
- 1.8. Infill: Angular stone, Type 4/20 mm.
- 1.9. Colour: Black with green facia strip.
- 1.10. Profile: Rhomboidal (diamond shape) indentations.
- 1.11. Panel size: 2560 x 8100 mm.
- 1.12. Peel strength: 1065 N.
- 1.13. Perforations: $16 \pm 3\%$.

System performance - Not Used

Products

320 Concrete tactile flags

- 1. Material: Precast concrete
 - 1.1. Manufacturer: Marshalls plc
 - 1.1.1. Contact details

1.1.1.1. Address: Landscape House Lowfields Business Park Elland West Yorkshire HX5 9HT

- 1.1.1.2. Telephone: +44 (0)330 0574472
- 1.1.1.3. Web: www.marshalls.co.uk
- 1.1.1.4. Email: info@marshalls.co.uk
- 1.1.2. Product reference: Tactile Blister (400 x 400 x 50 mm)
- 1.2. Physical properties
 - 1.2.1. Colour: Charcoal.
 - 1.2.2. Profile
 - 1.2.2.1. Flag type: Regular plan form.
 - 1.2.3. Dimensions and associated tolerances
 - 1.2.3.1. Nominal sizes: 400 x 400 x 50 mm.
 - 1.2.4. Abrasion resistance: ≤23 mm.
 - 1.2.5. Bending strength: 4 MPa.
- 1.3. Slip resistance: >45.
- 1.4. ThermalConductivity: To BS EN 13369.
- 1.5. Reaction to fire: Class A1.
- 1.6. Loading class: Category 1.
- 1.7. Weight: 19 kg.
- 1.8. Density: 2300 kg/m².

370 Cement for site-mixed mortar

- 1. Description: For steps
- 2. Standard: As section Z21.

Execution

620 Adverse weather

- 1. General
 - 1.1. 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.
 - 1.2. Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.
- 2. Paving with mortar joints and/ or bedding
 - 2.1. Protect from frost damage, rapid drying out and saturation until mortar has hardened.
- 3. Paving laid and jointed in sand/ fine aggregate
 - 3.1. Stockpiled laying course sand/ fine aggregate: Protect from saturation.
 - 3.2. Exposed areas of unbound laying course and uncompacted areas of unbound paving: Protect from heavy rainfall.
 - 3.3. Saturated unbound laying course: Remove and replace, or allow to dry before proceeding.
 - 3.4. Laying dry sand/ fine aggregate 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

- 1. Appearance: Smooth and even with regular joints and accurate to line, level and profile.
- 2. Falls: To prevent ponding.
- 3. Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
 - 3.1. Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.

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Q25 Slab**/ brick/ sett/ cobble pavings** Page 12 of 40

- 4. Slopes: Lay paving units upwards from the bottom of slopes.
- 5. Paving units: Free of mortar and sand stains.
- 6. Cutting: Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

630 Levels of paving

- 1. Permissible deviation from specified levels
 - 1.1. Generally: +/-6 mm.
- 2. Height of finished paving above features
 - 2.1. At gullies: +6 to +10 mm.
 - 2.2. At drainage channels and kerbs: +3 to +6 mm.

635 Regularity of paved surfaces

- 1. 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)
 - 1.1. Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
 - 1.2. Precast concrete flags or natural stone slabs: 3 mm.
- 2. Difference in level between adjacent paving units (maximum): 2 mm.
- 3. Sudden irregularities: Not permitted.

637 Regularity of paved surfaces

- 1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): **3 mm**.
- 2. Joints between paving units or utility access covers
 - 2.1. Joints flush with the surface: Difference in level between adjacent units to be no more than twice the joint width (with a 5 mm maximum difference in level).
 - 2.2. Recessed, filled joints: Difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
 - 2.3. Unfilled joints: Difference in level between adjacent units to be no greater than 2 mm.
- 3. Sudden irregularities: Not permitted.

650 Cementitious bases and sub-bases

1. General: Protect from moisture loss, if not covered by another pavement course within 2 hours of completion.

655 Condition of sub-bases/ bases before spreading laying course

- 1. Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
- Granular surfaces: Lay and compact so as to be sound, clean, smooth and close-textured enough to prevent migration
 of bedding/ laying course materials into the sub-base during compaction and use, free from movement under
 compaction plant and free from compaction ridges, cracks and loose material.
- 3. Prepared existing and new bound bases (roadbases): Sound, clean, free from rutting or major cracking. Remove sharp stones, projections and debris.
- 4. Sub-base/ Roadbase level tolerances: To BS 7533-101, annex A.
- 5. Levels and falls: Accurate and within the specified tolerances.
- 6. Drainage outlets: Within 0-10 mm of the required finished level.
- 7. Features in unbound paving (including mortar-bedded restraints and drainage ironwork): Complete to required levels; adequately bed and haunch in mortar.
- 8. Sub-bases containing cement/ hydraulic binder: Cure for minimum times specified in BS 7533-4.

