CampbellReith
consulting engineers

Ennor Farm

Confidential

Pavement Specification

For

The Council of the Isles of Scilly

Project Number: 13847

Revision: P1

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Document Details

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Contents

Q10
Kerbs/ edgings/ channels/ paving accessories

To be read with preliminaries/ general conditions. - Not Used

Types of kerbs/edgings and channels

100X General description of the works

1. New Item: Construction of site accesses, home zones, communal car park, and footways.

105X British standards

1. Materials and workmanship shall generally be in accordance with the requirements of relevant current British Standards including BS EN 1338 , BS EN 1340, BS EN 1343, BS 3921, and BS 7533. Where inconsistencies occur between these documents and this specification, this specification shall prevail.

107X Adoptable works and standards

1. Works which are to be adopted shall be carried out in accordance with the adopting authority standard specifications and requirements. Where inconsistencies occur between this specification and the adopting authority standard specifications and requirements the latter shall take precedence on adoptable works.
2. The Contractor shall confirm with the adopting authority requirements with regard to inspection notices, approvals, procedures, submissions etc. in advance of any works.
3. The above requirements shall also apply to areas of work already under the control of the Local Authority.

110 Proprietary precast concrete

1. Description: KERBS & CHANNELS
2. Standard: To BS EN 1340.
3. Manufacturer: Contractor's choice
4. - Product reference: Contractor's choice
5. Recycled content: Contractor's choice
6. Designations: BN Kerb, bullnosed; HB2 Kerb, half battered; EF Edging, flat top; CS1 Channel, square
7. Size (width x height x length): BN: 125 x 150 x 915 mm; HB2 & CS1: 125 x 255 x 915 mm; EF: 50 x 150 x 915 mm
8. Special shapes: Dropper kerbs DL1 and DR1 to footway crossings
9. Finish: As cast
10. Colour: Charcoal
11. Bedding: As drawing 13847-CRH-XX-XX-DR-C-5350
12. Joints generally: Narrow mortar Dry, 2-3 mm gap
13. Sealant movement joints: Not required
14. Accessories: None

Roads/paving accessories/ marking/ demarcation

395 Road marking (thermoplastic)

1. Standard: Road Safety Markings Association standard specification document for road marking and road studs (StanSpec).

2. Manufacturer: Contractor's choice
   2.1. Product reference: Contractor's choice
3. Colour: White
4. Retroreflectivity to BS EN 1436: Not required (Class R0)

Laying

510 Laying kerbs, edgings and channels

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

520 Adverse weather

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

530 Concrete for foundations, races and haunching

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

540 Cement mortar bedding

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

547 Bedding/ Backing of units on fresh concrete races

1. Standard: To BS 7533-6.

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.

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.

Ω End of Section

Q20
Granular sub-bases to roads/ pavings

To be read with preliminaries/ general conditions.

110 Thicknesses of sub-base/ subgrade improvement layers

1. Thicknesses: See sections: Q22 Coated macadam/asphalt roads/pavings; and Q24 Interlocking brick/brick roads/pavings

120 Checking of subgrades

1. Subgrade variation: If material appears to vary from that stated in the site investigation report, or if there are extensive soft spots, test subgrade CBR to BS 1377-4 or BS 1377-9. Submit results and obtain instructions before proceeding.

130 Herbicides

1. Type: Residual, soil-acting spray
2. Application: To subgrade of footpath.

140 Excavation of subgrades

1. Final excavation to formation or subformation level: Carry out immediately before compaction of subgrade.
2. Soft spots and voids: Give notice.
3. Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilized.

145 Preparation and compaction of subgrades

1. Timing: Immediately before placing sub-base.
2. Soft or damaged areas: Excavate and replace with sub-base material, compacted in layers 300 mm (maximum) thick
3. Compaction: Thoroughly, by roller or other suitable means, adequate to resist subsidence or deformation of the subgrade during construction and of the completed roads/ pavings when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

150A Subgrades for vehicular areas

1. As D20/261X.

170 Geotextile filter/ separator membrane

1. Manufacturer: Terram or similar approved
   1.1. Product reference: T1000 or similar approved
2. Jointing: 300 mm overlap
3. Protected from:
   3.1. Exposure to light, except during laying (maximum five hours).
   3.2. Contaminants.
   3.3. Materials listed as potentially deleterious by geotextile manufacturer.
   3.4. Damage, until fully covered by fill.
   3.5. Wind uplift, by laying not more than 15 m before covering with fill.
4. Preparation: Humps and sharp projections removed and hollows filled before laying.

