



BPD-HLM-XX-XX-SP-L-00601 LANDSCAPE SPECIFICATION

REVISION: C09

24 January 2023

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F
Masonry



F30
Accessories/ sundry items for brick/ block/ stone walling

F30
Accessories/ sundry items for brick/ block/ stone walling
Revision C02

F30 Accessories/ sundry items for brick/ block/ stone walling

To be read with Preliminaries/ General conditions.

110 CONCRETE FILL TO BASE OF CAVITY

- Concrete generally: To BS EN 206 and BS 8500-2.
- Concrete type: Standardized prescribed ST2.
 - Workability: High.
- Extent: Maintain 75 mm between top of fill and external ground level and a minimum of 225 mm between top of fill and ground level dpc.
- Placement: Compact to eliminate voids.

120 CLEANLINESS

- Cavity base and faces, ties, insulation and exposed dpcs: Free from mortar and debris.

130 PERPEND JOINT WEEP HOLES

- Form: Open perpend joint.
- Locations: Through outer leaf immediately above base of cavity, at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres and not less than two over each opening.

131 BED JOINT WEEP HOLES

- Form: Open 10 mm diameter hole.
- Locations: Through outer leaf immediately above base of cavity at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres and not less than two over each opening.

160A AIR BRICKS IN EXTERNAL WALLING

Deleted - 19 December 2022

Refer to Architects specification

REINFORCING/ FIXING ACCESSORIES

220A WALL TIES

Deleted - 19 December 2022
Refer to Architects specification

241A WALL STARTERS/ CONNECTORS

Deleted - 19 December 2022
Refer to Architects specification

242A SURFACE MOUNTED CHANNELS/ SLOTS

Deleted - 19 December 2022
Refer to Architects specification

255A WIND POSTS

Deleted - 19 December 2022
Refer to Architects specification

260A ANGLE SUPPORTS WALL

Deleted - 19 December 2022
Refer to Architects specification

265A SUPPORT SYSTEM WALL TYPE 1

Deleted - 19 December 2022
Refer to Architects specification

FLEXIBLE DAMP PROOF COURSES/ CAVITY TRAYS**330A DAMP PROOF COURSE - BITUMEN POLYMER**

Deleted - 19 December 2022
Refer to Architects specification clause 330B

390 SITE FORMED DPC/ CAVITY TRAY JUNCTIONS/ STOP ENDS

Deleted - 19 December 2022

Refer to Architects specification

INSTALLATION OF DPCS/ CAVITY TRAYS**415 HORIZONTAL DPCS**

- Placement: In continuous lengths on full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
- Width: At least full width of leaf unless otherwise specified. Edges of dpc not covered with mortar or projecting into cavity.
- Overlying construction: Immediately cover with full even bed of mortar to receive next masonry course.
- Overall finished joint thickness: As close to normal as practicable.

425 GROUND LEVEL DPCS

- Joint with damp proof membrane: Continuous and effectively sealed.

435 STEPPED DPCS IN EXTERNAL WALLS

- External walls on sloping ground: Install dpcs not less than 150 mm above adjoining finished ground level.

JOINTS

610A SEALANT FOR EXTERNAL BUILDING FABRIC" Manufacturer: Adshead Ratcliffe & Co Ltd.- Web: www.arbo.co.uk.- Email: arbo@arbo.co.uk.- Product reference: Arbokol 1000" Colour: submit samples." Accessories:- Joint backing: Closed cell foam polyethylene rod TO EXTERNAL WALL STARTER LOCATIONS

PROPRIETARY SILLS/ LINTELS/ COPINGS/ DRESSINGS**760 COPING UNITS**

- Standard: To BS 5642-2.
- Material: Natural stone.
- Manufacturer: Marshalls
www.marshalls.co.uk
info@marshalls.co.uk
T: +44 (0)330 0574472.
 - Product reference: Yorkstone Coping Stone
 - Refer to Drawing BPD-HLM-00-ZZ-DR-L-25402 LANDSCAPE COPING WALL DETAIL - NORTHHOUSE, and BPD-HLM-00-ZZ-DR-L-25404 LANDSCAPE COPING WALL DETAIL - WORKHOUSE.
- Dimensions: As shown on drawings.
- Finish: Diamond Sawn.
- Mortar for bedding/ jointing: Cement gauged as section Z21.
 - Standard: To BS EN 998-2.
 - Mix: Mortar batched and mixed on site.
 - Additional requirements: None.
- Joints: Full and finished flush.
- Placement: Lay on a full bed of mortar to line and level.

Q
Paving/Planting/Fencing/Site furniture



Q10
Kerbs/ edgings/ channels/ paving accessories

Q10
Kerbs/ edgings/ channels/ paving accessories
Revision C04

Q10 Kerbs/ edgings/ channels/ paving accessories

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS.

TYPES OF KERBS/EDGINGS AND CHANNELS

120A STONE STEPS

- Standard: To BS EN 1343.
- Manufacturer: Marshalls plc.
 - Web: www.marshalls.co.uk.
 - Email: info@marshalls.co.uk.
 - Product reference: Granite Step from **China**
- Types: Rectangular with radiused exposed edges.
 - Tolerances on batter: No requirement.
- Stone type: Granite.
Colour: **Callisto** Granite.
- Size (width x height): 300 x 200 x 1000 mm.
 - Tolerances on overall width and height (nominal): Class 1.
- Freeze/ Thaw resistance: Resistant.
- Finish: **Flamed**.
- Arrises: None.
- Bedding: Cement mortar.
- Joints generally: NA.
- Sealant movement joints: Not required.
- Accessories: 50 x50mm Dark grey granite Bullnose inset visibility strips to step nosings..

150A STEEL EDGING EDGING TYPE E2

- Standard: To BS EN 1338.
- Manufacturer: Logic or similar and approved.
 - Product reference: Edinburgh Edge Straight 3mm - Galvanised or similar and approved.
- Recycled content: 3% (minimum) to BS EN ISO 14021.
- Size: 3 x 70 x 70 x 2000mm.
- Finish: Galvanised Steel.
- Joints generally: to manufacturers specification.
- Sealant movement joints: to manufacturers specification.

150B STEEL EDGING EDGING TYPE E3

- (Deleted - 19th December 2022)

150C STEEL EDGING EDGING TYPE E1a

- (Deleted - 19th December 2022)

150D STEEL EDGING EDGING TYPE E1b

- Standard: To BS EN 1338.
- Manufacturer: Logic or similar and approved.
 - Product reference: Edinburgh Module Planter System.
- Recycled content: 3% (minimum) to BS EN ISO 14021.
- Size: varies.
- Special shapes: Custom lighting panel recesses.
- Finish: Galvanised Steel and powder coated - Black RAL9005.
- Joints generally: to manufacturers specification.
- Sealant movement joints: to manufacturers specification.

150E STEEL EDGING EDGING TYPE E2b

- Standard: To BS EN 1338.
- Manufacturer: Logic or similar and approved.
 - Product reference: Edinburgh Edge Straight 3mm - Galvanised powder coated or similar and approved.
- Recycled content: 3% (minimum) to BS EN ISO 14021.
- Size: 3 x 200 x 100 x 2000mm.
- Finish: Galvanised Steel and powder coated - Black RAL9005.
- Joints generally: to manufacturers specification.
- Sealant movement joints: to manufacturers specification.

150F STEEL EDGING EDGING TYPE E2a

- (Deleted - 19th December 2022)

200 • SPECIAL KERBS - E4 As Drawing BPD-HLM-00-00-DR-L-00217 - L(00)17

- Manufacturer: Marshalls
Landscape House, Premier Way, Lowfields Business Park, Elland, West Yorkshire. HX5
9HT www.marshalls.co.uk
info@marshalls.co.uk
 - Product reference: Bespoke Yorkstone Sandstone Kerb.
 - Size: 200 x 525 x 915mm As Drawing BPD-HLM-00-00-DR-L-00217 - L(00)17.
 - Type/ Material: Yorkstone Sandstone.
 - Finish: Fine picked.
 - Colour: Natural.
 - Accessories: None.
 - Bedding: As Q25.
- Joints: 5mm.

