Southwark Streetscape Design Manual Materials Palette

Southwark Council
southwark.gov.uk

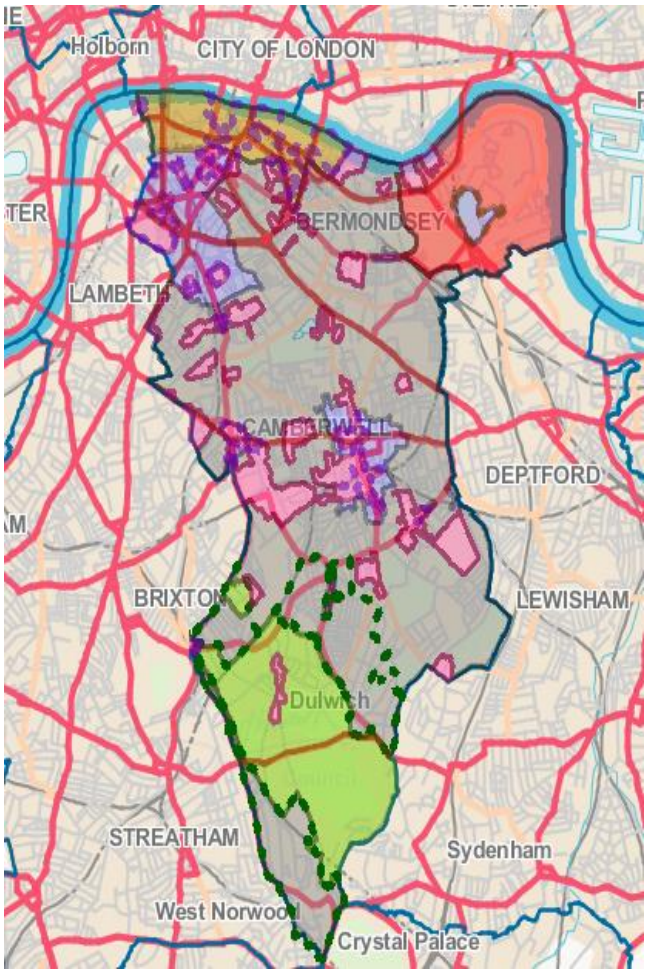
Contents

1 Introduction

The purpose of this Material Palette is to promote the consistent improvement of Southwark's streets and open spaces. It aims to achieve attractive, safe and accessible streets by setting out guidelines and specifications for materials, as well as complimenting the character and streetscape of the different areas in Southwark.

2 Regulating Plan

The Regulating Plan defines the basic default palettes of materials and street furniture for Southwark. They have been grouped according to their suitability for the different character areas within Southwark.



A live, on-line version of the Regulating Plan can be found in the SSDM pages at www.southwark.gov.uk. This can be used to zoom in to identify individual streets and properties when proposing a scheme. Alternatively a larger foldout plan is included in Appendix 1 for quick reference.

There are six character areas:

- **General** Any area not in one of the other Specification Area designations.
- **Docks** Rotherhithe ward and Surrey Docks ward (as defined by their constitutional boundaries at the time of publishing).
- **Village** "conservation area" designations established under the Planning (Listed Buildings and Conservation Areas) Act 1990 by the council acting as Local Planning Authority that are within Dulwich Community Council area (as defined by its constitutional boundaries at the time of publishing), with the exception of the following:
- **Heritage** "conservation area" designation established under the Planning (Listed Buildings and Conservation Areas) Act 1990 by the council acting as Local Planning Authority, excluding areas within Dulwich which fall within the "Village" Specification Area designation.
- **Town Centre** "major town centre", "district town centre" and "local centre" policy designation boundaries defined within the adopted Local Development Framework Proposals Map.
- **World Centre** the "strategic cultural area" policy designation boundaries defined within the adopted Local Development Framework Proposals Map.

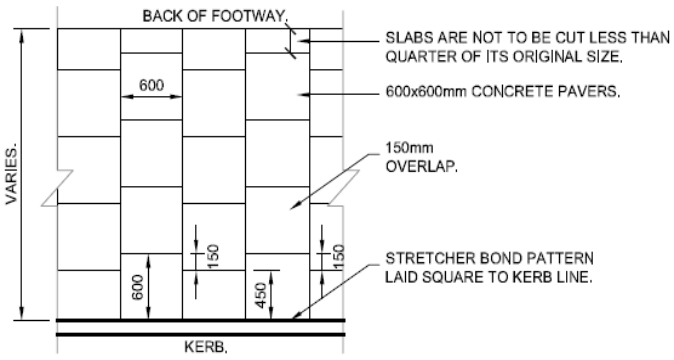
It is important to note that the requirement to comply with palettes linked to Regulating Plan designations does not currently apply to streets in Southwark that are not part of the Highway for which Southwark Council is the Highway Authority. As such parks, many estate roads and roads controlled by Transport for London are exempt. However, in the event that such roads are required for any reason to be constructed to the adoptable standards of the Council acting as Highway Authority (e.g. by requirement of a Planning Condition or Obligation) then the palette requirements for the relevant Regulating Plan designations shall apply.

