

MARIA FIDELIS OLD SCHOOL LANDSCAPE SPECIFICATION

Document No. 1CP01-MDS_LDE-LS-SPE-SS08_SL23_GF-000001

Work Package No. GWMW 0900S01

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STAKEHOLDER REVIEW REQUIRED (SRR)

- ☐ COUNTY/DISTRICT/LONDON BOROUGH COUNCIL
- ☐ LOV
- ☐ LUL
- ☐ NRL
- ☐ TFL
- ☐ UTILITIES COMPANY
- ☐ OTHER

PURPOSE OF SRR

- ☐ ACCEPTANCE
- ☐ APPROVAL
- ☐ NO OBJECTION
- ☐ CONSENT

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1 Buildings in the landscape

Products

S2: Security Kiosk - Option 1

1. **Description:** Main Entrance Area
2. **Manufacturer:** **Prestige kiosks**
Web: <http://prestigekiosks.com/>
Contact: Alberto Palmerio
Email: alberto.palmerio@prestigekiosks.com
Phone: 01179512040 (D), 07788293923 (M)
3. **Product reference:** Heritage
4. **Size:** 2.3 (W) x 2.6 (D)m
5. **Accessories/ Special requirements:** Locking access door (including the button release system for the security gate for deliveries), Shelving. Desk, Power points
6. **Method of fixing to ground or base:** The supplier should submit the fabrication drawing, and approval is required from the project engineer.

S2: Security Kiosk - Option 2

1. **Description:** Main Entrance Area
2. **Manufacturer:** **Capital Kiosk**
Web: <https://www.capitalkiosk.co.uk/>
Contact: Scott Hartopp
Email: scott.hartopp@capitalkiosk.co.uk
Phone: 024 76471666, 07815 119625 (M)
3. **Product reference:** Heritage Style
4. **Size:** 2.78 (W) x 2.785 (D)m
5. **Accessories/ Special requirements:** Locking access door (including the button release system for the security gate for deliveries), Shelving. Desk, Power points
6. **Method of fixing to ground or base:** The supplier should submit the fabrication drawing, and approval is required from the project engineer.

S2: Security Kiosk - Option 3

1. **Description:** Main Entrance Area
2. **Manufacturer:** **Cleveland Sitesafe**
Web: <https://cleveland-sitesafe.co.uk/>
Contact: Natasha Dunnakey
Email: scott.hartopp@capitalkiosk.co.uk
Phone: 01642 244663
3. **Product reference:** Bespoke Heritage Style
4. **Size:** 2.6 (W) x 2.3 (D)m
5. **Accessories/ Special requirements:** Locking access door (including the button release system for the security gate for deliveries), Shelving. Desk, Power points

6. **Method of fixing to ground or base:** The supplier should submit the fabrication drawing, and approval is required from the project engineer.

* S2: The subcontractor is responsible for contacting the suppliers mentioned above to coordinate the kiosk design and cost. The final design and choice of suppliers must be approved by the client before implementation.

S1: Bin Storage

1. **Description:** Indicate the location in General Arrangement Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, and provide details in 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000008.
2. **Manufacturer:** Lang and Fulton
Web: www.langandfulton.co.uk
Email: sales@langandfulton.co.uk
Tel: 0131 441 1255
3. **Product reference:** Wheelie Bin Stores (The Europa Bin Store)
4. **Size:** 3.61(W) x 5.6(D) x 2.5(H)m with roof
5. **Accessibility:** Single door from TEP side and double door from the Main entrance side
6. **Accessories/ Special requirements:** Lock and key access doors
7. **Method of fixing to ground or base:** Base plates bolted to concrete bases

Execution/ erection/ installation

Foundations generally

1. **Concrete Foundations / Base:** Foundation specifications to be approved by the project engineer based on supplier recommendations.
2. **Erection / Installation:** Refer to supplier specifications and fabrication drawings.
3. **Submission:** The final design to be submitted to the project's landscape consultant and structural engineer for approval.

Electrical and data services

1. **Services connection required:** to be fully coordinated and specified by the project M&E engineers (SVM).

Erection of prefabricated buildings/ structures

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

Completion

Documentation

1. [Contents](#)
 - 1.1. General product information.
 - 1.2. Installation information.
 - 1.3. Inspection and maintenance reports.
2. [Number of copies](#): 3
3. [Submission](#): Submit proposals.

2 Brick/ block walling

Types of walling

Clay common brickwork

1. **Description:** W1: Fire Wall around UKPN Substation, for the location to GA plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, Detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000014
2. **Bricks:** To BS EN 771-1.
 - 2.1. **Manufacturer:** Imperial Bricks
Web: <https://www.imperialbricks.co.uk/>
Email: sales@imperialbricks.co.uk
Tel: 01746 330994
 - 2.1.1. **Product reference:** Original London Stock
 - 2.2. **Size:** 215 x 102.5 x 65 mm.
 - 2.3. **Mean compressive strength (minimum):** 15.7N/mm²
 - 2.4. **Durability designation:** F2 S2
 - 2.5. **Water absorption:** Mean – 21%
 - 2.6. **Configuration:** *Frogged*
3. **Mortar:**
 - 3.1. **Standard:** To BS EN 998-2
 - 3.2. **Mix:** 1:1:6 cement : lime : sand
4. **Bond:** English
5. **Base Stone:** As 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000014 for the detail.
6. **Apex Coping Stone:** As 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000014 for the detail.

Testing

Fresh mortar cement content

1. **Test method:** BREMORTEST in accordance with Building Research Establishment Information Paper 8/89
2. Test specimens: Test mortar for the firewall.
3. **Results:** Submit.

Workmanship generally

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.

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 perpend:** 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.

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.

Height of lifts in walling using cement-gauged or hydraulic lime mortar

1. **Quoins and advance work:** Rack back.
2. **Lift height (maximum):** 1.2 m above any other part of work at any time.
3. **Daily lift height (maximum):** 1.5 m for any one leaf.

Height of lifts in walling using thin-layer mortar

1. **Quoins and advance work:** Rack back.
2. **Lift height (maximum):** 1.3 m above any other part of work at any time.

Levelling of separate leaves

1. **Locations for equal levelling of cavity wall leaves:** As follows:
 - 1.1. Every course containing vertical twist type ties or other rigid ties.
 - 1.2. Every third tie course for double triangle/ butterfly ties.
 - 1.3. Courses in which lintels are to be bedded.

Coursing brickwork

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

Laying frogged bricks

1. **Single frogged bricks:** Frog uppermost.
2. **Double frogged bricks:** Larger frog uppermost.

3. **Frog cavity:** Fill with mortar.

Brickwork to receive asphalt dpc

1. **Substrate:** Mortar bed finished flush, smooth and level.

Jointing

1. **Profile:** Consistent in appearance.

Pointing

1. **Joint preparation:** Remove debris. Dampen surface.
2. **Mortar:**
 - 2.1. **Standard:** To BS EN 998-2
 - 2.2. **Mix:** 1:1:6 cement : lime : sand
3. **Profile:** Bucket handle Bucket handle

Fire-stopping

1. **Avoidance of fire and smoke penetration:** Fit tightly between cavity barriers and masonry. Leave no gaps.

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

Brick/ Concrete block samples

1. **General:** Before placing orders with suppliers submit for approval of appearance labelled samples.
2. **Selection of samples:** Representative of the range in variation of appearance.

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.