735 Laying concrete sett paving - mortar-bedded

- 1. Laying: Spread and level a bed of mortar. Individually lay and hammer down the setts so that tops are level, leaving joints open.
- 2. Laying course
 - 2.1. Nominal thickness after compaction: 25 mm
- 3. Jointing: Fill joints and finish neatly. Clean mortar from face of setts before it sets.
- 4. Joint width (nominal): Butt jointed

770 Laying gravel-filled plastics pavers

- 1. Laying: Tamp down into lightly compacted laying course Secure with fasteners.
 - 1.1. Nominal thickness of laying course after compaction: 50 mm
- 2. Securing on slopes: Not required
- 3. Filling: Allow to settle and refill level with surface.

785 Tooled joints in mortar-bedded units

- 1. Joints: Completely filled with bedding mortar as work proceeds.
 - 1.1. Joint width: 6–10 mm
 - 1.2. Finish: Neat flush profile.

Completion - Not Used

Q28 Topsoil and soil ameliorants

System outline

135 Planting bed topsoil system

- 1. Composition
 - 1.1. Topsoil: Imported topsoil to BS 3882
 - 1.2. Subsoil:: Imported topsoil to BS 3882
 - 1.3. Ameliorants: Topsoil amelioration to be determined by analysis (see clause 610)

145 Tree pit backfilling soil system

- 1. Composition
 - 1.1. Topsoil: Imported topsoil to be manufactured soil or as dug to meet parameters set out below.
 - 1.2. Subsoil:: Imported subsoil to be manufactured soil or as dug to meet parameters set out below.
 - 1.3. Ameliorants: Topsoil amelioration to be determined by analysis (see clause 450 and 610)

155 Mulching and top dressing system

- 1. Description: For all planting beds
- 2. Composition
 - 2.1. Material: Well composted bark mulch. Samples to be approved by the landscape architect.
 - 2.2. Purity:: Free from diseases and pests.
 - 2.3. 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 likes.
 - 2.4. Contamination:: Do not use topsoil contaminated with subsoil, rubbish or other materials that are: -Corrosive, explosive or flammable -Hazardous to human life -Detrimental to healthy plant growth
 - 2.5. Size:: 15-35mm nominal size

Products

300 Preparation materials generally

- 1. Purity: Free of pests and disease.
- 2. 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.
- 3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - 3.1. Corrosive, explosive or flammable.
 - 3.2. Hazardous to human or animal life.
 - 3.3. Detrimental to healthy plant growth.
- 4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
- 5. Objectionable odour: None.
- 6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

310 Materials not permitted

1. Materials: Peat and Products containing peat or lime-stabilised subsoils (within landscaped areas - refer to clause 667)

315 Imported topsoil to BS 3882

- 1. Description: Topsoil for general landscapes (sample of site-won and/or imported topsoil to be sent for testing to check compliance with parameters below and to inform necessary amelioration.
- 2. Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- 3. Standard: To BS 3882.

320 Imported Topsoil for general use

- Description: Topsoil (manufactured or as-dug) is to be tested to determine suitability for proposed use and should be free from commonly tested contaminants, including asbestos; test report to be submitted to Landscape Architect for approval and to enable amelioration recommendations to be made:
- 2. Source:: Contractor's choice to meet parameters.
- 3. Soil parameters::
 - 3.1. Clay (<0.002mm):: Lower Limit: 5%; Upper Limit: 18%
 - 3.2. Silt (0.002-0.05mm):: Lower Limit: 0%; Upper Limit: 35%
 - 3.3. Sand (0.05-2.0mm):: Lower Limit: 50%; Upper Limit: 85% Of which at least 40% shall fall into fine to medium sand range:
 - 3.4. Stones (2-20mm):: Lower Limit: 0% dry wt.; Upper Limit: 20% dry wt.
 - 3.5. Stones (20-50mm):: Lower Limit: 0% dry wt.; Upper Limit: 15% dry wt.
 - 3.6. Stones (>50mm):: Lower Limit: --; Upper Limit: 0% dry wt.
 - 3.7. pH Value:: Lower Limit: 5.5; Upper Limit: 8.5
 - 3.8. Elec. Conductivity (1:2.5 water extract):: Lower Limit: --; Upper Limit: 1500 µS/cm
 - 3.9. Elec. Conductivity (CaSO4 extract):: Lower Limit: --; Upper Limit: 2800 µS/cm
 - 3.10. Exchangeable Sodium Percentage:: Lower Limit: --; Upper Limit: 15%
 - 3.11. Organic Matter:: Lower Limit: 4.0%; Upper Limit: 8.0%
 - 3.12. Total Nitrogen:: Lower Limit: 0.15%; Upper Limit: --
 - 3.13. Carbon: Nitrogen Ratio:: Lower Limit: --; Upper Limit: 20:1
 - 3.14. Extractable Phosphorus:: Lower Limit: 26 mg/l; Upper Limit: 100 mg/l
 - 3.15. Extractable Potassium:: Lower Limit: 240 mg/l; Upper Limit: 1200 mg/l
 - 3.16. Extractable Magnesium:: Lower Limit: 50 mg/l; Upper Limit: 600 mg/l

