



Client: TfGM

16012-OOB--XXX-XXX-L-LA-006001_Landscape and Planting Specification

P03

6001 - Bury Interchange - Phase 1

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Revision Table

Clauses

1.0 Revisions

1.

Date	Revision Number	Changes	Updates made by	Approved by
13/10/2025	P01	Issued for Information	JPO	MG
17/11/2025	P02	Issued for Information	JPO	MG

2.0 OOB

1. Address:
Newcastle: Door 19, Teapots 1 & 2, Hoult's Yard, Walker Road, Newcastle upon Tyne, NE6 2HL
Edinburgh: 91 George Street, Edinburgh EH2 3ES
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PREAMBLE

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

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

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

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Ω End of Section

D41

Crib walls, gabions and other gravity retaining walls

To be read with preliminaries/ general conditions.

105 W02 - Proposed HVM Dwarf Wall To Union Square Access

1. Requirement: Granite Cladded Concrete Wall
2. Structural requirements
 - 2.1. Generally: HVM rated
 - 2.2. Modifications: To Engineer's specification
 - 2.3. Design: To Engineer's specification
3. Other requirements: To Engineer's specification
4. Concrete for foundations: To Engineer's specification

106 W03 - Proposed Retaining Wall To Maintenance Paths

1. Requirement: Concrete Wall
2. Structural requirements
 - 2.1. Generally: To Engineer's specification
 - 2.2. Modifications: To Engineer's specification
 - 2.3. Design: To Engineer's specification
3. Other requirements: To Engineer's specification

Ω End of Section

F10

Brick/ block walling

Types of walling - Not Used

Testing - Not Used

Workmanship generally

430 Conditioning of clay bricks and blocks

1. Bricks and blocks delivered warm from manufacturing process: Do not use until cold.
2. Absorbent bricks in warm weather: Wet to reduce suction. Do not soak.

500 Laying generally

1. Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
2. AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
3. Clay block joints
 - 3.1. Thin-layer mortar: Lay blocks on a full bed.
 - 3.2. Interlocking perpends: Butted.
4. Bond where not specified: Half-lap stretcher.
5. Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

520 Accuracy

1. Courses: Level and true to line.
2. Faces, angles and features: Plumb.
3. Permissible deviations
 - 3.1. Position in plan of any point in relation to the specified building reference line and/ or point at the same level: ± 10 mm.
 - 3.2. Straightness in any 5 m length: ± 5 mm.
 - 3.3. Verticality up to 3 m height: ± 10 mm.
 - 3.4. Verticality up to 7 m height: ± 14 mm.
 - 3.5. Overall thickness of walls: ± 10 mm.
 - 3.6. Level of bed joints up to 5 m (brick masonry): ± 11 mm.
 - 3.7. Level of bed joints up to 5 m (block masonry): ± 13 mm.

560 Coursing brickwork

1. Gauge: Four brick courses including bed joints to 300 mm.

561 Coursing brickwork with existing

1. Gauge: Line up with existing brick courses.

690 Adverse weather

1. General: Do not use frozen materials or lay on frozen surfaces.
2. Air temperature requirements: Do not lay bricks/ blocks:
 - 2.1. In cement-gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.

- 2.2. In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising, or as manufacturer's/ supplier's recommendations.
- 2.3. In thin-layer mortars when outside the limits set by the mortar manufacturer.
3. Temperature of walling during curing: Above freezing until hardened.
4. Newly erected walling: Protect at all times from:
 - 4.1. Rain and snow.
 - 4.2. Drying out too rapidly in hot conditions and in drying winds.

Additional requirements for facework

750 Colour consistency of masonry units

1. **Colour range:** Submit proposals of methods taken to ensure that units are of consistent and even appearance within deliveries.
2. **Conformity:** Check each delivery for consistency of appearance with previous deliveries and with approved reference panels; do not use if variation is excessive.
3. Facing bricks should be blended on site from a minimum of three packs to ensure an even distribution of colour and texture variation.
4. **Finished work:** Free from patches, horizontal stripes and racking back marks.

760 Appearance

1. **Brick/ block selection:** Do not use units with damaged faces or arrises.
2. **Cut masonry units:** Where cut faces or edges are exposed cut with table masonry saw.
3. **Quality control:** Lay masonry units to match relevant reference panels.
 - 3.1. **Setting out:** To produce satisfactory junctions and joints with built-in features and components.
 - 3.2. **Coursing:** Evenly spaced using gauge rods.
4. **Lifts:** Complete in one operation.
5. **Methods of protecting facework:** Submit proposals.

780 Ground level

1. **Commencement of facework:** Not less than 150 mm below finished level of adjoining ground or external works level.

830 Cleanliness

1. **Facework:** Keep clean.
2. **Mortar on facework:** Allow to dry before removing with stiff bristled brush.
3. **Removal of marks and stains:** Rubbing not permitted.

Ω End of Section

L37

External stair, ramps, handrail and balustrades systems

General

160 R01 - Proposed Guardrail to Union Square

1. Reference:: GRP Palisade Fencing
2. System manufacturer: Evergrip [or similar approved]
3. Material: GRP
 - 3.1. Finish: To match Bridge
4. Accessories: To Metrolink's specification.

240 H01 - Proposed Handrail

1. Description: To steps, sloped path and maintenance access
2. Reference:: GRP Handrail System
3. System manufacturer: Evergrip [or similar approved]
4. Material: GRP
 - 4.1. Finish: Standard
 - 4.1.1. Colour:: RAL 1013
5. Height above ground surface (to upper surface of handrail)
 - 5.1. Upper handrail: 900~1100mmmm
 - 5.2. Lower handrail: 600mm
6. Fixing:: Wall mounted when presented with wall upstand, ground fixing where no wall is available to Engineer's specification.
7. Loading:: BS EN ISO 14122-3:2001 & BS 6399-1:1996
8. Accessories: All handrails shall extend 300 mm past the nosing of the top and bottom step, with the extending section being horizontal. With mid-rail and tapping rail.
9. Notes:: To BS 8300 - Metrolink's specification.

241 H02 - Proposed Illuminated Handrail

1. Description: To Union Square Steps
2. System manufacturer: Specialist's choice [FutureServ]
3. Product Reference:: DW Windsor Garda Pro
4. Accessories: To BS 8300 - Metrolink's specification.

System performance - Not Used

Products

315 ST01 - Proposed Steps

1. Manufacturer: Marshalls Plc [or similar approved]
 - 1.1. Product reference: Conservation X Step Units
2. Standard: To BS EN 771-5.
3. Size
 - 3.1. Surface width: As per drawing

- 3.2. Going: 300 mm, top step 400mm
- 3.3. Rise: 150 mm
- 4. Colour: Silver Grey
- 5. Finish: Smooth / acid etched
 - 5.1. Slip resistance value of integral tread - water wet (minimum): per manufacturers standard
 - 5.2. Slip resistance value of integral nosing - water wet (minimum): per manufacturers standard
 - 5.2.1. Colour of integral nosing: Black
- 6. Accessories: Visibility strips to corners as per Building Regulations Part M, BS 8300 and Metrolink regulation compatibility requirements.
The contrasting material should extend 55mm in width from the front and top edge of the tread.

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. 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.

630 Setting components in concrete

- 1. Holes:
- 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.