Ground level

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

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.

3 **Kerbs/ edgings/ channels/ paving accessories**

Types of kerbs/edgings and channels

E2: Metal Edge

1. **Description:** Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003 and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001
2. **Manufacturer:** Kinley
Email: sales@kinley.co.uk
Tel: +44 (0)1580 830688
3. **Product reference:** Excel Edge Fort
4. **Size:** 150mm high
5. **Type/ Material:** Galvanised flexible mild steel
6. **Finish:** Standard
7. **Joints:** Refer to manufacturer's recommendation

E3, E4 &E5: Natural Stone Kerbs

1. **Description:** Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003 and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001
2. **Standard:** To BS EN 1343.
3. **Supplier:** Hardscape
Web: <https://hardscape.co.uk/>
Email: dlowe@hardscape.co.uk
Contact: Dave Lowe
4. **Types:** Rectangular with radiused exposed edges
 - 4.1. **Tolerances on batter:** Class 2
5. **Stone type:** Granite - National Basalt by Hardscape or similar approved
6. **Size:** 145x250x900mm (upstand), 145x140x900mm (flush), 145x145/250x900mm (drop)
 - 6.1. **Tolerances on overall width and height (nominal):** Class 2
7. **Freeze/ Thaw resistance:** Resistant
8. **Finish:** Flamed
9. **Arrises:** Chamfer (5mm)
10. **Bedding:** As drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001
11. **Joints generally:** Narrow mortar
12. **Sealant movement joints:** At 15 m (maximum) centres

D1: Linear slot drainage channel systems

1. **Description:** Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003 and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001
2. **Manufacturer:** ACO Drainage
Contact: Davey, Aidan
Email: ADavey@aco.co.uk

Tel: 01462 810 400

Web: www.aco.co.uk

2.1. **Product reference:** AS1010 channel Brickslot Drainage Channel

3. **Bedding:** Refer to Engineer's specification

Roads/paving accessories/ marking/ demarcation

E1: Paving Edge - Border

1. **Description:** Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003 and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001
2. **Product reference:** Recycled natural stones which find on site
3. **Size: Varies:**
240 x 160 x 85 mm
290 x 165 x 82 mm
150 x 145 x 85 mm
270 x 142 x 85 mm
225 x 135 x 83 mm
4. **Material:** Granite
5. **Colour:** Grey
6. **Method of fixing:** As detail drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000001

Laying

Laying kerbs, edgings, and channels

1. **Cutting:** Neat, accurate and without spalling. Form neat junctions.
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.

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.

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.

Cement mortar bedding

1. Refer to Engineer's specification

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.
4. Drainage detail and specification refer to Engineer's specification.

Angle kerbs

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

Accuracy

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

Regularity of paved surfaces

1. **Maximum undulation of (non-tactile) paving surface:** 3 mm.
 - a. **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)**
 - a. **Joints flush with the surface:** Twice the joint width (with 5 mm max difference in level).
 - b. **Recessed, filled joints:** 2 mm.
 - i. **Recess depth (maximum):** 5 mm.
 - c. **Unfilled joints:** 2 mm.
3. **Sudden irregularities:** Not permitted.

Narrow mortar joints

1. **Jointing:** Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled, tightly butted and surplus mortar removed immediately.
 - a. **Joint width:** 3 mm.

Ω End of Section

4 Asphalt roads/ pavings

Types of paving

P6: Asphalt paving

1. **Description:** North side of the building, Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000003
2. **Standard:** In line with the adjacent recently constructed asphalt surface.
3. **Subgrade improvement layer:** To engineer's specification
4. **Granular sub-base:** To engineer's specification
5. **Binder course:** To engineer's specification
6. **Surface course:** In line with the adjacent recently constructed asphalt surface.
 - a. **Compacted thickness:** In line with the adjacent recently constructed asphalt surface.
7. **Surface treatment:** In line with the adjacent recently constructed asphalt surface.
8. **Other requirements:** In line with the adjacent recently constructed asphalt surface.

Applied slip resistant

1. **Description:** Anti-slip adhesive sheet or similar
2. **Manufacturer:** Contractor's choice
 - a. **Product reference:** Contractor's choice
3. **Size/ Coverage:** Entire Asphalt surfaced area

Preparatory work/ requirements

Bituminous materials generally

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

Samples

1. **Submit:** Representative samples of coated chippings

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

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**
 - a. Keep traffic free until it has cooled to prevailing atmospheric temperature.
 - b. Do not allow rollers to stand at any time.
 - c. Prevent damage.
 - d. **Lines and levels:** With regular falls to prevent ponding.
 - e. **Overall texture:** Smooth, even and free from dragging, tearing or segregation.
 - f. **State on completion:** Clean.

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.

Levels

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

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:
 - 1.1. **Base:** Machine laid, 25 mm
 - 1.2. **Binder course:** Machine laid, 13 mm
 - 1.3. **Surface course:** Machine laid, 7 mm
 - 1.4. Where a straightedge cannot be used the surface must be of a comparable standard of accuracy when judged by eye.

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

Documentation

1. **Standard:** BS EN 13108-4
 - 1.1. **Declaration of conformity:** Submit.
2. **Number of copies:** 3
3. **Submission:** Two weeks after request

5 Gravel/ resin bound roads/ pavings/ overlays

Types of surfacing

P2: Resin bound gravel

1. **Description:** TEP Garden and Main Landscape Area, Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000003
2. **Subgrade improvement layer:** Refer to Engineer's specification.
3. **Granular sub-base:** Refer to Engineer's specification
4. **Surface course:** Angular gravel, free from clay, with sufficient grit to enable compaction.
 - 4.1. **Manufacture:** SureSet Resin Systems
 - 4.2. **Product:** Natural Aggregate
 - 4.3. **Colour:** Butterscotch
 - 4.4. **Size:** 6mm
 - 4.5. **Compacted thickness:** 18mm
5. **Completion:** Compact to produce a firm, regular surface, stable in use.

P3: Self Binding Gravel

1. **Description:** Main Landscape Area, Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000003
2. **Subgrade improvement layer:** Refer to Engineers Specification
3. **Geotextile:** Refer to Engineer's specification
 - 3.1. **Manufacturer:** [Stoneworld Oxfordshire Ltd](#)
 - 3.1.1. **Contact details**
 - 3.1.1.1. **Address:** Views Farm
Windmill Hill
Great Milton
Oxfordshire
OX44 7NW
 - 3.1.1.2. **Telephone:** [+44 \(0\)1844 279274](tel:+44(0)1844279274)
 - 3.1.1.3. **Web:** <https://www.stoneworld.co.uk/>
 - 3.1.1.4. **Email:** sales@stoneworld.co.uk
 - 3.1.2. **Product reference:** **Cotswold Shale**
4. **Granular sub-base:** Engineer's specification
5. **Gravel:** Loose laid and raked to uniform thickness.
 - 5.1. **Colour:** Buff
 - 5.2. **Size:** 20mm
 - 5.3. **Thickness:** 50 mm

Laying

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.

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.

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.

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 manufacturer's recommended thickness layers. As soon as possible, compact each layer.
3. **Dry weather:** Lightly water layers during compaction.

Protection from traffic and plant

1. **Paved areas:** Restrict access to prevent damage.