321 Imported Subsoil for general use

- Description: Subsoil for general planting areas: sample to be sent for testing to check compliance with parameters below. Provide subsoil as necessary to make up deficiency on site. Natural or manufactured subsoil (from approved source) will be acceptable (within parameters given below). Subsoil to be tested to determine suitability for proposed use for planting; test report to be submitted for approval. Subsoil should be free from commonly tested contaminants, including asbestos.
- 2. Soil parameters to be within the following::
 - 2.1. Clay (<0.002mm):: Lower Limit: 5%; Upper Limit: 35%
 - 2.2. Silt (0.002-0.05mm):: Lower Limit: 0%; Upper Limit: 35%
 - 2.3. Sand (0.05-2.0mm):: Lower Limit: 50%; Upper Limit: 90% Of which at least 40% shall fall into fine to medium sand range:
 - 2.4. Stones (2-50mm):: Lower Limit: --; Upper Limit: 50% dry wt.
 - 2.5. Stones (>50mm):: Lower Limit: --; Upper Limit: 0% dry wt.
 - 2.6. pH Value:: Lower Limit: 5.5; Upper Limit: 8.5
 - 2.7. Elec. Conductivity (1:2.5 water extract):: Lower Limit: --; Upper Limit: 1500 µS/cm
 - 2.8. Elec. Conductivity (CaSO4 extract):: Lower Limit: --; Upper Limit: 2800 µS/cm

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- 2.9. Exchangeable Sodium Percentage:: Lower Limit: --; Upper Limit: 15%
- 2.10. Organic Matter:: Lower Limit: --; Upper Limit: 1.5%

406 Ameliorant

- 1. Topsoil amelioration to be determined by analysis (see clause 610)
- 2. Contractor is responsible for submitting a sample of topsoil to inform requirements for fertilizer and compost
- 3. Once amelioration requirements determined, approved (peat free) composts to PAS 100 and/ or fertilizers to be incorporated during cultivation at required rate to full depth of growing medium.

Execution

610 Topsoil analysis

- 1. Soil to be analysed: Each soil source, including imported and site-won subsoil and topsoil
- Soil analyst: Tim O'Hare Associates, Howbery Park, Wallingford, Oxon OX10 8BA (or equivalent approved)
 Tel: 01491 822653,
 - Email: info@toha.co.uk,
 - www.toha.co.uk
- 3. Samples: Collect in accordance with BS 3882.
- 4. Submit
 - 4.1. Declaration of analysis: Chemical analysis, contaminants and maximum stone content, stone size and pH value, organic matter, clay, silt and sand proportions
 - 4.2. Report detailing soil analyst's recommendations.

635 Documentation for compost and composted materials

- 1. Description: For Imported Soil Improvers.
- 2. Timing: Submit at handover.
- 3. Contents
 - 3.1. Full description of all compost components.
 - 3.2. Record of source for all compost components.
 - 3.3. Analyst's report for each test carried out.
 - 3.4. Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.

650 Notice

- 1. Give notice before
 - 1.1. Setting out.
 - 1.2. Spreading topsoil.
 - 1.3. Applying herbicide.
 - 1.4. Applying fertilizer.
 - 1.5. Visiting site during maintenance period.
- 2. Period of notice: 1 week

655 Mechanical tools

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

660 Grading subsoil for:

- 1. Description: Planting areas
- 2. Depths to be achieved:: Final subsoil depth to be :

- 600mm for tree pits and general planting area
- 400mm for planting
- 3. Standard: In accordance with BS 8601.
- 4. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
- 5. Avoid compaction.
- 6. Excess subsoil: Remove.

665 Subsoil surface preparation for:

- 1. Description: For all planting areas.
- 2. Standard: In accordance with BS 3882.
- 3. General: Excavate and/ or place fill to required profiles and levels, as section D20. and clause Q28, 660.
- 4. Loosening
 - 4.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
 - 4.2. Wet conditions: Do not loosen subsoils.
- 5. Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
- 6. Remove from site: Arisings, contaminants, rubble and debris

685 Surplus materials to be removed

- 1. Topsoil removal from site: Topsoil remaining after completion of all landscaping work
- 2. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

700 Grading of topsoil

- 1. Topsoil condition: Reasonably dry and workable.
- 2. Contours: Smooth and flowing, with falls for adequate drainage.
 - 2.1. Hollows and ridges: Not permitted.
- 3. Give notice: If required levels cannot be achieved by movement of existing soil.

705 Handling topsoil

- 1. Standard: In accordance with BS 3882.
- 2. Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- 3. Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- 4. Contamination: Do not mix topsoil with:
 - 4.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
 - 4.2. Other grades of topsoil.
- 5. Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- 6. Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall, or when the moisture content is greater than the plastic limit.

710 Spreading topsoil on:

- 1. Description: To all planted/ grassed areas
- 2. Standard: In accordance with BS 3882.
- 3. Temporary roads/ surfacing: Remove before spreading topsoil.
- 4. Layers
 - 4.1. Depth (maximum): 150 mm.
 - 4.2. Gently firm each layer before spreading the next.

- 5. Depth after firming and settlement: 300 mm
- 6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 Loose tipping of topsoil

- 1. Standard: In accordance with BS 3882.
- 2. 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

- 1. Description: For all planting and grassed areas
- 2. Compacted topsoil: Break up to full depth.
- 3. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
- 4. Depth: As shown on terra firma drawing 2497-TFC-00-XX-DR-L-4002
- 5. Particle size (maximum): 10 mm
- 6. Timing: Within a few days before planting
 - 6.1. Planting:: a few days before
 - 6.2. Grass:: after grading and fertilising, and within a few days before seeding
- 7. Weather and ground conditions: Suitably dry.
- 8. Surface: Leave regular and even.
- 9. Levels:
 - 25 mm above adjoining paving or kerbs;
 - 25 mm above adjoining lawns; and
 - Minimum 150 mm below dpc of adjoining buildings
- 10. Undesirable material brought to the surface
 - 10.1. Remove visible weeds.
 - 10.2. Remove roots and large stones with any dimension exceeding 50 mm.

