

OUR CULTURAL HEART, HUDDERSFIELD

PUBLIC REALM HARD AND SOFT LANDSCAPE
SPECIFICATION

CONSTRUCTION

Gillespies

DOCUMENT NUMBER: IR430301-GIL-ZZ-00-SP-L-500001

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STAGE 4	P01	FIRST ISSUE	JRD	23.02.2024
STAGE 4	P02	VARIOUS UPDATES INCLUDING D2 GRATING AND BIN SPECIFICATION	JRD	12.03.2024
STAGE 4	P03	BIN & BOLLARD SPEC ADJUSTMENTS	JRD	20.05.2024
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STAGE 4	P05	BOLLARD ADJUSTMENTS	JRD	20.06.2024
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A10 General

Clauses

10A General Requirements

1. The Landscape Specification should be read in conjunction with ALL Gillespies drawings and schedules and all works should be carried out in accordance with the standards set out in this specification. The Landscape Specification should be read in conjunction with all other consultant's specifications. Work should be carried out in accordance with the standards set out in these specifications
2. Information shown in this specification is not valid for Construction. Please refer to the status of the document
 - Do not procure or manufacture materials, or undertake construction site works from this drawing unless the issue status is noted as 'for construction'.
 - Any contractor that chooses to take forward this information for construction without full review process and sign-off does so at their own risk.
 - All measurements are to be checked on site prior to construction.
 - Where any conflict or inconsistency occurs between drawing and specification information the Contractor is to immediately notify Gillespies prior to continuing working.
3. The scope of this specification is limited to:
 - 3.1. External surface finishes/ kerbing/ edging
 - 3.2. Street furniture
 - 3.3. Planting & soft elements
4. The following is specifically excluded from the scope:
 - 4.1. Drainage, insulation, all paving buildups and other civil engineering aspects
 - 4.2. Street furniture/ boardwalk fixings and foundations - to engineer's specification and/or manufacturers details as indicated.
 - 4.3. Highways signage, lighting and road markings
 - 4.4. Lighting design (All lighting columns, bollards, fittings and features to be approved by landscape architect, CA and client prior to order)
 - 4.5. CCTV system (All CCTV columns to be approved by landscape architect, CA and client prior to order)

Ω End of Section

A20 Submittals

Clauses

10A Samples and technical submittals

1. To be read in conjunction with all Gillespies drawings and External Works Specification.
2. Technical submittals for all specified elements is to be submitted to the Landscape Architect for review prior to ordering samples.
3. No samples are to be ordered until the associated technical submittal for that element has been approved by the Landscape Architect.
4. Samples shall be as indicated in the particular Work Sections and incorporate the following elements:
5. All paving types including kerbs and edges. Refer to drawing IR430301-GIL-ZZ-00-DR-L-160001 & 160002 for sample areas required for approval.
 - 5.1. P1 Paving - No less than 1m²
 - 5.2. P2 Paving - No less than 1m²
 - 5.3. P3 Paving - 12no. 3x3m sample panels for feature paving patterns
 - 5.4. P4 Paving - No less than 1m²
 - 5.5. P6 Paving - No less than 1m²
 - 5.6. P7 Paving - No less than 1m²
 - 5.7. P8a/b Paving - No less than 1m²
 - 5.8. P9 Paving - No less than 1m²
6. Expansion joint mastic, to check colour and finish - product sample (specified by Engineer);
7. Jointing material, to check colour and finish - product sample for confirmation;
8. Light fittings for feature uplighting to landscape areas - sample fittings
9. Photographic evidence of tagged shrub/ perennial plant material within nursery
10. Nursery visits by Landscape Architect are required - allowance to be made to visit supplier nursery for tagging. Photographic evidence is not adequate.
11. Deliver to site a sample load of minimum 25 kg imported topsoil.
12. Soil Samples, Analysis & Reporting (Refer to Section Q28 for full details and requirements):
13. All imported soils/growing mediums shall be independently tested and approved prior to importation to site.
 - 13.1. One composite sample shall be taken for every 100m³ of each type of soil to be used. Each composite sample should be made up of 10 No. sub-samples taken from evenly spaced locations across the stockpile. The sub-samples shall be mixed together and quartered down to form a 5kg composite sample.
 - 13.2. **Timing::** Minimum 2 weeks prior to delivery.
 - 13.3. Each report shall contain the following information:
 - 13.3.1. Source name and location
 - 13.3.2. Visual examination
 - 13.3.3. Certificates of Analysis
 - 13.3.4. Interpretive Report to cover all results to confirm the suitability of the soils for the landscape scheme, and to provide recommendations for any treatments or additives.
14. Where necessary specified performance criteria test results are to be submitted with samples.
15. All samples and associated test data is to be provided in a timely fashion in accordance with contract programme.

14 Quality Benchmarks

1. To be read in conjunction with all Gillespies drawings & External Works Specification.
2. As a part of the first installation of each specified element, the contractor shall prepare a representative installed area for review by the Landscape Architect, which will act as a quality benchmark for the remainder of the works.
3. Each quality benchmark is to be approved by the Landscape Architect prior to any further instances of the element being installed.
4. Quality benchmarks shall be as indicated in the particular Work Sections and incorporate the following elements, to be completed to the areas or lengths listed below. This should include abutting materials/junctions where possible, particularly between paving types and edges.
 - 4.1. P1 paving including joints and edging: No less than 1m²
 - 4.2. P2 paving including joints and edging: No less than 1m²
 - 4.3. P3 paving including joints and edging: No less than 1m²
 - 4.4. P4 paving including joints and edging: No less than 1m²
 - 4.5. P5 paving including joints and edging: No less than 1m²
 - 4.6. P6 paving including joints and edging: No less than 1m²
 - 4.7. P7 paving including joints and edging: No less than 1m²
 - 4.8. P8a/b paving including joints and edging: No less than 1m²
 - 4.9. P9 paving including joints and edging: No less than 1m²
5. Where necessary quality benchmarks are to be tested against specified performance criteria.

15 Shop Drawings

1. To be read in conjunction with all Gillespies drawings & External Works Specification.
2. Shop drawings shall be submitted by the Contractor to the Landscape Architect for comment to ensure the Contractor's fabrication drawings maintain the design intent and performance criteria set out in Gillespies' drawings and specification.

16 Nursery Visits

1. To be read in conjunction with all Gillespies drawings & External Works Specification.
2. Within two months of being awarded the contract, the Contractor is to provide the Landscape Architect and Client with proposed nursery visit dates for all specimen shrubs, plants and trees that are not being free-issued to them by the Client. Contractor is to ensure that the proposed dates are sufficiently early to allow substitutions to take place should any specimens within the landscape planting schedule be unavailable.

Ω End of Section

B51

General structural requirements - landscape

Tendering

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-310010 to 310013 WALL DETAILS

Gillespies are providing design intent only. Refer to Engineer's design and specification.

General - Not Used

Performance

540A Wall Type W2 - Stone Retaining Wall

1. Description: Refer to F21.110A

540B Wall Type W3a - Low stone wall

1. Description: Refer to F21.110B

540C Wall Type W3b - Low stone clad framework

1. Description: Refer to H51.110A

540C Wall Type W4 - Stone clad retaining wall

1. Description: Refer to H51.110B

540D Wall Type W5 - Stone clad retaining wall

1. Description: Refer to H51.110C

540E Wall Type W6 - Stone clad retaining wall

1. Description: Refer to H51.110D

540F Wall Type W7 - Stone Retaining Wall, narrow

1. Description: Refer to F21.110C

Execution - Not Used

Completion - Not Used

Ω End of Section

B91

Buildings in the landscape

System outline

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-330001 to 330008 FURNITURE DETAILS

System performance - Not Used

Products

320 Furniture Type F10 - Bus shelter

1. **Description:** Existing shelters to be reviewed, with retroactive fitting of green roof system, or replacement with below product, to be agreed with Council

Green roof bus shelter

2. **Manufacturer:** Externiture
 - 2.1. **Product reference:** City Haven Bus Shelter (Sedum)
3. **Size:** To match existing footprint
4. **Frame:** Galvanised and PPC steel with RAL TBC
5. **Panels:** As standard
6. **Roof covering:** Green roof, to supplier's details
7. **Accessories/ Special requirements:** Bench and Bus stop sign mounting lugs
8. **Method of fixing to ground or base:** Root fixing

340 Cycle shelter

1. **Description:** Cycle shelter adjacent to Queensgate
2. **Manufacturer:** Broxap or similar
 - 2.1. **Phone number:** 01782 564411
 - 2.2. **Product reference:** Archimedes Cycle Shelter
3. **Size:** 5000 (l) x 4222 (w) x 2738mm (h)
4. **Frame:** Galvanised steel, PPC to RAL TBC
5. **Accessories/ Special requirements:** Anti-tamper bolts and fixings
6. **Method of fixing to ground or base:** Root fixed

Materials

450 Stainless steel

1. **Description:** For bus shelter
2. **Manufacturer:** Refer to B91.320
3. **Standards**
 - 3.1. **Properties of stainless steels:** To BS EN 10088-1.
4. **Grade:** Manufacturer's standard

5. Finish:
 - 5.1. Bars, rods and sections for general purposes: To BS EN 10088-3.
 - 5.2. Sheet/ plate and strip for general purposes: To BS EN 10088-2

Execution/ erection/ installation

610 Concrete foundations generally

1. Concrete: To BS 8500-2.
2. Mix: To Engineer's specification
3. Admixtures: Do not use.
4. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.
5. Foundation holes: Neat vertical sides.
6. Components: Accurately positioned and securely supported.
7. Concrete fill: Compact as filling proceeds.
8. Concrete foundations exposed to view: Compact until air bubbles cease to appear on the upper surface, then weather to shed water and trowel smooth.
9. Temporary component support: Maintain undisturbed for minimum 48 hours.

630 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.

640 Site painting and staining

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

Completion

930 Documentation

1. Contents
 - 1.1. General product information.
 - 1.2. Installation information.
 - 1.3. Inspection and maintenance reports.
2. Number of copies: Two
3. Submission: Contractor's choice

Ω End of Section

F21

Natural stone/ ashlar walling/ dressings **REVISED**

Types of walling/ dressings

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-310010 to 310013 WALL DETAILS

Gillespies are providing design intent only. Refer to Engineer's design and specification.
Bespoke walling and cladding systems to be developed with specialist input

110A Wall Type W2 - Stone retaining wall **REVISED**

1. **Description:** Stone wall by steps adjacent to Peel Street.
Refer to Gillespies design intent
2. **Detail:** Refer to detail drawing: IR430301-GIL-ZZ-00-DR-L-310021-C02 Step Details 02 - ST1 for W2 step edge unit details
3. **Stone:** To BS EN 771-6.
4. **Supplier:** Hardscape Products Ltd
5. **Telephone number:** 01204 565 500
6. **Type:** Mixed Colour Pennant, Yorkstone (sandblasted)
7. **Height:** Flush to match adjacent step Risers. Refer to detail for unit heights.
8. **Width:** 200mm
9. **Fixing/foundations:** Laid to concrete foundations to Engineer's details. Laid atop reinforcement dowel bars to securely hold units in place if required.

110B Wall Type W3a - Low stone wall **REVISED**

1. **Description:** Bespoke low stone wall.
Refer to IR430301-GIL-ZZ-00-DR-L-310010 WALL DETAILS 01
Refer to IR430301-GIL-ZZ-00-DR-L-310011 WALL DETAILS 02
2. **Stone:** To BS EN 771-6.
 - 2.1. **Type:** Granite
 - 2.2. **Colour:** Magma Granite
 - 2.3. **Supplier:** Hardscape Products Ltd
 - 2.4. **Telephone number:** 01204 565 500
 - 2.5. **Finishes to exposed main faces, edges and shadow gaps:** Flamed
 - 2.6. **Unit height:** 450mm from paving level (finishes 50mm below paving level for 500mm total height)
 - 2.7. **Unit width:** 600mm
 - 2.8. **Unit length:** 1500mm
 - 2.9. **Nosing:** 120mm radius to front top and end units requiring radial finish
50mm radius to back top
Note: Units with paving flush to top of wall to have no radial nosing to back of unit
Anti-skate notches/extrusion design TBC
 - 2.10. **Additional requirements:**

- Special recessed units where timber bench tops will sit (275mm above paving level). Refer to section Q50.220A for timber bench tops.
 - Special Radial units required on bends.
 - Lifting stap notches to be located beneath beneath bench not more than 30mm deep on base, so as to not be visible when installed. Detail and number TBC by specialist supplier
- 2.11. **Quality:** Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
3. **Joints:** Flush.
- 3.1. **Width:** Dry butt jointed
4. **Fixing:** Laid to concrete foundations to Engineer's details.