Completion

Slip resistance testing

1. **Surfaces to be tested:** resign bound gravel area
 - 1.1. **Surface condition:** Dry and wet
2. **Timing:** As agreed with contract administrator
3. **Period of notice (minimum):** 3 working days.
4. **Test standard:** To BS 7976
 - 4.1. **Testing authority:** An approved laboratory

- 4.2. Witnessing/ Certification: Arrange for tests to be witnessed/ certified by: Contract administrator.
- 4.3. **Report:** Submit.
- 4.4. **Format:** As required under BS 7976

6 Slab/ brick/ sett/ cobble pavings

General

P1: Natural stone block paving

1. **Description:** Main Entrance Area, Location to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000003
2. **Bond type:** Staggered
3. **Manufacturer:** Hardscape
Web: <https://hardscape.co.uk/>
Contact: Dave Lowe
Email: dlowe@hardscape.co.uk
Tel: 07734 103614
 - 3.1. **Product:** PRETA ODILVELAS
 - 3.2. **Style:** Flamed
 - 3.3. **Size:** 100x300x80mm
 - 3.4. **Colour:** Grey
 - 3.5. **Laid:** 2-5mm.
4. **Bedding and jointing:** Refer to Engineer's detail and specification
5. **Movement joints:** Refer to Engineer's detail and specification

P4: Tactile flag paving

1. **Description:** External Steps Areas, location to GA drawing 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, Detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000003.
2. **Standard:** To DD CEN/TS 15209.
3. **Material:** Natural stone
4. **Manufacturer:** Hardscape
Web: <https://hardscape.co.uk/>
Contact: Dave Lowe
Email: dlowe@hardscape.co.uk
Tel: 07734 103614
 - 4.1 **Product:** PRETA ODILVELAS
 - 4.2 **Nominal sizes:** 400x400x50 mm
 - 4.3 **Colour:** Grey
5. **Type of surface:** Corduroy

Ready-mixed mortar

1. **Description:** Main Entrance Area
2. **Type:** Epoxy mortar
3. **Standard/ Performance requirements:** In accordance with BS 7533-4
4. **Manufacturer:** Submit proposals

- 4.1. **Product reference:** Submit proposals
- 5. **Consistency:** Workable

Sealant for movement joints

- 1. **Description:** TO BLOCK PAVING
- 2. **Sealant**
 - 2.1. **Type:** High performance trafficable joint
 - 2.2. **Manufacturer:** Submit proposals
 - 2.2.1. **Product reference:** Submit proposals
 - 2.3. **Colour:** To match with mortar joint

Execution

Material samples

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

Control samples

- 1. **Sample areas:** Complete as part of the finished work.
 - 1.1. **Types of paving:** Concrete block paving
 - 1.2. **Size (minimum):** 1.5 x 1.5 m
 - 1.3. **Included features:** Edging
- 2. **Approval of appearance and surface:** Obtain before proceeding.

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 coarse 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.

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.

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.

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.

Colour banding

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

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:
 - 4.1. **Pedestrian traffic (minimum):** 4 days
 - 4.2. **Vehicular traffic (minimum):** 10 days
5. **Access:** Restrict access to paved areas to prevent damage from site traffic and plant.

Cementitious bases and sub-bases

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

Condition of sub-bases/ bases before spreading laying course

1. **Trenches and excavation of soft or loose spots in subgrade:** Fill and thoroughly compact.
2. **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 7533-7, 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.

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:**
4. **Laying and jointing:**
5. **Joint width (nominal):**

Laying rigid brick paving

1. **Standard generally:** In accordance with Brick Development Association Design Note 8.
2. **Bedding and jointing method:** Simultaneous bedding and jointing with stiff plastic mortar.
3. **Cement slurry:** Apply thin slurry (1-3 mm) of neat cement or 1:1 cement: soft sand over the freshly laid mortar bed immediately prior to laying bricks.

4. **Laying:** Wet bricks as necessary (but do not soak), butter joint faces and press down firmly to give a level surface with 10 mm regular joints.

Tooled joints in mortar-bedded units

1. **Joints:** Completely filled with bedding mortar as work proceeds.
 - 1.1. **Joint width:** 2-5mm
 - 1.2. **Finish:** Neat flush profile.

Cleaning existing blocks and setts

1. **Area:** Porous concrete block paving area as NHHB-LDA-ZB-00-D-L-0320
2. **Application**
 - 2.1. **Method:** To cleaning solution manufacturer's recommendations
 - 2.2. **Dosage:** As cleaning solution manufacturer's recommendations
3. **Sand/ fine aggregate jointed paving:** Do not displace jointing sand/ fine aggregate during cleaning process.

Completion

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, sweep clean before practical completion
2. **Final compaction of the surface course:** In accordance with BS 7533-3.
3. **Vacuum cleaning machines:** Not allowed.

Slip resistance testing

1. **Surfaces to be tested:** All concrete block paving areas
 - 1.1. **Surface condition:** Dry and wet
2. **Timing:** As agreed with contract administrator
3. **Period of notice (minimum):** 3 working days.
4. **Test standard:** To BS 1134
 - 4.1. **Testing authority:** An approved laboratory
 - 4.2. **Witnessing/ Certification:** Arrange for tests to be witnessed/ certified by: Contract administrator.
 - 4.3. **Report:** Submit.
 - 4.3.1. **Format:** As required under BS 1134

7 Topsoil and soil ameliorants

System outline

Soil system for grass swards

1. **Description:** FOR ALL GRASSED AREAS
2. **Composition**
 - 2.1. **Soil:** Imported topsoil to BS 3882

Soil system for wildflower swards

1. **Description:** FOR WILDFLOWER MEADOW
2. **Composition**
 - 2.1. **Soil:** Imported low fertility soil such as Meadowmat Low Fertility Soil by Turfonline or similar.

Planting bed soil system

1. **Description:** FOR EXTERNAL PLANTING
2. **Composition**
 - 2.1. **Topsoil:** Imported topsoil to BS 3882

Mulching and top dressing system

1. **Description:** FOR EXTERNAL TREE AND PLANTING BED
2. **Composition**
 - 2.1. **Material:** Bark mulch

Products

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.

Materials not permitted

1. **Materials:** Peat

Execution

Importing topsoil

1. **Give notice:** Before stripping topsoil for transfer to site.
 - 1.1. **Notice period:** 14 days

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:** 7 days

Documentation for imported topsoil

1. **Description:** All imported topsoil
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:** Two

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

Mechanical tools

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

Inspecting formations

1. Give notice: Before spreading topsoil.
2. **Notice period:** 14 days

Preparation of undisturbed topsoil

1. **Standard:** In accordance with BS 4428.
 - 1.1. **Grading and cultivation:** Category C
2. **Hard ground:** Break up thoroughly. Break up thoroughly. Break up thoroughly.
3. **Clearing:** Remove visible roots and large stones with a diameter greater than 50 mm.
4. **Areas covered with turf or thick sward:** Plough or dig over to full depth of topsoil.
5. **Fallow period (minimum):** One month
 - 5.1. **Weed control:** At appropriate times treat with a suitable translocated nonresidual herbicide.

Surplus materials to be removed

1. **Topsoil removal from site:** Not required
2. **Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings:** Remove.

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. Not permitted.
3. **Give notice:** If required levels cannot be achieved by movement of existing soil.

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.

Spreading topsoil on:

1. **Description:** GRASSED AREAS AND WILDFLOWER 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:** 150 mm
6. **Crumb structure:** Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

Spreading topsoil on:

1. **Description:** ALL PLANTING BEDS
2. **Standard:** In accordance with BS 3882.
3. **Temporary roads/ surfacing:** Remove before spreading topsoil.
4. **Layers**
 - 4.1. **Depth (maximum):** 300 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.