720 Finished levels of topsoil after settlement

- 1. In relation to adjoining paving, kerbs or hard surfaces: 25 mm above
- 2. In relation to dpc of adjoining buildings: Not less than 150 mm below.
- 3. Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
- 4. Thickness of turf or mulch: Included.

805 Applying soil ameliorant

- 1. Description: For all planting areas
- 2. Type: As determined by analysis.
- 3. Fully incorporate into topsoil to a depth of 200 mm.
- 4. Application: Spread evenly.
 - 4.1. Timing: Apply prior to cultivation.
 - 4.2. Rate: To suit soil report recommendations
- 5. Timing: Prior to cultivation.

845 Applying loose mulch

- 1. Description: For planting beds
- 2. Timing: Immediately after planting
- 3. Preparation: Clear all weeds and ensure that the soil is thoroughly moistened

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- 4. Coverage of mulch (minimum)
 - 4.1. Planting beds (depth): 75 mm depth

Completion

920 Applying mulch

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

Q30 Seeding/turfing

General information/requirements

115 Seeded and turfed areas

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

120 Climatic conditions

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

145 Watering

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

150 Water restrictions

1. 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

- 1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying fertilizer.
 - 1.3. Preparing seed bed.
 - 1.4. Seeding or turfing.
 - 1.5. Visiting site during maintenance period.
- 2. Period of notice: 1 week

170 Setting out

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

Preparation

250 Soil requirements

- 1. Type
 - 1.1. Seeded areas: Soil for grass swards, as section Q28
 - 1.2. Turfed areas: Soil for grass swards, as section Q28

Seeding

311 Grass seed

- 1. Description: FOR ALL GRASSED AREAS
- 2. Supplier: Emorsgate
 - 2.1. Mixture reference: EL1 Flowering Lawn Mixture

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3. Application rate: 5-10 g/m²

319 Quality of seed

- 1. Description: FOR ALL GRASSED AREAS
- 2. Freshness: Produced for the current growing season.
- 3. Certification: Blue label certified varieties.
 - 3.1. Standard: EC purity and germination regulations.
 - 3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- 4. Samples of mixtures: Submit when requested.

330 Sowing

- 1. General: Establish good seed contact with the root zone.
- 2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing
 - 2.1. Distribution: 2 equal sowings at right angles to each other and diagonally to main axis

352 Edges to seeded areas

- 1. Description: AROUND EXISTING TREES
- 2. Timing: After seeded areas are well established.
- 3. Edges: Clean straight lines or smooth curves.
 - 3.1. Mulch and soil: Draw back to permit edging.
- 4. Arisings: Remove.
- 5. Completion: Respread soil and mulch.

Turfing - Not Used

Protecting/cutting

510 Protective fencing

- 1. Fencing type: Chestnut pale fencing to BS 1722-4
 - 1.1. Height: 1.1 m
- 2. Erection: On completion of seeding/ turfing.
- 3. Removal: After grass is well established. Fencing will remain the property of the Contractor

530 First cut of grassed areas

- 1. Timing: When grass is reasonably dry.
 - 1.1. Height of initial growth: 75 mm
- 2. Preparation
 - 2.1. Debris and litter: Remove.
 - 2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
- 3. Height of first cut: 50 mm
- 4. Mower type: Contractor's choice
- 5. Arisings: Spread evenly over cut areas

560 Metal edgings

- 1. Manufacturer: Kinley
 - 1.1. Contact details

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- 1.1.1. Address: Northpoint, Compass Park Junction Road Staplecross East Sussex TN32 5BS
- 1.1.2. Telephone: +44 (0) 1580313124
- 1.1.3. Web: www.exceledge.co.uk
- 1.1.4. Email: sales@exceledge.co.uk
- 1.2. Product reference: AluExcel Aluminium Angle Edging (101019: Rigid Version 65 mm)
- 2. Material: Aluminium.
- 3. Edging
 - 3.1. Form: Rigid.
 - 3.2. Duty: Heavy.
 - 3.3. Length (minimum): 2.5 m.
 - 3.4. Size: 45 mm.
 - 3.5. Colour: Silver.
- 4. Height: 100mm
- 5. NominalThickness: 6 mm.
- 6. Surface finish: Mill.
- 7. Accessories: 90° Welded Corner Internal.

590 Cleanliness

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

Maintenance

610 Failures of seeding/ turfing

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

620 Maintaining

1. Description: Refer to terra firma landscape management plan 2497-TFC-00-XX-RP-L-7001

Q31 External planting

General information/ requirements

112 Site clearance generally

- 1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- 2. Stones: Remove those with any dimension exceeding 25 mm.
- 3. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- 4. Vegetation: Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings
- 5. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

118 Soil conditions

- 1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
- 2. 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

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

125 Times of year for planting

- 1. Deciduous trees and shrubs: Late October to late March.
- 2. Conifers and evergreens: September/ October or April/ May.
- 3. Herbaceous plants (including marginal): September/ October or March/ April.
- 4. Container grown plants: At any time if ground and weather conditions are favourable.
 - 4.1. Watering and weed control: Provide as necessary.