650 Installation generally

- 1. Fasteners: To 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 finished work as temporary support or strutting for other work.
4. **Applied finishes:** Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer's recommendation before application.

660 Installation of manufactured stone elements

1. **Selection:** Do not use damaged units.
2. **Accuracy**
 - 2.1. **Courses:** Level and true to line.
 - 2.2. **Faces, angles and features:** Plumb.
 - 2.3. **Setting out:** Achieve satisfactory junctions and joints with adjoining or built-in elements and components.
3. **Absorbent units:** Dampen in warm weather to reduce suction.
4. **Dowels:**
5. **Mortar joints:**
 - 5.1. **Laying:** Full bed of mortar with all joints and voids filled.
 - 5.2. **Temporary distance pieces:** Lead or stainless steel. Remove when mortar is sufficiently strong.
 - 5.3. **Appearance:** Neat and consistent.
6. **Cleanliness:** Keep facework clean. Rubbing and other abrasive or chemical cleaning methods to remove marks and stains, not permitted.
7. **Cutting of reinforced units:** Not permitted.

662 Adverse weather

1. **General:** Do not use frozen materials and do not lay on frozen surfaces.
2. **Working limits:** Do not lay blocks/ dressings:
 - 2.1. **Cement gauged mortars:** When the air temperature is at or below 3°C and falling or below 1°C and rising (unless mortar has a temperature of not less than 4°C when laid and work is thoroughly protected).
 - 2.2. **Hydraulic lime:sand mortars:** When the air temperature is at or below 5°C and falling or below 3°C and rising.
3. **Temperature of the work:** Maintain above freezing until mortar has fully set.
4. **Newly erected work:** Protect from precipitation; Prevent rapid drying in hot conditions.
5. **Remedial work:** Rake out and replace mortar damaged by frost.
 - 5.1. **Damaged work:** Rebuild.

Completion

910 Inspection

1. **Timing:** Give reasonable notice before covering up
2. **Period of notice (minimum):** 3 working days.

Ω End of Section

Q10

Kerbs/ edgings/ channels/ paving accessories

Types of kerbs/edgings and channels

110A K01 - Kerb Type 1

1. **Description:** Natural Stone - Granite
2. **Manufacturer:** Marshalls plc
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Landscape House
Lowfields Business Park
Elland
West Yorkshire
HX5 9HT
 - 2.1.2. **Telephone:** +44 (0)330 0574472
 - 2.1.3. **Web:** www.marshalls.co.uk
 - 2.1.4. **Email:** info@marshalls.co.uk
 - 2.2. **Product reference:** Tarvos
3. **Standard:** To BS 7533-6:1999.
4. **Physical properties**
 - 4.1. **Finish:** Flamed
 - 4.2. **Dimensions:** 300 x 125 mm x 915 mm.
 - 4.3. **Weathering resistance:** $\leq 1.0 \text{ kg/m}^2$ as a mean with no individual value $> 1.5 \text{ kg/m}^2$ (freeze thaw durability).
 - 4.4. **Abrasion resistance:** $\leq 23 \text{ mm}$ (Wide Wheel Abrasion Test).
 - 4.5. **Bending strength:** Characteristic bending strength of 3.5 MPa with no individual result less than 2.8 MPa
 - 4.6. **Unpolished Slip Resistance Value (USRV) (minimum):** > 45 .

110B K02 - Kerb Type 2

1. **Description:** British Standard Road Kerb
2. **Standard:** To BS EN 1340.
3. **Manufacturer:** Marshalls (or similar approved)

Marshalls PLC
Landscape House
Lowfield Business Park
Elland
HX5 9HT

Phone: 0370 218 5601
Email: info@marshalls.co.uk
4. **Manufacturer:** Marshalls plc.
5. **Web:** www.marshalls.co.uk.
6. **Tel:** +44 (0)330 0574472.) .
7. **- Product reference:** 125 x 150 Half Battered Kerb
8. **Size (width x height x length):** 125 x 255 x 915 mm with 100mm upstand

9. **Special shapes:** External radius kerbs as shown on landscape drawings
10. **Finish:** Standard aggregate
11. **Colour:** Standard grey
12. **Bedding:** To Engineers specification
13. **Joints generally:** Narrow mortar

110C K03 - Kerb Type 3

1. **Description:** Concrete Pin Kerb
2. **Standard:** To BS EN 1340.
3. **Manufacturer:** Marshalls (or similar approved)

Marshalls PLC
Landscape House
Lowfield Business Park
Elland
HX5 9HT

Phone: 0370 218 5601
Email: info@marshalls.co.uk

4. **Manufacturer:** Marshalls plc.
5. **Web:** www.marshalls.co.uk.
6. **Tel:** +44 (0)330 0574472.) .
7. **- Product reference:** Standard Concrete Pin Kerb
8. **Size (width x height x length):** 50 x 150 x 915 mm
9. **Special shapes:** External radius kerbs as shown on landscape drawings
10. **Colour:** Standard grey
11. **Bedding:** To Engineers specification
12. **Joints generally:** Narrow mortar

250 Material samples

1. **Samples representative of colour and appearance of designated materials:** Submit before placing orders.
 - 1.1. **Designated materials:** Stone kerbs

Roads/paving accessories/ marking/ demarcation - Not Used

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.

580 Drainage channel systems

1. **Installation:** To an even gradient, without ponding or backfall. Commence laying from outlets.
2. **Silt and debris:** Removed from entire system immediately before handover.
3. **Washing and detritus:** Safely disposed without discharging into sewers or watercourses.

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.

640 Tooled mortar joints

1. **Jointing:** Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
 - 1.1. **Joint width:** 6 mm.

Q22

Asphalt roads/ pavings

Types of paving

115 Tarmac

1. **Description:** Proposed Tarmac to external ramp
2. **Supplier:** : Contractors selection
3. **Details::** Refer to Engineer's specification

Preparatory work/ requirements

195 Hard landscaping materials specification

1. Minimum 'BRE Green Guide to Specification' online rating:

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.
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.

340 Flatness/ Surface regularity

1. **Deviation of surface:** Where appropriate in relation to the geometry of the surface, the variation in gap under a 3 m straightedge placed anywhere on the surface to be not more than:

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. **Adhesion:**
 - 2.3.1. **Application rate:**
 - 2.3.2. **Accuracy:** Uniform, without puddles.
 - 2.4. **Finishing:** Allow emulsion to break completely before applying surface.

Completion

390 Documentation

1. **Standard:**
 - 1.1. **Declaration of conformity:** Submit.
2. **Number of copies:**
3. **Submission:**

Ω End of Section

Q23

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

Types of surfacing

160 Gravel

1. Description: Proposed Gravel to Maintenance Area
2. Supplier:: Contractor's choice
3. Gravel: Loose laid and raked to uniform thickness.
 - 3.1. Colour: Silver

Laying

315 Materials

1. Compatibility: Chippings suitable for use with respective binders/ emulsions/ resin/ epoxy.

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.

380 Laying granular surfaces in pedestrian areas and cycle tracks

1. Permissible deviation from required levels, falls and cambers (maximum): ± 12 mm.
2. General: Spread and level in 100 mm maximum layers. As soon as possible, compact each layer.
3. Dry weather: Lightly water layers during compaction.