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.

Final cultivation

1. **Description:** FOR GRASS SEEDING
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:** 150 mm
5. **Particle size (maximum):** 5 mm
6. **Timing:** before seeding Within a few days before planting
7. **Weather and ground conditions:** Suitably dry.

8. **Surface:** Leave regular and even.
9. **Levels:** 50 mm above adjoining lawns
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.

Finished levels of topsoil after settlement

1. **In relation to adjoining paving, kerbs, or hard surfaces:** 25 mm below
2. In relation to dpc of adjoining buildings: Not less than 150 mm below and 25mm above adjacent paving, kerbs, or grass areas.
3. **In relation to adjacent grass areas:** 25 mm above
4. **Seeded areas:** Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
5. **Within root spread of existing trees and shrubs to be retained:** Do not dig or cultivate.
6. **Adjoining soil areas:** Marry in.
7. **Thickness of turf or mulch:** Included.

Applying loose mulch

1. **Description:** FOR TREE PITS AND FOR PLANTING BEDS
2. **Timing:** Immediately after planting
3. **Preparation:** Clear all weeds, Ensure that soil is thoroughly moistened, applying water where necessary
4. **Coverage of mulch (minimum)**
 - 4.1. **Planting beds (depth):** 50 mm depth
 - 4.2. **Trees:** In a circular area of 500 mm radius measured from the tree stem, 50 mm depth
 - 4.3. **Container planting:** 50 mm depth
5. **Finished level of mulch:** 50 mm below adjacent grassed or paved areas

8 Seeding/turfing

General information/requirements

Seeded 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.

Climatic conditions

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

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.

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.

Notice

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

Setting out

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

Preparation

Herbicide

1. **Description:** For all grassed areas
2. **Type:** Suitable for suppressing perennial weeds.
3. **Timing:** Allow fallow period before cultivation.
 - 3.1. **Duration:** As manufacturer's recommendation

Seed bed cleaning before sowing

1. **Description:** all grassed areas
2. **Operations:** Clear all vegetation and apply herbicide as seed supplier's recommendations.
Create weed free seed bed.

Cultivation

1. Final cultivations to all seeded areas before sowing seeds.

Seeding

Grass seed

1. **Description:** for amenity grass areas
2. **Mixture:** Barenbrug E4 - Fine Turf
3. **Application rate:** 30 g/m²

Wildflower seed mixture

1. **Description:** for Wildflower meadows.
2. **Supplier:** Emorsgate Seeds
Web: <https://wildseed.co.uk/>
Tel: 01553 829028
Email: enquiries@emorsgateseeds.com
 - 2.1. **Mixture reference:** Flowering Lawn Mixture EL1
3. **Application rate:** 4g/m²

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.

Quality of seed

1. **Description:** For wildflower meadows
2. **Freshness:** Produced for the current growing season.
3. **Certification:** Blue label certified varieties.
 - 3.1. **Standard:** EC purity and germination regulations and Department for Environment, Food and Rural Affairs Higher Voluntary Standard.
 - 3.2. **Official Seed Testing Station certificate of germination, purity and composition:** Submit when requested.
4. **Samples of mixtures:** Submit when requested.

Sowing

1. **General:** Establish good seed contact with the root zone.
2. **Method:** Manually broadcast, raked and rolled
 - 2.1. **Distribution:** 2 equal sowings at right angles to each other

Grass sowing season

1. **Grass seed generally:** April to June or August to October

Wildflower sowing season

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

Pre-emergent herbicide

1. **Description:** For all grassed areas
2. **Standard:** Pesticide Safety Directorate approved.
3. **Application rate:** In accordance with manufacturer's written recommendation.
 - 3.1. **Timing:** Immediately after sowing.

Edges to seeded areas

1. **Description:** Adjacent to planting beds and tree pits
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.

Protecting/cutting

Protective fencing

1. **Fencing type:** contractor's choice
 - 1.1. **Height:** 1.1m
2. **Erection:** On completion of seeding/ turfing.
3. **Removal:** After grass is well established. Fencing will remain the property of the Contractor

First cut of Grassed Areas

1. **Timing:** When grass is reasonably dry.
 - 1.1. **Height of initial growth:** 50 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:** 25 mm
4. **Mower type:** Contractor's choice
5. **Arisings:** Remove from site

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

Failures of seeding

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

Maintaining

1. **Description:** General 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:** 35 mm
4. **Preparation:** Before each cut remove all litter and debris.

5. Cutting: As and when necessary to a height of 75 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.
 - 8.1. **Method:** Application of a suitable selective herbicide.
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:** When instructed

9 External planting

General information/ requirements

Site clearance generally

1. **General:** Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. **Stones:** Remove those with any dimension exceeding 100 mm.
3. **Contamination:** Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. **Vegetation:** Clear vegetation in areas shown on drawings and as otherwise required to implement the works using suitable non residual herbicide
5. **Large roots:** Grub up and dispose of without undue disturbance of soil and adjacent areas.

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.

Climatic conditions

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

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.

Mechanical tools

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

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.

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.

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:** Two weeks

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.

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.

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: Country of origin.

Plants/ Trees reserved at supplier's premises

1. **Types/ Species:** As plant schedule
2. **Predelivery inspection:** Give notice.
3. **Labelling:** Identify inspected plants/ trees as reserved for use on this project.

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.

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. **Plant packaging:** Coextruded polyethylene bags with black interior and white exterior
5. **Packaging of bulk quantities:** Pallets or bins sealed with polyethylene and shrink wrapped
6. **Planting:** Upright or well balanced with best side to front.

Permanent identification of plants

1. **Location:** All trees
2. **Labels:** Black plastics 75 mm x 100 mm with white weatherproof lettering attached to tree trunks at 1.5 m from ground level
3. **Wording:** Genus, species, variety and common name

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.

Protection of existing grass

1. **General:** Protect areas affected by planting operations using boards/ tarpaulins.
 - 1.1. **Excavated or imported material:** Do not place directly on grass.
 - 1.2. **Duration:** Minimum period.

Surplus material

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

Preparation of planting beds/ planting materials

Herbicide

1. **Description:** To clear overgrown beds
2. **Locations:** Shrub and herbaceous planting area
3. **Type:** Suitable for suppressing perennial weeds.
4. **Timing:** Allow fallow period before cultivation.
 - 4.1. **Duration (minimum):** As manufacturer's recommendation

Weed control

1. **Description:** for invasive non-native weeds
2. **Locations:** All planting areas
3. **General:** Prevent weeds from seeding and perennial weeds from becoming established, by contractor's choice of herbicide.

Planting shrubs/ herbaceous plants/ bulbs

Regular plant layout

1. **Description:** To Herbaceous Planting, Shade Tolerant Planting and Rain Garden
2. **Spacing:** In regular, Plant in groups of 5-8.
3. **Density:** As plant schedule

Planting bulbs/ Corms/ Tubers

1. **Depth:** Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
2. **Backfilling:** Finely broken soil. Lightly firm to existing ground level.
3. **Naturalized planting in existing grassed areas**
 - 3.1. **Scattering:** Random. Plant bulbs/ corms/ tubers where they fall.
4. **Planting:** Neatly remove a plug of turf and replace after planting. Bulb plantings occur only perennial planting area.