3 General Specification Area

In the General Specification areas of Southwark, the carriageways are bituminous, the footway is a single type of flag paving (including the plateaus of vehicle accesses) and a single type of block paver used to raised tables, cycle tracks, inset parking bays and the plateaus of heavily used vehicle accesses.

The standard flag is grey, dimensions: 600 x 600 x 72mm. Steel reinforced slabs are required in heavy overrun areas. Where the overrun is expected to be light, then the reinforcement can be dropped and the slab thickness reduced from 72mm to 63mm. The 50mm thick option is not used in Southwark.

Flags are laid to BS 7533-4:1998 Installation.



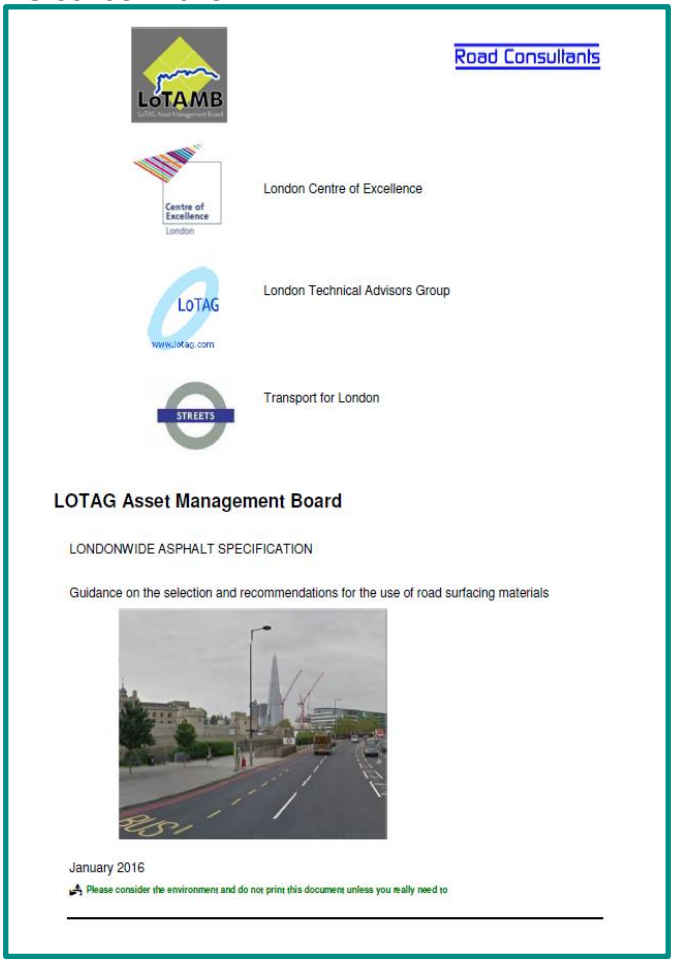
It may be permissible to utilise fibre reinforced concrete paving flags for heavy vehicle overrun areas as an alternative to the steel reinforced flags.

The standard block paver is 200x100x80mm mid grey colour. Where used in speed table ramps, they are laid bound in a stretcher bond perpendicular to the dominant carriageway edge.

Block pavers are laid to BS EN 1338:2003.

Alternative footway surfacing options are described in the Southwark Materials Palette. However, a level 1 departure will be required to use them instead of the preferred materials unless they are replacing like for like.

Carriageways are bituminous and the design is to the London Asphalt Specification and laid to BS 594987:2015.



The pavement design will depend on the traffic volume and the stiffness of the underlying formation (generally expressed as the CBR or *California Bearing Ratio*). See drawing LBS/700/10 for different standard pavement designs.

In General or Heritage areas any precast concrete kerb is to be replaced with granite kerbstone laid with a narrow top face (150mm wide).

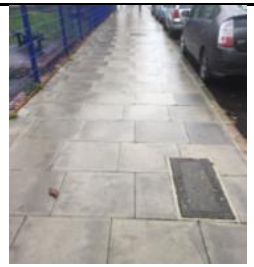
It is important to retain and match the wide kerbs where they exist. Kerbs can be worked to specific radii, but standard radii stock should be used normally to avoid mistakes.

In all other areas 300mm wide granite kerbs are preferred between the footway and the carriageway.

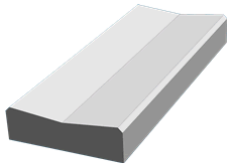
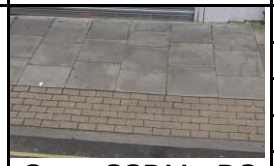
Appearance: the colour, veining, texture, etc. of any natural stone shall be identified visually, typically by a reference sample of the same stone suitable for providing a general description of visual appearance. A reference sample shall be provided by the supplier of the stone according to BS EN 1341:2012.