175 Impermeable membrane

1. Manufacturer: Marshalls or similar approved
   1.1. Product reference: MM380 or similar approved
2. Jointing: 300 mm overlap
3. Protected from:
   3.1. Exposure to light, except during laying (maximum five hours).
   3.2. Contaminants.
   3.3. Materials listed as potentially delerious by geotextile manufacturere.
   3.4. Damage, until fully covered by fill.
   3.5. Wind uplift, by laying not more than 15 m before covering with fill.
4. Preparation: Humps and sharp projections removed and hollows filled before laying.

200 Subgrade improvement layer (capping)

1. Material: To Highways Agency ‘Specification for highway works’, table 6/1, Class 6F1, 6F2 or 6F3.
2. Standard: Placed and compacted to Highways Agency ‘Specification for highway works', table 6/1, clauses 612 and 613.3, 613.8, 613.9, 613.10 and 613.13.

210A Highways agency type 1 granular material

1. Material: Type 1 unbound mixture to Highways Agency ‘Specification for highway works’, clause 801.
2. Testing (if required): As clause 803.
3. Recycled aggregate: Permitted

211 Granular material

1. Quality: Free from excessive dust, well graded, all pieces less than 75 mm in any direction, minimum 10% fines value of 50 kN when tested in a soaked condition to BS 812-111 and BS EN 1097-2, and in any one layer only one of the following:
   1.1. Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
   1.2. Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
   1.3. Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
   1.4. Natural gravel.
   1.5. Natural sand.
2. Filling: Spread and levelled in 150 mm maximum layers, each layer thoroughly compacted.

215A Granular material for permeable paving

1. Material: Open Graded Aggregate to Highways Agency 'Specification for highway works', Clause 801
   1.1. Grading: 4/20 mm
2. Testing: Required
3. Other requirements: Minimum 30% void ratio
4. Laying: As Clause 211

220A Frost susceptible granular material

1. Definition (non frost susceptible material): To Highways Agency 'Specification for highway works' clause 801.8.

2. Depth of frost susceptible material below final surface of paving (minimum): 450mm.
3. Testing: Test materials used if required and supply certificates.

225 Placing of material with high sulfate content

1. Standard: To Highways Agency 'Specification for highway works', clauses 801.2 and 801.3.
   1.1. Separation distance (minimum): 500 mm

230 Placing granular material generally

1. Preparation: Loose soil, rubbish and standing water removed.
2. Structures, membranes and buried services: Ensure stability and avoid damage.

240 Laying granular sub-bases for vehicular areas

1. General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
2. Standard: To Highways Agency 'Specification for highway works' clause 802.
3. At drainage fittings, inspection covers, perimeters and where local excavation and backfilling has taken place: Take particular care to compact fully.

241 Laying granular sub-bases for vehicular areas

1. Proposals: Well in advance of starting work submit details of:
   1.1. Maximum depth of each compacted layer.
   1.2. Type of plant.
   1.3. Minimum number of passes per layer.
2. General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
3. At drainage fittings, inspection covers, perimeters and where local excavation and backfilling has taken place: Take particular care to compact fully.
4. Sub-base surface after compaction and immediately before overlaying: Uniformly well closed and free from loose material, cracks, ruts or hollows.

250 Laying granular sub-bases

1. Description: FOR PEDESTRIAN AREAS
2. General: Spread and levelled.
3. Compaction
   3.1. Timing: As soon as possible after laying.
   3.2. Method: By roller or other suitable means, adequate to resist subsidence or deformation of the sub-base during construction and of the completed paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

310 Accuracy

1. Permissible deviation from required levels, falls and cambers (maximum)
   1.1. Subgrades
      1.1.1. Roads and parking areas: +20 -30 mm.
      1.1.2. Footways and recreation areas: ± 20 mm.
   1.2. Sub-bases
      1.2.1. Roads and parking areas: Hot rolled asphalt and coated macadam: +10 -30 mm; Precast concrete paving blocks and clay pavers: +20 -15 mm
      1.2.2. Footways and recreation areas: ± 12 mm

320A Blinding

1. Locations: Surfaces to receive sand bedded interlocking brick or block paving to sections Q24 and Q25.
2. Material: Sand, fine gravel or PFA or other approved.
3. Finish: Close, smooth, compacted surface.