110C Wall Type W7 - Stone retaining wall, narrow REVISED

1. **Description:** Narrow stone wall near cycle stands. Refer to Gillespies design intent
2. **Stone:** To BS EN 771-6.
3. **Supplier:** Hardscape Products Ltd
4. **Telephone number:** 01204 565 500
5. **Type:** Mixed Colour Pennant, Yorkstone (sandblasted)
6. **Height:** 100mm above adjacent surface
7. **Width:** 150mm
8. **Unit size::** 150mm (w) x 400mm (h) x 1345mm (l)
9. **New Item:** Refer to detail drawing: IR430301-GIL-ZZ-00-DR-L-310012-C01 Wall Details 03
10. **Fixing/foundations:** Laid to concrete foundations to Engineer's details.
11. **Other requirements:** Balustrade mounted to top of wall as per clause L37.160

General/ production

250 Cutting and dressing of stone

1. **Timing:** After seasoning but before delivery to site.
2. **Accuracy**
 - 2.1. **Exposed and joint surfaces:** Square, true planes free from hollow or rough areas.
 - 2.2. **Dimensions:** Maintain specified joint widths.
3. **Orientation for natural bed of stones:** Appropriate to properties of stones and positions in walling/ dressings.

260 Identification of stone units

1. **Marking:** Clearly and indelibly on concealed faces to indicate the natural bed and position in the finished work.

Laying and jointing

300 Reference panels

1. **General:** Complete areas of specified walling types and obtain approval of appearance before proceeding.
2. **Walling type:** Refer to F21.110A
 - 2.1. **Location:** Adjacent to steps
 - 2.2. **Size:** 2x2m

315 Adverse weather

1. General: Do not use frozen materials or lay on frozen surfaces.
2. Air temperature: Do not lay stones:
 - 2.1. In cement gauged mortars: At or below 3°C and falling or below 1°C and rising.
 - 2.2. In hydraulic lime:sand mortars: At or below 5°C and falling or below 3°C and rising.
3. Temperature of walling during curing: Above freezing until mortar 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.

325 Laying generally

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

330 Walling below ground level REVISED

1. Extent of facework below finished level of adjoining ground or external works (minimum): 50-100 mm.

340 Putlog scaffolding

1. Use: Not permitted.

360 Openings

1. Method of forming: Rigid templates, accurately fabricated to the required size.

Ω End of Section

H51

Natural stone slab cladding/ lining/ features **REVISED**

Types of cladding

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-310010 to 310013 WALL DETAILS

Gillespies are providing design intent only. Refer to Engineer's design and specification.

110A Wall Type W3b - Stone clad steel framework **REVISED**

1. **Description:** Stone cladding to steel framework to match aesthetic of W3a.
Refer to IR430301-GIL-ZZ-00-DR-L-310010 WALL DETAILS 01
Refer to IR430301-GIL-ZZ-00-DR-L-310011 WALL DETAILS 02
2. **Support structure:** Bespoke steel frame to specialist design. To incorporate louvered grille to ventilation (Furniture type F14), as well as structural slab opening requirements by Engineer
3. **Stone cladding system:**
 - 3.1. **Standard:** In accordance with BS 8298-2
 - 3.2. **Type:** Natural stone slabs supported on stainless steel angles at each floor level, with restraint fixings to back by Specialist Supplier
4. **Stone slab**
 - 4.1. **Standard:** To BS EN 1469
 - 4.2. **Supplier:** To match F21.110B
 - 4.3. **Colour:** To match F21.110B
 - 4.4. **Face dimensions, length (l) x width (b):** To match F21.110B
 - 4.5. **Thickness (d):** 80mm to top cladding. 100mm to front cladding - tbc by specialist suppliers details
 - 4.6. **Finish:** To match F21.110B
5. **Stone quality:** Free from vents, cracks, large fissures, sand and clay holes, discolouration, or other defects deleterious to durability, structural integrity or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier
6. **Fixings:** Mechanical to Engineer's details
7. **Joints**
 - 7.1. **Width (nominal):** Nominally 2-3mm
8. **Accessories/ other requirements:** To match F21.110B. Including radial profile of edges, shadow gap etc

110B Wall Type W4 - Stone clad retaining wall **REVISED**

1. **Description:** Stone clad retaining wall, adjacent to Queensgate steps
Refer to Gillespies design intent
2. **Support structure:** Bespoke concrete core to Engineer's details. To incorporate louvered grille for ventilation openings, requirements by Engineer
3. **Stone cladding system:**
 - 3.1. **Standard:** In accordance with BS 8298-2

- 3.2. Type: Natural stone slabs supported on stainless steel angles at each floor level, with restraint fixings to back by Specialist Supplier
4. Wall height: 2250mm varies
5. Stone slab
 - 5.1. Standard: To BS EN 1469
 - 5.2. Supplier: Hardscape Products Ltd
 - 5.3. Telephone number: 01204 565 500
 - 5.4. Colour: Mixed Colour Pennant, Yorkstone (sandblasted)
 - 5.5. Face dimensions, length (l) x width (b): Indicatively 665mm (l) x 150mm (w)
 - 5.6. Thickness (d): 50mm cladding to sides. 100mm coping unit to top
 - 5.7. Finish: To match F21.110B
6. Stone quality: Free from vents, cracks, large fissures, sand and clay holes, discolouration, or other defects deleterious to durability, structural integrity or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier
7. Fixings: Mechanical to Engineer's details
8. Joints
 - 8.1. Width (nominal): Nominally 2-3mm

110D Wall Type W6 - Stone Step Edge REVISED

1. Description: Stone retaining wall, adjacent to Queensgate steps
Refer to Gillespies design intent
2. New Item: Refer to detail drawings: IR430301-GIL-ZZ-00-DR-L-310015/16
3. Support structure: Bespoke concrete core to Engineer's details.
4. Stone cladding system: To tie into adjacent clad walls, refer to H51.110B
 - 4.1. Standard: In accordance with BS 8298-2
 - 4.2. Type: Natural stone slabs supported on stainless steel angles at each floor level, with restraint fixings to back by Specialist Supplier
 - 4.3. Height: Refer to details
5. Stone slab
 - 5.1. Standard: To BS EN 1469
 - 5.2. Supplier: Hardscape Products Ltd
 - 5.3. Telephone number: 01204 565 500
 - 5.4. Colour: Mixed Colour Pennant, Yorkstone (sandblasted)
 - 5.5. Face dimensions, length (l) x width (b): Varies
 - 5.6. Thickness (d): Refer to details: IR430301-GIL-ZZ-00-DR-L-310015/16
 - 5.7. Finish: To match F21.110B
6. Stone quality: Free from vents, cracks, large fissures, sand and clay holes, discolouration, or other defects deleterious to durability, structural integrity or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier
7. Fixings: Mechanical to Specialist contractor details
8. Joints
 - 8.1. Type: Mortar filled
 - 8.2. Width (nominal): Nominally 2-3mm
9. Accessories/ other requirements: Sloping sides to match step profile adjacent to steps. Flat profile adjacent to landing

General requirements/ preparatory work - Not Used

Design/ performance requirements - Not Used

Testing - Not Used

Fabrication and installation

510 Generally

1. **Location of joints:** Joints must occur only at positions indicated on final detailed drawings
2. **Prefabrication:** Machine-cut and drill products in workshop wherever possible
3. **Identification:** Mark or tag products. Do not mark surfaces visible in the complete installation
4. **Natural bed:** Indicate on a non-exposed surface of each stone
5. **Cleanliness:** Keep facework clean
6. **Protection:** Isolate and protect each stone with packers or protective coverings for transportation and in construction. Provide temporary protection over whole installation. Ensure that all arises are protective as long as possible, with material that will not mark or stain the stone

580 Fixing

1. **Torque figures and shim dimensions:** To specialist details
2. **External cladding:** To specialist details

620 Movement joints

1. **Description:** To be confirmed by Engineer
2. **Sealant:** To Engineer's specification
 - 2.1. **Standard:** To Engineer's specification
 - 2.2. **Colour:** To closely match stone colour, samples to be provided to Landscape Architect
3. **Joint widths:** Where not specified, to be as small as practicable. Allow for shrinkage, thermal and other movements in structure and cladding

Deleted clauses

110C Wall Type W5 - Stone clad retaining wall **DELETED**

Ω End of Section

L37

External stair, ramps, handrail and balustrades systems

REVISED

General

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-310020 to 310021 STEP DETAILS

110 ST1/ST2 Steps

1. Description: All external steps

To consist of:

Top step unit (refer to L37.315A/L37.315B)

Standard step units (refer to L37.315C/L37.315D)

Bottom step unit (refer to L37.315E) - Not required to all steps, may be same as adjacent paving in places. Refer to GA drawings & details

2. Type: Built in situ
3. Base/ Fabric: Stone step units
4. Surface: Stone step units
 - 4.1. Finish: Slip-resistant
5. Unobstructed width: Refer to drawings
6. Accessories: DDA visibility strips to risers.
Bicycle ramp to side of ST2 steps (refer to L37.120)

120 Bicycle ramp

1. Description: Bespoke bicycle ramp units to Queensgate steps (ST2). Refer to Gillespies design intent
2. Type: Built in situ
3. Base/ Fabric: To match steps
4. Surface: To match steps
 - 4.1. Finish: To match steps
5. Minimum surface width: 200mm
6. Gradients
 - 6.1. Going: To match adjacent step profile

150 Furniture Type F5 - Handrail REVISED

1. Description: Handrail to steps. Refer to Gillespies design intent
2. System manufacturer: Kent Stainless or similar
 - 2.1. Phone number: 01623750214
3. Material: Steel
 - 3.1. Cross section: 42mm diameter handrail
 - 3.2. Finish: Stainless Steel

4. Handrail ends: To extend 300-400mm beyond top and bottom steps
5. Height (to upper surface of handrail)
 - 5.1. Above pitch line: As per drawings
 - 5.2. Above landing: 1000mm
 - 5.3. Secondary lower handrail: As per BS 8300-1:2018
6. Accessories: Recess to integrate lighting strips to M&E specification
7. Fixing: Core drilled into steps
8. Post positioning: Centrally to top and bottom steps
9. Note:
 - Manufacturers will develop shop drawings for Landscape Architect approval
 - All posts to be sized by specialist manufacturer and approved by Landscape Architect
 - The ratio of posts to lengths of fencing needs to be checked and designed by specialist manufacturer and approved by Landscape Architect
 - The hinges/brackets/fixings/locks to be designed to be concealed systems by manufacturer and approved by Landscape Architect
 - Bespoke angles at gradient changes. To specialist supplier's shop drawings
 - Any fixings, screws, nuts, bolts etc, to be PPC with RAL to match metalwork
 - Anti-tamper fixings
 - Allowance for removable sections adjacent to Queensgate steps for maintenance access at landings

160 Furniture Type F6 - Balustrade REVISED

1. Description: Balustrade, fixed within paving or to top of wall. Refer to Gillespies design intent
2. System manufacturer: Alpharail Ltd or similar
 - 2.1. Phone number: 01623750214
3. Product: Flat Top Bar Railing
4. Balustrade:
 - 4.1. Material: Galvanised steel to BS EN ISO1461
 - 4.2. Finish: Galvanised and PPC
 - 4.3. Colour: Powder coated to RAL TBC
 - 4.4. Height above ground level: 1100mm, to follow slopes
 - 4.5. Vertical infills: 50x10mm rolled steel flat
 - 4.6. Support posts: 50x10mm rolled steel flat
 - 4.7. Post centres: 1500mm
 - 4.8. Gaps: No more than 100mm
5. Note:
 - Manufacturers will develop shop drawings for Landscape Architect approval
 - All posts to be sized by specialist manufacturer and approved by Landscape Architect
 - The ratio of posts to lengths of fencing needs to be checked and designed by specialist manufacturer and approved by Landscape Architect
 - The sizing and design of frame and bars to be checked and designed by specialist manufacturer and approved by Landscape Architect
 - The hinges/brackets/fixings/locks to be designed to be concealed systems by manufacturer and approved by Landscape Architect
 - Bespoke angles at gradient changes. To specialist supplier's shop drawings
 - Any fixings, screws, nuts, bolts etc, to be PPC with RAL to match metalwork

- Anti-tamper fixings
6. Fixing: **Floor mounted:** Core drilled into paving to Supplier's details
Wall mounted: Core drilled to centre of wall top, to Engineer's details

System performance

210 Design

1. Description: Design of steps
2. Inclusive design: Complete detailed design in accordance with BS 8300-1
3. Structure and associated features: Complete detailed design to BS EN 1991-1-1
4. Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

Products

315A ST1 Stone step unit (top)

1. Description: ST1 Yorkstone step unit (top of steps)
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Crosland Hill Yorkstone
3. Standard: To BS EN 771-5.
4. Size
 - 4.1. Surface width: 600mm per unit
 - 4.2. Going: 400mm
 - 4.3. Rise: 150mm

Refer to typical step details

5. Colour: Buff
6. Finish: Sawn
7. Nosing radius: 20mm
8. Accessories: 55mm DDA strip to top and front face of step unit, inlaid with Granite
9. DDA strips: 55mm to top and front face of step unit
 - 9.1. Manufacturer: Hardscape Products Ltd
 - 9.2. Product reference: Scottish Green Schist Granite