200A SPECIAL Dished Channel - DSH As Drawing BPD-HLM-00-XX-DR-L-30401 - D(49)

- (Deleted - 19th December 2022)

215 ~~MANHOLE COVER~~

(Deleted - Q10 revision C03 - 13th Jan 2021)

LAYING**510 LAYING KERBS, EDGINGS AND CHANNELS**

- Cutting: Neat, accurate and without spalling. Form neat junctions.
 - Long units (450 mm and over) minimum length after cutting: 300 mm.
 - Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- 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.
- 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

- 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

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

540 CEMENT MORTAR BEDDING

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

560 HAUNCHING DOWELS

- Dowels: Steel bar to BS 4482.
 - Size: 12 mm diameter, 150 mm long.
- Installation of dowels: Vertically into foundation while concrete is plastic.
 - Centres: 450 mm.
 - Distance from back face of kerb: 50 mm.
 - Projection: 75 mm.
- Haunching: Rectangular cross section, cast against formwork, fully enclosing and protecting dowels.

610 ANGLE KERBS

- Usage: Internal and external 90° changes of direction.
- Cutting of mitres: Not permitted.

620 ACCURACY

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

625 REGULARITY OF PAVED SURFACES

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

650 SEALANT MOVEMENT JOINTS

- Joint filler: Compressible cellular rubber or plastics compatible with specified sealant.
- Filler installation: Built in as work proceeds, extending through haunching and foundation. Filler positioned accurately to fully support sealant at the recommended depth below exposed faces of units.
- Joint width: 6 mm.
- Sealant: Submit proposals.
 - Colour: Natural.
- Sealant application: As section Z22.

Q20
Granular sub-bases to roads/ pavings
Revision C02

Q20 Granular sub-bases to roads/ pavings

To be read with Preliminaries/ General conditions.

110 THICKNESSES OF SUB-BASE/ SUBGRADE IMPROVEMENT LAYERS

- Thicknesses: See sections:
 - Q25 Slab/brick/sett/cobble pavings.

140 EXCAVATION OF SUBGRADES

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

145 PREPARATION AND COMPACTION OF SUBGRADES

- Timing: Immediately before placing sub-base.
- Soft or damaged areas: Obtain instructions.
- 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.

150 SUBGRADES FOR VEHICULAR AREAS

- Preparation and treatment: To Highways Agency 'Specification for highway works', clauses 616 and 617.

170 GEOTEXTILE FILTER/ SEPARATOR MEMBRANE AS REQUIRED BY CIVIL ENGINEER

- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Jointing: 300 mm overlap.
- Protect from:
 - Exposure to light, except during laying (maximum five hours).
 - Contaminants.
 - Materials listed as potentially deleterious by geotextile manufacturer.
 - Damage, until fully covered by fill.
 - Wind uplift, by laying not more than 15 m before covering with fill.
- Preparation: Remove humps and sharp projections and fill hollows before laying.

180 NOTICE

- Give notice: After preparation and compaction of subgrades and For inspection of granular sub-base material before spreading.
 - Period of notice: 2 working days.

210 HIGHWAYS AGENCY TYPE 1 UNBOUND MIXTURE FOR SUB-BASE

- Material: Type 1 unbound mixture to Highways Agency 'Specification for highway works', clauses 801 and 803.
 - Recycled aggregate: Not permitted.

211 GRANULAR MATERIAL

- Quality: Of a known suitability for use in sub-bases, 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 or a resistance to fragmentation of LA50 for the Los Angeles test to BS EN 1097-2, and in any one layer only one of the following:
 - Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
 - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
 - Natural gravel.
 - Natural sand.
- Filling: Spread and levelled in 150 mm maximum layers, each layer thoroughly compacted.

215 COARSE GRADED AGGREGATE FOR PERMEABLE PAVING - UNBOUND.

- Deleted - 19th December 2022

230 PLACING GRANULAR MATERIAL GENERALLY

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

240 LAYING GRANULAR SUB-BASES FOR VEHICULAR AREAS

- General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
- Standard: To Highways Agency 'Specification for highway works' clause 802.
- 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

- Proposals: Well in advance of starting work submit details of:
 - Maximum depth of each compacted layer.
 - Type of plant.
 - Minimum number of passes per layer.
- General: Spread and levelled in layers. As soon as possible thereafter compact each layer.
- At drainage fittings, inspection covers, perimeters and where local excavation and backfilling has taken place: Take particular care to compact fully.
- Defective areas: Remove loose, segregated or otherwise defective areas to the full thickness of the layer and lay and compact new material.
- 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 FOR PEDESTRIAN AREAS

- General: Spread and levelled.
- Compaction:
 - Timing: As soon as possible after laying.
 - 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

- Permissible deviation from required levels, falls and cambers (maximum):
 - Subgrades:
Roads and parking areas: +20 -30 mm.
Footways and recreation areas: \pm 20 mm.
 - Sub-bases:
Roads and parking areas: \pm 20 mm.
Footways and recreation areas: \pm 12 mm .

315A ACCURACY FOR SUB-BASES TO SYNTHETIC GRASS SURFACING

- Profile: Lay sub-base to levels shown on drawings and with a Crossfall in a single plane .
- Maximum gradient in any direction: 1:100 to flat areas, and as indicated in drawings to sloped areas .
- Degree of evenness: As specified by BS EN 14904 .
- Deviation from finished plane: No additional requirement .
- General accuracy: Sufficient to ensure that the surface will not cause a hazard or a ball to deflect from its true path.

320 SURFACES TO RECEIVE SAND BEDDING FOR PAVING TO SECTION Q25.

- Blind surface: As necessary before compaction to ensure that surface is tight and dense enough to prevent laying course sand being lost into it during construction or use.
- Material: Approved fine material.

330 COLD WEATHER WORKING

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

340 PROTECTION

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

Q23
Gravel/ Hoggin/ Woodchip/ Resin bound roads/ pavings/ overlays
Revision C03

Q23 Gravel/ Hoggin/ Woodchip/ Resin bound roads/ pavings/ overlays

To be read with Preliminaries/ General conditions.

TYPES OF SURFACING**160A LOOSE GRAVEL INFILL TO CONCRETE PAVING TYPE CP4**

- Deleted 19th December 2022

160B LOOSE GRAVEL Decorative Gravel GrV

- Gravel: Loose laid and raked to uniform thickness.
 - Type: CED Flat White Pebbles.
 - Source: CEDStone or similar and approved
<https://www.cedstone.co.uk/>
728 London Road
West Thurrock
Grays
Essex
RM20 3LU.
 - Colour: Buff.
 - Size: 20-40mm.
 - Thickness: Dressed to surface level.

LAYING**315 MATERIALS**

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

340 LAYING GENERALLY

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

350 COLD WEATHER WORKING

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

360 DRAINAGE FALLS

- Sealed surfaces:
 - Falls and cross falls (minimum): 1:40.
 - Camber (minimum): 1:50.
- Unsealed surfaces (minimum): 1:30.

380 LAYING GRANULAR SURFACES IN PEDESTRIAN AREAS

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

390 PROTECTION FROM TRAFFIC AND PLANT

- Paved areas: Restrict access to prevent damage.

Q25
Slab/ brick/ sett/ cobble pavings
Revision C02

Q25 Slab/ brick/ sett/ cobble pavings

To be read with Preliminaries/ General conditions.

GENERAL

110 NATURAL STONE SLAB PAVING SYSTEM BEDDING SYSTEM

- Subgrade improvement layer: Not required.
 - Compacted thickness: As drawing BPD-HLM-00-XX-DR-L-30401.
- Granular sub-base: As drawing BPD-HLM-00-XX-DR-L-30401.
 - Compacted thickness: As Engineers Details.
- Base: Parex Fine Bedding Concrete .
 - Thickness: As Engineers Details.
- Laying course: Ready mixed mortar.
 - Accessories: Primer for underside of flags or slabs.
- Paving units: Natural stone slabs.
- Jointing: Parex Granatech.
 - Bond: As drawings BPD-HLM-00-XX-DR-L-30411.
- Accessories: None.

127

PEDESTAL SUPPORTED PAVING SLAB/ FLAG SYSTEM to Stone Paving Type 9 SP9.

- Preparation of existing base: As Detail D14, Drawing BPD-HLM-00-XX-DR-L-30401.
- Paving support: Pedestals as clause 480 .
- Paving units: Stone Paving Type 9 SP9, as per drawing BPD-HLM-00-XX-DR-L-30401 and BPD-HLM-00-XX-DR-L-30411.
- Accessories: None.

127A PAVING SLAB/ FLAG SYSTEM TO PODIUM.

- Waterproofing to slab: Refer to Structural Engineers design and specification.
- Thermal insulation: Refer to Architects design and specification.
 - Protection: Permavoid Geomembrane Liner or similar and approved.
- Moisture control layers: Permavoid 150 Drainage layer. Refer to drawing BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS Sheet 1 for detail.
- Permeable layer: No
- Supplier: Polypipe Civils,
Charnwood Business Park, Loughborough, Leicestershire LE11 1LE
Tel: +44 (0)1509 615100 Fax: +44(0)1509 610215 Email: civils@polypipe.com or similar and approved.
 - Product Reference: Permavoid Cell System or similar and approved.