330 Cold weather working

1. Frozen materials: Do not use.
2. Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.

340 Protection

1. Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.
2. Subgrades and sub-bases: Prevent degradation by construction traffic, construction operations and inclement weather.

Ω End of Section

Q22
Coated macadam/ asphalt roads/ pavings

Clauses

2 To be read with preliminaries/ general conditions.

Types of paving

100X General description of the works

1. New Item: Construction of site accesses and footways.

106X British standards

1. Coated Macadam and hot rolled asphalt for roads and other paved areas shall generally comply with the material and workmanship requirements of current British Standards including BS EN 13108 and BS 594987.
2. Where inconsistencies occur between these documents and this specification the CA shall be informed.

107X Adoptable works and standards

1. Works which are to be adopted shall be carried out in accordance with the adopting authority standard specifications and requirements. Where inconsistencies occur between this specification and the adopting authority standard specifications and requirements, the adopting authority standard specifications and requirement shall take precedence on adoptable works.
2. The above requirements shall also apply to areas of work already under the control of the Local Authority.

108X Contractor

1. The Contractors particular attention is drawn to the following items: For surfacing details, refer to Architect's specification. Refer to drawing 13847-CRH-XX-XX-DR-C-5350 for pavement build-ups

115 Asphalt concrete paving

1. Description: TO FOOTWAYS
2. Standard: To MCHW Volume 1 'Specification for highway works'
3. Subgrade improvement layer: Not required
   - 3.1. Compacted thickness: Not applicable
4. Geotextile: Not required
   - 4.1. Manufacturer: Not applicable
     - 4.1.1. Product reference: Not applicable
5. Granular sub-base: Type 1 unbound mixture, as section Q20
   - 5.1. Compacted thickness: 250 mm
6. Binder course: AC 20 dense bin
   - 6.1. Paving grade: 40/60
   - 6.2. Compacted thickness: 50 mm
7. Surface course: As drawing 13847-CRH-XX-XX-DR-C-5350
   - 7.1. Paving grade: As drawing 13847-CRH-XX-XX-DR-C-5350
   - 7.2. Slip/ Skid resistance: As drawing 13847-CRH-XX-XX-DR-C-5350
   - 7.3. Compacted thickness: As drawing 13847-CRH-XX-XX-DR-C-5350

8. Reclaimed content
   8.1. Standard: To BS EN 13108-8.
   8.2. Value (maximum): Submit proposals
9. Surface treatment: Not required
10. USER NOTE - DELETE BEFORE ISSUE:: 110-115
    Optional. Use 110 for roads, driveways, car parks. Use 115 for footways and cycle routes. Refer to HA SHW , BS EN 13108 or Client specification in Standard section. Refer to CR 'Pavement Design Guide' for details of layer thickness, nature of materials etc.

160 Stone mastic asphalt paving

1. Description: TO SITE ENTRANCES
2. System manufacturer: Contractor's choice
3. Standard: To MCHW Volume 1 'Specification for highway works'
4. Subgrade improvement layer: Required if CBR is less than 3%
5. Preparatory work: Not required
6. Geotextile: Geogrid
   6.1. Manufacturer: Tensar or similar approved
      6.1.1. Product reference: Triax TX 150 or similar approved
7. Granular sub-base: Type 1 unbound mixture, as section Q20
8. Regulating course: As drawing 13847-CRH-XX-XX-DR-C-5350
9. Binder course: As drawing 13847-CRH-XX-XX-DR-C-5350
10. Surface course
    10.1. Manufacturer: Contractor's choice
       10.1.1. Product reference: Contractor's choice
    10.2. Slip/ Skid resistance: No requirement
11. Surface finish: No requirement
12. Edge restraints: No requirement
13. Embedded features: No requirement
14. Surface features: No requirement

Preparatory work/ requirements

220 Bituminous materials generally

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

221X Materials generally

1. Submit similar certification defined in Q22/220 for tack coat and edge binder materials.

235 Acceptance of sub-base

1. Surface: Sound, clean and suitably close textured.
2. Levels and falls: To be within the specified tolerances:
   2.1. Vehicular areas: +10 to -30 mm.
   2.2. Pedestrian areas: ±12 mm.