315B ST2 Stone step unit (top)

1. Description: ST1 Yorkstone step unit (top of steps)
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Crosland Hill, Yorkstone
3. Standard: To BS EN 771-5.
4. Size
 - 4.1. Surface width: 600mm per unit
 - 4.2. Going: 400mm
 - 4.3. Rise: 170mm

Refer to typical step details

5. Colour: Buff
6. Finish: Sawn
7. Nosing radius: 20mm
8. Accessories: 55mm DDA strip to top and front face of step unit, inlaid with Granite
9. DDA strips: 55mm to top and front face of step unit
 - 9.1. Manufacturer: Hardscape Products Ltd
 - 9.2. Product reference: Scottish Green Schist Granite

315C ST1 Stone step unit (typical)

1. Description: ST1 Yorkstone step unit (typical)
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Crosland Hill, Yorkstone
3. Standard: To BS EN 771-5.
4. Size
 - 4.1. Surface width: 600mm per unit
 - 4.2. Going: 400mm (100mm of which to underlap unit above for 300mm visible going)
 - 4.3. Rise: 150mm

Refer to typical step details

5. Colour: Buff
6. Finish: Sawn
7. Nosing radius: 20mm
8. Accessories: 55mm DDA strip to top and front face of step unit, inlaid with granite
9. DDA strips: 55mm to top and front face of step unit
 - 9.1. Manufacturer: Hardscape Products Ltd
 - 9.2. Product reference: Scottish Green Schist Granite

315D ST2 Stone step unit (typical)

1. Description: ST2 Yorkstone step unit (typical)
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Crosland Hill, Yorkstone
3. Standard: To BS EN 771-5.
4. Size
 - 4.1. Surface width: 600mm per unit
 - 4.2. Going: 400mm (100mm of which to underlap unit above for 300mm visible going)
 - 4.3. Rise: 170mm

Refer to typical step details

5. Colour: Buff
6. Finish: Sawn
7. Nosing radius: 20mm

8. Accessories: 55mm DDA strip to top and front face of step unit, inlaid with granite
9. DDA strips: 55mm to top and front face of step unit
 - 9.1. Manufacturer: Hardscape Products Ltd
 - 9.2. Product reference: Scottish Green Schist Granite

315E ST1/ST2 Stone step unit (bottom)

1. Description: Yorkstone step unit (bottom), laid flush with adjacent paving.

Note: only required where indicated. Adjacent paving may be used instead in place of bottom step unit.
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Crosland Hill, Yorkstone
3. Standard: To BS EN 771-5.
4. Size
 - 4.1. Surface width: 600mm per unit
 - 4.2. Going: 450mm (50mm of which to underlap unit above for 400mm visible going)
 - 4.3. Unit thickness: 150mm
5. Colour: Buff
6. Finish: Sawn
7. Nosing radius: Not required
8. DDA strips: Not required

Fabrication

510 Fabrication generally

1. Design: Complete the detailed design and obtain approval prior to commencing fabrication.
2. Shop drawings: Submit.
3. Structural calculations: Submit.
4. Frameworks: Assemble and brace, including temporary members required for installation.
5. Contact between dissimilar metals: Avoid.
6. Fixings: Fully bolt together. Tighten bolts.
7. Temporary support: Do not subject members to non-design loadings.

Execution

610 Loading

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

620 Concrete foundations generally

1. Standard: To Engineer's specification
2. Concrete: To Engineer's specification
3. Admixtures: To Engineer's specification
4. Foundation holes: To Engineer's specification
5. Depth of foundations, bedding, haunching: To Engineer's specification

630 Setting components in concrete

1. Holes: To Engineer's details
2. Components: To Engineer's specification
3. Concrete fill: To Engineer's specification
4. Concrete foundations exposed to view: To Engineer's specification
5. Temporary component support: To Engineer's specification

650 Installation generally

1. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
2. Temporary support: Do not use finished work as temporary support or strutting for other work.
3. Applied finishes: Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer's recommendation before application.

662 Adverse weather

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

670 Installation of tread inserts/ nosings

1. Treads: Fully cured, sound and level. Mock up required for approval
2. Fixing
 - 2.1. Location/ position: In accordance with BS 8300-1
 - 2.2. Fixings: As manufacturer's recommendations
 - 2.2.1. Centres: As manufacturer's recommendations

680 Site painting and staining

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

Completion

910 Inspection

1. Timing: Two weeks prior to date when principal contractor expects work to be practically complete
2. Period of notice (minimum): 3 working days.

920 Documentation

1. Contents
 - 1.1. Copies of structural design calculations/ test reports.
2. General product information.
 - 2.1. Installation information.
 - 2.2. Inspection and maintenance reports.
3. Number of copies: 2
4. **Submission:** Two weeks prior to date when principal contractor expects work to be practically complete

Ω End of Section

N91

External signage and interpretation

Signage outline

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:
IR430301-GIL-ZZ-00-DR-L-XXXXXX [DRAWING DESCRIPTION]

System performance

205 Design of signage systems

1. **Description:** All signage
2. **Design:** Complete detailed design and submit before commencing work.
3. **Proposals:** Submit drawings, schedules, technical information, calculations and manufacturer's literature before commencing work.

210 External signage generally

1. **Signage systems generally:** Complete to BS 559, including components, inserts, accessories and fixings necessary to complete the system.
2. **External signage:** To BS 559, clause 6.1.
3. **Content:** Signs including facing information, components, inserts, accessories and fixings necessary to complete the system.
4. **Geometric shapes, colours and layout:** To BS ISO 7001
5. **Wind loads:** To BS EN 1991-1-4.

220 Safety signage requirements

1. **Description:**
2. **General:** To relevant parts of BS ISO 3864-1.
3. **Safety meaning:** To BS ISO 3864-1.
4. **Geometric shapes, colours and layout:** To BS ISO 3864-1 and BS ISO 3864-4.
5. **Water safety:** To BS EN ISO 7010.
6. **Escape route:** To BS ISO 16069.

235 Electrical requirements for illuminated signs

1. **Electrical requirements for illumination:** To BS 559, section 7.

Products

305 Signage products generally

1. **Materials:** To BS 559.
2. **Colorimetric and photometric properties:** To BS ISO 3864-4.
3. **Fabricated letters:** To BS 559, clause 6.6.
4. **Fixings:** To BS 559, clause 6.11 and section Z12.

Materials - Not Used

Fabrication

505 Signage samples

1. Sign type: All
 - 1.1. Action: Submit labelled samples.
 - 1.1.1. Timing: Prior to order, all samples are to be approved by Landscape Architect, Contract Administrator and Client
 - 1.2. Conformity: Retain samples on site for the duration of the contract, or until instructed to remove them.
 - 1.3. Delivered product: To conform to labelled samples.

580 Furniture Type F15 - Town centre wayfinding signage

1. Description: Town centre wayfinding signage TBC

Allowance to be made for sitewide wayfinding signage. To be developed in conjunction with Kirklees Council and feed into town centre strategy

Execution/ erection/ installation

605 Method of fixing signs

1. Description: All
2. Method of fixing: To Manufacturer's specification

610 Fixing signs generally

1. Installation: To BS 559.
 - 1.1. Secure, plumb and level.
2. Strength of fasteners: Sufficient to support all live and dead loads.
3. Fasteners for external signs: Corrosion-resistant material or with a corrosion-resistant finish. Isolate dissimilar metals to avoid electrolytic corrosion.
4. Fixings showing on surface of sign: Must not detract from the message being displayed.
5. Temporary support: Do not subject members to non-design loadings.
6. Protection of users
 - 6.1. Fasteners for signs must not have sharp edges or protrusions that would cause injury to users.
 - 6.2. Fasteners for tactile/ Braille signs must not have protrusions that would cause confusion to users.

615 Building signs into existing structures

1. Components being built in: Accurately position and support securely. Set in mortar and point neatly to match adjacent material.
2. Temporary support: Maintain for 48 hours (minimum) and prevent disturbance.

625 Fixing signposts into concrete

1. Description: To Engineer's specification

660 Site painting and staining

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

670 Making good treated wood

1. Surfaces exposed by minor cutting and/ or drilling: Treat 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.
3. Cutting and machining: Carry out as much as possible before treatment.
4. Extensively processed wood: Retreat wood sawn lengthways, planed, ploughed, etc.

Completion

905 Inspection of signs

1. Standard for timber structures: In accordance with BS EN 1995-1-1.
2. Timing: Two weeks after request by contract administrator
3. Period of notice (minimum): Three working days.
4. Maintenance inspection: Check and tighten fixings six to eight weeks after completion of structure
5. Access: Provide access for inspection and maintenance of luminaires and other technologies.

910 Testing of signs and structures

1. Standard for testing timber structures: In accordance with BS EN 1995-1-1.
2. Evaluation of conformity for road traffic signs: To BS EN 12899-1, section 10.

920 Documentation

1. Submit
 - 1.1. Copies of structural design calculations/ test reports.
 - 1.2. General product information.
 - 1.3. Installation information.
 - 1.4. Inspection and maintenance reports.
 - 1.5. Manufacturer's maintenance instructions.
 - 1.6. Guarantees, warranties, test certificates, record schedules and logbooks.
2. Number of copies: Two
3. Submission: Two weeks after request by contract administrator

Ω End of Section

P31

Holes, chases, covers and supports for services **REVISED**

Products

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-300001 to 300010 PAVING DETAILS

370A Manhole covers

1. **Description:** Throughout site all manhole covers are to be recessed to accept varying paving finish depths. To be confirmed by Engineer.

Refer to Gillespies details positioning rules for manhole orientations

370B Furniture Type F17 - Recessed Christmas tree socket

1. **Description:** Christmas tree socket with recessed cover plate
2. **Requirements:** Power and drainage to M&E design
3. **Aperture diameter:** Indicatively 400mm retention socket TBC with client
4. **Manufacturer:** NAL or similar approved
 - 4.1. **Phone number:** 01905 427100
5. **Cover plate:** Recessed to allow for paving infill, bespoke if off the shelf product not available

370C Furniture Type F18 - Recessed pop up power/water

1. **Description:** Recessed pop up power/water
2. **Requirements:** Power and drainage to M&E design
3. **Cover:** To Engineer's specification. To be recessed to allow for paving infill

370D Furniture Type F14 - Ventilation Grille **REVISED**

1. **Description:** Ventilation Grille adjacent to W3b
2. **Requirements:** Litter mesh
3. **Grille:** Louvre Grille - To M&E Specifications, but specialist supplier as part of W3b Details
4. **Width:** As details - TBC by specialist manufacturer - Hardscape

370E VG1 - Ventilation Grille by Queensgate Steps **REVISED**

1. **Description:** Ventilation Grille adjacent to Queensgate steps
2. **Requirements:** Suitable for pedestrian loading
3. **Details:** Refer to detail drawings: IR430301-GIL-ZZ-00-DR-L-310016
4. **Grille:** Pressure locked safety floor grating, PPC to RAL TBC.
5. **Sizes:** Refer to details
PL 55x11 (Depth to be confirmed by specialist)
Free area and type to be confirmed by M&E specialist.
6. **Manufacturer:** Lang and Fulton or similar approved
7. **Specials:** In VG1c - Integrated temporary balustrade slots to be manufactured into grille design. Socket type to access temporary railing/ balustrade for maintenance.