A reference sample shall be an adequate number of pieces (typically three pieces) of natural stone of sufficient size to indicate the general appearance of the finished work. The dimensions of individual pieces shall be at around 300mm by 300mm and shall indicate the range of appearance regarding the colouring, the vein pattern, the physical structure and the surface finish. In particular the reference sample shall show specific characteristics of the stone, such as typical holes, glass seams, spots, crystalline veins and rusty spots. The reference sample does not imply strict uniformity between the sample itself and the actual supply; natural variations may always occur. If the processing of the stone involves the use of patching, fillers or other similar products for natural holes, faults or cracks, then the reference sample shall similarly display the impact of the same on the finished surface. All the characteristics as shown by the reference sample shall be considered typical of the stone and not as flaws, therefore they shall not become a reason for rejection, unless their concentration becomes excessive and the typical character of the stone is lost.

The name and address of the manufacturer or the supplier of the stone, as well as the denomination of the stone in accordance with Section 4.1 of BS EN 1341:2012 and/or information on the treatment in accordance with section 4.1.2 or the above standard shall be indicated on the reference sample. Any comparison between production sample and reference sample shall be carried out by placing the reference sample against the production samples and viewing them at a distance of about 2m under normal daylight conditions and recording any visible differences in the characteristics of the stones.

3.1	General Area Surfacing Materials Palette			
Heavy overrun footway	Precast concrete paving slab, pimple finish, grey, steel reinforced to BS EN 1339:2003 600x600x70mm **F-PC-B1(70)**		Dimensions	600mm wide x 600mm long x 70 or 72mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading
			Lower arris	BS EN 1339:2003 Square with no bevel or beading
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
	Precast concrete paving slab, pimple finish, grey, fibre reinforced to BS EN 1339:2003 600x600x70mm **F-PC-B2(70)**		Dimensions	600mm wide x 600mm long x 70mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading
			Lower arris	BS EN 1339:2003 Square with no bevel or beading
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 15.1 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be fibre reinforced to reduce fragmentation in case of failure
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Light overrun footway	Precast concrete paving slab, pimple finish, grey, to BS EN 1339:2003 600x600x63mm **F-PC-B1(63)**		Dimensions	600mm wide x 600mm long x 63 or 65mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading
			Lower arris	BS EN 1339:2003 Square with no bevel or beading
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 15.1 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer

Footway Trim or edging	Precast concrete blocks – with face division, light grey to BS EN 1338:2003 200x100x80mm **B-PC(80)-B2a**	 For use in all circumstances except those specified below.	Dimensions	100mm wide x 200mm long x 80mm thick. Pencil chamfered division groove across width of upper face to divide into two 100 x 100mm areas
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded with no further texturisation
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: light grey to Munsell colour 7.5YR 8.25/0.5. bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/STR**	 For use as part of raised kerb edge to tree pits and planting areas or raised lip kerb edge to staggered crossings.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in stretcher bond or stack bond.
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa
Footway Surface Channel	Precast concrete paving slab, pimple finish, grey, steel reinforced to BS		Dimensions	600mm wide x 600mm long x 70 or 72mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading
			Lower arris	BS EN 1339:2003 Square with no bevel or beading
			Colour	Light grey upper face as Munsel colour SY 7 5/0.5 with no inconsistency

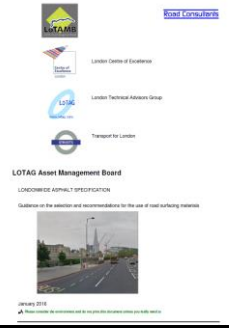
	EN 1339:2003 600x600x70mm **F-PC-B1(70)**	 Slabs need to be cut to widths as described in SSDM DS 130 and DS 118 to form surface channel detail.	Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
	Precast concrete paving slab, pimple finish – V profile channel unit, grey **F-PC-B1(X)**	 Shallow V-profile unit may be used to avoid need for cutting slabs to width.	Dimensions	600mm wide x 600mm long x 70 or 72mm thick regular plan and section. However, upper face to have shallow 'V' profile with valley located down centre of unit. Depth of valley verses unit thickness at edges to be 15mm. Gradient of valley sides to be ≥ 1:20. Except for upper face and base, all other opposing faces to be planar to one another and all adjacent faces to be perpendicular to one another.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Vehicle crossing plateau surface Non-Frequent	Precast concrete paving slab, pimple finish, grey, steel reinforced to BS EN 1339:2003 600x600x70mm **F-PC-B1(70)**	 See SSDM DS 132 for traffic thresholds for	Dimensions	600mm wide x 600mm long x 70 or 72mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading
			Lower arris	BS EN 1339:2003 Square with no bevel or beading
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN