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:** Forest Stewardship Council (FSC) certified sustainable sources, BS EN ISO 9001:2015 and BS EN ISO 14001:2015 certified bark mulch for landscaping
 - 3.1. **Depth:** 50 mm

Planting trees

Tree pits

1. **Sizes:** As tree pit detail drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000009.
2. **Sloping ground:** Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
3. **Pit bottoms:** With slightly raised centre. Break up to a depth of: 200 mm
 - 3.1. **Treatment:** Soil ameliorant worked into pit bottoms
4. **Pit sides:** Scarify.
5. **Backfilling material:** Plant pit backfilling soil system.
6. **Accessories:** Perforated plastics irrigation/ ventilation pipe, Watering bag and timber stakes as drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000009.

Tree pit root barriers

1. **Locations:** within 3m of services or as required.
2. **Manufacturer:** GreenBlue Urban
Email: enquiries@greenblue.com
Tel: 01580 830 800
 - 2.1. **Product reference:** ReRoot 1000
3. **Depth of top of root barrier below finished soil level:** 50mm below ground.
4. **Installation:** With sides vertical.

Tree pit irrigation and ventilation accessories A

1. **Locations:** All tree pits
2. **Manufacturer:** greentech
Web: <https://www.green-tech.co.uk/>
email: sales@green-tech.co.uk
Tel: 01423 369727
 - 2.1. **Product reference:** Treegator Watering Bag
3. **Type:** Slow release watering bag

Tree pit irrigation and ventilation accessories B

1. **Locations:** All tree pits
2. **Manufacturer:** Green Blue Urban,
Northpoint Compass Park Junction Road Bodiam TN32 5BS
tel: 0800 018 7797
email: enquiries@greenblueurban.com
 - 2.1. **Product reference:** RootRain Urban
3. **Product reference:** RootRain Urban
4. **Type:** Perforated plastics irrigation pipe, 60 mm diameter, in circle above and around sides of rootball, with plastics cap

Tree pit drainage

1. **Locations:** For tree pit
2. Aggregate drainage layer.
3. **Aggregate layer:** Clean gravel or broken stone, with no fines, graded 40 to 20 mm.
 - 3.1. **Depth:** 200 mm
4. **Drainage pipes:** not required.
5. **Geotextile filter:** not required.

Short double staking for

1. **Description:** ALL TREES
2. **Staking:** Drive stakes vertically at least 300 mm into bottom of pit on either side of tree position before planting.
 - 2.1. **Backfilling:** Consolidate material around stakes.
3. **Height of stakes:** Cut to approximately 600 mm above ground level.
4. **Cross bar:** 900X75X38mm Timber crossing bar
 - 4.1. Firmly fix on windward side of tree and as close as possible to stem.
5. **Ties:** Rubber ties
6. **Tying:** Secure tree firmly but not rigidly to cross bar.

Hedges / Herbaceous Planting Mix / Shade Tolerant Planting Mix / Rain Garden /

Existing vegetation/ Weed clearance

1. **Surface vegetation clearance:** Screef an area one metre diameter around each planting location
2. **Arisings:** Remove.

Existing vegetation/ weed clearance

1. **Surface vegetation clearance:** Clear all existing vegetation and screef an area one metre diameter around each planting location
2. **Arisings:** Remove.

Existing trees/ seedlings/ coppice shoots

1. **Existing trees and seedlings:** Retain otherwise stated.
2. **Coppice shoots:** Thin to 3-5 stems per stool, removing all damaged, dead or diseased shoots

Removing trees and hedges

1. **Identification:** Clearly mark trees and hedges to be removed.
2. **Work near retained trees:** Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
3. **Arisings:** Remove.
4. **Tree stumps:** Cut as close to ground as possible and kill with ammonium sulfamate immediately after felling

Cultivation

1. **General:** Plough to full depth of topsoil
2. **Consolidation:** Leave for one month

3. **Soil within root spread of trees to be retained:** Do not plough or cultivate.

Notch planting in uncultivated ground

1. **Notching:** Make a vertical 'I', 'L', 'T' or 'H' notch.
 - 1.1. **Depth:** To accommodate full depth of roots.
2. **Planting:** Plant tree, close notch with root collar at ground level and firm the soil.

Setting out

1. **Planting density:** As plant schedule
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

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 maintenance schedule

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:** In accordance with an agreed defects rectification programme

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.

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 use of suitable herbicides

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. **Staking:** Check condition of stakes, ties, guys and guards.
 - 4.1. **Broken or missing items:** Replace.
 - 4.2. **Rubbing:** Prevent.
 - 4.3. **Ties:** Adjust to accommodate growth.
 - 4.4. **Damage to bark:** Cut back neatly with sharp knife. Prevent further damage.
 - 4.5. **Frequency of checks:** in accordance with an agreed schedule
5. **Firming up:** Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
6. **Trees:** Spray crown when in leaf during warm weather.
 - 6.1. **Timing:** After dusk.
7. **Watering:** When instructed

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:** In accordance with the agreed maintenance schedule
 - 1.3. **Trees:** Favour a single central leading shoot.
2. **Arisings:** Remove.

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.

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):** 50 mm
5. **Trees:** Remulch.
6. **Depth (minimum):** 50 mm

10 Landscape maintenance

Generally

Maintenance objectives

1. **Location:** External Space General
 - 1.1. **Duration:** Two years
2. **Aims:** Enhanced landscape quality
3. **Restrictions:** As described in the landscape maintenance manual
4. **Results:** As scheduled

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

Reinstatement

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

Watering

1. **Supply:** 1 water post within TEP garden and 2 water posts within the main landscape area
2. **Quantity:** Wet to field capacity
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.

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.

Disposal of arisings

1. **General:** Unless specified otherwise, dispose of arisings as follows:
 - 1.1. **Biodegradable arisings:** Remove to recycling facility
 - 1.2. **Grass cuttings:** Remove to recycling facility
 - 1.3. **Tree roots and stumps:** Remove from site

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

Chipping or shredding

1. **General:** Not permitted on site.

Litter

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

Protection of grass

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

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

Maintenance of grassed areas

1. **General:** Maintain turf in a manner appropriate to the intended use.
2. **Soil and grass**
 - 2.1. **Condition:** Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch, or wilt.
 - 2.2. **Waterlogging and compaction:** Prevent.
 - 2.3. **Damage:** Repair trampling, abrasion, or scalping.
3. **Ornamental lawns:** Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts and mole hills.
 - 3.1. **Edges:** Neat and well defined, in clean straight lines or smooth flowing curves.
4. **Litter and fallen leaves:** Remove regularly to maintain a neat appearance.

Grass cutting generally

1. **Before mowing:** Remove litter, rubbish, and debris.
2. **Finish:** Neat and even, without surface rutting, compaction, or damage to grass.
3. **Edges:** Leave neat and well defined. Neatly trim around obstructions.
4. **Adjoining hard areas:** Sweep clear and remove arisings.

5. **Drought or wet conditions:** Obtain instructions.