Completion - Not Used

Ω End of Section

Q24

Interlocking brick/ block roads/ pavings

Types of paving

110 P06 - Paving Type 6 - Maintenance Path

1. **Description:** Concrete Flags to Maintenance paths
2. **Laying course**
 - 2.1. **Material:** In accordance with BS 7533-3.
3. **Blocks:** To BS EN 1338.
 - 3.1. **Manufacturer:** Marshalls Plc [or similar approved]
 - 3.1.1. **Product reference:** Saxon
 - 3.2. **Sizes:** 600mm x 600mm x 65mm
 - 3.3. **Colour/ Finish:** Natural
4. **Jointing**
 - 4.1. **Material:** In accordance with BS 7533-3.
 - 4.2. **Joint width:** 2-5 mm.
5. **Setting out**
 - 5.1. **Bond:** 90° herringbone

Execution

200 Execution generally – concrete block and clay paver paving

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

211 Colour banding

1. **General:** Unless premixed by manufacturer, select blocks/ pavers/ setts from at least 3 3-5 separate packs in rotation, to avoid colour banding.

220 Samples

1. **General:** Before ordering, submit samples of all blocks/ pavers/ setts that are representative of colour and appearance.

240 Adverse weather

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

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.

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 - Not Used

System performance - Not Used

Products

151 P04 - Paving Type 4

1. **Description:** Union Square granite paving to be retained / reinstated - Natural Stone Flags should new be required
2. **Standard:** To BS EN 1341.
3. **Supplier:** Marshalls Plc
 - 3.1. **Product reference:** Rosalind Granite
4. **Finish:** Flamed
5. **Sizes:** To match existing

310 P01 - Paving Type 1

1. **Description:** Natural Stone Flags
2. **Standard:** To BS EN 1341.
3. **Supplier:** Marshalls Plc
 - 3.1. **Product reference:** Brackendale Sandstone
 - 3.2. **Quarry:** India
4. **Finish:** Flamed
5. **Sizes:** 600mm wide gauge x 50mm thick x random lengths [400mm – 750mm]

320 TP01 - Tactile Paving Corduroy

1. **Description:** Tactile paving to top and bottom of steps
2. **Standard:** To DD CEN/TS 15209.
3. **Material:** Concrete
 - 3.1. **Manufacturer:** Marshalls Plc
 - 3.1.1. **Product reference:** Tactile Hazard Warning
4. **Nominal sizes:** 400x400x50mm
5. **Colour:** Buff
6. **Type of surface:** Corduroy

370 Concrete for site mixed mortar

1. **Description:** Fine Bedding Concrete
2. **Manufacturer:** Marshalls PLC
 - 2.1. **Product Reference:** Pavebed

435 Primer for underside of flags and slabs

1. **Description:** High Strength Slurry Primer and Cladding adhesive
2. **Manufacturer:** Marshalls PLC

- 2.1. Product reference: Pavebond

Execution

610 Material samples

1. Samples representative of colour and appearance of designated materials: Submit before placing orders.
 - 1.1. Designated materials: All pavings

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.
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.

645 Protection

1. **Cleanliness:** Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
2. **Materials storage:** Do not overload pavings with stacks of materials.
3. **Handling:** Do not damage paving unit corners, arrises, or previously laid paving.
4. **Mortar bedded pavings:** Keep free from traffic after laying:
5. **Access:** Restrict access to paved areas to prevent damage from site traffic and plant.

690 Reclaimed natural stone

1. **Description:** Union Square granite paving to be reclaimed / reinstated
2. **Location/ Access:**
3. **Lifting/ Storage/ Protection:**
4. **Preparation:**

715 Laying flag and slab paving – mortar laying course and jointing

1. **Standard generally:** In accordance with BS 7533-4.
2. **Flag installation and cutting:** To Interpave 'Concrete flag paving'.
3. **Laying course**
 - 3.1. **Nominal thickness:** 40 mm before laying paving slabs
4. **Laying and jointing:** Marshalls PLC Pavement
5. **Joint width (nominal):** 6-10 mm

730 Laying natural stone sett paving

1. **Standard generally:** In accordance with BS 7533-7.
2. **Laying type:** Rigid.
 - 2.1. **Laying and jointing method:** Marshalls PLC Pavement
3. **Laying course**
 - 3.1. **Target thickness after compaction:** 40 mm
4. **Joint width (nominal):** 12 mm

Completion

915 Completion of paving with dry sand or fine aggregate filled joints

1. **Sand dressing:** Leave a thin layer of dry jointing sand/ fine aggregate over the paving until opened to public access
2. **Final compaction of the surface course:** In accordance with BS 7533-3.
3. **Vacuum cleaning machines:** Not allowed.

Ω End of Section

Q28

Topsoil and soil ameliorants

Clauses - Not Used

System outline

135 Planting bed topsoil system

1. **Description:** For all planted areas
2. **Composition**
 - 2.1. **Topsoil:** Imported topsoil to BS 3882
 - 2.2. **Ameliorants:** sanitized and stabilized compost to PAS 100
 - 2.3. **Accessories:** Mycorrhizal inoculant.

155 Mulching and top dressing system

1. **Description:** For all planted areas
2. **Composition**
 - 2.1. **Material:** Organic materials - bark mulch

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;- Products containing peat; and- River and canal dredgings

315 Imported topsoil to BS 3882

1. **Description:** For planted areas
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.
4. **Classification:** Multipurpose
 - 4.1. **Soil textural class** to BS 3882, Figure 1: Sandy loam
5. **Source:** Greenblue Urban or similar approved

5.1. Product reference: Rootsoil 20

345 Aggregates Gravel for mulch layer to rain gardens

1. Description: Pea Gravel or Pea Shingle for drainage layer to planters
2. Source: Contractor's choice
 - 2.1. Product reference: Quarried, washed, non-calcareous, sub-rounded to rounded gravel
3. Reference, description and grading
 - 3.1. Grit: 5-10mm pea shingle

355 Organic materials

1. Description: FOR CONTAINER PLANTING
2. Type: Bark mulch
3. Source: Row lawn [or similar approved]
 - 3.1. Product reference: Promulch

360 Sanitized and stabilized composted materials certified to PAS 100

1. Description: For all planted areas
2. Standard: In accordance with PAS 100.
3. Source: Submit proposals
 - 3.1. Product reference: Submit proposals
4. Horticultural parameters
 - 4.1. pH (1:5 water extract): 7.0-8.7.
 - 4.2. Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
 - 4.3. Moisture content (m/m of fresh weight): 35-55%.
 - 4.4. Organic matter content (minimum): 25%.
 - 4.5. Grading (air dried samples): 99% passing 25 mm screen, and 90% passing: 10 mm screen mesh aperture
 - 4.6. Carbon:Nitrogen ratio (maximum): 20:1.
5. Texture: Friable.
6. Objectionable odour: None.
7. Compost Certification Scheme certification: Required
8. Declaration of analysis: Submit.
9. Additional analyses: Not required
10. Samples: Not required

380 Mycorrhizal inoculant

1. Description: Apply to shrub beds at time of planting in accordance with manufacturers instructions
2. Manufacturer: Greenblue Urban [Or similar approved]
 - 2.1. Product reference: RootStart Mycorrhiza

385 Water retention gels

1. Description: FOR CONTAINER PLANTING
2. Type: Agri-polymer gel
3. Manufacturer: Green-tech or similar

- 3.1. Product reference: Broadleaf P4

401 Organic fertilizers

1. Description: FOR CONTAINER PLANTING
2. Manufacturer/ source: Contractor's choice
 - 2.1. Product reference: Submit proposals
3. Standard: In accordance with The EC Fertilizers (England and Wales) Regulations 2006
4. Purpose: General purpose fertilizer Maintenance fertilizer - March application (15:10:10 spring turf fertilizer)
5. Type: Sanitized and stabilized compost
6. Availability to plants: Slow-release

Execution

610 Topsoil analysis

1. Soil to be analysed: Imported topsoil
2. Soil analyst: submit proposals
3. Samples: Collect in accordance with BS 3882.
4. Submit
 - 4.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
 - 4.2. Additional analysis: Not required
 - 4.3. Report detailing soil analyst's recommendations.