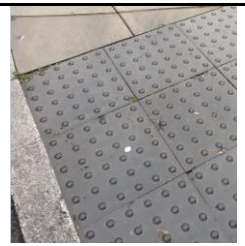
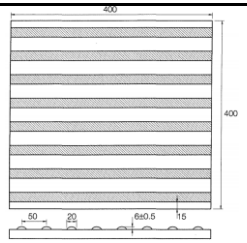
Use access		occasional use vehicle accesses	Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Vehicle crossing plateau surface Frequent Use access **And** Vehicle crossing ramp surface	Precast concrete blocks with face division to BS EN 1338;2003. Mid grey 200x100x80mm **B-PC(80)-B2b**	 See SSDM DS 132 for traffic thresholds for frequent use vehicle accesses	Dimensions	100mm wide x 200mm long x 80mm thick. Pencil chamfered division groove across width of upper face to divide into two 100 x 100mm areas
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded with no further texturisation
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: mid grey to Munsell colour (neutral scale) N 6.0 /_30.0% Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
Main C/way surface	Bituminous mixture surface course		See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.	
	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003		Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm

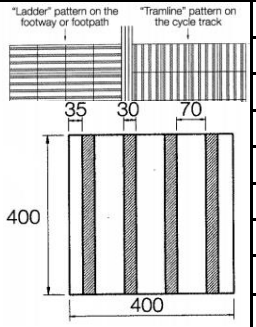
	B-PC(AS)-G1b	 To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge. 	Spacer nibs	To be SF-Kooperation VS units or similar approved. Side faces to include nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude 3mm from side of unit & be approx. 13mm wide with chamfered top & sides. Top of nibs recessed 5 -15mm beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
			Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark grey to BS EN 1338:2003 **B-PC(AS)-G1c**	 To be laid in a	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be SF-Kooperation VS units or similar approved. Side faces to include nibs located at regular ≤ 42mm centres so as to interlock between nibs of

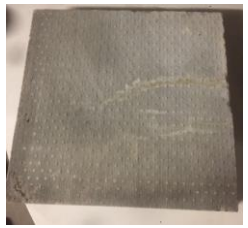
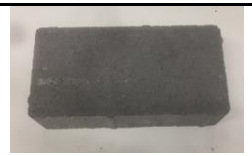
		distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge. 		opposing units. Each nib to protrude 3mm from side of unit & be approx. 13mm wide with chamfered top & sides. Top of nibs recessed 5 -15mm beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
			Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
Parking Bay Surface	Bituminous mix surface course		As described above for Main Carriageway Surface	

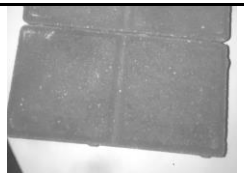
	Imitation granite sett precast concrete blocks. Anti-shift units. **B-PC(AS)-G1b** **B-PC(AS)-G1c**		As described above for Main Carriageway Surface Mid grey and Dark grey to BS EN 1338:2003	
	Imitation granite sett precast concrete blocks. Infiltration joint units. Mid grey to BS EN 1338: 2003 200x100x80mm **B-PC(W80)-G1b**	 Use only where rooting zones extend beneath parking bays. See SSDM DS 601. To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge.	Dimensions	BS EN 1338:2003 100mm wide x 200mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation process ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Spacer nibs to side. Specialist nibs to promote ingress of surface water whilst preventing migration of jointing material. Extent of protrusion to be ≤ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 6/_30%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks.		Dimensions	BS EN 1338:2003 100mm wide x 200mm long x 80mm thick.
			Upper arris	BS EN 1339:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation process ≤ 4mm horizontal ≤ 2mm vertical

	Infiltration joint units. Dark grey to BS EN 1338:2003 200x100x80mm **B-PC(W80)-G1c**	 Use only where rooting zones extend beneath parking bays. See SSDM DS 601. To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge.	Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Spacer nibs to side. Specialist nibs to promote ingress of surface water whilst preventing migration of jointing material. Extent of protrusion to be ≤ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mix surface course		As described above for Main Carriageway Surface and Parking Bay Surface	

	Imitation granite sett precast concrete blocks. Anti-shift units. **B-PC(AS)-G1b** **B-PC(AS)-G1c**		As described above for Main Carriageway Surface and Parking Bay Surface Mid grey and Dark grey to BS EN 1338:2003	
Raised Table Ramp Surface and Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	
Tactile surface Blister crossing	Blister tactile precast concrete paving slab Dark grey 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Tactile surface Corduroy	Corduroy tactile precast concrete paving slab Dark grey 400x400x65mm **T(C)-PC2**	 See SSDM DS 207 about the	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency
			Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type R1
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN

		use of tactile pavers.	Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Tactile surface Ladder/ Tramline	Ladder/ tramline tactile precast concrete paving slab Dark grey 400x400x65mm **T(L)-PC2**		Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency
			Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type R3
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Reserve Footway paving materials	Precast concrete paving slab, pimple finish, grey, to BS EN 1339:2003 750x600x70mm **F-PC-B2**	 Only appropriate for light overrun areas.	Dimensions	600mm wide x 750mm long x 70 or 72mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14)
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
	Precast concrete paving slab, pimple finish, grey, to BS EN 1339:2003 450x450x70mm **F-PC-B3**		Dimensions	450mm wide x 450mm long x 70mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14)
			Abrasion resistance	BS EN 1339:2003 Class 4(I)