127B PAVING SLAB/ FLAG SYSTEM TO TERRACES.

- Deleted - 19th December 2022

140 NATURAL STONE SETT PAVING SYSTEM STONE PAVING TYPE SP1

- Subgrade improvement layer: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Granular sub-base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Thickness: n/a.
- Laying course: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Accessories: n/a.
- Paving units: Marshalls Scoutmoor Yorkstone Setts **100 x 50 x 600**mm.
- Jointing: Site mixed fine concrete.
 - Bond: Refer to BPD-HLM-00-XX-DR-L-30411 PAVING PATTERN DETAILS.
- Accessories: None.

140A NATURAL STONE SETT PAVING SYSTEM STONE PAVING TYPE SP2

- Subgrade improvement layer: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Granular sub-base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Thickness: n/a.
- Laying course: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Accessories: n/a.
- Paving units: Marshalls **Chinese** Granite Setts 100 x 50 x 200 (10%) 300 (30%) 400 (60%) mm, colours 50% **Callisto - Silver Grey**, 20% **Mimis - Red** & 30% **Larrissa - Buff**).
- Jointing: Site mixed fine concrete.
 - Bond: Refer to BPD-HLM-00-XX-DR-L-30411 PAVING PATTERN DETAILS.
- Accessories: None.

140B NATURAL STONE SETT PAVING SYSTEM STONE PAVING TYPE SP3 - TACTILE

- Subgrade improvement layer: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Granular sub-base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Compacted thickness: n/a.
- Base: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Thickness: n/a.
- Laying course: Refer to BPD-HLM-00-XX-DR-L-30401 HARD LANDSCAPE DETAILS - SHEET 01.
 - Accessories: n/a.
- Paving units: Marshalls **Chinese** Granite Tactile slabs 400 x 400 x 50mm, colour **Mimas - Red**.
- Jointing: Site mixed fine concrete.
 - Bond: Stack.
- Accessories: None.

140C NATURAL STONE SLAB PAVING SYSTEM RELAYING OF STONE PAVING TYPE SP4

- Subgrade improvement layer: As section Q20.
 - Compacted thickness: Submit proposals.
- Granular sub-base: Highways Agency Type 1 unbound mixture, as section Q20.
 - Compacted thickness: MIN 150 mm or as shown on Landscape drawings.
- Base: Not required unless specified on engineers drawings.
 - Thickness: Not required.
- Laying course: 3:1 sand:cement mortar or as shown on engineers drawings .
 - Accessories: None.
- Paving units: Existing setts.
- Jointing: Site mixed fine concrete.
 - Bond: As existing.
- Accessories: None.

140D NATURAL STONE SLAB PAVING SYSTEM RELAYING OF STONE PAVING TYPE SP5

- Subgrade improvement layer: As section Q20.
 - Compacted thickness: Submit proposals.
- Granular sub-base: Highways Agency Type 1 unbound mixture, as section Q20.
 - Compacted thickness: MIN 150 mm or as shown on Landscape drawings.
- Base: Not required unless specified on engineers drawings.
 - Thickness: Not required.
- Laying course: 3:1 sand:cement mortar or as shown on engineers drawings .
 - Accessories: None.
- Paving units: Existing slabs.
- Jointing: Site mixed fine concrete.
 - Bond: As existing.
- Accessories: None.

140E NATURAL STONE SLAB PAVING SYSTEM STONE PAVING TYPE SP6A / SP6B & SP6C

- Deleted 19th December 2022

140F NATURAL STONE SLAB PAVING SYSTEM STONE PAVING TYPE SP7

- Deleted 19th December 2022

140G NATURAL STONE SLAB PAVING SYSTEM STONE PAVING TYPE SP8

- Deleted 19th December 2022

140H NATURAL STONE SLAB PAVING SYSTEM STONE PAVING TYPE SP9

- Deleted 19th December 2022

150 CONCRETE SETT PAVING SYSTEM CONCRETE PAVING TYPE CP1, CP2 & CP4

- Deleted 19th December 2022

150A CONCRETE SETT PAVING SYSTEM CONCRETE PAVING TYPE CP1A & CP2A

- Deleted 19th December 2022

150B CONCRETE SETT PAVING SYSTEM CONCRETE PAVING TYPE CP3 & CP5 & BP

- Deleted 19th December 2022

PRODUCTS**320 TACTILE FLAGS AND SLABS STONE PAVING TYPE SP3**

- Standard: To DD CEN/TS 15209.
- Material: Granite.
 - Manufacturer: Marshalls or similar and approved.
 - Product reference: Marshalls **Chinese Granite Mimas** or similar and approved.
- Recycled content: Contractor's choice.
- Nominal sizes: 400 x 400 x 50mm.
- Colour: Malasana - **Light sand blasted**

- Type of surface: Rib – type R1.

330 NATURAL STONE SETTS STONE PAVING TYPE SP1

- Standard: To BS EN 1342.
- Supplier: Marshalls or similar and approved.
 - Product reference: Scoutmoor Yorkstone Paving or similar and approved.
 - Quarry: No requirement.
 - Petrographical description/ stone type: Sandstone.
- Finish: Coarse textured.
- Sizes: 100 x 50 x random length 200-400mm.
 - Plan dimension and thickness deviation: Class 2.
- Special setts: NA.
 - Tolerances on undercut of sides: Class 2.
 - Tolerances on hewn and coarse textured face irregularities: Class 2.
 - Breaking strength: No requirement.
- Slip resistance: No requirement.
- Skid resistance: No requirement.
- Surface treatment: None.

330B NATURAL STONE SETTS STONE PAVING TYPE SP2

- Standard: To BS EN 1342.
- Supplier: Marshalls or similar and approved.
 - Product reference: Marshalls **Chinese Granite setts (Larissa (30%), Mimas (20%), Callisto (50%)** or similar and approved.
 - Quarry: No requirement.
 - Petrographical description/ stone type: Granite.
- Finish: **Larissa Fine picked, Callisto and Mimas Flamed**
- Sizes: 100 x 50 x 200 (10%) 300 (30%) 400 (60%) mm.
 - Plan dimension and thickness deviation: Class 2.
- Special setts: NA.
 - Tolerances on undercut of sides: Class 2.
 - Tolerances on hewn and coarse textured face irregularities: Class 2.
 - Breaking strength: No requirement.
- Slip resistance: SRV to BS EN 14231 of 69 (min).
- Skid resistance: No requirement.
- Surface treatment: None.

330C NATURAL STONE SETTS STONE PAVING TYPE SP6A / SP6B & SP6C

- Deleted 19th December 2022

330D NATURAL STONE SETTS STONE PAVING TYPE SP7A / SP7B & SP7C

- Deleted 19th December 2022

330E NATURAL STONE SETTS STONE PAVING TYPE SP8

- Deleted 19th December 2022

335A CONCRETE SETTS CONCRETE PAVING TYPE CP1A

- Deleted - 19th December 2022

335E CONCRETE SETTS CONCRETE PAVING TYPE CP4

- Deleted 19th December 2022

335F ~~CONCRETE SETTS~~

(Deleted - Q25 revision C02 - 15th Jul 2020)

335G ~~CONCRETE SETTS~~

(Deleted - Q25 revision C02 - 15th Jul 2020)

335H ~~CONCRETE SETTS~~

(Deleted - Q25 revision C02 - 15th Jul 2020)

335I CONCRETE SETTS STEPPING STONE SS

- Deleted - 19th December 2022

335J CONCRETE SETTS BALCONY PAVING TYPE BP

- Deleted - 19th December 2022

420 FINE AGGREGATE FOR LAYING COURSE OF CONCRETE SETT PAVING

- Material: Laying course sand to BS 7533-4.

425 FINE AGGREGATE FOR JOINTING CONCRETE SETT PAVING

- Material: Limestone dust, 3-4 mm down.

**435 PRIMER FOR UNDERSIDE OF FLAGS AND SLABS NATURAL STONE PAVING TYPE SP1, SP2, SP3, SP4, SP5,
~~SP6A & SP7A~~**

- Manufacturer: Parex Ltd,
Holly Lane Industrial Estate,
Atherstone,
Warwickshire,
CV9 2QZ
Tel: 01827 711755,
Email: enquiries@parex.co.uk.
- Product reference: PAREX Bond Plus Priming Mortar.