620 Importing topsoil

1. Give notice: Before stripping topsoil for transfer to site.
 - 1.1. Notice period: 5 days

625 Sample loads

1. Description: For imported topsoil
2. Deliver to site a sample load: of 5 kg
3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - 3.1. Notice period: 5 days

630 Documentation for imported topsoil

1. Description: To all planted areas
2. Timing: Submit at handover.
3. Contents
 - 3.1. Full description of all soil components.
 - 3.2. Record of source for all soil components.
 - 3.3. Record drawings showing the location and depth of all soils by type and grade.
 - 3.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
4. Number of copies: 3

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: All planted areas
2. Standard: In accordance with BS 8601.
3. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
4. Areas of thicker topsoil: Excavate locally.
5. Avoid compaction.
6. Excess subsoil: Remove.
7. Imported subsoil: Greenblue Urban [Or similar approved], Rootsoil subsoil

665 Subsoil surface preparation for:

1. Description: All planted areas
2. Standard: In accordance with BS 3882.
3. General: Excavate and/ or place fill to required profiles and levels, as section D20.
4. Loosening
 - 4.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth
 - 4.1.1. Light and noncohesive subsoils: when dry conditions are reasonably dry, loose thoroughly to a depth of 300mm
 - 4.1.2. Stiff clay and cohesive subsoils: when dry conditions are reasonably dry, loose thoroughly to a depth of 450mm
 - 4.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
 - 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 and debris and Builders rubble

670 Inspecting formations

1. Give notice: Before spreading topsoil for planting beds.
2. Notice period: 7 days

690 Topsoil storage heaps

1. Location: Submit proposals
2. Height (maximum): 1.0 m

3. **Width (maximum):** 4.0 m
 - 3.1. **Formation:** Loose tip and shape from the side only, without running machinery on the heap at any time.
4. **Protection**
 - 4.1. Do not place any other material on top of storage heaps.
 - 4.2. Do not allow construction plant to pass over storage heaps.
 - 4.3. Prevent compaction and contamination, by fencing and covering as appropriate.

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 it is wetter than the plastic limit: less 3%, to BS 1377-2

710 Spreading topsoil on:

1. **Description:** ORNAMENTAL PLANTING BEDS / PLANTERS
2. **Standard:** In accordance with BS 3882.
3. **Layers**
 - 3.1. **Depth (maximum):** 150 mm.
 - 3.2. Gently firm each layer before spreading the next.
4. **Depth after firming and settlement:** 300 mm for all shrub, perennials and ornamental grasses, subsoil to be used below
5. **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.

845 Applying loose mulch

1. **Description:** For all planted areas
2. **Timing:** Immediately after planting
3. **Preparation:** Clear all weeds

4. Coverage of mulch (minimum)
 - 4.1. Container planting: 50 mm - 75mm depth [refer to details]
5. Finished level of mulch: Level with lip of planter

Completion

920 Applying mulch

1. Timing: At end of the maintenance period
2. Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
3. Container planting: Remulch.
 - 3.1. Depth (minimum): 50-75mm deep [refer to detail drawings]

Ω End of Section

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.

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 28
 - 1.2. **Turfed areas:** Soil for grass swards as Section 28
 - 1.3. **Reinforced grass areas:** NA

Seeding

310 Proposed Grassland

1. **Description:** Seeded grassland to match Pyramid Park remediation works

311 Proposed Species Rich Lawn

1. **Supplier:** Emorsgate [or similar approved]
 - 1.1. **Mixture reference:** EL1 Flowering Lawn Mix
2. **Application rate:** 4 g/m²

312 Proposed Wildflower & Grass Meadow

1. **Supplier:** Emorsgate [or similar approved]

- 1.1. Mixture reference: EM34 Diverse Meadow Mix
2. Application rate: 4 g/m²

313 Proposed Woodland Planting

1. Supplier: Emorsgate [or similar approved]
 - 1.1. Mixture reference: EW1 Woodland Seed Mix
2. Application rate: 4 g/m²
3. Density:: Tree whips to be added creating denser areas and gaps. Average density: 1 whip / 2m²

319 Quality of seed

1. Description: for grassed and meadow 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

335 Grass sowing season

1. Grass seed generally: April to October

336 Wildflower sowing season

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

352 Edges to seeded areas

1. Description: To all grassed areas
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

530 First cut of grassed areas

1. Timing: When grass is reasonably dry.
 - 1.1. Height of initial growth: 40-75 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: down to 10 mm
4. Mower type: Contractor's choice
5. Arisings: Remove from site

540 First cut of meadow mix

1. Description: Wildflower Meadows
2. Preparation:
3. Debris and litter: Remove.
 - 3.1. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 70-100mm
5. Mower type: Contractor's choice
6. Arisings: Remove from site

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: All Grassed areas
2. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
3. Maximum height of growth at any time: 75 mm
4. Preparation: Before each cut remove all litter and debris.
5. Cutting: As and when necessary to a height of 10 mm.
 - 5.1. Arisings: Remove
6. Bulb planting areas: Do not cut until bulb foliage has died down.
7. Trimming: All edges.
 - 7.1. Arisings: Remove.
8. Weed control: Substantially free of broad leaved weeds.
9. Stones brought to the surface: Remove regularly.
 - 9.1. Size: Exceeding 25 mm in any dimension.
10. Areas of settlement: Make good.
11. Watering: As instructed in line with maintenance schedule

650 Maintaining grassed areas with perennial wildflowers

1. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
2. Preparation: Before each cut remove all litter and debris.
3. Height and frequency of cut in first growing season
 - 3.1. Time of first cut: mid-September - early October
 - 3.2. Height of first cut: 70-100mm
 - 3.3. Frequency of subsequent cutting (minimum): 2
 - 3.4. Height of growth permitted (maximum): To allow flowering of species mix
4. Height and frequency of cut in second growing season
 - 4.1. Time of cut: mid- august - early October and March
 - 4.2. Height of cut: 70-100mm
5. Trimming: All edges.
 - 5.1. Arisings: Remove.

Ω End of Section

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 50 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.
5. **Dried bulbs, corms and tubers:** September/ October.
6. **Colchicum (crocus):** July/ August.
7. **Green bulbs:** After flowering in spring.
8. **Wildflower plugs:** Late August to mid November or March/ April.
9. **Aquatic plants:** May/ June or September/ October.