370F VG2 - Ventilation Grille to W4a (A) ADDED

1. **Description:** Ventilation Grille adjacent to Queensgate steps to W4a
2. **Requirements:** Louvre Screen
3. **Details:** DeltaBox Louvre Screening
Refer to detail drawings: IR430301-GIL-ZZ-00-DR-L-310016
4. **Grille:** DeltaBox Stainless Steel Louvre, PPC to RAL TBC. Hot-dip galvanized and polyester powder coated to BS EN ISO 1461 and BS EN 13438.
5. **Sizes:** Refer to details
Free Area Requirements (To be confirmed by M&E)
6. **Manufacturer:** Lang and Fulton or similar approved
7. **Specials:** In W4a - Bespoke fabrication - opening sizes - refer to drawings

Execution - Not Used

Ω End of Section

Q10 Kerbs/ edgings/ channels/ paving accessories

Types of kerbs/edgings and channels

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-160001 to 160002 SAMPLE MOCK-UP AREA PLAN
IR430301-GIL-ZZ-00-DR-L-210001 to 210007 INTERFACE SECTIONS
IR430301-GIL-ZZ-00-DR-L-300001 to 3100010 PAVING DETAILS
IR430301-GIL-ZZ-00-DR-L-310001 to 310005 KERB AND EDGES DETAILS
IR430301-GIL-ZZ-00-DR-L-310010 to 310013 WALL DETAILS

112B Kerb Type K3 - Flush Pin Kerb

1. Description: Precast concrete pin kerb, flush
2. Standard: To BS EN 1340.
3. Product Reference: Cycle kerb, flat
4. Width: 50mm
5. Height: 150mm
6. Length: 1000mm
7. Manufacturer: [Hardscape Products Ltd](#)
8. Contact details
 - 8.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 8.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
 - 8.3. Web: www.hardscape.co.uk
 - 8.4. Email: enq@hardscape.co.uk
9. Colour: Standard, light grey
10. Slip/ skid resistance: To Supplier's specification
11. Laying: Flush

120A Kerb Type K1 - Flush stone kerb

1. Description: Stone kerb, flush
2. Standard: To BS EN 1343.
3. Supplier: [Hardscape Products Ltd](#)
4. Contact details
 - 4.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire

United Kingdom
BL7 9RP

- 4.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
- 4.3. Web: www.hardscape.co.uk
- 4.4. Email: enq@hardscape.co.uk
5. Product reference: Mixed Colour Pennant, Yorkstone
 - 5.1. Finish: Sandblasted
6. Stone type: Yorkstone
7. Width: 100mm
8. Height: 200mm
9. Length: 1000mm
10. Special shapes: Allowance for radial units as required
11. Laying: Flush
12. Joints generally: Butt jointed
13. Slip/skid resistance: To Supplier's specification

120B Kerb Type K2 - Upstand stone kerb

1. Description: Stone kerb, upstand
2. Standard: To BS EN 1343.
3. Supplier: [Hardscape Products Ltd](#)
4. Contact details
 - 4.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 4.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
 - 4.3. Web: www.hardscape.co.uk
 - 4.4. Email: enq@hardscape.co.uk
5. Product reference: Mixed Colour Pennant, Yorkstone
 - 5.1. Finish: Sandblasted
6. Stone type: Yorkstone
7. Width: 300mm
8. Height: 250mm
9. Length: 1000mm
10. Special shapes: Allowance for radial units as required
11. Laying: 100mm upstand. Refer to Gillespies details.
12. Joints generally: Butt jointed
13. Slip/skid resistance: To Supplier's specification

120C Kerb Type K4 - Flush stone kerb

1. Description: Stone kerb, flush. To retain part of edge by seating walls
2. Standard: To BS EN 1343.
3. Supplier: [Hardscape Products Ltd](#)

4. Contact details
 - 4.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 4.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
 - 4.3. Web: www.hardscape.co.uk
 - 4.4. Email: enq@hardscape.co.uk
5. Product reference: Mixed Colour Pennant, Yorkstone
 - 5.1. Finish: Sandblasted
6. Stone type: Yorkstone
7. Width: 200mm
8. Height: 350mm
9. Length: 1000mm
10. Special shapes: Allowance for radial units as required
11. Laying: Flush. Refer to Gillespies details.
12. Joints generally: Butt jointed
13. Slip/skid resistance: To Supplier's specification

120D Edge Type 2 - Uprand Stone Edge

1. Description: Uprand stone edge by ventilation grilles to Queensgate steps. TBC by Engineer
2. Standard: To BS EN 1343.
3. Supplier: [Hardscape Products Ltd](#)
4. Contact details
 - 4.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 4.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
 - 4.3. Web: www.hardscape.co.uk
 - 4.4. Email: enq@hardscape.co.uk
5. Product reference: Mixed Colour Pennant, Yorkstone
 - 5.1. Finish: Sandblasted
6. Stone type: Yorkstone
7. Width: 100mm
8. Height: 260mm
9. Length: 1000mm
10. Special shapes: Allowance for corner units as required
11. Laying: With upstand. Refer to Gillespies details.
12. Joints generally: Butt jointed
13. Slip/skid resistance: To Supplier's specification

170 D1 - Slot drain system

1. Description: Slot drain system
2. Manufacturer: ACO
 - 2.1. Product reference: Brickslot ST

Note: Engineer to confirm suitability for purpose, loading & capacity requirements

3. Standard: To BS EN 1433.
4. Third party certification: CE Certified in accordance with BS EN 1433.
5. Material: Stainless steel
6. Aperture
 - 6.1. Aperture Width: 10mm

180 D2 - Drainage channel system with bespoke grating

1. Description: Drainage channel system with bespoke grating
2. Manufacturer: ACO
 - 2.1. Product reference: MultiDrain MD

Note: Engineer to confirm suitability for purpose, loading & capacity requirements

3. Standard: To BS EN 1433.
4. Third party certification: CE Certified in accordance with BS EN 1433.
5. Material: Stainless steel
6. Aperture
 - 6.1. Width: 150 mm.
 - 6.2. Grating: Bespoke with perforated jaquard loom punch hole pattern, refer to Gillespies design intent
 - 6.3. Grating material: Powder coated RAL TBC by specialist
 - 6.4. Loadings: D4 Rating for HGV loading

200 Edge Type E1 - Metal Retaining Edge

1. Description: Metal Retaining Edge, to retain adjacent planting adjacent to ventilation grille
Refer to Gillespies design intent
2. Manufacturer: Logic Bespoke
 - 2.1. Phone number: 01642 373400
 - 2.2. Product reference: Bespoke Metal edge
3. Size: Indicative retaining height: 500mm. Refer to details.
4. Footprint: Offset from adjacent ventilation steelwork
5. Type/ Material: Steel
 - 5.1. Finish: Galvanised and PPC
6. Accessories: To support top mounted perforated ventilation grille
7. Fixings/foundations: Foundation free baseplate, placed onto drainage board system due to position over slab.

Roads/paving accessories/ marking/ demarcation

305 Furniture Type F14 - Ventilation Grille Behind Low Wall

1. **Description:** Bespoke perforated ventilation grille behind low wall, over slab. Refer to Gillespies design intent
2. **Manufacturer:** Specialist fabricator TBC
 - 2.1. **Product reference:** Specialist fabricator details TBC
3. **Size:** 300mm width
4. **Material:** Galvanised steel, PPC to RAL 7016 Anthracite Grey
5. **Grille:** Perforations to prevent litter ingress, while allowing for adequate ventilation. Jaquard Loom punch hole pattern. Litter mesh located behind ventilation grille
6. **Fixings:** To Wall Type 3b framework and Edge Type E1

Laying

510 Laying kerbs, edgings and channels

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

520 Adverse weather

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

530 Concrete for foundations, races and haunching

1. **Standard:** To Engineer's details
2. **Designated mix:** To Engineer's details
3. **Workability:** To Engineer's details

570 Channels

1. **Installation:** To an even gradient, without ponding or backfall.
2. **Lowest points of channels:** 6 mm above drainage outlets.

580 Drainage channel systems

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

600 Radius kerbs/ channels

1. **Usage:** Radii of 15 m or less.

610 Angle kerbs

1. Usage: Internal and external 90° changes of direction.
2. Cutting of mitres: Not permitted. Bespoke angle/junction units, refer to details.

620 Accuracy

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

625 Regularity of paved surfaces

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

630 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.
 - 1.1. Joint width: 3 mm.

Ω End of Section

Q22 Asphalt roads/ pavings

Clauses

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-210001 to 210007 INTERFACE SECTIONS
IR430301-GIL-ZZ-00-DR-L-300001 to 300010 PAVING DETAILS

15 Paving Type P7 - Temporary Pedestrian Asphalt Surface

1. Description: Temporary surfaced footpath
2. Standard: To BS EN 13108-1
3. Subgrade improvement layer: To Engineer's details
4. Granular sub-base: To Engineer's details
 - 4.1. Compacted thickness: To Engineer's details
5. Binder course: Submit proposals
6. Surface course: AC 6 dense surf
7. Reclaimed content
 - 7.1. Standard: To BS EN 13108-8.

30 Laying generally

1. Preparation: Remove all loose material, rubbish and standing water.
2. Adjacent work: Form neat junctions. Do not damage.
3. Channels, kerbs, inspection covers etc: Keep clean.
4. New paving
 - 4.1. Keep traffic free until it has cooled to prevailing atmospheric temperature.
 - 4.2. Do not allow rollers to stand at any time.
 - 4.3. Prevent damage.
 - 4.4. Lines and levels: With regular falls to prevent ponding.
 - 4.5. Overall texture: Smooth, even and free from dragging, tearing or segregation.
 - 4.6. Condition on completion: Clean.

35 Levels

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

Ω End of Section

Q23

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

Types of surfacing

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-XXXXXX [DRAWING DESCRIPTION]

Gillespies are providing design intent only. Refer to Engineer's design and specification.

Laying

340 Laying generally

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

350 Cold weather working

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

390 Protection from traffic and plant

1. Paved areas: Restrict access to prevent damage.

Completion - Not Used

Deleted clauses

160 Paving Type P10 - Loose pebbles **DELETED**

Ω End of Section

Q25

Slab/ brick/ sett/ cobble pavings **REVISED**

General

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-160001 to 160002 SAMPLE MOCK-UP AREA PLAN
IR430301-GIL-ZZ-00-DR-L-190001 to 190006 HARDWORKS SETTING OUT
IR430301-GIL-ZZ-00-DR-L-210001 to 210007 INTERFACE SECTIONS
IR430301-GIL-ZZ-00-DR-L-300001 to 300010 PAVING DETAILS

100A Sub-base and Build-ups Generally (On grade)

1. **Description:** Generally all build-up and sub-bases to be to Engineers specification. Jointing and mortar to Landscape Architect's details.

Refer to section Q25.100B for build-ups on slab

2. **Subgrade improvement layer:** To Engineer's details
 - 2.1. **Compacted thickness:** To Engineer's details
3. **Geotextile:** To Engineer's details
4. **Granular sub-base:** To Engineer's details
 - 4.1. **Compacted thickness:** To Engineer's details
5. **Laying course**
 - 5.1. **Material:** In accordance with BS 7533-3 on flexible systems, and ready mixed mortar for rigid systems
6. **Blocks:** To Landscape Architect's specification
 - 6.1. **Paving depth:** To Engineer's specification to accommodate appropriate loading requirements
7. **Jointing:** To Landscape Architect's specification
8. **Setting out**
 - 8.1. **Bond:** To Landscape Architect's specification

100B Sub-base and Build-ups Generally (On Slab)

1. **Description:** Generally all build-up and sub-bases to be to Engineers specification. Jointing and mortar to Landscape Architect's details.

Refer to section Q25.100A for build-ups on grade

2. **Laying course**
 - 2.1. **Material:** In accordance with BS 7533-3 on flexible systems, and ready mixed mortar for rigid systems
3. **Blocks:** To Landscape Architect's specification
 - 3.1. **Paving depth:** To Engineer's specification to accommodate appropriate loading requirements
4. **Jointing:** To Landscape Architect's specification
5. **Setting out**
 - 5.1. **Bond:** To Landscape Architect's specification

6. Proposed screed layer: To Engineer's details
7. Primary waterproof layer above existing screed: To Architect's details
8. Drainage board: To Engineer's details
9. Filter fleece: To Engineer's details

110A Paving Type P1 - Yorkstone flag paving

1. Description: Yorkstone flag paving
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Stone type: Yorkstone
4. Product name/colour: Crosland Hill - Multi
5. Finish: Diamond sawn
6. Sizes: 600-900 (l) x 300 (w)

Thickness to Engineer's information

7. Laying course: Ready-mixed mortar to Engineer's information
8. Jointing: Ready-mixed mortar, 6-8mm joints
 - 8.1. Bond: Random stretcher bond
9. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab

110B Paving Type P2 - Yorkstone block paving

1. Description: Yorkstone block paving
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Stone type: Yorkstone
4. Product name/colour: Crosland Hill - Multi
5. Finish: Diamond sawn
6. Sizes: 100-200 (l) x 100 (w)

Thickness to Engineer's information

Note: Allowance for 10-15% extra long (300mm units) to avoid sliver paving cuts

7. Laying course: Ready-mixed mortar
8. Jointing: Ready-mixed mortar, 6-8mm joints
 - 8.1. Bond: Random stretcher bond
9. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab

110C Paving Type P3 - Feature granite paving REVISED

1. Description: Feature granite paving to square, in 3 sections:
 - Madras pattern
 - Glen Check
 - TatterstallRefer to drawings and sample mock up panel requirements
2. Supplier: Hardscape Products Ltd

2.1. Phone number: 01204 565 500

3. Products: UK and European granites/slate, see below for preferred variation
4. Product depths: To Engineers details

Depth to Engineer's information

5. **VARIATION 2**

Refer to drawings IR430301-GIL-ZZ-00-DR-L-300010 to 300016 Feature Paving Details for typical sizes. Sizes below are indicative only

Madras Pattern - Variation 2

Main thread (111m²): Fernando Beige granite, sandblasted, 300x200mm, soldier course

Secondary thread (46m²): Rosa Monforte, bush hammered 300x200mm, soldier course

Infill panel (146m²): Mix of Fernando Beige, flamed (58%), Gris Cadalso, flamed (23%) & Amarelo Ariz, shotblasted(19%), 150x150mm, stack bond

Feature (37m²): Amarelo Ariz granite, flamed, 300x200mm, soldier course

Glen Check Pattern - Variation 2

Main thread (66m²): Fernando Beige granite, sandblasted, 300x200mm, double row soldier course