445 READY MIXED FINE CONCRETE JOINTING MORTAR

- Standard/ Performance requirements: In accordance with BS 7533-7.
- Manufacturer: Parex Ltd,
Holly Lane Industrial Estate,
Atherstone,
Warwickshire,
CV9 2QZ
Tel: 01827 711755,
Email: enquiries@parex.co.uk.
- Product reference: Parex Granatech .
Consistency: Slurry.

480 SUPPORT PEDESTALS TO CONCRETE PAVING TYPE CP3 - LEVEL 08

- Deleted - 19th December 2022

480A SUPPORT PEDESTALS TO CONCRETE PAVING TYPE CP3 - LEVEL 04

- Deleted - 19th December 2022

~~480B SUPPORT PEDESTALS~~

(Deleted - Q25 revision C02 - 15th Jul 2020)

480C SUPPORT PEDESTALS TO North House Courtyard Paving

- Manufacturer: Marshalls or similar and approved.
- Product reference: Marshalls MP Stackable Pad System or similar and approved.
- Type: Non-adjustable.
- Material: Recycled polypropylene.
- Dimensions: 15mm high.
- Additional pedestals: To manufacturers recommendations.
- Accessories: Not required.

EXECUTION

610 MATERIAL SAMPLES

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

620 ADVERSE WEATHER

- General:
 - 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.
 - Frozen materials: Do not use. Do not lay bedding on frozen or frost covered bases.
- Paving with mortar joints and/ or bedding:
 - Protect from frost damage, rapid drying out and saturation until mortar has hardened.
- Paving laid and jointed in sand:
 - Stockpiled bedding sand: Protect from saturation.
 - Exposed areas of sand bedding and uncompacted areas of sand bedded paving: Protect from heavy rainfall.
 - Saturated sand bedding: Remove and replace, or allow to dry before proceeding.
 - Laying dry-sand 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

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

630 LEVELS OF PAVING

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

635 REGULARITY OF PAVED SURFACES

- 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):
 - Precast concrete paving blocks and clay pavers for flexible pavements: 10 mm.
 - Precast concrete flags or natural stone slabs: 3 mm.
- Difference in level between adjacent paving units (maximum): 2 mm.
- Sudden irregularities: Not permitted.

645 PROTECTION

- Cleanliness: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
- Materials storage: Do not overload pavings with stacks of materials.
- Handling: Do not damage paving unit corners, arrises, or previously laid paving.
- Mortar bedded pavings: Keep free from traffic after laying:
 - Pedestrian traffic (minimum): 4 days.
 - Vehicular traffic (minimum): 10 days.
- Access: Restrict access to paved areas to prevent damage from site traffic and plant.

655 **CONDITION OF SUB-BASES/ BASES BEFORE SPREADING LAYING COURSE**

- Trenches and excavation of soft or loose spots in subgrade: Fill and thoroughly compact.
- 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.
- Prepared existing and new bound bases (roadbases): Sound, clean, free from rutting or major cracking. Remove sharp stones, projections and debris.
- Sub-base/ Roadbase level tolerances: To BS 7533-7, Annex A.
- Levels and falls: Accurate and within the specified tolerances.
- Drainage outlets: Within 0-10 mm of the required finished level.
- Features in sand bedded paving (including mortar bedded restraints and drainage ironwork): Complete to required levels; adequately bed and haunch in mortar.
- Sub-bases containing cement/ hydraulic binder: Cure for minimum times specified in BS 7533-4.

665 **PLANING AND REPAIRS TO EXISTING BASES**

- Existing macadam/ asphalt surfaces: Plane to required levels.
- Repairs: Cut out to remove ruts and cracks over 25 mm wide and Cut out depressions, fill to match existing surface and compact.
- Building up existing surfaces to required levels: Regulate using asphalt concrete to BS EN 13108-1.

730 **LAYING NATURAL STONE SETT PAVING**

- Standard generally: In accordance with BS 7533-7.
- Laying type: Rigid.
 - Laying and jointing method: Moist mix fine concrete with vibratory compaction.
- Laying course:
 - Target thickness after compaction: 40 mm.
- Joint width (nominal): 5 mm.

735 **LAYING CONCRETE SETT PAVING - MORTAR BEDDED**

- Laying: Spread and level a bed of mortar. Individually lay and hammer down the setts so that tops are level, leaving joints open.
- Laying course:
 - Nominal thickness after compaction: 35 mm.
- Jointing: Fill joints and finish neatly. Clean mortar from face of setts before it sets.
- Joint width (nominal): 5 mm.
 - Recess mortar joints below sett surface by: 2 mm.

740 **LAYING CONCRETE SETT PAVING - FINE AGGREGATE BEDDING AND JOINTING**

- Laying: 35mm.
- Jointing: 5mm.

805 **CLEANING EXISTING BLOCKS AND SETTS**

- Area: STONE PAVING TYPE SP4 & SP5.
- Application:
 - Method: Contractor's choice.
 - Dosage: Contractor's choice.
- Sand jointed paving: Do not displace jointing sand during cleaning process.

810 **PEDESTAL INSTALLATION**

- Surface to accept pedestals: Clean and free of debris.
- Setting out: Mark centre-point of pedestal on substrate surface, with perpendicular guidelines to ensure square layout.
 - Orientation: Align parallel with adjacent features.
 - Spacing: To suit paving material and dimensions.
- Movement tolerance at perimeter of paver system (maximum): 5 mm.

COMPLETION**915 COMPLETION OF PAVING WITH DRY SAND OR FINE AGGREGATE FILLED JOINTS**

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

930 SLIP RESISTANCE TESTING

- Surfaces to be tested: ALL.
 - Surface condition: Dry and wet.
 - Timing: As agreed with contract administrator.
 - Period of notice (minimum): 3 working days.
 - Test standard: To BS 7976.
 - Testing authority: A UKAS accredited laboratory.
 - Witnessing/ Certification: Arrange for tests to be witnessed/ certified by: Project manager.
 - Report: Submit.
- Format: As required under BS 7976.

Q28
Topsoil and soil ameliorants
Revision C02

Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

SYSTEM OUTLINE

115A SOIL SYSTEM FOR GRASS TO GRASSED/ SEDUM AREAS BETWEEN PAVING TYPE 6A/6B

- Deleted - 19th December 2022

125 GREEN ROOF GROWING MEDIA SYSTEM TO GREEN ROOF SYSTEM

- Deleted 19th December 2022

135A PLANTING BED SOIL SYSTEM TO RAISED PLANTING AREAS

- Composition:
 - Topsoil: Imported topsoil to BS 3882 and Submit design and cost proposals.
 - Ameliorants:
 - Organic materials;
 - Fertilizer; and
 - Submit design and cost proposals.
- Topsoil depth: 150 - 300mm
- Subsoil depth: to achieve minimum depth of 500mm of top soil and subsoil combined.

135B PLANTING BED SOIL SYSTEM TO FLUSH PLANTING AREAS - TO LEVEL 00

- Composition:
 - Topsoil: Imported topsoil to BS 3882 and Submit design and cost proposals.
 - Ameliorants:
 - Organic materials;
 - Fertilizer; and
 - Submit design and cost proposals.
- Topsoil depth: 150 - 300mm
- Subsoil depth: to achieve minimum depth of 500mm of top soil and subsoil combined.

135C PLANTING BED SOIL SYSTEM TO FLUSH PLANTING AREAS - TO TERRACES

- Deleted 19th December 2022

145A PLANT PIT BACKFILLING SOIL SYSTEM FOR TREE PITS

- Composition:
 - Topsoil: Imported topsoil to BS 3882 and Submit design and cost proposals.
 - Ameliorants:
 - Organic materials;
 - Fertilizer; and
 - Submit design and cost proposals.
- Topsoil depth: 300mm or to base of root ball.
- Subsoil depth: to depth of root cell or to achieve minimum depth of 1000mm of top soil and subsoil combined

155 MULCHING AND TOP DRESSING SYSTEM FOR EXTERNAL PLANTING AREAS AND TREE PITS

- Composition:
 - Material: Organic materials and PAS 100 compost and Submit design and cost proposals.

PRODUCTS**300 PREPARATION MATERIALS GENERALLY**

- Purity: Free of pests and disease.
- 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.
- Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable.
 - Hazardous to human or animal life.
 - Detrimental to healthy plant growth.
- Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
- Objectionable odour: None.
- 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

- Materials: Composted green/ food waste certified to PAS 100.
- Give notice: before ordering or using.
- Declaration of compliance in accordance with BS EN 13650: Required.