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.
 - 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: One week

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. **External container planting:** Container planting growing media system, as section Q28
 - 1.4. **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 National Plant Specification
7. **Species:** True to name.
8. **Origin/ Provenance:** Grown in the United Kingdom for at least one growing season, unless otherwise approved
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).

225 Bulbs/ Corms/ Tubers

1. **Condition:** Firm, entire, not dried out or shrivelled.
2. **Health:** Free from pests, diseases and fungus.
3. **Handling:** Remove from packaging immediately.

4. **Storage:** Permitted only when necessary.
 - 4.1. **Location:** Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
 - 4.2. **Duration:** Minimum period.
 - 4.3. **Temperature:** 18-21°C.

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.

245 Labelling and information

1. **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:
 - 1.1. Full botanical name.
 - 1.2. Total number.
 - 1.3. Number of bundles.
 - 1.4. Part bundles.
 - 1.5. Supplier's name.
 - 1.6. Employer's name and project reference.
 - 1.7. Plant specification, in accordance with scheduled National Plant Specification categories.
2. **Additional information:** Submit on request: Date supplied and consignment details or reference.

246 Labelling and information

1. **Standard:** To BS 3936.

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 - Not Used

Preparation of planting beds/ planting materials

305 Weed control

1. Locations: All planting areas
2. General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding.

Planting shrubs/ herbaceous plants/ bulbs

400 Proposed Ornamental Planting

1. Topsoil Depth:: 450mm
2. Notes: Low maintenance ornamental mix to Union Square

401 Proposed Scrub Planting

1. Notes: Average density 2no / m² - unevenly planted to create denser areas and gaps

402 Random plant layout

1. Description: to all beds
2. Spacing: Evenly, avoiding straight lines
3. Density: As indicated on detailed planting plans

405 Shrub planting pits

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

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: 75mm

Planting trees

500 Proposed Tree

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

501 Proposed Sapling

1. **New Item:** Tree whips to be added creating denser areas and gaps. Average density: 1 whip / 2m²
2. **Standard:** Prepare trees and transplant in accordance with BS 8545

510 Tree Root Barriers

1. **Manufacturer:** GreenBlue Urban Ltd
 - 1.1. **Contact details**
 - 1.1.1. **Address:** Northpoint
Compass Park
Junction Road
Bodiam
East Sussex
TN32 5BS
 - 1.1.2. **Telephone:** +44 (0)1580 830800
 - 1.1.3. **Web:** www.greenblue.com
 - 1.1.4. **Email:** hello@greenblueurban.com
 - 1.2. **Product reference:** ReRoot Root Barriers (RER1000A)
2. **Roll depth:** 1000 mm. 1000 mm.
3. **Profile:** Ribbed.

535 Tree stakes

1. **Stakes:** 3no. Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
2. **Stake size (minimum):** 75mm dia
3. **Stake length (minimum):** 600mm

576 Tree pit surfacing – loose fill

1. **Surfacing material:** Mulch, as section Q28
2. **Area:** Full extent of tree pit surface
3. **Depth:** 75 mm 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

600 Woodland work generally

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

605 Existing vegetation/ Weed clearance

1. **Arisings:** Remove.

680 Setting out

1. **Planting density:** Refer to detailed planting plan

2. **Layout:** Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

Protecting/ maintaining/ making good defects

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 In accordance with an agreed defects rectification programme

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:** Every two weeks
7. **Watering:** As required for healthy establishment, depending on weather conditions

780 Maintenance instructions

1. **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

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

Ω End of Section

Q35

Landscape maintenance

Generally

110 Notice

1. Give notice before
 - 1.1. Application of herbicide.
 - 1.2. Application of fertilizer.
 - 1.3. Watering.
 - 1.4. Each site maintenance visit.
2. Period of notice: 7 Days

130 Reinstatement

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

155 Watering

1. Supply: Potable mains water
2. Quantity: Wet full depth of topsoil
3. Application: Do not damage or loosen plants.
4. Compacted soil: Loosen or scoop out, to direct water to rootzone.
5. Frequency: As necessary for the continued thriving of all planting. When the soil is dry in winter and frost-free, it is advisable to water regularly.

160 Water restrictions

1. 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 arisings

1. General: Unless specified otherwise, dispose of arisings as follows:
 - 1.1. Biodegradable arisings: Remove to recycling facility
 - 1.2. Tree roots and stumps: Remove from site
 - 1.3. Shrub and tree prunings: Remove to recycling facility
 - 1.4. Litter and nonbiodegradable arisings: Remove from site

181 Mechanical equipment

1. General: Minimize.
2. Prohibited equipment: To be confirmed with CA
3. Timing: Use of mechanical equipment allowed between the hours of 10:00 am and 4:00 pm only

190 Litter

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

197 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.

Grassed areas

226 Tree stems

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

250 Leaf removal

1. **Operations:** Collect fallen leaves.
2. **Special requirements:** None
3. **Disposal:** Remove from site for recycling

350 Fertilizer – spring application

1. **Type:** Organic
2. **Application rate:** 60 g/m²

360 Fertilizer – autumn application

1. **Type:** Organic
2. **Application rate:** 60 g/m²

Flower beds/ seasonal beddings

460 Beds of perennials or perennials and annuals

1. **Plant supports:** Stake and tie plants using Upright, tall, clump-forming perennial can be supported with canes or rods and twine. Use single stem ring supports to support stems of plants with large single blooms. Use grow-through circular grid support frames for bushy clump-forming perennials. Pea-sticks can also be used for both short front-of-the-border as well as taller back-of the border plants.
 - 1.1. **Length:** Support type and length to suit vigour of plant and be installed in spring, before plants have made too much growth
 - 1.2. **Maintain** throughout the growing season.
2. **Gaps in planting:** Refill by replanting.
3. **Watering**
 - 3.1. **New plants:** Before and after planting out.
 - 3.2. **Ongoing:** As necessary for the continued thriving of all planting.
4. **Operations at end of growing season**
 - 4.1. **Trim:** Older flowering stems of herbaceous perennials.
 - 4.2. **Remove:** Redundant plant supports, litter, debris and arisings.
 - 4.3. **Cultivate:** Fork over the soil, taking care not to cause undue disturbance to plants.

470 Flower beds generally

1. **Operations**
 - 1.1. **Remove:** Dead flower heads, fallen leaves, litter and debris.

- 1.2. Weeds: Thoroughly hand weed.
- 1.3. Cultivate: Lightly hoe.
- 1.4. Trim: Clip grass edges.

490 Thinning by removal of surplus plants

1. Plants to be thinned: Perennials and grasses if overcrowded
2. Standard: BS 7370-4, clause 3.5.17.1.
3. Timing: Thin when foliage of adjacent plants has begun to touch.
4. Roots
 - 4.1. Disturbance to adjacent plants: Minimize.
 - 4.2. Soil: Refill holes with topsoil to leave an even graded surface.
 - 4.3. Mulch: Maintain mulch as original specification.
5. Adjacent plants: Make good any minor damage immediately.
6. Plants for retention: Select plants with a strong healthy habit.
7. Mature planting density: To provide lush non-gappy planting without overcrowding.