Secondary thread (114m²): Rosa Monforte, bush hammered, 300x200mm, soldier course

Infill panel (127m²): Mix of Fernando Beige, flamed (55%), Gris Cadalso, flamed (21%) & Amarelo Ariz, shotblasted (24%), 150x150mm, stack bond

Feature (36m²): Amarelo Ariz granite, flamed, 300x200mm, soldier course

Tatterstall Pattern - Variation 2

Main thread (48m²): Fernando Beige granite, sandblasted, 300x200mm, soldier course

Secondary thread (54m²): Rosa Monforte, bush hammered, 300x200mm, soldier course

Infill panel (210m²): Mix of Fernando Beige, flamed (65%), Gris Cadalso, flamed (19%) & Amarelo Ariz, shotblasted(16%), 158x158mm, stack bond

Feature (23m²): Amarelo Ariz granite, flamed, 300x205mm, soldier course

6. Laying course: Ready-mixed mortar
7. Jointing: Ready-mixed mortar, 6-8mm joints
 - 7.1. Bond: Varies, refer to Gillespies design intent
8. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab
9. Sample panels: Allowance for 3x3m sample panels x 12no. for client approval of paving pattern

Sample patterns to be fully laid and grouted prior to inspection by client team for approval on site. Requirement to be undertaken early on in construction prior to ordering of full materials

110D Paving Type P5 - Existing yorkstone flag paving relaid

1. Description: Yorkstone flag paving (existing relaid)
2. Stone type: Yorkstone as existing
3. Product name/colour: As existing (buff/grey)
4. Finish: As existing
5. Sizes: As existing
6. Laying course: Ready-mixed mortar
7. Jointing: To match existing

- 7.1. Bond: Stretcher bond as existing
8. Build-up: Refer to Section Q25.100A for build-up on grade
9. Note: Allowance made for making good of existing units where necessary and contractor to confirm and order of small amount of matching units should there not be enough to relay - samples to be provided for comparison and approval by Landscape Architect

110E Paving Type P9 - Feature paving with lettering

1. Description: Feature granite paving with inset lettering
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Stone type: Granite
4. Product name/colour/finish: **Paving body:** Preta Odilvelas (Flamed)
Inset lettering: Cinza Ariz (Sandblasted)
5. Sizes: varies (l) x 400 (w) x 65mm (d)

Depth to Engineer's information

6. Laying course: Ready-mixed mortar
7. Jointing: Ready-mixed mortar, 6-8mm joints
8. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab
9. Sample panel: Allowance for sample panels for client approval of paving pattern

Sample patterns to be fully laid and grouted prior to inspection by client team for approval on site. Requirement to be undertaken early on in construction prior to ordering of full materials

110F Paving Type P12 - Yorkstone band paving

1. Description: Yorkstone flag paving
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Stone type: Yorkstone
4. Product name/colour: Crosland Hill - Multi
5. Finish: Sandblasted
6. Sizes: 400 (l) x 100 (w) x 65mm (d)

Depth to Engineer's information

Bespoke corner units - 200 (l) x 200 (w) x 65mm (d) with 100mm void to corner, refer to details

7. Laying course: Ready-mixed mortar
8. Profile: Flush with adjacent paving
9. Jointing: Ready-mixed mortar, 6-8mm joints
10. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab
11. Special: Bespoke corner units

120A Paving Type P4 - Concrete Flag Paving

1. Description: To Queensgate South highway works
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500

3. Stone type: Concrete
4. Product name/colour: Shelbourne Silver Granite
5. Finish: As supplied
6. Sizes: 300 (l) x 300 (w) x 80mm (d)

Depth to Engineer's information

7. Laying course: Ready-mixed mortar
8. Jointing: Ready-mixed mortar, 6-8mm joints
 - 8.1. Bond: Stretcher bond
9. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab

120B Paving Type P6 - Concrete Flag Paving

1. Description: To south of building
2. Supplier: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Stone type: Concrete
4. Product name/colour: Shelbourne Buff Granite
5. Finish: As supplied
6. Sizes: 400 (l) x 400 (w) x 80mm (d)

Depth to Engineer's information

7. Laying course: Ready-mixed mortar
8. Jointing: Ready-mixed mortar, 6-8mm joints
 - 8.1. Bond: Random stretcher bond
9. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab

System performance - Not Used

Products

320A Paving Type P8A - Corduroy Tactile Paving

1. Description: Corduroy tactile paving
2. Standard: To DD CEN/TS 15209.
3. Material: Granite
 - 3.1. Manufacturer: [Hardscape Products Ltd](#)
 - 3.1.1. Contact details
 - 3.1.1.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 3.1.1.2. Telephone: [+44 \(0\)1204 565500](tel:+44(0)1204565500)
 - 3.1.1.3. Web: www.hardscape.co.uk
 - 3.1.1.4. Email: enq@hardscape.co.uk

- 3.1.2. Product reference: Granite Corduroy Tactile Paving Units
 - 3.1.3. Colour: Silva Preta Favaco (flamed)
 - 3.1.4. Note: LV values and sample to be provided by supplier to ensure adequate contrast between paving, step units and tactiles, for approval by Landscape Architect
4. Nominal sizes: 400x400x80mm
- Depth to Engineer's information
- 5. Colour: Mid Grey
 - 6. Build-up: Refer to Section Q25.100A for build-up on grade
Refer to Section Q25.100B for build-up on slab

320B Paving Type P8B - Blister Tactile Paving

- 1. Description: Blister tactile paving, to Queensgate South highways works
 - 2. Standard: To DD CEN/TS 15209.
 - 3. Material: Concrete
 - 3.1. Manufacturer: [Hardscape Products Ltd](#)
 - 3.1.1. Contact details
 - 3.1.1.1. Address: Eagley House
Deakins Business Park
Egerton
Bolton
Lancashire
United Kingdom
BL7 9RP
 - 3.1.1.2. Telephone: +44 (0)1204 565500
 - 3.1.1.3. Web: www.hardscape.co.uk
 - 3.1.1.4. Email: enq@hardscape.co.uk
 - 3.1.2. Product reference: Blister Concrete Tactile Paving Units
4. Nominal sizes: 400x400x50mm
- Depth to Engineer's information
- 5. Colour: Red at crossings, else buff

365 Geotextile sheet

- 1. Description: To Engineer's Specification

390 Sand/ fine aggregate for unbound laying course and jointing of concrete flag paving

- 1. Description: Sand to joints for tactile paving
- 2. Standard: To BS 7533-4, unbound construction laying course and jointing material.
- 3. Purity: Free from deleterious salts, contaminants, lime and cement.
- 4. Procurement: Obtain from one source and ensure consistent grading.

440 Ready-mixed mortar

- 1. Description: To match existing on Jameson Street, contractor to review

465 Sealant for movement joints

- 1. Description: Mastic for movement joints

2. Sealant
 - 2.1. Type: Mastic
 - 2.2. Manufacturer: Contractor to submit proposals. Engineer to confirm suitability for purpose
 - 2.3. Colour: Allowance for 3no. colours to be tested within sample area for approval by Landscape Architect

Execution

610 Material samples

1. Samples representative of colour and appearance of designated materials: Submit before placing orders.
 - 1.1. Designated materials: Natural stone slab paving; reference sample to BS EN 1341

615 Quality Control

1. Sample areas: Provided on site for approval by Client and Landscape Architect
 - 1.1. Types of paving: Natural stone
 - 1.2. Size (minimum): 1000x1000mm
2. Approval of appearance and surface: Obtain before proceeding.

620 Adverse weather

1. General
 - 1.1. Temperature: Do not lay or joint paving if the temperature is below 3°C on a falling thermometer or below 1°C on a rising thermometer.
 - 1.2. Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.
2. Paving with mortar joints and/ or bedding
 - 2.1. Protect from frost damage, rapid drying out and saturation until mortar has hardened.
3. Paving laid and jointed in sand/ fine aggregate
 - 3.1. Stockpiled laying course sand/ fine aggregate: Protect from saturation.
 - 3.2. Exposed areas of unbound laying course and uncompacted areas of unbound paving: Protect from heavy rainfall.
 - 3.3. Saturated unbound laying course: Remove and replace, or allow to dry before proceeding.
 - 3.4. Laying dry sand/ fine aggregate jointed paving in damp conditions: Brush in as much jointing sand as possible. Minimize site traffic over paving. As soon as paving is dry, top up joints and complete compaction.

625 Laying pavings – general

1. Appearance: Smooth and even with regular joints and accurate to line, level and profile.
2. Falls: To prevent ponding.
3. Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
 - 3.1. Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.
4. Slopes: Lay paving units upwards from the bottom of slopes.
5. Paving units: Free of mortar and sand stains.
6. Cutting: Cut units cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

630 Levels of paving

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

635 Regularity of paved surfaces

1. Maximum variation in gap under a 3 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface)
 - 1.1. Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
 - 1.2. Precast concrete flags or natural stone slabs: 3 mm.
2. Difference in level between adjacent paving units (maximum): 2 mm.
3. Sudden irregularities: Not permitted.

640 Colour banding

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

645 Protection

1. Cleanliness: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
2. Materials storage: Do not overload pavings with stacks of materials.
3. Handling: Do not damage paving unit corners, arrises, or previously laid paving.
4. Mortar bedded pavings: Keep free from traffic after laying:
 - 4.1. Pedestrian traffic (minimum): To Supplier's recommendations
 - 4.2. Vehicular traffic (minimum): To Supplier's recommendations
5. Access: Restrict access to paved areas to prevent damage from site traffic and plant.

650 Cementitious bases and sub-bases

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

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

1. Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
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.

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

1. Standard generally: In accordance with BS 7533-4.
2. Flag installation and cutting: To Interpave 'Concrete flag paving'
3. Laying course
 - 3.1. Nominal thickness: 30mm
4. Joint width (nominal): To match existing on Jameson Street

795 Sealant movement joints in mortar-bedded units

1. Spacing: To Engineer's details
2. Extent of joints: To Engineer's details
3. Joint filler: Compressible cellular rubber or plastics compatible with specified sealant. Build in as work proceeds.
 - 3.1. Joint width: To Engineer's details
4. Barrier (joint breaker): As recommended by sealant manufacturer. Position filler and barrier accurately to fully support sealant at recommended distance from exposed faces of units.
5. Sealant
 - 5.1. Application: To Engineer's details

Completion

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

1. Sand dressing: Leave a thin layer of dry jointing sand/ fine aggregate over the paving, sweep clean before practical completion
2. Final compaction of the surface course: In accordance with BS 7533-3.
3. Vacuum cleaning machines: Not allowed.

Ω End of Section

Q28 Topsoil and soil ameliorants

System outline

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-400001 to 400006 PLANTING PLAN
IR430301-GIL-ZZ-00-DR-L-410001 to 410006 BULB & TREE PLANTING PLAN
IR430301-GIL-ZZ-00-DR-L-450001 to 450007 SOFTSCAPE DETAILS

115A Topsoil system for S1 Species Rich Lawn

1. Description: To amenity lawn
2. Composition
 - 2.1. Topsoil/subsoil: In accordance with BS 3882.
 - 2.2. Topsoil depth: 150mm
 - 2.3. Subsoil depth: 150mm
 - 2.4. Subgrade: Broken up to depth of 150-200mm

135A Planting bed topsoil system for S2/S3 Planting (On Grade)

1. Description: To ornamental planting over existing subgrade (not slab)
2. Composition
 - 2.1. Topsoil/subsoil: In accordance with BS 3882.
 - 2.2. Mulching and top dressing: As per Q28.155A
 - 2.3. Topsoil depth: 300mm
 - 2.4. Subsoil depth: 300mm
 - 2.5. Subgrade: Broken up to depth of 150-200mm

135B Planting bed topsoil system for S2/S3 Planting (On Slab)

1. Description: To ornamental planting over slab
2. Composition
 - 2.1. Topsoil/subsoil: In accordance with BS 3882.
 - 2.2. Mulching and top dressing: As per Q28.155A
 - 2.3. Topsoil depth: 300mm
 - 2.4. Subsoil depth: Remaining depth between topsoil and drainage mat layer. Min. 200mm

145 Planting pit backfilling topsoil system for all trees

1. Description: Tree pits to trees
2. Composition
 - 2.1. Topsoil/subsoil: In accordance with BS 3882.
 - 2.2. Mulching and top dressing: As per Q28.155A
 - 2.3. Depths: **Tree Planting (Semi-mature, on grade)**

Topsoil: 400mm
Subsoil: 600mm

Indicative tree pit footprint: 2000x2000mm

Tree Planting (Semi-mature, over/near slab)

Topsoil: 400mm (low weight spec)
Subsoil: 600mm (low weight spec)
Indicative tree pit footprint: 2000x2000mm

Tree Planting (Multi-stem, on grade)