2.3. Drainage outlets: 0 to -10 mm of the required finished level.

3. Kerbs and edgings: Complete, adequately bedded and haunched and to the required levels.

240 Acceptance of surfaces

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

250 Abutments

1. Vertical edges of manholes, gullies, kerbs and other abutments: Clean and paint with a thin uniform coating of hot applied 40/60 paving grade bitumen.
2. Finishing: Tamp surface around projections.
   2.1. Level: Flush or not more than 3 mm above projections.

Laying

310 Laying generally

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

311X Hand laying

1. Hand laying other than adjacent to site/street furniture items, will only be accepted when agreed in advance by the CA having regard to the area involved or the surface shape of the carriageway. When hand laying is agreed, compaction shall be by rolling with an approved roller and the whole area be rolled sufficiently to provide a satisfactory surface shape and degree of compaction.

315X Compaction

1. The Contractor shall submit details of his proposed compaction plant including the Manufacturers specification.
2. Where plant other than 8 tonne dead weight rollers are proposed to be used, the Contractor shall submit documentary evidence demonstrating that the plant is capable of achieving at least the standard of compaction of an 8 tonne dead weight roller.
3. Rolling shall continue until all roller marks have been removed from the surface.

318X Joints

1. Unless otherwise agreed by the CA joints shall be cut back to a vertical face of not less than the specified layer thickness, discarding all loosened material and painting the vertical face completely with a thin uniform coating of 50 or 70 penetration hot bitumen prior to the next width is laid. Alternatively a cold applied Thixotropic bitumen compound of similar grade may be used.

320A Adverse weather

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

330 Levels

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

330A Levels

1. Permissible deviation from the required levels, falls and cambers (maximum):
   1.1. Finished surface: ±6 mm.
   1.2. Adjacent to gullies and manholes: 0 to +3 mm.
   1.3. Levels of finished surface and drainage components shall be coordinated to ensure positive drainage.

340 Flatness/ Surface regularity

1. Deviation of surface: Where appropriate in relation to the geometry of the surface, the variation in gap under a 3 m straightedge placed anywhere on the surface to be not more than:
   1.1. Base: Machine laid, 25 mm
   1.2. Binder course: Hand laid, 13 mm
   1.3. Surface course: Machine laid, 7 mm
   1.4. Where a straightedge cannot be used the surface must be of a comparable standard of accuracy when judged by eye.

350 Contractor's use of pavements

1. Before use
   1.1. Timing: allow newly laid sections to cool before trafficking.
   1.2. Open-grained surface: Fill with 0/4 mm size coated grit. Remove surplus.
   1.3. Finish: Uncoated chipping and binder surface treatment.
2. Preparation for final surfacing
   2.1. Timing: Defer laying until as late as practicable.
   2.2. Immediately before laying final surfacing: Clean and make good the base/ binder course. Allow to dry.
   2.3. Adhesion: Contractor's choice
      2.3.1. Application rate: As manufacturer's recommendation
      2.3.2. Accuracy: Uniform, without puddles.
   2.4. Finishing: Allow emulsion to break completely before applying surface.

380X Existing pavements

1. Excavations in existing pavements and other paved areas, including surfacing, roadbase and sub-base, shall be cut to neat lines to dimensions at least 75 mm greater on each side than the dimensions of any further excavation below formation level. Excavations in granular capping shall

be taken at least 75 mm outside the dimensions of any excavation below. Road surfacing shall be cut back by sawing to a further 75 mm on each side.

2. Immediately before bituminous layers are reinstated, the edges of the existing material shall be cleaned of all loose material and be coated with bituminous binder as Clause 318X. Tack coat shall be applied to all exposed surfaces to this specification.
3. Where new pavement construction abuts an existing bituminous pavement which has to be reduced in level or overlaid to match alignment and levels, the existing surface shall be trimmed by the minimum amount of scarifying, planing or burning off to a depth which will allow a specified layer thickness of wearing course to be laid, the edge being trimmed and treated in compliance with this specification.
4. Where the difference in level makes it necessary, a regulating course complying in general with the appropriate clauses in this specification shall be provided subject to CA approval.