310 MATERIALS NOT PERMITTED

- Materials:
 - Peat;
 - Products containing peat; and
 - River and canal dredgings.

315 IMPORTED TOPSOIL TO BS 3882 FOR EXTERNAL PLANTING AREAS AND TREE PITS

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Classification: Multipurpose.
 - Soil textural class to BS 3882, Figure 1: Sandy loam.
- Source: Submit proposals.
 - Product reference: Submit proposals.

315A IMPORTED SUBSOIL TO BS 3882 FOR EXTERNAL PLANTING AREAS AND TREE PITS

- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Classification: Multipurpose.
 - Soil textural class to BS 3882, Figure 1: Sandy loam.
- Source: Submit proposals.
 - Product reference: Submit proposals.

355 ORGANIC MATERIALS FOR PLANTING AREAS AND TREE PITS

- Type: Wood chips.
- Source: Submit proposals.
 - Product reference: Submit proposals.

360 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR PLANTING AREAS AND TREE PITS

- Standard: In accordance with PAS 100.
- Source: Submit proposals.
 - Product reference: Submit proposals.
- Horticultural parameters:
 - pH (1:5 water extract): 7.0-8.7.
 - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
 - Moisture content (m/m of fresh weight): 35-55%.
 - Organic matter content (minimum): 25%.
 - Grading (air dried samples): 99% passing 25 mm screen, and 90% passing: 10 mm screen mesh aperture.
 - Carbon:Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.
- Compost Certification Scheme certification: Required.
- Declaration of analysis: Submit.
- Additional analyses: Phytotoxic elements.
- Samples: Supply 5 kg sample before ordering.

380 MYCORRHIZAL INOCULANT FOR TREE PITS

- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.

EXECUTION**620 IMPORTING TOPSOIL**

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

625 SAMPLE LOADS FOR IMPORTED TOPSOIL

- Deliver to site a sample load: of 5 kg.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
 - Notice period: 5 days.

630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR PLANTING AREAS AND TREE PITS

- Timing: Submit at handover.
- Contents:
 - Full description of all soil components.
 - Record of source for all soil components.
 - Record drawings showing the location and depth of all soils by type and grade.
 - Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
- Number of copies: One.

640 DOCUMENTATION FOR PREPARATION MATERIALS FOR ORGANIC MATERIALS

- Timing: Submit at handover.
- Contents:
 - Full description of all components.
 - Record of source for all components.
 - Analyst's report for each test carried out.
 - Supplier's declaration of compliance with BSI PD CR 13456.
- Number of copies: One.

650 NOTICE

- Give notice before:
 - Setting out.
 - Spreading topsoil.
 - Applying herbicide.
 - Applying fertilizer.
 - Visiting site during maintenance period.
- Period of notice: 2 working days.

655 MECHANICAL TOOLS

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

660 GRADING SUBSOIL FOR ALL PLANTING AREAS

- Standard: In accordance with BS 8601.
- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
- Areas of thicker topsoil: Excavate locally.
- Avoid compaction.
- Excess subsoil: Remove.

665 SUBSOIL SURFACE PREPARATION FOR PLANTING AREAS AND TREE PITS

- Standard: In accordance with BS 3882.
- General: Excavate and/ or place fill to required profiles and levels, as section D20.
- Loosening:
 - When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth:
 - Light and noncohesive subsoils: 600 mm.
 - Stiff clay and cohesive subsoils: 600 mm.
 - Rock and chalk subgrades: Lightly scarify to promote free drainage.
 - Wet conditions: Do not loosen subsoils.
- Stones: Immediately before spreading topsoil, remove stones larger than 20 mm.
- Remove from site: Arisings, contaminants and debris and Builders rubble.

670 INSPECTING FORMATIONS

- Give notice: Before spreading topsoil for tree pits and planting beds.
- Notice period: 7 days.

675 PREPARATION OF UNDISTURBED TOPSOIL

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

700 GRADING OF TOPSOIL

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

705 HANDLING TOPSOIL

- Standard: In accordance with BS 3882.
- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- Contamination: Do not mix topsoil with:
 - Subsoil, stone, hardcore, rubbish or material from demolition work.
 - Other grades of topsoil.
- Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.

710 SPREADING TOPSOIL ON PLANTING AREAS AND TREE PITS

- Standard: In accordance with BS 3882.
- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
 - Depth (maximum): 150 mm.
 - Gently firm each layer before spreading the next.
- Depth after firming and settlement: 300 mm.

- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

- Standard: In accordance with BS 3882.
- 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.

720

FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

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

730 GREEN ROOF GROWING MEDIUM INSTALLATION

- Deleted - 19th December 2022

840 APPLYING MYCORRHIZAL INOCULANT TO PLANTING AREAS AND TREE PITS

- Depth: To manufacturer's/ supplier's recommendations.

845 APPLYING LOOSE MULCH FOR PLANTING AREAS AND TREE PITS

- Timing: Immediately after planting.
- Preparation: Ensure that soil is thoroughly moistened, applying water where necessary.
- Coverage of mulch (minimum):
 - Planting beds (depth): 50 mm depth.
 - Trees: 75 mm depth.
 - Container planting: 50 mm depth.
- Finished level of mulch: 25 mm below adjacent grassed or paved areas.

COMPLETION**920 APPLYING MULCH**

- Timing: At end of the rectification period.
- Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Planting beds: Re-mulch.
 - Depth (minimum): 50 mm.
- Trees: Remulch.
 - Depth (minimum): 75 mm.
- Container planting: Remulch.
 - Depth (minimum): 50 mm.



Q31
External planting

Q31
External planting
Revision C02

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

112 SITE CLEARANCE GENERALLY

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 50 mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Vegetation: Clear surface vegetation in areas shown on drawings using suitable nonresidual herbicide.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: None.

118 SOIL CONDITIONS

- Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
- 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

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

125 TIMES OF YEAR FOR PLANTING

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

130 MECHANICAL TOOLS

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

145 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

150 WATER RESTRICTIONS

- 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

- Give notice before:
 - Setting out.
 - Applying herbicide.
 - Applying fertilizer.
 - Delivery of plants/ trees.
 - Planting shrubs.
 - Planting trees into previously dug pits.
 - Watering.
 - Visiting site during maintenance period.
- Period of notice: One week.

170 SOIL REQUIREMENTS

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

200 PLANTS/ TREES - GENERAL

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
 - Standard: The National Plant Specification.
- Species: True to name.
- Origin/ Provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved.
Definition: Origin and Provenance have the meaning given in the National Plant Specification.

215 PLANTS/ TREES - SPECIFICATION CRITERIA

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

225 BULBS/ CORMS/ TUBERS

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

235 CONTAINER GROWN PLANTS/ TREES

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

246 LABELLING AND INFORMATION

- Standard: To BS 3936.

260 PLANT/ TREE SUBSTITUTION

- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
 - Price.
 - Difference from specified plants/ trees.
- Approval: Obtain before making any substitution.

265 PLANT HANDLING, STORAGE TRANSPORT AND PLANTING

- Standard: To CPSE 'Handling and establishing landscape plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Plant packaging: Coextruded polyethylene bags with black interior and white exterior.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

280 TREATMENT OF TREE WOUNDS

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

285 PROTECTION OF EXISTING GRASS

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

290 SURPLUS MATERIAL

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

PLANT CONTAINERS**PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS****305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS**

- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, by contractor's choice of herbicide.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS**400 RANDOM PLANT LAYOUT TO ALL BEDS**

- Spacing: Refer to planting schedule.
- Density: Refer to planting schedule.

401 REGULAR PLANT LAYOUT TO HEDGE PLANTING

- Spacing: In regular, double staggered rows.
- Density: Refer to planting schedule.

405 SHRUB PLANTING PITS

- Timing: Excavate 1-2 days (maximum) before planting.
- Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system.
- Pit bottom improvement Break up to a depth of 150 mm, incorporating soil ameliorant/ conditioner at 50 g/m².

420A CLIMBING PLANTS

- Planting: 150 mm clear of supporting structure (e.g. wall/ fence) with roots spread outward.
 - Branches: Lightly secured to supports.
- Climber support supplier: S3i or similar and approved.
 - Product: Wire Trellis Kit or similar and approved
- Climber Support: Sainless steel wire
 - Distance from wall: 50 mm.
- Fixings: Stainless steel screw eyes.
 - Centres: 0.5 m.