Topsoil: 400mm
Subsoil: 600mm
Indicative tree pit footprint: 1500x1500mm

2.4. Subgrade: Broken up to depth of 150-200mm, unless over slab

2.5. Accessories: Root barriers to edge of planting bed

2.5.1. Product: ReRoot 600

2.5.2. Supplier: GreenBlue Urban

2.5.3. Phone number: 0808 588 0121

155 Mulching and top dressing system - Organic

1. Description: For trees and Ornamental Planting. Refer to Q28.355
2. Composition
 - 2.1. Material: Organic materials

Products

300 Preparation materials generally

1. Purity: Free of pests and disease.
2. Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - 3.1. Corrosive, explosive or flammable.
 - 3.2. Hazardous to human or animal life.
 - 3.3. Detrimental to healthy plant growth.
4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
5. Objectionable odour: None.
6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

305 Permitted materials

1. Materials: Bark, Composted coir fibre, Composted green waste
2. Give notice: before ordering or using.
3. Declaration of compliance in accordance with BS EN 13650: Required

310 Materials not permitted

1. Materials: Products containing peat

315A Imported topsoil for general areas (on grade)

1. **Description:** For general areas (excluding areas over slab)
2. **Quantity:** Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
3. **Standard:** To BS 3882.
4. **Classification:** Multipurpose
 - 4.1. Soil textural class to BS 3882, Figure 1: Sandy loam
5. **Source:** Green-Tech or similar approved
 - 5.1. Phone number: 01423 369727
 - 5.2. Product reference: Green-tree Topsoil. Product no: 190GT3230-PRO
 - 5.3. Samples: Sample and test sheet to be provided
 - 5.4. Indicative analysis:

PH	7.9
Soil texture	
Clay Content %	7
Silt Content %	11
Sand Content %	82
Total Nitrogen %	0.2
Extractable Phosphorus mg/l	83
Extractable Potassium mg/l	1293
Extractable Magnesium mg/l	139
Organic Matter %	5
Carbon: Nitrogen Ration	13
Visible contaminants	
>2mm	0
Plastic	0
Sharps	0

315B Imported subsoil for general areas (on grade)

1. **Description:** For general areas (excluding areas over slab)
2. **Quantity:** Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
3. **Standard:** To BS 8601
4. **Classification:** Multipurpose
 - 4.1. Soil textural class to BS 3882, Figure 1: Sandy loam
5. **Source:** Green-Tech or similar approved
 - 5.1. Phone number: 01423 369727
 - 5.2. Product reference: Green-tree Subsoil. Product no: 190GT3102-PRO
 - 5.3. Samples: Sample and test sheet to be provided
 - 5.4. Indicative analysis:

PH	7.9
Soil texture	
Clay Content %	8
Silt Content %	12%
Sand Content %	80
Organic Matter %	0.6

330A Imported lightweight topsoil for general areas (on slab)

1. Description: For topsoil within areas over slab
2. Type: Lightweight
 - 2.1. Soil textural class: As manufactured
3. Source: Green-Tech or similar approved
 - 3.1. Phone number: 01423 369727
 - 3.2. Product reference:: Green-tree Intensive Roof Garden Substrate. Product no: 190GT3551-PRO
 - 3.3. Samples: Sample and test sheet to be provided

330B Imported lightweight subsoil for general areas (on slab)

1. Description: For subsoil within areas over slab
2. Type: Lightweight
 - 2.1. Soil textural class: As manufactured
3. Source: Green-Tech or similar approved
 - 3.1. Phone number: 01423 369727
 - 3.2. Product reference:: Green-tree Roof Garden Subsoil. Product no: 190GT4569-PRO
 - 3.3. Samples: Sample and test sheet to be provided

355 Organic materials

1. Description: Fine bark mulch for general planting areas
2. Requirements: Well composted bark mulch, 10-35mm grain size
3. Type: Fine bark - well composted
4. Source: Locally sourced, contractor to submit proposals

Execution

610 Topsoil analysis

1. Soil to be analysed: All imported soils/manufactured growing media shall be independently tested and approved prior to importation to site. Soil Supplier Test Certificates/Reports will not be accepted. Independent soil tests shall be carried out by the approved soil analyst.
2. Soil analyst: Tim O'Hare Associates or similar approved
3. Samples: Collect in accordance with BS 3882.
4. Submit
 - 4.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
 - 4.2. Report detailing soil analyst's recommendations.

620 Importing topsoil

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

625 Sample loads

1. Description: For all soil types
2. Deliver to site a sample load: Minimum 25kg
3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - 3.1. Notice period: 14 days

630 Documentation for imported soil/growing media

1. Description: For all areas of soft landscape
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

650 Notice

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

655 Mechanical tools

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

660 Grading subsoil for:

1. Description: All areas of soft landscape
2. Standard: In accordance with BS 8601.
3. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
4. Areas of thicker topsoil: Excavate locally.
5. Avoid compaction.
6. Excess subsoil: Remove.

665 Subsoil surface preparation for:

1. Description: Areas of soft landscape on grade (not on slab)
2. Standard: In accordance with BS 3882.
3. General: Excavate and/ or place fill to required profiles and levels, as section D20.
4. Loosening
 - 4.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth

- 4.1.1. Light and noncohesive subsoils: 150-200mm
- 4.1.2. Stiff clay and cohesive subsoils: 300 mm
- 4.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
- 4.2. Wet conditions: Do not loosen subsoils.
- 5. Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
- 6. Remove from site: Arisings, contaminants and debris

670 Inspecting formations

- 1. Give notice: Before spreading topsoil for all areas.
- 2. Notice period: 7 days

680 Surplus topsoil to be retained

- 1. Generally: Spread and level on site:
 - 1.1. Locations: Throughout the site
 - 1.2. Protected areas: Do not raise soil level within root spread of trees that are to be retained.

685 Surplus materials to be removed

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

690 Topsoil storage heaps

- 1. Location: Submit proposals
- 2. Height (maximum): 1.0 m
- 3. Width (maximum): 2.0 m
 - 3.1. Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
- 4. Protection
 - 4.1. Do not place any other material on top of storage heaps.
 - 4.2. Do not allow construction plant to pass over storage heaps.
 - 4.3. Prevent compaction and contamination, by fencing and covering as appropriate.

700 Grading of topsoil

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

705 Handling topsoil

- 1. Standard: In accordance with BS 3882.
- 2. Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- 3. Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- 4. Contamination: Do not mix topsoil with:
 - 4.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
 - 4.2. Other grades of topsoil.
- 5. Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.

6. **Wet conditions:** Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall, or when the moisture content is greater than the plastic limit.

710 Spreading topsoil on:

1. **Description:** All 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:** Refer to Q28.135 & Q28.145
6. **Crumb structure:** Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 Loose tipping of topsoil

1. **Standard:** In accordance with BS 3882.
2. **General:** Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

718 Final cultivation

1. **Description:** Soft landscape areas
2. **Compacted topsoil:** Break up to full depth.
3. **Tilth:** Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. **Depth:** Refer to Q28.135 & Q28.145
5. **Particle size (maximum):** 20 mm
6. **Timing:** Within a few days before planting
7. **Weather and ground conditions:** Suitably dry.
8. **Surface:** Leave regular and even.
9. **Levels:** 25 mm above adjoining paving or kerbs
10. **Undesirable material brought to the surface**
 - 10.1. Remove visible weeds.
 - 10.2. Remove roots and large stones with any dimension exceeding 50 mm.

720 Finished levels of topsoil after settlement

1. **In relation to adjoining paving, kerbs or hard surfaces:** 25 mm below
2. **In relation to dpc of adjoining buildings:** Not less than 150 mm below.
3. **In relation to adjacent grass areas:** 25 mm below
4. **Seeded areas:** Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
5. **Sportsfields:** To even levels and within the following permitted deviations:
 - 5.1. **From levels or gradients shown on drawings:** ± 75 mm.
 - 5.2. **From line between boning rods 30 m apart:** ± 25 mm.
6. **Within root spread of existing trees and shrubs to be retained:** Do not dig or cultivate.
7. **Adjoining soil areas:** Marry in.
8. **Thickness of turf or mulch:** Included.

845 Applying loose mulch

1. Description: For planting areas and tree pits
2. Timing: Immediately after planting
3. Preparation: 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: 50 mm depth
 - 4.3. Container planting: 50 mm depth
5. Finished level of mulch: 25mm below adjacent surface

Completion

920 Applying mulch

1. Timing: At end of the rectification period
2. Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
3. Planting beds: Re-mulch.
 - 3.1. Depth (minimum): 50 mm
4. Trees: Remulch.
 - 4.1. Depth (minimum): 50 mm

Ω End of Section

Q30 Seeding/ turfing

General information/requirements

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-400001 to 400006 PLANTING PLAN
IR430301-GIL-ZZ-00-DR-L-450001 to 450007 SOFTSCAPE DETAILS

115 Seeded and turfed areas

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

120 Climatic conditions

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

145 Watering

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

150 Water restrictions

1. **Timing:** If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

160 Notice

1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying 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: 3 working days

170 Setting out

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

Preparation

210 Herbicide

1. Description: DO NOT USE

250 Soil requirements

1. Type
 - 1.1. Seeded areas: Mulching and top dressing system, as section Q28
 - 1.2. Turfed areas: Mulching and top dressing system, as section Q28

Seeding - Not Used

Turfing

400 Softworks Type S1 - Species Rich Lawn Turf

1. Description: Species rich amenity grass turf
2. Supplier: Wildflower Turf
 - 2.1. Phone number: 01256 771222
 - 2.2. Website: wildflowerturf.co.uk
 - 2.3. Product reference: WFT-Species-Rich-26
3. Properties of soil used for turf production: Peat-free, well drained sandy loam

420 Delivery and storage

1. Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
2. Frosty weather or waterlogged ground: Do not lift turf.
3. Delivery: Arrange to avoid need for excessive stacking.
4. Stacking height (maximum): 1 m.
5. Dried out or deteriorated turf: Do not use.
6. Certification
 - 6.1. Standard: To BS 3969.
 - 6.2. Declaration: Species mix, including percentage of specified species

423 Inspection of turf

1. Description: For all turf areas
2. Sampling method: To BS 3969.
3. Give notice: Before lifting turf.
 - 3.1. Period of notice: 3 working days

430 Turfing generally

1. Time of year: Autumn or early winter
2. Timing of laying
 - 2.1. Spring and summer: Within 18 hours of delivery.
 - 2.2. Autumn and winter: Within 24 hours of delivery.
3. Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.

4. Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
5. Jointing: Laid with broken joints, well butted up. Do not stretch turf.
6. Edges: Whole turfs, trimmed to a true line.
7. Adjusting levels: Remove high spots and fill hollows with fine soil.
8. Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
9. Dressing, brushed well in to completely fill all joints: Mulching and top dressing system, as section Q28
10. Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

450 Trimming turf

1. Newly planted tree pits: Neatly cut away around individual trees.
 - 1.1. Diameter: 1000 mm
 - 1.2. Tree pit surface: Respread existing mulch

Protecting/cutting

530 First cut of amenity grass areas

1. Timing: When grass is reasonably dry.
 - 1.1. Height of initial growth: 40-75 mm
2. Preparation
 - 2.1. Debris and litter: Remove.
 - 2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 50 mm
4. Mower type: Contractor's choice
5. Arisings: Remove from site and dispose of at a local green waste disposal facility

590 Cleanliness

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

Maintenance

610 Failures of seeding/turfing

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

620 Maintaining amenity grass

1. Description: Maintenance to amenity grass
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:
4. Preparation: Before each cut remove all litter and debris.
5. Cutting: As and when necessary to a height of 50 mm.
 - 5.1. Arisings: Remove from site and dispose of at a local green waste disposal facility
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

Ω End of Section

Q31

External planting

General information/ requirements

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-400001 to 400006 PLANTING PLAN
IR430301-GIL-ZZ-00-DR-L-410001 to 410006 BULB & TREE PLANTING PLAN
IR430301-GIL-ZZ-00-DR-L-450001 to 450007 SOFTSCAPE DETAILS

112 Site clearance generally

1. **General:** Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. **Stones:** Remove those with any dimension exceeding 50 mm.
3. **Contamination:** Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. **Large roots:** Grub up and dispose of without undue disturbance of soil and adjacent areas.

118 Soil conditions

1. **Soil for cultivating and planting:** Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
2. **Frozen or snow covered soil:** Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

120 Climatic conditions

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

125 Times of year for planting

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

130 Mechanical tools

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

146 Watering

1. **Quantity:** Wet full depth of topsoil.
2. **Application:** Even and without damaging or displacing plants or soil.

