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
   - Tatterstall

   Refer 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
         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