Tree stems

1. **Precautions:** Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

Leaf removal

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

First cut of

1. **Description:** All grassed areas
2. **Height of initial growth:** 50 mm
3. **Preparation**
 - 3.1. **Debris and litter:** Remove.
 - 3.2. **Stones and earth clods larger than 25 mm in any dimension:** Remove
4. **Height of first cut:** 50 mm
5. **Mower type:** Contractor's choice
6. **Arisings:** Remove

Mowing general areas

1. **Grass height:** 75 mm maximum
2. **Arisings:** Remove

Maintaining grassed areas with perennial wild flowers

1. **Preparation:** Before each cut remove litter and debris.
2. **Height and frequency of cut in first growing season**
 - 2.1. **Time of first cut:** as provider's recommendation
 - 2.2. **Height of first cut:** 50 mm
 - 2.3. **Frequency of subsequent cutting (minimum):** as provider's recommendation
 - 2.4. **Height of growth permitted (maximum):** 150 mm
3. **Height and frequency of cut in second growing season**
 - 3.1. **Time of cut:** After flowering in July or August take a hay cut
 - 3.2. **Height of cut:** 50 mm
4. **Trimming:** All edges.
 - 4.1. **Arisings:** Remove.

5. **Watering:** When instructed

Hollow tining

1. **Location:** All lawns
2. **Timing:** As necessary to relieve compaction
3. **Depth:** 75 mm

Edges to seeded areas

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

Levelling hollows and bumps in turf

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

Relieving surface compaction in turf

1. **Standard:** To BS 7370-3.
2. **Method:** Spiking
3. **Top dressing:** Fine sand
 - 3.1. **Depth:** 2-3 mm

Spot weedkilling in rough grass areas

1. **Herbicide:** Suitable for suppressing perennial weeds
2. **Operations:** Spot treat - all broad leaved weeds; - Japanese knotweed (*Fallopia* spp); and- nettles (*Urtica* spp).

Fertilizer – spring application

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

Fertilizer – autumn application

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

Reinstatement of worn or damaged lawns

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

Flower beds/ seasonal beddings

Planting beds of annuals

1. **Clearance:** Remove previous season's bedding, including all bulbs, litter and debris.
2. **Preparation:** Dig over beds using a spade or hand held mechanical cultivator:
 - 2.1. **Annual weeds:** Bury.
 - 2.2. **Perennial weeds:** Carefully dig out.
3. **Fertilizer:** Either in autumn or spring spread and incorporate Slow release fertilizer.
 - 3.1. **Application rate:** As manufacturer's recommended rate
4. **Annual bedding plants**
 - 4.1. **Standard:** To BS 3936-7.
 - 4.2. **Setting out:** Plant out As planting plan and schedule, including edging plants, main layer, specimen or pot plants, corms, bulbs or tubers.
5. **Watering:** Keep plants watered as necessary before planting out and water in after planting.
6. **Failed planting:** Replant as necessary any plants, or areas of plants, that have failed to thrive.

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.
2. **Fungicide:** Not required
3. **Insecticide:** Not required

Shrubs/trees/hedges

Establishment of new planting

1. **Duration:** One year
2. **Weed control**
 - 2.1. **Method:** Keep planting beds clear of weeds by use of suitable herbicides.
 - 2.2. **Area:** Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
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:** When instructed

Establishment of new planting – fertilizer

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

Tree stakes and ties

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

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.

Nesting wild birds

1. **Survey:** Before starting hedge or tree work during the period of February to August (inclusive), carry out a survey by a qualified ecologist and submit report
2. **Accidental disturbance:** Report immediately.

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.

Pruning of excessive overhang

1. **Timing:** As instructed
2. **Operations:** Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.

Pruning of excessive height

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

Pruning trees and shrubs

1. **Standard:** To BS 7370-4.

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.

Pruning flowering species of shrubs and roses

1. **Time of year**
 - 1.1. **Winter flowering shrubs:** Spring.
 - 1.2. **Shrubs flowering between March and July:** Immediately after the flowering period.
 - 1.3. **Shrubs flowering between July and October:** Back to old wood in winter.

- 1.4. **Rose bushes:** Early spring to encourage basal growths and a balanced, compact habit.

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.

Dead and diseased plants

1. **Removal:** Within one week of notification
2. **Replacement:** In the next suitable planting season

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.
 - 4.2. **Additional requirements:** None
5. **Dressing:** Slow release fertilizer:
 - 5.1. **Type:** Organic
 - 5.2. **Application rate:** As manufacturer's recommendations

Weed control generally

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

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:** Reinstatement to original depth.

Herbicide to kill regrowth

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

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.

Soil level adjustment

1. **Level of soil/mulch at edges of beds:** Reduce to 50 mm below adjacent grass or hard surface.
 - 1.1. **Arisings (if any):** Spread evenly over the bed.

Maintenance of loose mulch

1. **Thickness (minimum):** 50 mm
 - 1.1. **Top up:** Annually
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 herbicide treatment.

Fertilizing established trees and shrubs

1. **Time of year:** After flowering
2. **Type of fertilizer:** Slow release
3. **Application:** Spread evenly.
 - 3.1. **Rate:** As manufacturer's recommendations

Snow removal from shrubs/ trees

1. **Standard:** To BS 7370-4.
2. **Plants subject to snow removal:** As instructed
3. **Timing:** When instructed

Winter leaf removal

1. **Operations:** Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
2. **Arisings:** Remove

Tree work

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. **Standards:** To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
4. **Removing branches:** Cut as Arboricultural Association Leaflet 'Mature tree management'. Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
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.

Additional work

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

Prevention of wound bleeding

1. **Standard:** To BS 3998, clause 8.

Prevention of disease transmission

1. **Standard:** To BS 3998, clause 9 and Appendix B.

Cleaning out and deadwooding

1. **Remove**
 - 1.1. Dead, dying, or diseased wood, broken branches and stubs.
 - 1.2. Fungal growths and fruiting bodies.
 - 1.3. Rubbish, windblown or accumulated in branch forks.
 - 1.4. Wires, clamps, boards, and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - 1.5. Other unwanted objects, e.g. tree houses, swings.

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:** Remove only with prior approval
 - 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.

Crown lifting

1. **Clearances:** Remove branch systems to give clearance.
 - 1.1. **Height:** As recommended by BS 7370-4, clause 3.7.2.3
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.

Removing trees, shrubs and hedges

1. **Standards:** To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
2. **Existing services:** Check for below and above ground services. Give notice if they may be affected.
3. **Shrubs and smaller trees:** Cut down and grub up roots.
4. **Tree stumps**
 - 4.1. **Removal:** Cut as close to ground as possible and kill by applying ammonium sulfamate into drilled holes immediately after felling
 - 4.2. **Removal by winching:** Give notice. Do not use other trees as supports or anchors.
5. **Protection:** Avoid damage to neighbouring trees, plants and property
6. **Work near retained trees:** Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
7. **Filling holes**
 - 7.1. **Material:** Use as-dug material and/ or imported soil as required.
 - 7.2. **Finishing:** Consolidate and grade to marry in with surrounding ground level.

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.

Hard landscape areas/fencing

Hard surfaces and gravel areas

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

Graffiti removal

1. **Method:** Chemical poultice
2. **Subsequent treatment:** Not required
 - 2.1. **Finish:** Matt

Wheelie bins Storage

1. **Collections:** Follow and comply with the council's schedule for regular collection days and methods.
2. **Storage cleaning:** Agree upon the schedule for regular cleaning with TEP before operations.

Triple Bins

1. **Collections:** Agree upon the schedule for regular collections from these bins with TEP.