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3. Frequency: As maintenance schedule

150 Water restrictions

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

160 Notice

1. Give notice before
 - 1.1. Setting out.
 - 1.2. Applying herbicide.
 - 1.3. Applying fertilizer.
 - 1.4. Delivery of plants/ trees.
 - 1.5. Planting shrubs.
 - 1.6. Planting trees into previously dug pits.
 - 1.7. Watering.
 - 1.8. Visiting site during maintenance period.
2. Period of notice: Three working days

170 Soil requirements

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

200 Plants/ Trees – general

1. Condition: Materially undamaged, sturdy, healthy and vigorous.
2. Appearance: Of good shape and without elongated shoots.
3. Hardiness: Grown in a suitable environment and hardened off.
4. Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
5. Budded or grafted plants: Bottom worked.
6. Root system and condition: Balanced with branch system.
 - 6.1. Standard: The National Plant Specification
7. Species: True to name.
8. Origin/ Provenance: Submit supplier for Landscape Architect review. Landscape Architect and Landscape contractor to visit nursery for tree tagging visit.
9. Definition: Origin and Provenance have the meaning given in the National Plant Specification.
10. Note:
 - Not to be stored on site for prolonged durations or during hot weather
 - Protected from mechanical damage, exposure to drying winds, heat, frost or unsuitable storage conditions

215 Plants/ Trees – specification criteria

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

216 Plants/ Trees – specification criteria

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

225 Bulbs/ Corms/ Tubers

1. Condition: Firm, entire, not dried out or shrivelled.
2. Health: Free from pests, diseases and fungus.
3. Handling: Remove from packaging immediately.
4. Storage: Permitted only when necessary.
 - 4.1. Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
 - 4.2. Duration: Minimum period.
 - 4.3. Temperature: 18-21°C.

235 Container grown plants/ Trees

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

245 Labelling and information

1. General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
 - 1.1. Full botanical name.
 - 1.2. Total number.
 - 1.3. Number of bundles.
 - 1.4. Part bundles.
 - 1.5. Supplier's name.
 - 1.6. Employer's name and project reference.
 - 1.7. Plant specification, in accordance with scheduled National Plant Specification categories.
2. Additional information: Submit on request: Country of origin & Type of container.

246 Labelling and information

1. Standard: To BS 3936.

255A Plant Selection

1. The intention is to select and mark at the earliest appropriate time all plant material listed in the accompanying schedules to meet the size shown in schedules. These sizes must be achieved when the material is delivered to and planted on the site.
2. All selected plant material will be retained in approved areas of the Contractor's nursery or nurseries and clearly marked as being for the project.

255B Nursery Visits

1. The Contractor is to make provisions for and to meet the cost of all inspections for all plants at the nursery or nurseries of origin, whether in the UK or overseas at any time whenever requested by the Contract Administrator.
2. The Contract Administrator do not invalidate their ability to reject material previously inspected at the source of supply when it is delivered to the site.
3. The Contract Administrator retains the right at all times to have access to and visit any nursery where plant material for the contract is being grown. The Contractor must confirm their acceptance of this point at the time of tendering.

255C Plant Samples

1. Before any planting commences the Contractor shall deliver to the site labelled samples of the plants but not the trees they propose to use. A sample of any variety of plant shall comprise at least five plants which upon the approval of the Contract Administrator for size, quality, shape and variety shall be deemed to be the minimum quality of the sample variety acceptable for incorporation into the works.
2. Approved sample plants shall either be heeled in temporarily, or planted in their final positions as directed by the Contract Administrator. On no account unless so directed in writing by the Contract Administrator shall approved samples be removed and the Contractor shall be deemed to have allowed for their protection in accordance with normal horticultural practice.
3. Samples which are not approved shall be removed at the Contractor's own expense.
4. Any material below the approved standards shall be removed and replaced at the Contractor's own expense with specimens matching the approved samples.

260 Plant/ Tree substitution

1. Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
 - 1.1. Price.
 - 1.2. Difference from specified plants/ trees.
2. **Approval:** Obtain before making any substitution. Note that in the instance where a substitution is not approved, the submission of further alternatives may be required.

265 Plant handling, storage transport and planting

1. **Standard:** To CPSE 'Handling and establishing landscape plants'.
2. **Frost:** Protect plants from frost.
3. **Handling:** Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. **Plant packaging:** Supplier's choice to ensure safe transit
5. **Packaging of bulk quantities:** Supplier's choice to ensure safe transit
6. **Planting:** Upright or well balanced with best side to front.

280 Treatment of tree wounds

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

285 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.

290 Surplus material

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

Plant containers - Not Used

Preparation of planting beds/ planting materials

300 Herbicide

1. Description: To beds topsoiled but left unplanted for more than 4 weeks
2. Type: Suitable for suppressing perennial weeds.
3. Timing: Allow fallow period before cultivation.
 - 3.1. Duration (minimum): As manufacturer's recommendation

305 Weed control

1. Description: FOR INVASIVE NON-NATIVE WEEDS
2. Locations: Whole site
3. General: Prevent weeds from seeding and perennial weeds from becoming established, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.

Planting shrubs/ herbaceous plants/ bulbs

400 Random plant layout

1. Description: TO ALL BEDS. Layout on site to be agreed
2. Spacing: As per planting plans
3. Density: As per planting plans

445 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.
 - 3.2. Planting: Neatly remove a plug of turf and replace after planting.

480 After planting

1. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
2. Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
3. Top dressing: Mulching and top dressing system, as section Q28
 - 3.1. Depth: 50 mm

Planting trees

505 Tree pits

1. Sizes: As per Typical Soft Landscape Details
2. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
3. Pit bottoms: Excavate with slightly raised centre: Break up base to a depth of 200 mm if on grade.
4. Pit sides: Scarify.
5. Backfilling material: Proprietary tree backfilling material, as section Q28
6. Accessories: Refer to Q31.512, 510 & 526

510 Tree pit root barriers

1. Locations: To edges of planting beds
2. Manufacturer: GreenBlue Urban Ltd
 - 2.1. Phone number: 0808 599 0253
 - 2.2. Product reference: ReRoot 600
3. Barrier depth: 600mm
4. Installation: With sides vertical. Remove all sharp objects adjacent to barrier.

512 Tree pit irrigation and ventilation accessories

1. Locations: All trees
2. Manufacturer: [GreenBlue Urban Ltd](#)
 - 2.1. Contact details
 - 2.1.1. Address: Northpoint
Compass Park
Junction Road
Bodiam
East Sussex
TN32 5BS
 - 2.1.2. Telephone: [+44 \(0\)1580 830800](tel:+44(0)1580830800)
 - 2.1.3. Web: www.greenblue.com
 - 2.1.4. Email: hello@greenblueurban.com
 - 2.2. Product reference: RootRain Urban
3. Type: Perforated plastics irrigation pipe with inlet
4. Pipe diameter: 60mm
5. Ring diameter: Varies depending on tree size
6. Inlet: Black plastics
7. Installation
 - 7.1. Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
 - 7.2. Top cap of inlet: Protruding slightly above finished surround level.
 - 7.3. Backfill material: Carefully compact in layers.

526 Underground guying for trees

1. Description: Underground guying for all trees

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2. Manufacturer: [GreenBlue Urban Ltd](#)
 - 2.1. Contact details
 - 2.1.1. Address: Northpoint
Compass Park
Junction Road
Bodiam
East Sussex
TN32 5BS
 - 2.1.2. Telephone: [+44 \(0\)1580 830800](tel:+44(0)1580830800)
 - 2.1.3. Web: www.greenblue.com
 - 2.1.4. Email: hello@greenblueurban.com
 - 2.2. Product reference: ArborGuy - AnchorPlate or similar approved
3. Installation: Ensure tree is positioned correctly and vertically prior to tightening guy line tensioners.

Woodland/ matrix/ buffer zone planting

615 Existing trees/ Seedlings/ Coppice shoots

1. Existing trees and seedlings: Retain as per Arboriculturist's tree protection plan
2. Coppice shoots: Thin to 3-5 stems per stool, removing all damaged, dead or diseased shoots

Protecting/ maintaining/ making good defects

710 Maintenance

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

720 Failures of planting

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

740 Cleanliness

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

750 Planting maintenance generally

1. Weed control: Maintain weed free area around each tree and shrub.
 - 1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
 - 1.2. Keep planting beds clear of weeds: By hoeing/hand weeding
2. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.

3. **Precautions:** Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
4. **Firming up:** Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
5. **Trees:** Spray crown when in leaf during warm weather.
 - 5.1. **Timing:** After dusk.
6. **Tree accessories:** Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
 - 6.1. **Broken or missing items:** Replace.
 - 6.2. **Loose stakes:** Re-firm in the ground or replace as necessary to provide support to the tree.
 - 6.3. **Loose guys:** Re-firm anchor points and adjust as necessary to provide support to the tree.
 - 6.4. **Ties:** Adjust to accommodate growth and prevent constriction or abrasion.
 - 6.5. **Damage to bark:** Cut back neatly with sharp knife. Prevent further damage.
7. **Watering:** When instructed

760 Planting maintenance – pruning

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

780 Maintenance instructions

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

790 Final mulching

1. **Timing:** At end of the maintenance period.
2. **Watering:** Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
3. **Planting beds:** Remulch.
4. **Depth (minimum):** 50mm
5. **Trees:** Remulch.
6. **Depth (minimum):** 50 mm

Ω End of Section

Q41 Barriers/ guardrails

Types of barriers/ guardrails

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-330001 to 330008 FURNITURE DETAILS

130 Furniture Type F11 - Door Barrier

1. Description: Door barrier, bespoke
2. Manufacturer: Vestre
 - 2.1. Phone number: 07548 342576
3. Product Reference: Bespoke Door Barrier, using modified FORUM (narrow) cycle stands, with tapping rail
4. Surface finish: Galvanised and PPC
 - 4.1. Colour: RAL TBC
5. Height: 900mm above surface level
6. Fixings/ Foundations: Root fixed, 300 mm below ground, set in concrete base to Supplier's details

Performance/ inspection/ testing - Not Used

Installation

480 Concrete foundations for posts

1. Excavations: To Engineer's details
2. Concrete mix: To Engineer's details
3. Placing concrete: To Engineer's details
4. Temporary support to posts: To Engineer's details

Completion - Not Used

Ω End of Section

Q50 Site/ street furniture/ equipment

Gates, barriers and parking controls

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-310010 WALL DETAILS
IR430301-GIL-ZZ-00-DR-L-330001 to 330008 FURNITURE DETAILS
IR430301-GIL-ZZ-00-DR-L-330010 FEATURE SHUTTLECOCK BENCH - LARGE
IR430301-GIL-ZZ-00-DR-L-330011 FEATURE SHUTTLECOCK BENCH - SMALL
IR430301-GIL-ZZ-00-DR-L-330012 FEATURE BENCH DETAIL

190A Furniture Type F8a - Fixed Bollards

1. Description: Bollard within hard landscape
2. Manufacturer: [Marshalls Landscape Protection & Street Furniture](#)
 - 2.1. Contact details
 - 2.1.1. Address: Landscape House
Lowfields Business Park
Elland
West Yorkshire
United Kingdom
HX5 9HT
 - 2.1.2. Telephone: [0370 600 2425](tel:03706002425)
 - 2.1.3. Web: www.marshalls.co.uk/commercial/landscape-protection
 - 2.1.4. Email: StreetFurniture@marshalls.co.uk
 - 2.2. Product reference: [RhinoGuard® Static 75/50 Bollard](#)
3. Standard: In accordance with PAS 68.
4. Dimensions
 - 4.1. Size and profile: Ø244 mm.
 - 4.2. Height: 1100 mm.
 - 4.3. Length below ground: 750 mm.
5. Post top: Flat.
6. Post base: Flat.
7. Dimensions
 - 7.1. Size and profile: Ø244 mm.
 - 7.2. Height: 1050 mm.
 - 7.3. Length below ground: 600 mm.
8. Finishes
 - 8.1. Worked finish: Brushed.
 - 8.2. Applied finish: Not applicable.
 - 8.3. Colour: Brushed stainless steel.
9. Accessories: Visibility strip
10. Reflective tape: Required.
11. Fixing method: Root fixed.

12. Dimensions
13. Method of fixing: Core drilled and fixed to concrete base

190B Furniture Type F8c - Removable Bollards

1. Description: Bollard within hard landscape
2. Manufacturer: [Vestre](#)
 - 2.1. Contact details
 - 2.1.1. Address: Profile West Suite 2, Floor 1
950 Great West Road
Brentford
TW8 9ES
 - 2.1.2. Telephone: [+44\(0\)207 846 8725](tel:+44(0)207 846 8725)
 - 2.1.3. Web: www.vestre.com
 - 2.1.4. Email: uk@vestre.com
 - 2.2. Product reference: [Urban Bollard \(Urban bollard Ø127, demountable - 588-900D\)](#)
3. Dimensions
 - 3.1. Size and profile: Ø127 mm.
 - 3.2. Height: 900 mm.
4. Post top: Flat.
5. Post base: Demountable.
6. Finishes
 - 6.1. Colour: Brushed stainless steel.
7. Accessories: Visibility strip, and lockable mechanism
8. Method of fixing: To Manufacturer's details

190C Furniture Type F8d - Fixed Bollard with Shallow Foundation

1. Description: Shallow foundation bollard within hard landscape
2. Manufacturer: [Marshalls Landscape Protection & Street Furniture](#)
 - 2.1. Contact details
 - 2.1.1. Address: Landscape House
Lowfields Business Park
Elland
West Yorkshire
United Kingdom
HX5 9HT
 - 2.1.2. Telephone: [0370 600 2425](tel:0370 600 2425)
 - 2.1.3. Web: www.marshalls.co.uk/commercial/landscape-protection
 - 2.1.4. Email: StreetFurniture@marshalls.co.uk
 - 2.2. Product reference: [RhinoGuard® Shallow Mount 72/50](#)
3. Standard: In accordance with PAS 68.
4. Dimensions
 - 4.1. Size and profile: 273 mm.
 - 4.2. Height: 1000 mm.
 - 4.3. Length below ground: 275 mm.
5. Post top: Flat.
6. Post base: Flat.