Shrubs/trees/hedges

500 Establishment of new planting

1. Duration: 12 months
2. Weed control
 - 2.1. Method: Keep planting beds clear of weeds by hand weeding.
3. Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
4. Watering: As necessary for the continued thriving of all planting.

502 Establishment of new planting – fertilizer

1. Time of year: March or April.
2. Type: Slow release
3. Spreading: Spread evenly.
 - 3.1. Application rate: As Manufacturer's recommendations

520 Refirming of trees and shrubs

1. Timing: After strong winds, frost heave and other disturbances.
2. Refirming: Tread around the base until firmly bedded.
3. 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

1. Pruning: In accordance with good horticultural and arboricultural practice.
 - 1.1. Removing branches: Do not damage or tear the stem or bark.
 - 1.2. Wounds: Keep as small as possible and cut cleanly back to sound wood.
 - 1.3. Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - 1.4. Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.

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

545 Pruning of excessive overhang

1. **Timing:** Annually
2. **Operations:** Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
3. **Special requirements:** None

550 Pruning of excessive height

1. **Timing:** Annually
2. **Operations:** Remove excessive height Remove excessive height As instructed.

555 Pruning trees and shrubs

1. **Standard:** To BS 7370-4.
2. **Special requirements:** None

575 Pruning ornamental shrubs

1. **General:** Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
2. **Suckers:** Remove by cutting back level with the source stem or root.

605 Trimming slowly establishing hedges

1. **Operations**
 - 1.1. **Timing:** Cut back hard in June and September to encourage bushy growth down to ground level.
 - 1.2. **Form:** Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

620 Removal of dead plant material

1. **Operations:** At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

625 Climbing plants

1. **Pruning:** Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
2. **Insecure growth:** Attach to supporting wires or structures using 5-ply soft twine.
3. **Supporting structures:** Check and repair as necessary.

635 Reinstatement of shrub/ herbaceous areas

1. **Dead and damaged plants:** Remove.
2. **Mulch/ matting materials**
 - 2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting.
3. Do not disturb roots of adjacent plants.

4. Replacement plants

- 4.1. 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.

5. Dressing: Slow release fertilizer:

- 5.1. Type: Landscape contractors choice
5.2. Application rate: As manufacturers guidance for planting type

645 Weed control generally

1. Weed tolerance: Weed to clear ground every two weeks
2. Adjacent plants, trees and grass: Do not damage.

650 Hand weeding

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

680 Soil aeration

1. Compacted soil surfaces
1.1. Prick up: To aerate the soil of root areas and break surface crust.
1.2. Size of lumps: Reduce to crumb and level off.
1.3. Damage: Do not damage plants and their roots.

690 Maintenance of loose mulch

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

Tree work

810 Tree work generally

1. Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
2. Protection: Avoid damage to neighbouring trees, plants and property
3. Standard: To BS 3998.
4. Removing branches: Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
5. Appearance: Leave trees with a well-balanced natural appearance.
6. Chain saw work: Operatives must hold a Certificate of Competence.
7. Tree work: To be carried out by an approved member of the Arboricultural Association.

820 Prevention of wound bleeding

1. Standard: To BS 3998.

825 Prevention of disease transmission

1. **Standard:** To BS 3998.

835 Cutting and pruning generally

1. **Tools:** Appropriate, well maintained and sharp.
2. **Final pruning cuts**
 - 2.1. **Chainsaws:** Do not use on branches of less than 50 mm diameter.
 - 2.2. **Hand saws:** Form a smooth cut surface.
 - 2.3. **Anvil type secateurs:** Do not use.
3. **Removing branches:** Do not damage or tear the stem.
4. **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.
5. **Cutting:** Cut at a fork or at the main stem to avoid stumps wherever possible.
6. **Large branches:**
 - 6.1. Remove in small sections and lower to ground with ropes and slings.
7. **Dead branches and stubs:** When removing, do not cut into live wood.
8. **Unsafe branches:** Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
9. **Disease or fungus:** Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 Crown reduction/ shaping

1. **General:** Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.

845 Crown lifting

1. **Clearances:** Remove branch systems to give clearance.
 - 1.1. **Height:** 2.5 m above footpaths
2. **Removing branches:** Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

865 Bark damage

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

Water areas - Not Used

Hard landscape areas/fencing

900 Snow clearance

1. **Clearance:** When instructed
2. **De-icing:** To roads, footpaths
 - 2.1. **Material:** Rock salt to BS 3247

- 2.2. **Timing:** When the road surface temperature falls to +1°C with forecast of freezing conditions and ice forming
When the road surface temperature falls to +1°C with forecast of freezing conditions and ice forming

910 Hard surfaces and gravel areas

1. **Hard surfaces:** Remove litter, leaves and other debris.
2. **Surface gutters and channels:** Remove mud, silt and debris.
3. **Drainage gullies:** Empty traps and flush clean.
4. **Gravel areas:** Rake over. Remove weeds, litter, leaves and debris, and level off.
5. **Repairs to flexible bituminous pavings:** In accordance with the original paving specification or BS 7370-2, clause 4.12.

920 Logic Manufactured Bespoke Timber integrated seating

1. Inspection & Cleaning

To maximise life expectancy, all products should be visually inspected on a regular basis for any signs of damage, vandalism, breakdown of surface finish, build-up of salt, dirt or atmospheric residue, and fixings are in place and tightened.

During these inspections, should any concerns be noted, then the Customer's attention is brought to the following pages whereby suitable maintenance and repair methods are described for the various materials used.

In the event of serious damage to any main component then LOGIC should be contacted immediately for detailed advice.

In addition to the visual inspection, a regular cleaning programme is also required.

The frequency of visual inspection and cleaning will be dependent on the environment in which the product is situated.

NB. This document is not designed to be exhaustive and extensive in the exacting requirements of every case. If you consider your cleaning or repair circumstances to be outside of the scope of this document, then please contact LOGIC and we will be happy to advise.

All cleaning and maintenance should be recorded, detailing the method of cleaning, what products have been used, and what repair work has been undertaken, if any.

LOGIC will require this information if any defects occur.

2. Powder Coating

This type of coating is applied electrostatically to the surface as a free-floating, dry powder before heat is used to seal the coating. The powder can be made of any number of products: polyester, polyurethane, polyester-epoxy, and acrylics. The final finish is a thick, hard wearing coating that is tougher than conventional paints. Typically, powder coat has an expected life span of 20 years depending upon the product design and geographic location.

Maintenance:

Visual inspection is required to ensure the protective coating has not been 'punctured' in any way. If this has happened, then the underlying steel will be exposed and will potentially oxidise unless there are other protective layers beneath. If the coating has been damaged, then this requires sealing straight away.

For light scratches / chips where the base material is exposed then a suitable primer should be carefully applied to the defect, followed by a topcoat finish of a matching paint or touch up.

For larger damages, the area may require 'filling' to bring it back up to the same level. A suitable epoxy car-body filler can be used and can easily be sanded back. This should then be followed by a topcoat finish of a matching paint or touch up.

Cleaning:

This finish can simply be cleaned with using a solution of warm water and non-abrasive, pH neutral detergent solution. You can use a soft cloth, sponge or a soft natural bristle brush. Make sure you thoroughly rinse the surfaces after cleaning to remove all residues.

At no time during the cleaning process is it advisable for any abrasive cleaners, solvents, or any other chemicals, to be used.