Completion

390 Documentation

1. Standard: BS EN 13108-1
   1.1. Declaration of conformity: Submit.
2. Number of copies: 1
3. Submission: Two weeks prior to date when Contractor expects work to be complete

Ω End of Section

Q24
Interlocking brick/ block roads/ pavings

Clauses

2 To be read with preliminaries/ general conditions

Types of paving

100X General description of the works

1. New Item: Construction of permeable and non-permeable areas of home zones and permeable communal car park

105X British standards

1. Materials and workmanship shall generally be in accordance with the requirements of relevant current British Standards including BS EN 1338 / 1339 / 1340 / and BS 7533. Where inconsistencies occur between these documents and this Specification, this Specification shall prevail.

107X Adoptable works and standards

1. Works which are to be adopted shall be carried out in accordance with the adopting authority standard specifications and requirements. Where inconsistencies occur between this specification and the adopting authority standard specifications and requirements the adopting authority standard specifications and requirement shall take precedence on adoptable works.
2. The Contractor shall confirm with the adopting authority requirements with regard to inspection notices, approvals, procedures, submissions etc.. in advance of any works.
3. The above requirements shall also apply to areas of work already under the control of the Local Authority.

108X Contractor

1. Description: For surfacing details, refer to Architect's specification. Refer to drawing 13847-CRH-XX-XX-DR-C-5350 for pavement build-ups

120 Conventional clay paver paving

1. Description: Home Zone Footways
2. Subgrade improvement layer: Not required
   2.1. Compacted thickness: Not applicable
3. Geotextile: Geogrid
   3.1. Manufacturer: Tensar or similar approved
      3.1.1. Product reference: Triax TX 150 or similar approved
4. Granular sub-base: Type 1 unbound mixture, as section Q20
   4.1. Compacted thickness: 325 mm
5. Laying course
   5.1. Material: In accordance with BS 7533-3.
      5.1.1. Category: II
   5.2. Method of screeding, in accordance with BS 7533-3: Compaction.
   5.3. Nominal thickness after compaction: 50 mm
6. Pavers: To BS EN 1344:
   6.1. Manufacturer: Refer to Landscape Architect's specification

6.1.1. Product reference: Refer to Landscape Architect's specification
6.2. Sizes: Refer to Landscape Architect's specification
6.3. Special pavers: Refer to Landscape Architect's specification
6.4. Arrises: Refer to Landscape Architect's specification
6.5. Colour/ Finish: Refer to Landscape Architect's specification
6.6. Requirements: Refer to Landscape Architect's specification
6.6.1. Dimensional deviations: Refer to Landscape Architect's specification
6.6.2. Freeze/ thaw resistance class: Refer to Landscape Architect's specification
6.6.3. Mean transverse breaking load: Refer to Landscape Architect's specification
6.6.4. Abrasion resistance (mm): Refer to Landscape Architect's specification
6.6.5. Slip/ Skid resistance: Refer to Landscape Architect's specification
6.6.6. Acid resistance: Refer to Landscape Architect's specification
7. Jointing
7.1. Material: In accordance with BS 7533-3.
7.2. Joint width: 2-5 mm.
8. Sealer/ Stabilizer: Not required
9. Setting out
9.1. Bond: Refer to Landscape Architect's specification
9.2. Features: Refer to Landscape Architect's specification
10. Accessories: None

128 Permeable clay paver paving – no infiltration

1. Description: Home Zones and Communal Car Park
2. Subgrade improvement layer: Type 1 unbound mixture, as section Q20
2.1. Compacted thickness: 325 mm
3. Impermeable membrane:
3.1. Manufacturer: Marshalls or similar approved
3.1.1. Product reference: MM380 or similar approved
4. Water collection system: Diffuser boxes
4.1. Manufacturer: Polypipe or similar approved
4.1.1. Product reference: Permavoid Rainwater Diffuser Unit or similar approved
5. Geotextile below granular sub-base: As drawing 13847-CRH-XX-XX-DR-C-5350
6. Granular sub-base: Coarse graded aggregate for permeable paving, as section Q20
6.1. Compacted thickness: 300 mm
7. Geotextile below laying course
7.1. Manufacturer: Terram or similar approved
7.1.1. Product reference: T1000 or similar approved
8. Laying course
8.1. Material: Marshalls Priora 2/6mm Laying Aggregate
8.2. Compaction: In accordance with BS 7533-3. Determine by trial the depth of loose bedding material needed to ensure specified bedding course thickness after final compaction of paving.
8.3. Nominal thickness after compaction: 50 mm
9. Pavers: To BS EN 1344.
9.1. Manufacturer: Refer to Landscape Architect's specification