445 PLANTING BULBS/ CORMS/ TUBERS

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

455 PLANTING WILDFLOWER PLUGS

- Handling: Keep plants watered and in shade until planted. Do not allow to dry out.
- Preparation: Remove brambles, coarse and invasive weeds from planting sites.
- Planting in grass: Close mow to approximately 50 mm. Remove arisings.
- Planting sites: Refer to planting schedule - MIX00G.
- Planting: Into a hole to suit plug size and shape. Create a cleft at bottom of hole to improve rooting. Gently firm plant into hole.

470 FORMAL HEDGES

- Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

471 NATURALIZED HEDGES

- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

480 AFTER PLANTING

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- 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.
- Top dressing: Mulching and top dressing system, as section Q28.
 - Depth: 50 mm.

PLANTING TREES**500 TREE PLANTING**

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

502 ANTIDESICCANT FOR CONIFERS/ EVERGREENS

- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Application: Dip or thoroughly spray before delivering to site. Spray again soon after planting.
 - Do not apply in wet or frosty weather.
 - Ensure full coverage of underside of foliage.

505A TREE PITS IN GROUND

- Sizes: 1200 mm diameter x 750 mm deep.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Excavated material: Separate topsoil and subsoil material and stockpile for backfilling.
- Pit bottoms: Excavate with slightly raised centre: Break up base to a depth of 150 mm.
 - Treatment: Submit proposals.
- Pit sides: Scarify.
- Backfilling material: Topsoil, as section Q28.

505B TREE PITS ON PODIUM

- Sizes: 1000 mm diameter, Depth to top of drainage layer.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Excavated material: Separate topsoil and subsoil material and stockpile for backfilling.
- Pit bottoms: Excavate with slightly raised centre: Do not disturb base.
 - Treatment: Not required.
- Pit sides: Scarify.
- Backfilling material: Topsoil, as section Q28.

510 TREE PIT ROOT BARRIERS

- Locations: To all tree pits on podium and in ground.
- Manufacturer: Green Blue Urban or similar and approved.
 - Product reference: ReRoot300 or similar and approved.
- Thickness: 1.0 mm.
- Barrier depth: 300 mm.
- Foil liner: Not required .
- Top of root barrier in relation to finished topsoil level: 75 mm below ground level.
- Installation: With sides vertical. Remove all sharp objects adjacent to barrier.

512A TREE PIT IRRIGATION AND VENTILATION ACCESSORIES

- Locations: To all tree pits in soft landscape and planters.
- Manufacturer: Green Blue Urban or similar and approved.
 - Product reference: RootRain Hydrogrille or similar and approved.
- Type: As manufactured - length to suit root ball.
- Installation: To manufacturers specifications
 - Membrane: Lay in loop around 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.
 - Top cap of inlet: Protruding slightly above finished surround level.
 - Backfill material: Carefully compact in layers.

512B TREE PIT IRRIGATION AND VENTILATION ACCESSORIES

- Deleted - 19th December 2022

520A CELLULAR STRUCTURAL SOIL SYSTEM To connect soft landscape areas beneath hard landscape ON podium

- Deleted - 19th December 2022

520C CELLULAR STRUCTURAL SOIL SYSTEM To tree pit in hard landscape ON podium

- Deleted - 19th December 2022

526 UNDERGROUND GUYING FOR ALL TREES.

- Deleted - 19th December 2022

526A UNDERGROUND GUYING FOR TO TREE LOCATED ON PODIUM IN WORKHOUSE.

- Manufacturer: Platipus or similar and approved.
 - Product reference: Expanding Eyebolt System or similar and approved.
- Anchoring system: 3 no drive-in anchors.
- Installation: Ensure tree is positioned correctly and vertically prior to tightening guy line tensioners.

576 TREE PIT SURFACING - LOOSE FILL

- Surfacing material: Mulch, as section Q28.
- Area: Full extent of tree pit surface.
- Depth: 75 mm.
- Watering: Water soil thoroughly before laying.
- Installation: Ensure the base of the tree stem is kept free from loose filled material.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS**710 MAINTENANCE**

- Duration: Carry out the operations in the following clauses from completion of planting until practical completion.
- Frequency of maintenance visits: As necessary to ensure health and establishment of plants.

720 FAILURES OF PLANTING

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

740 CLEANLINESS

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

750 PLANTING MAINTENANCE GENERALLY

- Weed control: Maintain weed free area around each tree and shrub.
 - Diameter (minimum): The larger of 1 m or the surface of original planting pit.
 - Keep planting beds clear of weeds: By use of approved non-residual herbicides.
- 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.
- Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
- Trees: Spray crown when in leaf during warm weather.
 - Timing: After dusk.
- Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
 - Broken or missing items: Replace.
 - Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
 - Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
 - Ties: Adjust to accommodate growth and prevent constriction or abrasion.
 - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
 - Frequency of checks: As schedule.
- Watering: As required for healthy establishment, depending on weather conditions.

780 MAINTENANCE INSTRUCTIONS

- 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

- Timing: At end of the maintenance period.
- Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
- Planting beds: Remulch.
Depth (minimum): 50 mm.
- Trees: Remulch.
Depth (minimum): 75 mm.



Q35
Landscape maintenance

Q35
Landscape maintenance
Revision C02

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

105 MAINTENANCE OBJECTIVES

- Location: All planting areas and tree pits.
 - Duration: 5 years or as specified in Management and Maintenance Document.
- Aims: Enhanced landscape quality and Improved landscape visual amenity.
- Restrictions: As described in the landscape maintenance manual.
- Results: As scheduled.

110 NOTICE

- Give notice before:
 - Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
- Period of notice: 7 days.

130 REINSTATEMENT

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

140 CONTROL OF MAMMALIAN PESTS

- Specialist firms: Submit proposals.
 - Method: Submit proposals.

145 CONTROL OF INVASIVE ANIMAL SPECIES

- Specialist firms: Submit proposals.
- Species: as relevant to site.
- Location: Whole site.
- Method: Submit proposals.

155 WATERING

- Supply: Potable mains water.
- Quantity: Wet full depth of topsoil .
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to rootzone.
- Frequency: As necessary for the continued thriving of all planting.

160 WATER RESTRICTIONS

- General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

170 DISPOSAL OF ARISING

- General: Unless specified otherwise, dispose of arising as follows:
 - Biodegradable arising: Remove to recycling facility.
 - Grass cuttings: Remove to recycling facility.
 - Tree roots and stumps: Remove from site.
 - Shrub and tree prunings: Remove to recycling facility.
 - Litter and nonbiodegradable arising: Remove from site.

180 CHIPPING OR SHREDDING

- General: Not permitted on site.

181 MECHANICAL EQUIPMENT

- General: Minimize.
- Prohibited equipment: Chippers.
- Timing: Use of mechanical equipment allowed between the hours of 10:00 am and 4:00 pm only.

190 LITTER

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

195 PROTECTION OF EXISTING GRASS

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

197 CLEANLINESS

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

FLOWER BEDS/ SEASONAL BEDDINGS**450 PLANTING BEDS OF ANNUALS**

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

470 FLOWER BEDS GENERALLY

- Operations:
 - Remove: Dead flower heads, fallen leaves, litter and debris.
 - Weeds: Thoroughly hand weed.
 - Cultivate: Lightly hoe.
 - Trim: Clip grass edges.
- Fungicide: Not required.
- Insecticide: Not required.

SHRUBS/TREES/HEDGES**500 ESTABLISHMENT OF NEW PLANTING**

- Duration: Five full growing seasons from the date of planting.
- Weed control:
 - Method: Keep planting beds clear of weeds by maintaining full thickness of mulch.
 - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: As schedule and when instructed.

502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER

- Time of year: March or April.
- Type: Organic.
- Spreading: Spread evenly. Carefully lift and replace any mulch materials.
 - Application rate: As manufacturer's recommendations.

515 TREE GUY WIRES

- Inspection/ Maintenance times: Immediately after strong winds.
- Operations:
 - Replace or resecure loose or missing guy wires.
 - Adjust to suit stem growth and to provide correct and uniform tension.
- Removal: When instructed.

520 REFIRMING OF TREES AND SHRUBS

- Timing: After strong winds, frost heave and other disturbances.
- Refirming: Tread around the base until firmly bedded.
- Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

525 TREE GUARDS

- Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing.

535 TREE GRILLES

- Operations: Lift grilles, remove weeds, adjust levels as necessary and lightly compact. Refit grilles, refill interstices and lightly compact to correct level.
- - Material for making up levels and refilling: 6 mm to dust granite aggregate.