130 Mechanical tools

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

145 Watering

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

150 Water restrictions

1. 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

- 1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying herbicide.
 - 1.3. Applying fertilizer.

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- 1.4. Delivery of plants/ trees.
- 1.5. Planting shrubs.
- 1.6. Planting trees into previously dug pits.
- 1.7. Watering.
- 1.8. Visiting site during maintenance period.
- 2. Period of notice: Two weeks

170 Soil requirements

- 1. Type
 - 1.1. Planted beds: Planting bed soil system, as section Q28
 - 1.2. Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28
 - 1.3. Mulch applied after planting: Mulching and top dressing system, as section Q28

200 Plants/ Trees - general

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

215 Plants/ Trees - specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification (available on CS Design Software Limited's website).

235 Container grown plants/ Trees

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

260 Plant/ Tree substitution

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

265 Plant handling, storage transport and planting

- 1. Standard: To CPSE 'Handling and establishing landscape plants'.
- 2. Frost: Protect plants from frost.

- 3. Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- 4. Planting: Upright or well balanced with best side to front.

280 Treatment of tree wounds

- 1. Cutting: Keep wounds as small as possible.
 - 1.1. Cut cleanly back to sound wood using sharp, clean tools.
 - 1.2. Leave branch collars. Do not cut flush with stem or trunk.
 - 1.3. Set cuts so that water will not collect on cut area.
- 2. Fungicide/ Sealant: Do not apply unless instructed.

290 Surplus material

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

Plant containers

296 Treated timber plant containers L-Shaped

- 1. Manufacturer: WoodBlocX Ltd
- 2. Contact details
 - Address: WoodBlocX Ltd, Munro Sawmills Old Evanton Road Dingwall United Kingdom United Kingdom IV15 9UN
 Telephoney 444 (0)900 290 1420
 - **2.2.** Telephone: +44 (0)800 389 1420
 - 2.3. Web: https://www.woodblocx-landscaping.com/
 - 2.4. Email: admin@woodblocx.co.uk
- 3. Product reference: WoodBlocX Modular Planter System
- 4. Material
 - 4.1. Timber species: Scots pine.
 - 4.2. Preservative
 - 4.2.1. Treatment: Wolmanit CX-8.
 - 4.3. Finish: Pressure treated Pine.
- 5. Shape: L-Shape
- 6. Dimensions: 2.625 x 1.125 x 0.75 x 0.35m
- 7. Fixings: 400 mm galvanized steel ground spikes.
- 8. Capping: Standard.
- 9. Use class: Class 4.
- 10. Components: BlocX 10/ BlocX 5/ BlockX 4/ BlockX 3/ BlocX 2/ Angle BlocX 7/ Angle BlocX 15 as required.
- 11. System accessories: None.

296 Treated timber plant containers Wheelchair Accessible Raised Bed

- 1. Manufacturer: WoodBlocX Ltd
- 2. Contact details
 - 2.1. Address: WoodBlocX Ltd, Munro Sawmills Old Evanton Road

Dingwall United Kingdom United Kingdom IV15 9UN

- 2.2. Telephone: +44 (0)800 389 1420
- 2.3. Web: https://www.woodblocx-landscaping.com/
- 2.4. Email: admin@woodblocx.co.uk
- Product reference: WoodBlocX Modular Planter System
- 4. Material

3.

- 4.1. Timber species: Scots pine.
- 4.2. Preservative
 - 4.2.1. Treatment: Wolmanit CX-8.
- 4.3. Finish: Pressure treated Pine.
- 5. Shape: Wheelchair Accessible Raised Bed
- 6. Dimensions: 1.5 x 1.125 x 0.85m
- 7. Fixings: 400 mm galvanized steel ground spikes.
- 8. Capping: Standard.
- 9. Use class: Class 4.
- 10. Components: BlocX 10/ BlocX 5/ BlockX 4/ BlockX 3/ BlocX 2/ Angle BlocX 7/ Angle BlocX 15 as required.
- 11. System accessories: None.
- 12. Lining/ Reservoir: Polyethylene sheet

Preparation of planting beds/ planting materials

305 Weed control

- 1. Description: FOR INVASIVE NON-NATIVE WEEDS
- 2. Locations: Whole site
- 3. General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding.