			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
	Precast concrete paving slab, pimple finish, grey, to BS EN 1339:2003 400x400x70mm **F-PC-B4**		Dimensions	400mm wide x 400mm long x 70mm thick
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency
			Appearance	No exposed aggregate in upper face
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14)
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
	Precast concrete blocks to BS EN 1338;2003. Light grey 200x100x60mm **B-PC(60)-B1a**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: light grey to Munsell colour 7.5YR 8.25/0.5.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks to BS EN 1338;2003. Mid grey 200x100x60mm **B-PC(60)-B1b**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: mid grey to Munsell colour (Neutral scale) N6.0/_30%R.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)

			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks to BS EN 1338;2003. Dark grey 200x100x60mm **B-PC(60)-B1c**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: dark grey to Munsell colour (Neutral scale) N4.75/_17.6%R
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks with face division to BS EN 1338;2003. Light grey 200x100x80mm **B-PC(80)-B2a**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 80mm thick. Pencil chamfered division groove across width of upper face to divide into two 100 x 100mm areas
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: light grey to Munsell colour 7.5YR 8.25/0.5.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks with face division to BS EN 1338;2003. Mid grey 200x100x80mm **B-PC(80)-B2b**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 80mm thick. Pencil chamfered division groove across width of upper face to divide into two 100 x 100mm areas
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: mid grey to Munsell colour 7.5YR 8.25/0.5.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)

			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks with face division to BS EN 1338;2003. Dark grey 200x100x80mm **B-PC(80)-B2c**	May be laid as a single colour or as a mix of two different colours 	Dimensions	100mm wide x 200mm long x 80mm thick. Pencil chamfered division groove across width of upper face to divide into two 100 x 100mm areas
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: dark grey to Munsell colour 7.5YR 8.25/0.5.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured
	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Silver grey 300x200x60mm **B-PC(60)-G2a**	 May be laid as a single colour or as a mix of two different colours	Dimensions	200mm wide x 300mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25 /_46.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter.

				Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Mid grey 300x200x60mm **B-PC(60)-G2b**	 May be laid as a single colour or as a mix of two different colours	Dimensions	200mm wide x 300mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6 /_30%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
			Dimensions	200mm wide x 300mm long x 60mm thick.

	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Dark grey 300x200x60mm **B-PC(60)-G2c**	 May be laid as a single colour or as a mix of two different colours	Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Silver grey 300x200x80mm **B-PC(80)-G2a**		Dimensions	200mm wide x 300mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25 /_46.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey

		  May be laid as a single colour or as a mix of two different colours	Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Mid grey 300x200x80mm **B-PC(80)-G2b**	 May be laid as a single colour or as a mix of two different colours	Dimensions	200mm wide x 300mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6 /_30%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter.

				Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Sett Precast concrete blocks to BS EN 1338;2003. Dark grey 300x200x80mm **B-PC(80)-G2c**	May be laid as a single colour or as a mix of two different colours 	Dimensions	200mm wide x 300mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To side ≤ 1.75mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Narrow pressed clay pavers to BS EN 1344:2002		Dimensions	52mm wide x 215mm long x 70mm thick. Minor variants (+/-4mm) permitted. Rectangular plan and section.
			Deviations	BS EN 1344:2002 Class R1 and Class U3

	Red brown 215x52x70mm **B-CP-1a**	 Unit may be laid on alternate face as either 50mm deep or 70mm deep depending on trafficking.	Upper and lower arris	Rounded /tumbled on all sides
			Colour	Subtly varying red-brown to all sides ranging through approx. Munsell colours SYR 6/2, SYR 6/3, SYR 6/4, SYR 5/2, SYR 5/3 and SYR 5/4
			Appearance	Flat faces with tumbled edges. No further texturisation.
			Breaking load	BS EN 1344:2002 Class T4
			Abrasion resistance	BS EN 1344:2002 Class A3(+)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Water absorption	BS EN 711:2011 Class W3
			Acid resistance	BS EN 1344:2002 Class C
			Fire performance	BS EN 1344:2002 Class A1
			Method of manufacture	Units to be CE marked to BS EN 1344:2002 for external paving
	Tumbled imitation sandstone sett precast concrete block to BS EN 1338:2003 Mid grey 173x208x80mm **B-PC(80)-S1b**	These units may only be laid in a stretcher bond. Unlikely to be used in c/way, limited to small areas tightly constrained by edge restraints.	Dimensions	173mm wide x 208mm long x 80mm thick
			All arris	BS EN 1338:2003 Tumbled square edge (machine tumbled)
			Colour	Mid grey all sides to Munsell colour (neutral scale) 5.7/ 27.2% R. Variation in pigmentation generally not to exceed 0.5 Value units either side of general appearance colour.
			Appearance	Smooth with no exposed aggregate in all faces. Overall distressed appearance due to machine tumbling with worn corners.
			Spacer nibs to sides	Nib protrusion to be ≤ 1.75mm
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer. Units to be vapour cured to reduce efflorescence before packing
	Precast concrete blocks infiltration joint unit to BE EN 1388:2003 Light grey 208/173x173x80 **B-PC(W60)-B1a**	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm wide x 80mm thick.
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded with no further texturisation.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer colour light grey to Munsell colour 7.5YR 8.25/0.5.. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). No exposed aggregate or other texturisation