11 Fencing

Fencing systems

Fe1: 2.4m high Security Fence

1. **Manufacturer:** Barkers Fencing
Contact: Adam Savage
Email: adams@barkersfencing.com
Phone: 01782319264
 - 1.1. **Product reference:** As drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000002 and Appendix A
2. **Standard:** To BS 1722-9.
3. **Height:** 2400 mm
4. **Verticals:** To match with the adjacent Starcross Yard Railing Design
5. **Centres of verticals:** To match with the adjacent Starcross Yard Railing Design
6. **Posts:** RHS, 70 x 70 x 3 mm
 - 6.1. **Finish:** Powder-coated to BS 1722 PT9
 - 6.1.1. **Colour:** RAL 9005
7. **Centres of posts (maximum):** 2750 mm
8. **Method of setting posts/ stays/ legs:** Posts embedded 800 mm with minimum 100 mm concrete cover, intermediate supports in rammed earth
9. **Accessories:** The final design to match the adjacent Starcross Yard Public Open Space
10. **Conformity:** Submit manufacturer's and installer's certificates, to BS 1722-9.

Gates, posts, and stiles

Fe1: 2.4m high Security Fence Posts

1. **Description:** As drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000002 and Appendix A
2. **Manufacturer:** Barkers Fencing
Contact: Adam Savage
Email: adams@barkersfencing.com
Phone: 01782319264
3. **Standard**
 - 3.1. **Description:** Grade S235 all welds to BS1722 PT9, Powder coat to RAL 9005, Galvanised to BS1461
4. **Finish:** Powder-coated to BS 1722 PT9
 - 4.1. **Colour:** RAL 9005
5. **Jointing:** Welded.

Fe2: 2.4m high Security Fence Gates

1. **Manufacturer:** Barkers Fencing
Contact: Adam Savage

Email: adams@barkersfencing.com

Phone: 01782319264

- 1.1. **Product reference:** To match railing design
2. **Sizes:** 1No. 1.2m wide single door to TEP community entrance*
1No. 1.2m wide single door to TEP emergency exit*
1No. 2m wide double door to bin collection area
1No. 1.2m wide single door to Main entrance – cycle.
1No. 4m wide double door to Main entrance – vehicle.
1No. Single Turnstile gate to Main entrance - pedestrian.
1No. double door to UKPN Entrance (width TBC)
1No. 1m wide single door to Starcross Yard
- * The side gates by TEP will be implemented before the permanent scheme design.
3. **Posts:** Steel Material Grade S235 all welds to BS1722 PT9 Powder coat and Galvanised to BS1461
4. **Finish as delivered:** BS 1722 PT9 Powder-coated to RAL 9005
5. **Accessories:** Security notice (supplied by Employer)

Execution

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.

Competence

1. **Operatives:** Contractors must employ competent operatives.

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.

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.

Setting posts in earth

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

Completion

Cleaning

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

Fixings

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

Gates

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

Ω End of Section

12 Site/ street furniture/ equipment

Gates, barriers, and parking controls

Turnstile

1. **Description:** AT SECURITY BARRIER
2. **Manufacturer:** datascope
Web: <https://www.datascopeplc.com/>
Tel: [0845 450 7387](tel:08454507387)
Support Email: helpdesk@datascopeplc.com
 - 2.1. **Product reference:** Titan 3, Double turnstile
Type: Full height, double turnstile
3. **Size:** 2,180mm wide x 2,250mm high
4. **Finish as delivered:** As manufactured
 - 4.1. **Colour:** RAL 9005
5. **Accessories/ Features:** A hinged topper with the same forged head as the railing. Design by Barkers Fencing.

Site and street furniture

F12: Sheffield cycle stands

1. **Description:** Location to GA plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000007
2. **Manufacturer:** [Broxap Ltd](#)
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Rowhurst Industrial Estate
Chesterton
Newcastle-under-Lyme
Staffordshire
ST5 6BD
 - 2.1.2. **Telephone:** [+44 \(0\)1782 571700](tel:+44(0)1782571700)
 - 2.1.3. **Web:** www.broxap.com
 - 2.1.4. **Email:** nbs@broxap.com
 - 2.2. **Product reference:** [Sheffield Cycle Stand \(BXMW/GS0 Senior Sheffield Cycle Stand\)](#)
3. **Stand type:** Sheffield Cycle Stand
4. **Number of stands:** Single.
5. **Base:** Root fixed.
6. **Finish as delivered:** Stainless steel.
7. **Size:** 800 x 715 mm.
8. **Accessories / Features:** 100mm Black Visibility Banding and Tapper Rail to be used to bookend rows as per drawing, 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000007 - Cycle Stand Details.

F13: Tow-tier cycle racks

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](tel:+44(0)1782571700)
 - 1.1.3. **Web:** www.broxap.com
 - 1.1.4. **Email:** nbs@broxap.com
 - 1.2. **Product reference:** Eco-2-Tier Cycle Rack
2. **Stand type:** Two-tier Cycle Stand
3. **Number of stands:** As drawing
4. **Base:** Baseplated.
5. **Fixing:** to the manufacture's recommendation and the project engineer's approvals.

F13: Cycle shelters

1. **Description:** for two tier cycle rack area, detail drawing as 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000007
2. **Manufacturer:** Falco
Web: <https://www.falco.co.uk/>
Contact: Bryan Duggan Email: bryan.duggan@falco.co.uk
 - 2.1. **Product reference:** FalcoZen 180
3. **Material:** Steel frame with timber cladding
 - 3.1. **Finish:** Powder coated
 - 3.2. **Colour:** Black / Dark grey to match with surrounding landscape
4. **Accessories:** LED ceiling lighting with motion sensors or side subject to M&E engineer's specification
5. **Method of fixing:** As per manufacture's specification

F10: Benches

1. **Description:** Concrete base bench unit to the main landscape area, location to GA plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000004
2. **Manufacturer:** Factory Furniture
Web: <https://factoryfurniture.co.uk/>
Contact: Dean Harvey
Email: office@factoryfurniture.co.uk>
Tel: + 44 (0) 1367 242731

- 2.1. **Product reference:** Concrete SOCA seat
3. **Material:** concrete base with timber slats
 - 3.1. **Finish:** As manufactured
4. **Size:** Refer to detail drawings
5. **Accessories/ Special requirements:** Back and arm rests as per shop drawings
6. **Method of fixing:** Manufacturer's shop drawing and engineer's approvals.

F11: Armchairs

7. **Description:** Metal frame chairs to the main landscape area, Location to GA plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000004
8. **Manufacturer:** Factory Furniture
Web: <https://factoryfurniture.co.uk/>
Contact: Dean Harvey
Email: office@factoryfurniture.co.uk>
Tel: + 44 (0) 1367 242731
 - 8.1. **Product reference:** SOCA, FF5355
9. **Material:** Metal base with timber slats
 - 9.1. **Finish:** As manufactured
10. **Size:** Refer to detail drawings
11. **Accessories/ Special requirements:** Back and arm rests as per shop drawings
12. **Method of fixing:** Manufacturer's shop drawing and engineer's approvals.

F8: Metal Planter*

1. **Description:** Refer to GA Plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003.
2. **Manufacturer:** Factory Furniture
Contact: Dean Harvey
Email: office@factoryfurniture.co.uk
Tel: + 44 (0) 1367 242731
Web: <https://factoryfurniture.co.uk/>
3. **Material:** Corten Steel
4. **Size:** Refer to detail drawing 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000005 and manufacturer's fabrication drawings
5. **Method of fixing:** Place directly on the floor

* Movable metal planters may be implemented during the MWU on the TEP Garden side and relocated to the main entrance area, contingent upon agreement with TEP Design.