537 NESTING WILD BIRDS

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

540 PRUNING GENERALLY

- Pruning: In accordance with good horticultural and arboricultural practice.
 - Removing branches: Do not damage or tear the stem or bark.
 - Wounds: Keep as small as possible and cut cleanly back to sound wood.
 - Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
- Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
- Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
- Disease or infection: Give notice if detected.
- Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 PRUNING OF EXCESSIVE OVERHANG

- Timing: Annually.
- Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
- Special requirements: Allow ground cover plants to partially overlap paths and lawns.

550 PRUNING OF EXCESSIVE HEIGHT

- Timing: Annually.
- Operations: Remove excessive height As instructed.

555 PRUNING TREES AND SHRUBS

- Standard: To BS 7370-4.
- Special requirements: Growth retardants not permitted.

570 FORMATIVE PRUNING OF YOUNG TREES

- Standard: Type and timing of pruning operations to suit the plant species.
- Time of year: Do not prune during the late winter/ early spring sap flow period.
- Young trees up to 4 m high:
 - Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
 - Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
- Whips or feathered trees: Do not prune.
- Operatives: Approved specialist contractor.

575 PRUNING ORNAMENTAL SHRUBS

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

580 PRUNING FLOWERING SPECIES OF SHRUBS AND ROSES

- Time of year:
 - Winter flowering shrubs: Spring.
 - Shrubs flowering between March and July: Immediately after the flowering period.
 - Shrubs flowering between July and October: Back to old wood in winter.
 - Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.

600 TRIMMING RAPIDLY ESTABLISHING HEDGES

- General: Allow to reach planned height as rapidly as possible.
 - Form: Trim back lateral branches moderately.

611 TRIMMING NONTAPERING ESTABLISHED HEDGES

- Time of year: Regular trimming from June to September.
- Operations:
 - Form: Trim carefully and neatly to regular line and shape with vertical sides.
 - Trim: Remove current growth rather than old wood.
- Tools/ Cutting: Shears.

620 REMOVAL OF DEAD PLANT MATERIAL

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

625 CLIMBING PLANTS

- Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
- Insecure growth: Attach to supporting wires or structures using Stainless steel wire.
- Supporting structures: Check and repair as necessary.

630 DEAD AND DISEASED PLANTS

- Removal: Within 1 week of notification.
- Replacement: In the next suitable planting season.

640 THINNING BY REMOVAL OF SURPLUS PLANTS

- Plants to be thinned: Herbaceous beds.
- Standard: BS 7370-4.
- Timing: When foliage of adjacent plants has begun to touch.
- Roots:
 - Disturbance to adjacent plants: Minimise.
 - Soil: Refill holes with topsoil to leave an even graded surface.
 - Mulch: Maintain mulch as original specification.
 - Adjacent plants: Make good any minor damage immediately.
- Plants for retention: Select plants with a strong healthy habit.
- Mature planting density: Refer to planting schedule.

645 WEED CONTROL GENERALLY

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

650 HAND WEEDING

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

675 DIGGING OVER

- General: Dig over beds. Do not damage existing plants, bulbs and roots.
 - Depth of dig (minimum): 100 mm.

680 SOIL AERATION

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

685 SOIL LEVEL ADJUSTMENT

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

690 MAINTENANCE OF LOOSE MULCH

- Thickness (minimum): 50 mm.
 - Top up: Every 3 months.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by hand weeding.

695 FERTILIZING ESTABLISHED TREES AND SHRUBS

- Time of year: April through July.
- Type of fertilizer: Organic.
- Application: Spread evenly.
 - Rate: As manufacturer's recommendations.

705 WINTER LEAF REMOVAL

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: Distribute evenly over all planting beds.

TREE WORK**810 TREE WORK GENERALLY**

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Removing branches: Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.
- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 ADDITIONAL WORK

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

820 PREVENTION OF WOUND BLEEDING

- Standard: To BS 3998.

825 PREVENTION OF DISEASE TRANSMISSION

- Standard: To BS 3998.

830 CLEANING OUT AND DEADWOODING

- Remove:
 - Dead, dying, or diseased wood, broken branches and stubs.
 - Fungal growths and fruiting bodies.
 - Rubbish, wind blown or accumulated in branch forks.
 - Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - Other unwanted objects, e.g. tree houses, swings.
 - Climbing plants Refer to planting schedule.

835 CUTTING AND PRUNING GENERALLY

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
 - Chainsaws: Do not use on branches of less than 50 mm diameter.
 - Hand saws: Form a smooth cut surface.
 - Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
Large branches: Remove only with prior approval.
 - Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 CROWN REDUCTION/ SHAPING

- General: Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations: Reduce crown from 15 m height and 4 m radius to 13 m height and 3.2 m radius.

845 CROWN LIFTING

- Clearances: Remove branch systems to give clearance.
 - Height: As recommended by BS 7370-4, clause 3.7.2.3.
- Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

850 CROWN THINNING

- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
- Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown.
 - Quantity: 10 %.
- Cutting: Make no cuts of more than 25 mm diameter.
 - Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.
- Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 CUTTING TREE ROOTS

- Excavating: Use hand tools only.
- Protected area: Do not cut roots within an area which is the larger of:
 - The branch spread of the tree.
 - An area with a radius of half the tree's height, measured from the trunk.
- Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
- Cutting:
 - Cutting: Make clean smooth cuts with a hand saw.
 - Wounds: Minimize. Avoid ragged edges.
 - Finishing: Pare cut surfaces smooth with a sharp knife.
- Backfilling:
 - Protection: Cover cut roots with clean sharp sand.
 - Material: Backfill with original topsoil.

865 BARK DAMAGE

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

870 CAVITIES IN TREES

- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.
- Cavity openings: Cover, as scheduled, with galvanized wire mesh, lightly secured.

HARD LANDSCAPE AREAS/FENCING**900 SNOW CLEARANCE**

- Clearance: When instructed.
- Deicing: To roads and footpaths.
 - Material: Rock salt to BS 3247.
 - Timing: When instructed.
 - Application rate: Spread evenly at a rate of As manufacturer's recommendations.

910 HARD SURFACES AND GRAVEL AREAS

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

930 GRAFFITI REMOVAL

- Method: As appropriate.
- Subsequent treatment: Not required.
 - Finish: Matt.



Q40
Fencing

Q40
Fencing
Revision C02

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

220A STEEL FENCING BOUNDARY TYPE BD1 - EXISTING

- Deleted - 19th December 2022

220B STEEL FENCING BOUNDARY TYPE BD1A - PROPOSED

- Manufacturer: Campbell Design and Engineering or similar and approved.
 - Product reference: Submit proposals.
- Height: 800mm.
- Posts, Rails and Pales:
 - Refer to Detail D19 BPD-HLM-00-ZZ-DR-L-25401 LANDSCAPE BOUNDARY DETAILS
 - Corner/ End posts: Square hollow section, 50 x 30mm.
 - Finish: Polyester powder coated, as section Z31.
 - Colour: black RAL9005.
 - Horizontal Rails: Flat, 50 x 30mm.
 - Finish: Prepared and primed, as section M60.
 - Colour: black RAL9005.
 - Pales: Pale 1 - Square, 12 x 12 x 580mm, Pale 2 - 12 x 12 x 680mm.
 - Finish: Primed and painted.
 - Colour: black.
 - Method of setting posts: Base plate surface fixed into wall. To Engineers specification.
 - End and corner posts: Set into wall to a minimum depth of 450 mm.
- Accessories: Finial Detail - 10/13 130X12mm 12mm base
Finial Detail - 8b/10 120x35mm 30mm base
As drawing DXX BPD-HLM-00-ZZ-DR-L-25401 LANDSCAPE BOUNDARY DETAILS - SHEET 02
Supplier:
Brooks Forging Limited
Doulton Road
Cradley Heath
B64 5QJ
United Kingdom
Tel: +44(0)1384 563356.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-8.

220C STEEL FENCING BOUNDARY TYPE BD1B - PROPOSED

- Deleted - 19th December 2022

430A PROPRIETARY SCREEN to Level 3 Terrace

- Deleted - 19th December 2022

GATES, POSTS AND STILES

560A STEEL GATE TYPE G1 - EXISTING

- Deleted - 19th December 2022
- Reference changed to GA - Refer to Architects details and specification

560B STEEL GATE TYPE G2

- Deleted - 19th December 2022
- Reference changed to GB - Refer to Architects details and specification

560C STEEL GATE TYPE G3

- Deleted - 19th December 2022

560D STEEL GATE TYPE G4

- Deleted - 19th December 2022

ACCESSORIES

635 GATE OPENERS TO GATE TYPE G1, G2 & G3

- Deleted - 19th December 2022
- Reference changed to GA - Refer to Architects details and specification

EXECUTION

710 INSTALLATION GENERALLY

- Set out and erect:
 - Alignment: Straight lines or smoothly flowing curves.
 - Tops of posts: Following profile of the ground.
 - Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
 - Fixings: All components securely fixed.