3. Stainless Steel

Stainless steel, as the name indicates, is stain-less meaning it has a high resistance to corrosion. This is due to the various alloys contained within the steel, one of which is Chromium which produces a thin layer of oxide on the surface of the steel. This prevents any further corrosion of the surface. There are various grades of Stainless which come from the differing alloy content; depending on the environment in which they are going, a suitable grade would be selected.

The steel is available in a variety of finishes; polished, brushed, matt, bead-blasted, and can also be powder coated if required. Typically, stainless steel has an expected life span of 40 years depending upon the stainless grade, product design and geographic location.

Maintenance:

Some grades of stainless steel will stain and discolour in certain conditions due to surface deposits and cannot be considered completely maintenance-free. In order to retain maximum corrosion resistance and aesthetic appeal, the surface of stainless steel must be kept clean. Provided the grade of stainless steel and the surface finish are correctly selected, and cleaning schedules carried out on a regular basis then good performance and long service life is assured.

Cleaning:

Cleaning of this finish can simply be carried out with using a solution of warm water and non-abrasive, detergent solution. Alternatively, a mild solution of white vinegar and water can be used. Use a soft cloth, sponge or a soft natural bristle brush. Make sure you thoroughly rinse the surfaces after cleaning to remove all residues and drying the steel will further enhance its appearance.

If the steel becomes extremely dirty due to long periods of neglect, or subject to an aggressive environment, mild abrasion may be required. Nylon scourers, or Stainless-Steel soap pads, can be used carefully. Ordinary steel scourers should not be used.

On brushed finishes, nylon abrasive blocks may be used to remove minor surface imperfections, ground in dirt and scratches. These blocks are flexible and are impregnated with grit. NB they must always be used in the same direction as the original polishing marks.

4. Timber

Douglas Fir – Class 3

Sometimes known as Oregon pine or Columbian pine and is a native species of North America. This timber can be successfully used in the outside environment and has a high strength / weight ratio and is subject to low shrinkage and good stability. Douglas Fir also scores particularly high regarding suitability / green credentials thanks to the speed & location of growth (UK).

Left in its natural state, Douglas Fir will turn silvery grey in time. This can be delayed / stopped by application of surface treatments. During the interim period, the surface of the timber may show signs of discolouration and/or surface mildew which is part of the natural weathering process. This is something that will have been covered in the design stage of the product and is mentioned in the Maintenance section below. Typically, Douglas Fir has an expected life span of 15 years depending upon the product design and geographic location.

Maintenance:

A visual check should be completed at least annually, whereby any splinters or sharp edges of the timber should be lightly sanded to remove them. Also, check for any unwanted surface build up and/or surface mold.

If the timber has had any surface treatment applied, then this should be inspected and re-applied as necessary. The frequency of this treatment will depend on location of the timber. Areas subject to severe environmental impact will require more frequent maintenance.

Cleaning:

Surface dust and debris can be removed with a soft brush, whereas more engrained dirt, guano, or surface mold will require greater agitation with a stiff brush. Care should be taken not to damage the surface of the timber.

925 Tobermore Concrete block paving

1. Product Maintenance

Routine cleaning and maintenance is required to keep the overall appearance of products in pristine condition.

All concrete products can develop algae, lichen, and moss growths due to environmental conditions and

may require cleaning. Areas adjacent to plant borders and trees may discolour from transfer of plant-life. Tobermore cannot accept responsibility for any of these conditions.

2. Light coloured paving Blocks
Light coloured paving blocks and flags emphasise tyre marks and oil spills on the driveway. Please note that these products will need more maintenance if overall appearance is to be maintained.
3. Initial Cleaning
When an area has just been paved, allow it to settle for a few days. After this, you may wish to lightly hose down the paving to remove any excess sand or dirt. The area should then be treated with a weed killer suppressant two – three times per year as required.
4. General Cleaning
Paving requires regular maintenance, including regular sweeping to prevent the build up of detritus. Tobermore recommends that paving is cleaned two – three times per year.
For general cleaning of dirt and algae, vigorous brushing with a stiff yard brush with plenty of hot detergent solution (washing up liquid or non-bio washing powder), thoroughly rinsed with clean water, should suffice. Repeated treatment may be required for paved areas sited beneath trees or in permanent/near permanent shade.
A light power hose at medium pressure is generally all that is required to clean general dirt and grime. Any jointing material which is removed must be replaced. Do not use high pressure powerwashers as aggressive power-washing can damage the product surface. A trial area should be tested before large scale powerwashing takes place. (Important: EasyClean products should not be pressure washed. Please refer to specific EasyClean information)
5. Moss, Lichen and Algae
Thick growths of moss or lichen must be removed first by scraping out the joints and then treating the area with a moss killer such as anti-moss paving cleaner. Anti-moss is designed to remove moss, lichens and algae. It is best applied in dry weather. After being applied it will take a few days to be fully effective. Once the moss and lichens have been killed, they can easily be brushed off. Anti-moss also leaves a residue in the sand joint which will help reduce the likelihood of re-growth. The manufacturer's instructions should always be followed when using any cleaning agent.
6. Weeds
Large weeds should be removed by hand and then the area treated with a weed killer (available from any good garden centre). Smaller weeds can then be treated directly with weed killer and these weeds should start to die within days. The manufacturer's instructions should always be followed when using any weed killing agent.
7. Block Paving Sealer
It is possible to seal block paving with a resin material which combats staining and weed growth and which also enhances colour and appearance. The acrylic sealer is sprayed onto the block paving and forms a 'skin' on top of the paving and the jointing material giving an easily maintained finish. The manufacturer's instructions should always be followed when using any sealing agent. (Important: Do not use sealers on EasyClean products)

930 Marshalls PLC Commercial cleaning for concrete block paving, natural stone and Pavé drain

1. Commercial Cleaning and Maintenance Manual [see attachment]
2. Cleaning and Maintenance Guidelines - Commercial Natural Stone [See attachment]
3. Pavé Drain Maintenance [See attachment]

Ω End of Section

Q38

Green walls

General - Not Used

Performance - Not Used

Products

305 W01 - Proposed Vegetated Retaining Wall

1. **Manufacturer:** Flex MSE [or similar approved]
 - 1.1. **Product reference:** Vegetated Retaining Wall
2. **Purpose:** to ramp area
3. **Note::** To Manufacturer's detail and specification

Execution

602 Climatic conditions

1. **Generally:** Prevent frost damage or drying-out of plants. Do not work with frozen materials.
2. **Adverse weather:** Secure unfinished work from damage and wind uplift.

604 Substrate preparation

1. **Preparation:** Clear wall surface of debris and existing coverings. Make good.
2. **Additional work required:** Give notice.

605 Installation generally

1. **Component assembly:** Carry out as much assembly as possible in the workshop prior to installation on site.
2. **Joints:** Secure rigidly, reinforce where necessary and fix with hairline abutments.
3. **Electrolytic corrosion:** Prevent. Submit proposed methods.
4. **Identification of products:** When marking or tagging products to facilitate identification during assembly, handling, storage and installation, do not mark surfaces visible in completed system.
5. **Contamination:** Do not use materials detrimental to healthy plant growth.
6. **Tolerances**
 - 6.1. **Width:**
 - 6.2. **Height:**
7. **In situ welding:**
8. **Temporary protective coverings:** Remove at completion.