Planting shrubs/ herbaceous plants/ bulbs

401 Regular plant layout

- 1. Description: TO ALL BEDS
- 2. Spacing: As drawing 2496-TFC-00-XX-DR-L-3001
- 3. Density: As plant schedule

420 Climbing plants

- 1. Planting: 150 mm clear of supporting structure (e.g. wall/ fence) with roots spread outward.
 - 1.1. Branches: Lightly secured to supports.
- 2. Climber supports: Stainless steel wire
 - 2.1. Base height: As drawing 2496-TFC-00-XX-DR-L-4003
 - 2.2. Extent: To wall edge
 - 2.3. Centres: To manufacturers recommendations
 - 2.4. Distance from wall: 50 mm
- 3. Fixings: Stainless steel screw eyes
 - 3.1. Centres: 1.5 m

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470 Formal hedges

- 1. Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
- 2. Planting: As drawing 2496-TFC-00-XX-DR-L-4003

480 After planting

- 1. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- 2. 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.
- 3. Top dressing: Mulching and top dressing system, as section Q28
 - 3.1. Depth: 75 mm

Planting trees

500 Tree planting

1. Standard: Prepare trees and transplant in accordance with BS 8545

505 Tree pits

- 1. Sizes: As drawing 2496-TFC-00-XX-DR-L-4003
- 2. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- 3. Excavated material: Separate topsoil and subsoil material and stockpile for backfilling
- 4. Pit bottoms: Excavate with slightly raised centre: As drawing 2496-TFC-00-XX-DR-L-4003.
- 5. Pit sides: Scarify.
- 6. Backfilling material: Proprietary tree backfilling material, as section Q28

510 Tree pit root barriers

- 1. Locations: As drawing 2496-TFC-00-XX-DR-L-2001
- 2. Manufacturer: Submit proposals
- 3. Thickness: 1.0 mm
- 4. Barrier depth: 1000 mm
- 5. Top of root barrier in relation to finished topsoil level: 25 mm below ground level
- 6. Installation: With sides vertical. Remove all sharp objects adjacent to barrier.

512 Tree pit irrigation and ventilation accessories

- 1. Locations: As drawing 2496-TFC-00-XX-DR-L-4003
- 2. Manufacturer: Contractor's choice
- 3. Type: Perforated plastics irrigation pipe with inlet
- 4. Pipe diameter: Minimum 60 mm
- 5. Ring diameter: To suit rootball
- 6. Inlet: Black plastics, with cap
- 7. Installation
 - 7.1. Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
 - 7.2. Top cap of inlet: Protruding slightly above finished surround level.
 - 7.3. Backfill material: Carefully compact in layers.

535 Tree stakes

- 1. Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
 - 1.1. Preservative treatment: To provide a 20 year service life
- 2. Stake size (minimum): 75 mm diameter
- 3. Stake length (minimum): 1800 mm

540 Single angled staking for

- 1. Description: ALL TREES
- 2. Staking
 - 2.1. Position: Close to tree position on windward or upslope side.
 - 2.2. Tying position: Approximately one third of the height of the clear stem of the tree to be planted.
 - 2.3. Driving: At an angle of 45° away from the tree position and at least 300 mm into bottom of pit before planting.
 - 2.4. Backfilling: Consolidate material around stake.
 - 2.5. Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
 - 2.6. Excess length: Cut off 200 mm above tree support position.
- 3. Ties: Adjustable
 - 3.1. Number of ties: One
- 4. Tying: Secure tree firmly but not rigidly to stake. Prevent tree from touching stake using spacer blocks or cushions if required.
- 5. Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.

576 Tree pit surfacing - loose fill

- 1. Surfacing material: Mulch, as section Q28
- 2. Area: 1000 mm radius circle
- 3. Depth: 75 mm
- 4. Watering: Water soil thoroughly before laying.
- 5. Installation: Ensure the base of the tree stem is kept free from loose filled material.

Woodland/ matrix/ buffer zone planting - Not Used

Protecting/ maintaining/ making good defects

710 Maintenance

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

720 Failures of planting

- 1. Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
 - 1.1. Exclusions: Theft or malicious damage after completion.
 - 1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
- 2. Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- 3. Timing of making good: During the next suitable planting season

740 Cleanliness

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

750 Planting maintenance generally

- 1. Weed control: Maintain weed free area around each tree and shrub.
 - 1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
 - 1.2. Keep planting beds clear of weeds: By hoeing By maintaining full thickness of mulch
- 2. 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.
- 3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- 4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- 5. Trees: Spray crown when in leaf during warm weather.
 - 5.1. Timing: After dusk.
- 6. Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
 - 6.1. Broken or missing items: Replace.
 - 6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
 - 6.3. Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
 - 6.4. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
 - 6.5. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
 - 6.6. Frequency of checks: As landscape management plan
- 7. Watering: As required for healthy establishment, depending on weather conditions

760 Planting maintenance – pruning

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

790 Final mulching

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

Q40 Fencing

Fencing systems

126 Secure mesh fencing

- 1. Manufacturer: Jacksons Fencing
 - 1.1. Contact details
 - 1.1.1. Address: 209 Stowting Common Ashford Kent TN25 6BN
 - 1.1.2. Telephone: 0800 408 4757
 - 1.1.3. Web: www.jacksons-security.co.uk
 - 1.1.4. Email: sales@jacksons-fencing.co.uk
 - 1.2. Product reference: Securi-Mesh® Fencing
- 2. Standard: Can be configured to meet Home Office specifications for prison use.
- 3. Category: 3.
- 4. Posts: Manufacturer's standard.
- 5. Post foundations: Over length set in concrete. Holes to be suitably lined to protect tree roots from chemical damage.
- 6. Panels: 2134 mm.
- 7. Height: 2150 mm.
- 8. Fence topping: None.
- 9. Finish/ Colour: Black RAL 9005.
- 10. Works within the Root Protection Area: Excavations to be dug by hand, avoiding tree roots.