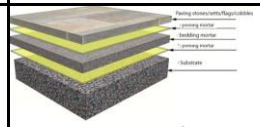
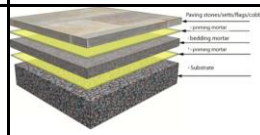
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Precast concrete blocks infiltration joint unit to BE EN 1388:2003 Mid grey 208/173x173x80 **B-PC(W60)-B1b**	Only likely as a no dig pavement construction over rooting zones of existing trees. 	Dimensions	Mix of 208 and 173mm long x 173mm wide x 80mm thick.
			Upper arris	BS EN 1338:2003 Chamfered (pencil chamfered) ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded with no further texturisation.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer colour mid grey to Munsell colour (neutral scale) N 6.0 /_30.0%R. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). No exposed aggregate or other texturisation
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Silver grey. 208/173x173x60 **B-PC(W60)-G1a**	 Only likely as a no dig pavement construction over	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25/_46.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite

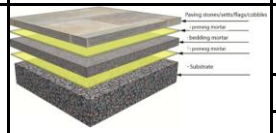
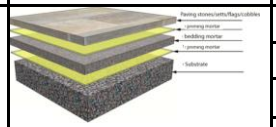
		rooting zones of existing trees.		aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Mid grey. 208/173x173x60 **B-PC(W60)-G1b**	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6/_30.0%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)

			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Dark grey. 208/173x173x60 **B-PC(W60)-G1c**	Only likely as a no dig pavement construction over rooting zones of existing trees. 	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver grey to BS EN 1338:2003		Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm

	B-PC(AS)-G1a	 Use may be permitted either alone or as a mixed surface with other anti-shift blocks. 	Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 -15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25 /_46.8% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm in diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.

	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound	For use where there might be	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.

	footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-X1**	cleansing issues (vacuum cleaners sucking out jointing sand).		A dry sharp sand and cement mix, brushed into the joints and then moistened with water
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	2 options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**	 BS 7533-4/2006, Table 4, clause 5.4.4.1	Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.

			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar for bound construction **L-MHX**		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.

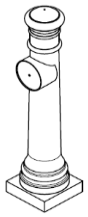
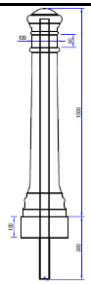
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

3.2 General Area Street Furniture Palette

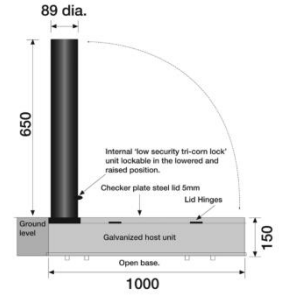
Long Seat	Simple style metal seat with timber appearance slats and upright geometry. Arm rest at ends only, backrest, both slightly inclined. Minimalist design with no non-structural or functional metal work or timber and no decoration.	 **Bailey International** Delta Eco E Bench UM365-M FSC timber with security bolts	Dimensions	Sit height approximately 450mm . Back height between 700 – 850mm Length of approximately 1800mm
			Slats	Minimum 50mm width of seat slats with maximum 35mm gap between each. Wider gaps may be acceptable on backrest. Slats not to protrude beyond arm rests or back support. Slats to be capable of removal without need to de-root bench. Slats ideally to be single common size (and never more than two sizes) for ease of maintenance and replacement.
			Fixing	Root fixed or concealed bolt ground fixing. Security bolt fixing to slats.
			Materials	Legs armrests and back supports to be metal in one of the following: stainless steel, hot dipped galvanised steel, or ductile iron (where corrosion treated). Slats to be imitation timber recycled plastic (or composite recycled plastic and wood) or polyurethane coated galvanised steel or aluminium. Otherwise to be real hard-wood timber slats (FSC certified, European source preferred) with a minimum 5-year guarantee.
			Colour	Grey finish to metal ends. Maybe achieved either through polyester powder coating in RAL 7005 signal grey colour, exposure of natural metal where appropriately coloured and corrosion treated, or coating of the metal with a RAL 7005 signal grey coloured polyurethane outer (e.g. ferrocast/durocast or similar)
Street Chair	Simple style metal seat with		Dimensions	Sit height approximately 450mm. Back height between 700 – 850mm Length of approximately 1800mm