610 Pre-installation survey

1. **Primary support structure (substrate):** Carry out a sufficiently detailed survey to verify that required accuracy of erection can be achieved.
2. **Survey results:** Submit. Confirm that the structure will allow the accuracy and security or erection required by specification. Give notice of all areas of structure that do not meet the requirements.
3. **Timing:** Before commencement of installation on site.

620 Installing waterproof membranes

1. **General requirements:** Visually inspect waterproof membrane prior to installation. Report any damage.
2. **Continuity:** No breaks in waterproof layer. Minimize joints.
3. **Sheet laps**
 - 3.1. **Overlap (minimum):** 150 mm.
 - 3.2. **Sealing:**
4. **Sheet repairs and punctures:** Seal with lapped patch of waterproof membrane and continuous band of sealant tape along edges.

655 Installing divided modular units

1. **Alignment:** Ensure correct alignment with support structure placement. Vertically and horizontally square.
2. **Fixing:**
3. **Joints**
 - 3.1. **Type:**
 - 3.2. **Gaps:**
4. **Irrigation system:** Install header pipe as work progresses.

Completion - Not Used

Ω End of Section

Q40

Fencing

Fencing systems - Not Used

Gates, posts and stiles

570 G01 - Proposed GRP Maintenance Gate

1. **Manufacturer:** Evergrip [or similar approved]
 - 1.1. **Product reference:** Gates to match adjoining fence type and height
2. **Locking Mechanism::** KABA Keys - Mechanical Locking System
3. **Accessories:** To BS 8300 / BS 9999 - Metrolink's specification.

571 G02 - Proposed Handrail Gate

1. **Manufacturer:** Evergrip [or similar approved]
 - 1.1. **Product reference:** Gates to match existing handrail type and height
2. **Locking Mechanism::** KABA Keys - Mechanical Locking System
3. **Accessories:** To BS 8300 / BS 9999 - Metrolink's specification.

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.

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.

760 Nailed wood rails

1. **Length (minimum):** Two bays, with joints in adjacent rails staggered.
2. **Fixing:** Nail each length of rail to each post with two 100 mm galvanized nails.

3. Rails with split ends: Replace.

770 Site cutting of wood

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

780 Making good galvanized surfaces

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.

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.

Ω End of Section

Q41

Barriers/ guardrails

Types of barriers/ guardrails - Not Used

Performance/ inspection/ testing - Not Used

Installation

405 Competence

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

420 Alignment

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

430 Erection generally

1. **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.
2. **Prevention of electrolytic corrosion:** Isolate dissimilar metals.
3. **Steel components:** Do not drill, cut or weld after galvanizing.

480 Concrete foundations for posts

1. **Excavations:** To have vertical sides. Dispose of all arisings. Blind excavation bottoms with a 50 mm layer of concrete.
2. **Concrete mix:** To BS 8500-2, Designated mix not less than GEN 4 or Standard mix not less than ST5. Do not use admixtures.
3. **Placing concrete:** Fill holes to the specified depth and fully compact. Do not backfill for at least four days.
4. **Temporary support to posts:** Provide for a at least four days after placing concrete.

510 Preparation for site painting

1. **Preparation and application:** As soon as possible after installation of barriers/ guardrails.

Completion - Not Used

Ω End of Section

Q50

Site/ street furniture/ equipment

Gates, barriers and parking controls

192 F03 - Proposed HVM Bollard To Union Square Access

1. Manufacturer: Marshalls [or similar approved]
 - 1.1. Product reference: Rhinoguard Geo 75 40 Protective Bollard
2. Material: Stainless Steel
3. Dimensions
 - 3.1. Height: 1100mm
 - 3.2. Length below ground: 600mm.
4. Accessories: include sleeve
5. OverallDiameter: 204 mm.
6. Method of fixing: To Manufacturer's detail and specification

Site and street furniture

220A F01 - Proposed Bench

1. Description: Steel and Timber Bench - no Armrest and no Backrest
2. Manufacturer: Marshalls [or similar approved]
 - 2.1. Product reference: Geo Bench
3. Features : At Union Square, to be provided without armrests and backrest
4. Length: 1800mm
5. Material: 316 Grade Stainless Steel and Iroko hardwood
 - 5.1. Finish: Standard
6. Method of fixing: Refer to Manufacturer's specification

220B F02 - Proposed Seat

1. Description: Steel and Timber Seat
2. Manufacturer: Marshalls [or similar approved]
 - 2.1. Product reference: Geo Seat
3. Length: 1800mm
4. Material: 316 Grade Stainless Steel and Iroko hardwood
 - 4.1. Finish: Standard
5. Method of fixing: Refer to Manufacturer's specification

250 S01 - Metrolink Flag Sign

1. Description: Standard Metrolink "Flag" Stop Sign
2. Manufacturer: TfGM / Metrolink approved signage manufacturer, or similar approved
3. Material: Aluminium panel with high-performance retro-reflective sheeting. Sign support post: brushed or satin-polished stainless steel, grade 316 for external use
 - 3.1. Finish: All exposed metalwork in satin-polished stainless steel or PPC finish in Metrolink standard colour, with contrasting background to ensure legibility and visual contrast for partially sighted users
4. Size: Final dimensions to Metrolink standard detail for stop name flag signs

5. **Method of fixing:** Post base fixed to platform structure to manufacturer's detail and specification, coordinated with Metrolink ITS

251 S02 - Cyclist Dismount Sign

1. **Description:** Standard "Cyclists Dismount" regulatory Sign
2. **Manufacturer:** TfGM / Metrolink approved signage manufacturer, or similar approved
3. **Features :** Mounted to existing lamp post on pedestrian / cycle approach to the Metrolink bridge stop, positioned to maintain minimum 2.3 m clearance above footway
4. **Material:** Sign face: Aluminium substrate with Class RA2 (or better) retro-reflective sheeting
5. **Method of fixing:** Fixing brackets and clips: Stainless steel to suit host lighting column diameter, designed to avoid drilling of column.

350 E01 - Proposed Nest Box - Closed fronted

1. **Manufacturer:** Schwegler [or similar approved]
 - 1.1. **Product reference:** Nest Box 1B
2. **Material:** Woodcrete
3. **Method of fixing:** Galvanised steel hanger and aluminium nail

351 E02 - Proposed Bat Box

1. **Manufacturer:** Schwegler [or similar approved]
 - 1.1. **Product reference:** Bat Box 2F universal
2. **Material:** Woodcrete
3. **Method of fixing:** Galvanised steel hanger and aluminium nail

352 E03 - Proposed Bug Hotel

1. **Manufacturer:** NHBS [or similar approved]
 - 1.1. **Product reference:** Bug Hotel
2. **Material:** FSC Certified Exterior Grade Plywood
3. **Method of fixing:** 2 mounting holes in top of back panel

353 E04 - Proposed Deadwood Log Piles

1. **Material:** Using felled trees on site

Installation

510 Concrete foundations generally

1. **Standard:** To BS 8500-2.
2. **Concrete:** Refer to engineers spec
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:** To suit furniture requirement
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.
5. **Temporary component support:** Maintain undisturbed for minimum 48 hours.

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 zinc-rich 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.

Ω End of Section