9.1.1. Product reference: Refer to Landscape Architect's specification
9.2. Sizes: Refer to Landscape Architect's specification
9.3. Special pavers: Refer to Landscape Architect's specification
9.4. Spacer nibs: Refer to Landscape Architect's specification
9.5. Arrises: Refer to Landscape Architect's specification
9.6. Colour/ Finish: Refer to Landscape Architect's specification
9.7. Requirements: Refer to Landscape Architect's specification
9.7.1. Dimensional deviations: Refer to Landscape Architect's specification
9.7.2. Freeze/ thaw resistance class: Refer to Landscape Architect's specification
9.7.3. Mean transverse breaking load: Refer to Landscape Architect's specification
9.7.4. Abrasion resistance (mm): Refer to Landscape Architect's specification
9.7.5. Slip/ Skid resistance: Refer to Landscape Architect's specification
9.7.6. Acid resistance: Refer to Landscape Architect's specification
10. Jointing
10.1. Material: Refer to Landscape Architect's specification
10.2. Joint width: Refer to Landscape Architect's specification
10.3. Conventional sand jointing: Refer to Landscape Architect's specification
11. Setting out
11.1. Bond: Refer to Landscape Architect's specification
11.2. Features: Refer to Landscape Architect's specification
12. Accessories: None

Execution

200 Execution generally – concrete block and clay paver paving

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

211 Colour banding

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

240 Adverse weather

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

260A Levels of paving

1. Permissible deviation from specified levels:
1.1. Generally: ±6 mm.
2. Height of finished paving above features:
2.1. At drainage channels manhole covers, chamber covers and kerbs: +3 to +6 mm.

440 Laying geotextile edging strip for conventional paving

1. Location: Immediately below laying course, abutting features that interrupt the laying course, including:
1.1. Perimeters, edge restraints and kerbs.
1.2. Other types of paving.
1.3. Drainage fittings, e.g. channels and manholes.
2. Width: 1000 mm

3. Jointing: Lap by 300 mm
4. Edge detail: Turn sheet up to form an upstand fitted neatly against features.
   4.1. Height (minimum): Thickness of sand laying course.

450 Laying geotextile sheet for conventional paving

1. Location: Immediately below laying course.
2. Jointing: Lap by 300 mm
3. Laying: Fit neatly at edge restraints and other features that interrupt the sand laying course, e.g. drainage fittings, channels, manholes and kerbs.
   3.1. Edge detail: Turn sheet up to form an upstand against features.
      3.1.1. Height (minimum): Thickness of sand laying course.

451 Laying geotextile sheet for permeable paving

1. Jointing: As per Manufacturer's specification

485 Laying blocks/ pavers/ setts

1. Setting out: Start from an edge restraint.
2. Cutting: Cleanly, accurately and vertically, without spalling. Do not mark or damage visible surfaces.
3. Cut edges: Turn inwards where possible; do not position against edge restraints or other features.
4. In situ mortar or concrete infill:
5. Compaction: Vibrate to produce thoroughly interlocked paving of even overall appearance with regular joints and accurate to line, level and profile. Do not mark or damage paving units, kerbs and adjacent work.
   5.1. Concrete blocks and clay pavers: In accordance with BS 7533-3, Annex F, to site category required for laying course material.

490 Laying permeable paving

1. General: As per Manufacturer's specification

495 In situ surrounds to obstructions

1. Locations: Around circular drainage fittings, Where blocks/ pavers cannot be fitted tight up to features
2. Material: C35 air entrained concrete or 3:1 mix of coarse aggregate and mortar in accordance with BS 7533-3, clause 5.4.3.2.
3. Shape and size: Rectangular, 100 mm (minimum) all round obstruction.
4. Thickness (minimum): Combined depth of blocks/ pavers/ setts and sand laying course.
5. Colour: To match paving units
6. Timing: Lay and allow to cure in advance of laying blocks/ pavers/ setts.

505 Regularity of paved surfaces

1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
2. Joints between paving units or utility access covers
   2.1. Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
   2.2. Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.

2.3. Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.

3. Sudden irregularities: Not permitted.

Completion

615 Completion of paving

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

Ω End of Section