Gates, posts and stiles - Not Used

Accessories - Not Used

Execution

710 Installation generally

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

715 Competence

- 1. Operatives: Contractors must employ competent operatives.
- 2. Qualifications: Submit certification of training.

720 Setting posts in concrete

- 1. Standard: To BS 8500-2.
- 2. Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.

- 3. 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.
- 4. Admixtures: Do not use.
- 5. Holes: Excavate neatly and with vertical sides.
- 6. Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- 7. Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

730 Exposed concrete foundations

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

780 Making good galvanized surfaces

- 1. 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.
- 2. Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 Site painting

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

Completion

910 Cleaning

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

920 Fixings

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

930 Gates

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

Q50 Site/ street furniture/ equipment

Gates, barriers and parking controls - Not Used

Site and street furniture

210 Carbon steel cycle stands

- 1. Manufacturer: Broxap Ltd
 - 1.1. Contact details
 - 1.1.1. Address: Rowhurst Industrial Estate Chesterton Newcastle-under-Lyme Staffordshire ST5 6BD
 - 1.1.2. Telephone: +44 (0)1782 571700
 - 1.1.3. Web: www.broxap.com
 - 1.1.4. Email: nbs@broxap.com
 - 1.2. Product reference: Sheffield Cycle Parking Stand (BXMW/GS0 Senior Sheffield Cycle Stand)
- 2. Stand type: Sheffield Cycle Stand
- 3. Number of stands: Single.
- 4. Base: Root fixed.
- 5. Finish as delivered: Galvanized and polyester powder coated.
- 6. Colours: To match architectural metalwork.
- 7. Size:: 800 x 715 mm.

212 Carbon steel cycle lockers Type A

- 1. Manufacturer: Cyclehoop
 - 1.1. Contact details
 - 1.1.1. Address: Unit 1, Burnham Way Kangley Bridge Road London London SE26 5AG
 - 1.1.2. Telephone: +44 (0)20 86991338
 - 1.1.3. Web: www.cyclehoop.com
 - 1.1.4. Email: info@cyclehoop.com
 - 1.2. Product reference: Bikehangar®
- 2. Stand type: Cycle.
- 3. Dimensions
 - 3.1. Width: 2676 mm.
 - 3.2. Depth: 2030 mm.
 - 3.3. Height: 1330 mm (closed); 2270 mm (open).
- 4. Materials
 - 4.1. Frame: Stainless steel.
 - 4.2. Panels: Perforated sheet.
- 5. Finish as delivered: Galvanized to BS EN ISO 1461.

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Q50 Site/ street furniture/ equipment Page 33 of 40

- 6. Colours: Powder coated, RAL colour.
- 7. Film thickness (minimum): 0.9 mm.
- 8. Accessories: Digital access with basic use reporting.
- 9. Locking: High security lock mechanism.
- 10. Fixings: Stainless steel, grade 304.
- 11. Internal Size: 2450 x 1900 x 1316 mm.
- 12. Weight: 300 kg.

225 Street and site seats (C)

- 1. Manufacturer: Vestre
 - 1.1. Contact details
 - 1.1.1. Address: Profile West Suite 2, Floor 1 950 Great West Road Brentford TW8 9ES
 - 1.1.2. Telephone: +44(0)207 846 8725
 - 1.1.3. Web: www.vestre.com
 - 1.1.4. Email: uk@vestre.com
 - 1.2. Product reference: Vroom Seat (Vroom seat straight end 617-900)
- 2. Length: 2167 mm.
- 3. Base: Ground mounted.
- 4. Material: Steel.
- 5. Finish as delivered: Hot-dip galvanized and powder-coated.
- 6. Colours: RAL TBC
- 7. Film thickness (minimum): 10 mm.
- 8. Accessories: Not required.
- 9. Wood species/ Finish: Linseed oil proofed Nordic pine.
- 10. Weight: 80 kg.
- 11. Height: 440 mm (seat); 778 mm (back).
- 12. Width: 546 mm.

Installation

510 Concrete foundations generally

- 1. Standard: To BS 8500-2.
- 2. Concrete: Designated, not less than GEN 1
- 3. Admixtures: Do not use.
- 4. Foundation holes: Neat vertical sides.
- 5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

515 Setting components in concrete

- 1. Holes: As per manufacturers specification.
- 2. Components: Accurately positioned and securely supported.
- 3. Concrete fill: Fully compacted as filling proceeds.
- 4. Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.

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Q50 Site/ street furniture/ equipment Page 34 of 40 5. Temporary component support: Maintain undisturbed for minimum 48 hours.

530 Preservative treated timber

- 1. 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.
- 2. Heavily worked sections: Re-treat.