	timber appearance slats and upright geometry. Arm rest at ends only, backrest, both slightly inclined. Minimalist design with no non-structural or functional metal work or timber and no decoration.	 **Bailey International** Delta Eco E Chair UM365-M FSC timber with security bolts	Slats	Minimum 50mm width of seat slats with maximum 35mm gap between each. Wider gaps may be acceptable on backrest. Slats not to protrude beyond arm rests or back support. Slats to be capable of removal without need to de-root bench. Slats ideally to be single common size (and never more than two sizes) for ease of maintenance and replacement.
			Fixing	Root fixed or concealed bolt ground fixing. Security bolt fixing to slats.
			Materials	Legs armrests and back supports to be metal in one of the following: stainless steel, hot dipped galvanised steel, or ductile iron (where corrosion treated). Slats to be imitation timber recycled plastic (or composite recycled plastic and wood) or polyurethane coated galvanised steel or aluminium. Otherwise to be real hardwood timber slats (FSC certified, European source preferred) with a minimum 5-year guarantee.
			Colour	Grey finish to metal ends. Maybe achieved either through polyester powder coating in RAL 7005 signal grey colour, exposure of natural metal where appropriately coloured and corrosion treated, or coating of the metal with a RAL 7005 signal grey coloured polyurethane outer (e.g. ferrocast/durocast or similar).
Wide Bin	Simple square, rectangular or elliptical plan plastic bin. SSDM DS 222 for use requirements	 **Plastic Omnium** Elegant Charter, 110L	Dimensions	Height 900 - 1150mm, Length 600 – 800mm, Depth 300 – 375mm
			Capacity	60 litres or greater
			Fixing	Bolt or base plate fixed to the ground.
			Materials	Durable recycled or new plastic to outer. Zinc coated galvanised steel to or polyurethane liner.
			Colour	Black finish
			Appearance	Integrated hood with shallow domed or inclined profile to facilitate rain water run-off. Front opening door with secure hinge and locking system and industry standard security key. Stem lock mechanism. Removable liner. Fire resistant. Capable of accommodating an ash tray as a variant. Limited text or other decals on bin. Blank with either tidyman insignia or 'litter' text (preferred) but not both. Limited narrow gold horizontal detail bands around bin.
Narrow Bin	Simple square, rectangular or elliptical plan plastic bin.		Dimensions	Height 900 - 1150mm, Length 400 – 600mm, Depth 400 – 450mm
			Capacity	80 litres or greater
			Fixing	Bolt or base plate fixed to the ground.
			Materials	Durable recycled or new plastic to outer. Zinc coated galvanised steel to or polyurethane liner.
			Colour	Black finish

	SSDM DS 222 for use requirements		Appearance	Integrated hood with shallow domed or inclined profile to facilitate rain water run-off. Front opening door with secure hinge and locking system and industry standard security key. Stem lock mechanism. Removable liner. Fire resistant. Capable of accommodating an ash tray as a variant. Limited text or other decals on bin. Blank with either tidyman insignia or 'litter' text (preferred) but not both. Limited narrow gold horizontal detail bands around bin.
Pedal Cycle Stand without tapping bar	Simple unadorned 'n' stand design with orthogonal uprights and cross bar and small radius corners.	 **Broxap** Sheffield stand BMXW/GS0	Dimensions	Height 700 - 750mm, Length 800 – 850mm. Overall diameter of main stand tubing to be 45 – 50mm. Outer radius of corners to be 100 – 150mm.
			Fixing	Root fixed minimum 230mm below ground.
			Materials	Solid steel core (to deter theft) with polyurethane outer finish to protect bicycle frames from damage (durocast/ferrocast or similar)
			Colour	Jet black finish RAL 9005
			Appearance	No signage, no visibility bands
Pedal Cycle Stand with tapping bar	Unadorned 'n' stand design with orthogonal uprights and cross bar, tapping bar and small radius corners.	 **Broxap** BMXW/GS0 Sheffield stand	Dimensions	Height 700 - 750mm, Length 800 – 850mm. Overall diameter of main stand tubing to be 45 – 50mm. Outer radius of corners to be 100 – 150mm. Tapping bar to be circular, 20mm in diameter and approximately 15mm above the ground.
			Fixing	Root fixed minimum 230mm below ground.
			Materials	Solid steel core (to deter theft) with polyurethane outer finish to protect bicycle frames from damage (durocast/ferrocast or similar)
			Colour	Jet black finish RAL 9005
			Appearance	No signage, no visibility bands
Footway bollard without signage	Recycled shorter version of the classic Manchester cast iron bollard		Dimensions	Height 700 - 750mm
			Fixing	Root fixed minimum 300 - 350mm below ground.
			Materials	Aluminium or galvanised steel core with polyurethane outer finish (durocast/ferrocast or similar)
			Colour	To match area standard colour