715 COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Qualifications: Submit certification of training.
 - NHSS Sector Scheme 2A sub categories: (a) and (b).
 - NHSS Sector Scheme 2C sub categories: Not required.

720 SETTING POSTS IN CONCRETE

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.

- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

730 EXPOSED CONCRETE FOUNDATIONS

- Filling: Compact until air bubbles cease to appear on the upper surface.

- Finishing: Weathered to shed water and trowelled smooth.

740 SETTING POSTS IN EARTH

- Deleted - 19th December 2022

760 NAILED WOOD RAILS

- Deleted - 19th December 2022

780 MAKING GOOD GALVANIZED SURFACES

- Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
- Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 SITE PAINTING

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

COMPLETION**910 CLEANING**

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

920 FIXINGS

- All components: Tighten.
 - Timing: Before handover.

930 GATES

- Deleted - 19th December 2022



Q41
Barriers/ guardrails

Q41
Barriers/ guardrails
Revision C02

Q41 Barriers/ guardrails

To be read with Preliminaries/ General conditions.

TYPES OF BARRIERS/ GUARDRAILS

240A HANDRAIL SYSTEMS BOUNDARY TYPE BD2 and B3

- Refer to Detail D21 and D23, BPD-HLM-00-ZZ-DR-L-25401.
 - System manufacturer: Campbell Design and Engineering or similar and approved.
 - Material: Steel.
 - Cross section: D shaped bar, Steps 45 x 12mm and Ramp 48 x 12mm with integrated lighting
 - Finish: Primed and painted black.
 - Height above ground surface (to upper surface of handrail):
 - Upper handrail: 9000 mm .
 - Lower handrail: Not applicable.
- Accessories: None.

PERFORMANCE/ INSPECTION/ TESTING

305 PRODUCTION INSPECTION OF POSTS

- General: At place of fabrication, at rate of 15 per order selected randomly.
 - Weld defect levels: As stipulated in Highways Agency 'Manual of contract documents for highway works' Volume 1 'Specification for highway works' Series 400.

INSTALLATION

410 WORK ON OR ADJACENT TO HIGHWAYS

- Requirement: Comply with the Department for Transport's 'Safety at street works and road works. A code of practice'. Retain a copy of this document on site at all times during the course of the works.

420 ALIGNMENT

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

430 ERECTION GENERALLY

- Protection: Coat all internal and external surfaces of aluminium and steel posts below and up to 150 mm above ground level, with two coats of bituminous paint to BS 6949 type 2, unless other applied surface finish is specified.
- Prevention of electrolytic corrosion: Isolate dissimilar metals.
- Steel components: Do not drill, cut or weld after galvanizing.

480 CONCRETE FOUNDATIONS FOR POSTS

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

490 DAMAGE REPAIR TO GALVANIZED SURFACES

- Areas of repair: Minor damage, including fixings and fittings.
 - Total area of repair not to exceed 0.5% of total surface area.
 - Each area not to exceed 1000 mm².
- Renovation: Use low melting point zinc alloy repair rods or powders or at least two coats of zinc-rich paint to BS 4652

510 PREPARATION FOR SITE PAINTING

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

COMPLETION

900 DOCUMENTATION

- Contents:
 - General product information.
 - Installation information.
 - Inspection and maintenance reports.
- Number of copies: 1.
- Submission: Two weeks after request by contract administrator.



Q50
Site/ street furniture/ equipment

Q50
Site/ street furniture/ equipment
Revision C02

Q50 Site/ street furniture/ equipment

To be read with Preliminaries/ General conditions.

GATES, BARRIERS AND PARKING CONTROLS

196 REMOVABLE BOLLARDS BOLLARD BL1

- Deleted - 19th December 2022

196A FIXED BOLLARDS BOLLARD BL2

- Deleted - 19th December 2022

SITE AND STREET FURNITURE

210 CYCLE STANDS

- Manufacturer: Marshalls or similar and approved.
 - Product reference: Ollerton Sheffield Cycle Stand or similar and approved.
- Type: Single stands.
- Material: Galvanised steel.
 - Finish: Polyester powder coated.
 - Colour: Black RAL9005.
- Accessories: None.
- Method of fixing: **Surface mounted, set into concrete pad.**

220 BENCHES BENCH TYPE B1a/c/e/

- Manufacturer: Marshalls or similar and approved.
 - Product reference: Escofet
B1a Box 200 (white) with Universe Bench

 - B1c Box 200 (white) with Universe Backless Bench

 - B1e Box 50 (white)

 - or similar and approved.
- Material: Hardwood timber seat, concrete base.
 - Finish: As manufactured.
 - Colour: White
- Size: Refer to Detail D25, BPD-HLM-00-XX-DR-L-30402 - **SHEET 02.**
- Accessories/ Special requirements: None.
- Method of fixing: Benches fixed at slope of ground.

220A BENCHES BENCH TYPE B2

- Deleted - 19th December 2022

220B BENCHES BENCH TYPE B3

- Deleted - 19th December 2022

240 LITTER BINS LB

- Deleted - 19th December 2022

342 BESPOKE VEGETABLE PLANTER TO LEVEL 5 TERRACE

- Deleted - 19th December 2022

INSTALLATION**510 CONCRETE FOUNDATIONS GENERALLY**

- Standard: To BS 8500-2.
- Concrete: to Engineers specification.
- Admixtures: Do not use.
- Foundation holes: Neat vertical sides.
- Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

515 SETTING COMPONENTS IN CONCRETE

- Holes: As relevant and shown in details.
- Components: Accurately positioned and securely supported.
- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

520 SETTING IN EARTH

- Holes: As small as practicable.
- Components being fixed: Accurately positioned and securely supported.
- Buried depth (minimum): 200 mm.
- Earth refill: Well rammed as filling proceeds.

540 BUILDING IN TO MASONRY WALLS

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

545 ERECTION OF TIMBER AND PREFABRICATED STRUCTURES

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

550 DAMAGE TO GALVANIZED SURFACES

- Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - Material: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zinc-rich paint to BS 4652.
 - Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

560 SITE PAINTING

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

Building fabric reference specification



Z21
Mortars

Z21
Mortars
Revision C01

Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

110 CEMENT GAUGED MORTAR MIXES

- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

120 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 13139.
- Grading: 0/2 (FP or MP).
 - Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
Lower proportion of sand: Use category 3 fines.
Higher proportion of sand: Use category 2 fines.
- Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.

160 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
 - Types: Portland cement, CEM I.
Portland limestone cement, CEM II/A-L or CEM II/A-LL.
Portland slag cement, CEM II/B-S.
Portland fly ash cement, CEM II/B-V.
 - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
 - Type: Portland cement, CEM I.
 - Strength class: 52.5.
- Sulfate resisting Portland cement:
 - Type: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
 - Strength class: 32.5, 42.5 or 52.5.
- Masonry cement: To BS EN 413-1 and CE marked.
 - Class: MC 12.5.

180 ADMIXTURES FOR SITE MADE CEMENT GAUGED MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

190 RETARDED READY TO USE CEMENT GAUGED MORTAR

- Standard: To BS EN 998-2.
- Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
- Pigments for coloured mortars: To BS EN 12878.
- Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
 - Retempering: Restore workability with water only within prescribed time limits.

200 STORAGE OF CEMENT GAUGED MORTAR MATERIALS

- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Factory made ready-mixed lime:sand/ ready to use retarded mortars: Keep in covered containers to prevent drying out or wetting.
- Bagged cement/ hydrated lime: Store off the ground in dry conditions.

210 MAKING CEMENT GAUGED MORTARS

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
 - Mix proportions: Based on dry sand. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
 - Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
- Working time (maximum): Two hours at normal temperatures.
- Contamination: Prevent intermixing with other materials.



Z22
Sealants

Z22
Sealants
Revision C01

Z22 Sealants

To be read with Preliminaries/General conditions.

PRODUCTS

EXECUTION

610 SUITABILITY OF JOINTS

- Presealing checks:
 - Joint dimensions: Within limits specified for the sealant.
 - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Submit proposals for rectification.

620 PREPARING JOINTS

- Surfaces to which sealant must adhere:
 - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
 - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
- Protection: Keep joints clean and protect from damage until sealant is applied.

630 APPLYING SEALANTS

- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
 - Butt and lap joints: Slightly concave.
 - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.