545 Erection of timber and prefabricated structures

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

550 Damage to galvanized surfaces

- 1. Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - 1.1. Material: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zincrich paint to BS 4652.
 - 1.2. Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

560 Site painting

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

Q52 Play and sports equipment

General - Not Used

System performance - Not Used

Products

320 Balance beam

- 1. Description: TO PLAYGROUND
- 2. Standard: To BS EN 1176-1.
- 3. Manufacturer: Playdale
 - 3.1. Product reference: Twin balance beam
- 4. Age range: 14+
- 5. Materials: Timber
 - 5.1. Finish: None
 - 5.2. Colour: Manufacturer's standard
- 6. Length: 5.2 m
- 7. Height: 390 mm
- 8. Method of fixing: Set in concrete

320 Log walk A

- 1. Description: TO PLAYGROUND
- 2. Standard: To BS EN 1176-1.
- 3. Manufacturer: Playdale
 - 3.1. Product reference: Log walk
- 4. Age range: 1.5 6
- 5. Materials: Timber
 - 5.1. Finish: None
 - 5.2. Colour: Manufacturer's standard
- 6. Height: 200 mm
- 7. Method of fixing: Set in concrete

Execution

710 Play equipment installation generally

1. Standard: To manufacturer's written instructions provided in accordance with BS EN 1176-1.

720 Concrete foundations generally

- 1. Standard: To BS 8500-2.
- 2. Concrete: Designated, not less than GEN 1 or Standard prescribed, not less than ST2.
- 3. Admixtures: Do not use.
- 4. Foundation holes: Neat vertical sides.
- 5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

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725 Setting components in concrete

- 1. Holes: To manufacturers specification
- 2. Components: Accurately positioned and securely supported.
- 3. Concrete fill: Fully compacted as filling proceeds.
- 4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
- 5. Temporary component support: Maintain undisturbed for minimum 48 hours.

740 Preservative treated timber

1. 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.

750 Damage to galvanized surfaces

- 1. Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - 1.1. Materials: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zincrich paint to BS 4652.
 - 1.2. Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

760 Site painting

1. Timing: Prepare surfaces and apply finishes as soon as possible after installing components.

Completion

910 Inspection

- 1. Standard: To BS EN 1176-1 and 1176-7
- 2. Timing: 2 weeks prior to date when work is expected to be practically complete
- 3. Period of notice (minimum): 3 working days.
- 4. RoSPA:: A post-installation inspection must be carried out by to check for compliance, specifications and installation procedures.

920 Cleaning

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

930 Testing

1. Standard: To BS EN 1176-1.

950 Documentation

- 1. Standard: To BS EN 1176-1 and 1176-7
- 2. Contents
 - 2.1. Copies of test reports.
 - 2.2. General product information.
 - 2.3. Installation information.
 - 2.4. Inspection and maintenance information.
- 3. Number of copies: 2
- 4. Submission: 2 weeks after request by contract administrator

 Ω End of Section

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Q52 Play **and sports equipment** Page 37 of 40

2497 - Chester Road Hostel – Landscape Specification Client:

Q55 External decks, boardwalks and bridges

Tendering - Not Used

General - Not Used

System performance

217 Structural design provided

- 1. Description: Design to decking area.
- 2. Requirements
 - 2.1. Generally: As section: B50.
 - 2.2. Additional requirements: To comply with agreed arboricultural methodology.
- 3. Production/ execution records: In accordance with the designated code of practice

Products

370 Composite sections

- 1. Description: FOR DECK STRUCTURE GENERALLY
- 2. Manufacturer: Contractor's choice
 - 2.1. Product reference: Contractor's choice
- 3. Colour: Contractor's choice

380 Recycled plastics deck boards

- 1. Manufacturer: James Latham
 - 1.1. Contact details
 - 1.1.1. Address: Unit 3 Swallow Park Finway Road Hemel Hempstead HP2 7QU
 - 1.1.2. Telephone: +44 (0) 207 288 6417
 - 1.1.3. Web: www.lathamtimber.co.uk
 - 1.1.4. Email: specificationteam@lathams.co.uk
 - 1.2. Product reference: Millboard Decking
- 2. Profile: Plain.
- 3. Finished size
 - 3.1. Section: 176 x 32 mm.
 - 3.2. Length: 3.6 m.

Fabrication

510 Fabrication generally

- 1. Design: Complete the detailed design and obtain approval prior to commencing fabrication.
- 2. Shop drawings: Submit.
- 3. Structural calculations: Submit.
- 4. Frameworks: Assemble and brace, including temporary members required for installation.
- 5. Contact between dissimilar metals: Avoid.

- 6. Fixings: Fully bolt together. Tighten bolts.
- 7. Temporary support: Do not subject members to non-design loadings.

Execution

610 Loading

1. Site activities: Restrict, to ensure that design loads are not exceeded, or submit proposals for temporary supports.

620 Concrete foundations generally

- 1. Standard: To BS 8500-2.
- 2. Mix: Designated concrete not less than GEN 1 or standard prescribed concrete not less than ST2.
- 3. Admixtures: Do not use.
- 4. Foundation holes: Neat vertical sides.
- 5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

630 Setting components in concrete

- 1. Holes: As drawing 2497-TFC-00-XX-DR-L-4003
- 2. Components: Accurately positioned and securely supported.
- 3. Concrete fill: Compact as filling proceeds.
- 4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
- 5. Temporary component support: Maintain undisturbed for minimum 48 hours.

665 Installation generally

- 1. Fasteners and methods of fixing: As section Z20.
- 2. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
- 3. Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.

670 Installation of surfacing

- 1. Heading joints: Kept to a minimum, and formed only as butt joints situated over joists.
- 2. Length: Each board must span not less than two bays between joists with joints in adjacent boards staggered.
- 3. Gaps between boards: 3-5 mm

Completion - Not Used



Specification created using NBS Chorus