7. Finishes
 - 7.1. Worked finish: Brushed.
 - 7.2. Applied finish: Not applicable.
 - 7.3. Colour: Brushed stainless steel.
8. Accessories: Visibility strip
9. Reflective tape: Required.
10. Fixing method: Cast in foundation. Set below surface, paving surface above

190D Furniture Type F8e - Telescopic Bollard with assisted lifting

1. Description: Removable bollard within hard landscape with assisted lifting mechanism
2. Manufacturer: [Marshalls Landscape Protection & Street Furniture](#)
 - 2.1. Contact details
 - 2.1.1. Address: Landscape House
Lowfields Business Park
Elland
West Yorkshire
United Kingdom
HX5 9HT
 - 2.1.2. Telephone: [0370 600 2425](tel:03706002425)
 - 2.1.3. Web: www.marshalls.co.uk/commercial/landscape-protection
 - 2.1.4. Email: StreetFurniture@marshalls.co.uk
 - 2.2. Product reference: Rhinoguard 35/30 HVM lift assist bollard
3. Dimensions
 - 3.1. Size and profile: Ø140 mm.
 - 3.2. Height: 910 mm.
4. Post top: Flat.
5. Finishes
 - 5.1. Colour: Brushed stainless steel.
6. Accessories: Visibility strip, and lockable mechanism
7. Method of fixing: To Manufacturer's details

196 Furniture Type F8b - Automatic bollards

1. Description: Automatic bollard within hard landscape
2. Manufacturer: Frontier Pitts Ltd
 - 2.1. Phone number: 0293548301
 - 2.2. Product reference: IWA 14 Terra Universal Bollard
3. Material: Stainless Steel
4. Finish: Brushed
5. Standard: V/7200[N2A]/80/90:6.3
6. Height above ground: 1000mm
7. Sectional size: Supplier to confirm
8. Top: Flat
9. Special features: Hydraulic rising mechanism
10. Accessories: Visibility strip
Protruding rebar to be reduced to 6mm to allow for decorative finishes
11. Requirements: Electricity requirements to M&E specification

Site and street furniture

210 Furniture Type F7 - Cycle stands

1. Manufacturer: [Furnitubes International Ltd](#)
 - 1.1. Contact details
 - 1.1.1. Address: 28 Leonard Street
London
United Kingdom
United Kingdom
EC2A 4BY
 - 1.1.2. Telephone: +44 (0)20 8378 3200
 - 1.1.3. Web: www.furnitubes.com
 - 1.1.4. Email: sales@furnitubes.com
 - 1.2. Product reference: [Sheffield Carbon Steel Cycle Stand](#)
2. Stand type: Cycle.
3. Accessories: Tapping rail
4. Height:: 800mm
5. Width: 715mm
6. Tube diameter: 48 mm.
7. Material: Stainless Steel
 - 7.1. Finish: Brushed
8. Method of fixing: Root, 300 mm below ground, set in concrete base

220A Furniture Type F3 - Wall top bench

1. Description: Top mounted bench to low wall.

Refer to IR430301-GIL-ZZ-00-DR-L-310010 WALL DETAILS 01
2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
 - 2.2. Product reference: Bespoke top mounted bench to granite walls L21.110B & H51.110A
3. Timber slats: Piano key section profile
 - 3.1. Material: Class 2 UK grown sustainable timber
 - 3.2. Nosing radius: 120mm to front
50mm to back
 - 3.3. Dimensions: 600mm (l) x 75mm (w) x 145mm (d)
 - 3.4. Joints: 8mm
4. Width:: 600mm
5. Length:: 2500mm
6. Armrests: 2no. per bench
 - 6.1. Material: Galvanised steel
 - 6.2. Finish: PPC to RAL TBC
 - 6.3. Width: 40mm
 - 6.4. Length: 400mm
7. Accessories/ Special requirements: Any furniture fixings/bolts/screws to be PPC to RAL TBC.
Recessed lighting rebate to slat seats (lighting to be detailed by Lighting Engineer)
Allowance made for backrest option

8. Method of fixing: To top of low granite wall with steel rails to Supplier's details

220B Furniture Type F4 - Bench

1. Description: Bespoke benches adjacent to soft landscape on Peel Street

Refer to IR430301-GIL-ZZ-00-DR-L-330012 FEATURE BENCH DETAIL

2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Length: 3000mm
4. Height above paving level: 450mm
5. Width: 500mm
6. Stone material: Granite type and finish to match F21.110B
7. Slats: Class 2 UK grown sustainable timber
 - 7.1. Sizes : 500 (l) x 65 (w) x 75mm (d)
 - 7.2. Nosing: 10mm
 - 7.3. Joints: 8mm
8. Armrests: 2no. per bench
 - 8.1. Height: 200mm above top of slats
 - 8.2. Width: To match slat width
 - 8.3. Length: 300mm
 - 8.4. Material: Galvanised steel
 - 8.5. Finish: PPC to RAL TBC
9. Method of fixing: Placed on concrete foundation to Supplier's details

220C Furniture Type F2 - Small shuttlecock bench

1. Description: Small shuttlecock bench with integrated vent. Manufacturer to work up shop drawings for approval by Landscape Architect

Refer to IR430301-GIL-ZZ-00-DR-L-330011 FEATURE SHUTTLECOCK BENCH - SMALL

2. Manufacturer: Hardscape Products Ltd
 - 2.1. Phone number: 01204 565 500
3. Overall size: Plan dimensions vary, refer to design intent

Indicatively: 3000mm (l) x 600mm (w) x 450mm (d)
4. Slats:
 - 4.1. Dimensions: varies (l) x 65mm (w) x 75mm (d)
 - 4.2. Joints: 8mm
 - 4.3. Material: Class 2 UK grown sustainable timber
5. Accessories/ Special requirements:
 - 5.1. Curves: Curves and radii as indicated
 - 5.2. Nosing: 50mm radial edge to seat edges
 - 5.3. Ends: Solid granite base plinth or steel option TBC
 - 5.4. Fixings: Any furniture fixings/bolts/screws to be PPC to RAL TBC
 - 5.5. Screening/vent: Perforated metal cladding base in punch card pattern, PPC to RAL TBC
 - 5.6. Forklifting eyes: Integrated into seat base. Allowance for solid steel base to support mechanical lifting

6. Armrests: Flat bar, galvanised and PPC to RAL TBC
7. Structure: Structural metalwork to specialist fabricator details
8. Litter mesh:
9. Moveable:
10. Method of fixing: Hidden fixings TBC to Supplier's details

225 Furniture Type F1 - Large shuttlecock seat

1. **Description:** Large shuttlecock seat with integrated vent. Manufacturer to work up shop drawings for approval by Landscape Architect

Refer to IR430301-GIL-ZZ-00-DR-L-330010 FEATURE SHUTTLECOCK BENCH - LARGE
2. **Manufacturer:** Hardscape Products Ltd
 - 2.1. **Phone number:** 01204 565 500
3. **Overall size:** Plan dimensions vary, refer to design intent

Indicatively: 7096mm (l) x 1200mm (w) x 450mm (d)
4. **Slats:**
 - 4.1. **Dimensions:** varies (l) x 65mm (w) x 75mm (d)
 - 4.2. **Joints:** 8mm
 - 4.3. **Material:** Class 2 UK grown sustainable timber
5. **Accessories/ Special requirements:** Sloped backrests where indicated, 360mm above seat level. Slats to align with seating slats
 - 5.1. **Curves:** Curves and radii as indicated
 - 5.2. **Nosing:** 50mm radial edge to seat edges
 - 5.3. **Ends:** Solid granite base plinth
 - 5.4. **Fixings:** Any furniture fixings/bolts/screws to be PPC to RAL TBC
 - 5.5. **Screening/vent:** Perforated metal screening with litter mesh in punch card pattern
 - 5.6. **Rain screen:** Solid steel rain screen beneath slats to prevent water ingress into basement vents
 - 5.7. **Stone skirt base:**
6. Armrests: Flat bar, galvanised and PPC to RAL TBC
7. Structure: Structural metalwork to specialist fabricator details, to accommodate structural opening TBC by Engineer
8. Method of fixing: Hidden fixings TBC to Supplier's details

240 Furniture Type F13 - Litter Bins

1. **Description:** Litter bin within hard landscape
2. **Manufacturer:** Glasdon UK Ltd
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Preston New Road, Blackpool, Lancashire, FY4 4UL
 - 2.1.2. **Telephone:** 01253600410
 - 2.1.3. **Email:** enquiries@glasdon-uk.co.uk
 - 2.2. **Product reference:** Centrum Litter Bin
3. **Material:** Grade 316 Stainless steel with galvanised steel liner
4. **Diameter:** 502mm
5. **Height:** 1078mm

6. Capacity: 90L
7. Finish: Galvanised with PPC
8. Accessories/ Special requirements: Lockable/ hinged panel
9. Method of fixing: Surface mounted to Supplier's details

Installation

510 Concrete foundations generally

1. Standard: To Engineer's specification
2. Concrete: To Engineer's specification
3. Admixtures: To Engineer's specification
4. Foundation holes: To Engineer's specification
5. Depth of foundations, bedding, haunching: To Engineer's specification

515 Setting components in concrete

1. Components: To Engineer's specification
2. Concrete fill: To Engineer's specification
3. Concrete foundations exposed to view: To Engineer's specification
4. Temporary component support: To Engineer's specification

520 Setting in earth

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

530 Preservative treated timber

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

540 Building in to masonry walls

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

545 Erection of timber and prefabricated structures

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

560 Site painting

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

Ω End of Section

S15

Fountains and water features

General

00 Notes

1. To be read in conjunction with all Gillespies drawings, especially the following:

IR430301-GIL-ZZ-00-DR-L-100001 to 100006 GENERAL ARRANGEMENT PLAN
IR430301-GIL-ZZ-00-DR-L-330001 to 330008 FURNITURE DETAILS

200 Furniture Type F9 - Water Feature

1. **Description:** Bespoke underground water fountain
2. **Specification:** To specialist design and specification

250 Furniture Type F12 - Drinking Water Fountain

1. **Description:** Drinking water fountain
2. **Manufacturer:** Santa & Cole
 - 2.1. **Phone number:** 07596831942
3. **Product reference:** Atlantida
4. **Surface finish:** Anti-rust cast iron, painted in black with brass spout
5. **Accessories:** Allowance to be made for mains water supply
6. **Fixings:** Rootfixed to supplier's recommendations. Foundation to be hidden from view.

Performance

200 General design

1. **Design:** Complete the design of the water feature.
2. **Proposals:** Submit drawings (showing equipment positions and pipeline routes), technical information, calculations and manufacturers' literature.

Products - Not Used

Execution

700 Installation generally

1. **Performance:** Free from leaks and the audible effects of expansion, vibration and water hammer.
2. **Concealment:**
3. **Fixing of equipment, components and accessories:** Fix securely to the structure of the feature using appropriate purpose made fixings.
4. **Preparation:** Prior to installation, clear all surfaces of debris and projections.
5. **Access:** Allow adequate space for inspection, servicing and maintenance.
6. **Corrosion resistance:** In locations where moisture is present or may occur, provide corrosion-resistant fittings/ fixings and avoid contact between dissimilar metals by including suitable washers, gaskets, etc.

Completion

930 Testing and commissioning of pipework

1. Standard: To BE EN 805, section 11
 - 1.1. Notice (minimum): Three days.

936 Cleaning

1. Equipment: Clean immediately before handover.

940 Documentation

1. Contents
 - 1.1. Full technical description of each system installed.
 - 1.2. Manufacturers' operating and maintenance instructions for equipment and controls.
 - 1.3. Manufacturers' guarantees and warranties.
 - 1.4. System operating and maintenance instructions for the system as a whole giving optimum settings for controls and maintenance intervals for all equipment.
 - 1.5. Record drawings showing the location of circuits, fittings, pipes, apparatus and operating controls.
 - 1.6. List of normal consumable items.
 - 1.7. Electrical inspection and completion certificates.
2. Number of copies: Two
3. Submission: Two weeks after request by contract administrator

950 Operating tools

1. Tools: Supply tools for operation, maintenance and cleaning purposes.
2. Keys: Supply keys for valves, vents and cabinets.

960 Labels

1. Valve labels: Provide on isolating and regulating valves on primary circuits, stating function.

Ω End of Section

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