F7: Triple Litter bins

1. **Description:** For TEP Garden* and Main Entrance area, Location to GA plan 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003, Detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000005

2. **Manufacturer:** [Artform Urban Furniture Limited](#)
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Adlington Business Park
London Road
Adlington
Cheshire
United Kingdom
SK10 4NL
 - 2.1.2. **Telephone:** [+44 \(0\)1625 877554](tel:+44(0)1625877554)
 - 2.1.3. **Web:** www.artformurban.co.uk
 - 2.1.4. **Email:** enquiries@artformurban.co.uk
 - 2.2. **Product reference:** [Box Litter Bin \(100 L\)](#)
3. **Material:** Steel.
4. **Base:** Pre-drilled for anchors, for ground fixing with M8 bolts.
5. **Finish as delivered:** Galvanized and polyester powder coated.
6. **Colours:** tbc
7. **Film thickness (minimum):** Manufacturer's standard.
8. **Size (h x w x d):** 1005 x 517 x 400 mm.
9. **Door design:** Box Wood.
10. **Capacity:** 100 L each.
11. **Material:** Powder coated steel with Timber front
12. **Accessories/ Special requirements:** General, Recycled and bin litter signs

F6: Garden taps

1. **Description:** For watering plants
1No. to TEP Garden Area*
2No. to Main Landscape Area
Refer to GA drawing 1CP01-MDS_LDE-LS-DGA-SS08_SL23_GF-000003 for the locations and detail drawing to 1CP01-MDS_LDE-LS-DDE-SS08_SL23_GF-000005
2. **Manufacturer:** Contractor's choice
 - 2.1. **Product reference:** Contractor's choice

Installation

Concrete foundations generally

1. **Standard:** To BS 8500-2.
2. **Concrete:** 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.

Setting components in concrete

1. **Holes:** manufacturer's recommendation and engineer's approvals.
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.

Setting in earth

1. **Holes:** As small as practicable.
2. **Components being fixed:** Accurately positioned and securely supported.
3. **Buried depth (minimum):** Engineer's specification
4. **Earth refill:** Well rammed as filling proceeds.

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.

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.

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.

13 Appendix A Technical Data

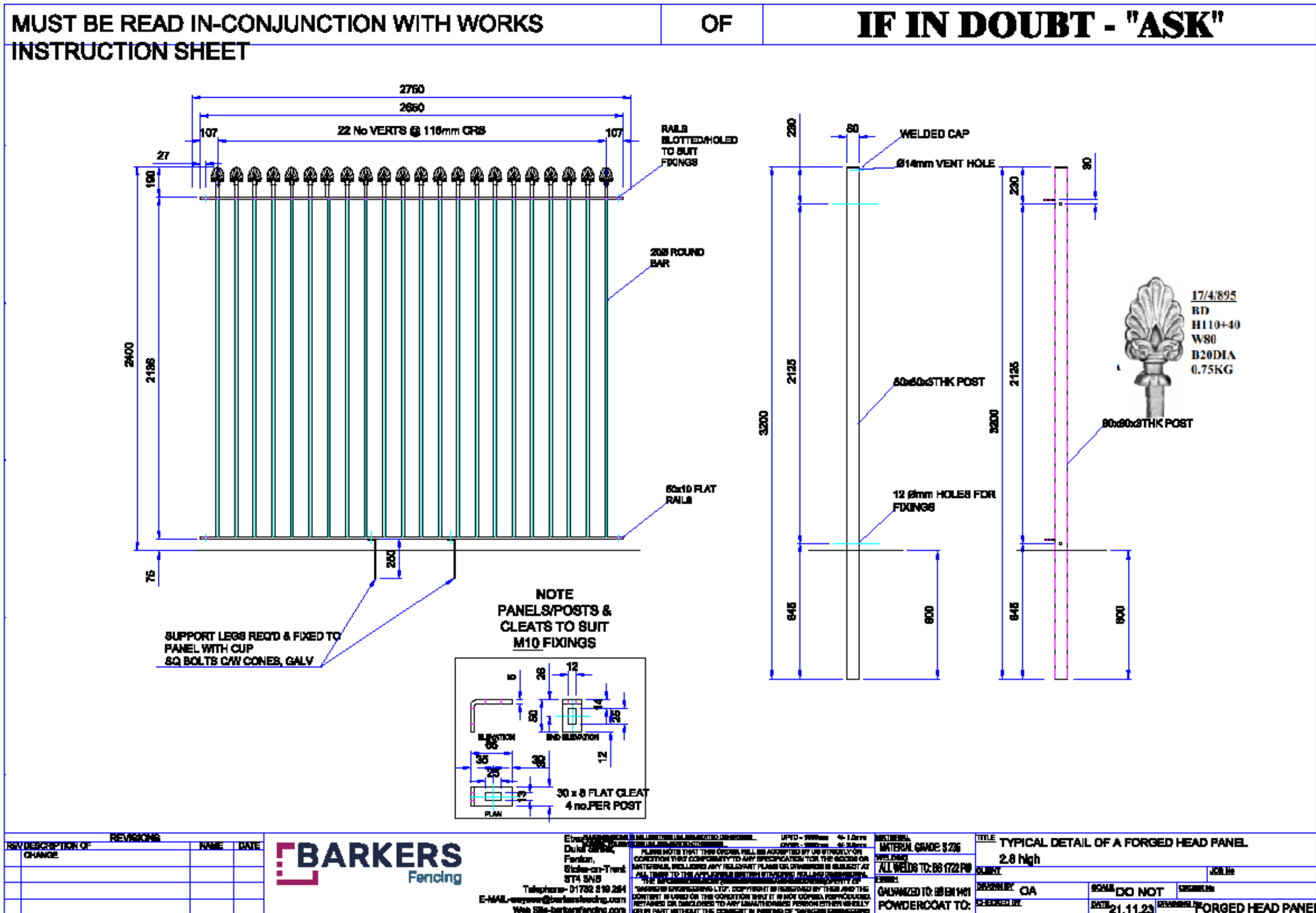
Fencing

Bakers – Typical Detail of a Forged Head Standard Panel

Bakers – Typical Detail of Anti Phishing Panel

Bakers – Typical Detail of Pedestrian Gate

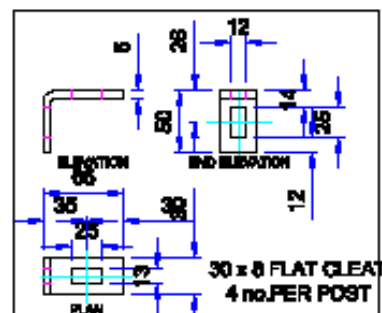
Bakers – Typical Detail of Emergency Gate



IF IN DOUBT - "ASK"



**NOTE
PANELS/POSTS &
CLEATS TO SUIT
M10 FIXINGS**



TITLE			
DETAIL OF PANEL TO GO NEXT TO THE EMERGENCY GATE PLATE WELDED TO VERTS TO REDUCES PHINSHING			
QUANTITY			JOIN No
ISSUANCE BY	QA	SCALE	DO NOT
DESIGNED BY		DATE	21.11.23
		REVISIONS	H82 EUSTON
			ANTI PHISHING PANE