	SSDM DS 211 for use requirements	 **Broxap** Manchester mini	Appearance	No colour contrast to detail bonds or any other areas.
Footway bollard with signage	To incorporate 150mm diameter moulding below bollard head for roundel sign		Dimensions	Height 700 - 750mm
			Fixing	Root fixed minimum 300 - 350mm below ground.
			Materials	Aluminium or galvanised steel core with polyurethane outer finish (durocast/ferrocast or similar)
			Colour	To match area standard colour
			Appearance	No colour contrast to detail bonds or any other areas.
C/way bollard without signage	Higher design to increase conspicouity to motorists and to incorporate Class 2 reflective tape around bollard positioned beneath its head		Dimensions	Height 950 - 1100mm Diameter 100mm at narrowest point Retro reflective tape width 450 – 600mm
			Fixing	Root fixed minimum 300 - 350mm below ground.
			Materials	Galvanised steel or ductile iron inner core with polyurethane outer finish (durocast/ferrocast or similar)
			Colour	Jet Black RAL 9005. Retro reflective tape to be RAL 7004 signal grey
			Appearance	No colour contrast to detail bonds or any other areas.
C/way bollard with signage	Larger diameter to accommodate sign		Dimensions	Height 950 - 1100mm Diameter 190mm at narrowest point Retro reflective tape width 450 – 600mm Sign diameter 270mm roundel
			Fixing	Root fixed minimum 300 - 350mm below ground.
			Materials	Galvanised steel or ductile iron inner core with polyurethane outer finish (durocast/ferrocast or similar)
			Colour	Jet Black RAL 9005. Retro reflective tape to be RAL 7004 signal grey
			Appearance	No colour contrast to detail bonds or any other areas.
Bollard and rail system			Dimensions	Height 700 -750mm. Rail height minimum 675mm above ground. Rail section approximately 45mm square. Bollards located at 1.8m spacing with overall minimum and maximum spacing to be 1.5 – 3m

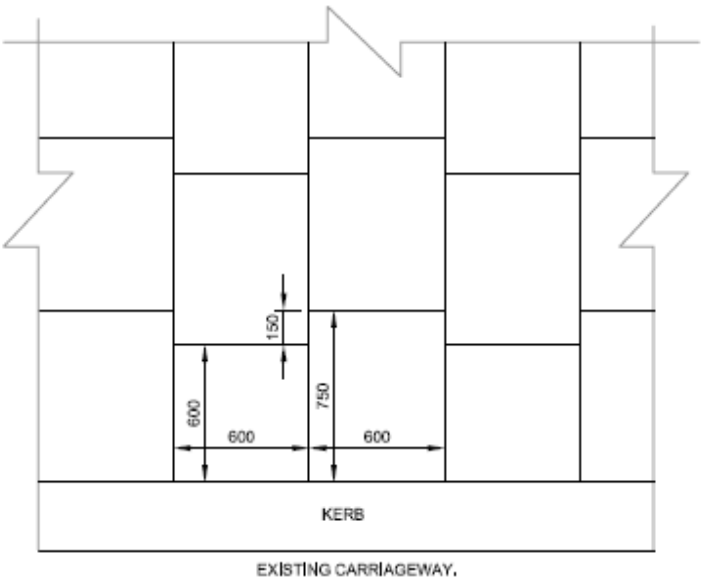
	SSDM DS 112 for use requirements	 **Broxap** Manchester bollard and rail combo **Furnitube** Manchester bollard and rail combo	Fixing	Root fixed minimum 300 - 350mm below ground. Bollards to be joined by square section metal rail, fixed to be diamond profile to deter climbing by children.
			Materials	Galvanised steel or ductile iron inner core with polyurethane outer finish (durocast/ferrocast or similar)
			Colour	Polyurethane outer finish pigment to match area standard colour
			Appearance	To incorporate moulded rail aperture to receive 1x square section rail to either side of bollard. Apertures to be located immediately beneath the domed bollard head. Apertures to allow rails to pass through bollard where necessary.
High visibility panel guard railing	Standard high visibility railing with vertical offset bars.	 **Bridge Parapets Ltd** Visiflex	Dimensions	Rail section panel lengths 1–3m. Min. gap between vertical bars to be 200mm.
			Fixing	To be mounted on top of root fixed stub posts rather than hung between interspacing posts.
			Materials	Mill finished aluminium or galvanised steel
			Colour	Upright posts to ends of runs of panels to be polyester powder coated in Jet Black RAL 9005. Remainder of panel to be natural finish, corrosion treated as necessary.
			Appearance	To incorporate moulded rail aperture to receive 1x square section rail to either side of bollard. Apertures to be located immediately beneath the domed bollard head. Apertures to allow rails to pass through bollard where necessary.
Self-righting post with reflective material	Rebound Hi-visibility retro reflective bollard		Dimensions	Height: 980mm, width 340mm, thickness: 88mm. Base: 200mmx200mm.
			Fixing	Root fixed minimum 300 - 350mm below ground.
			Materials	Plastic with retro-reflective cover to BS 8442:2015
			Colour	Yellow.
			Appearance	To incorporate directional arrow or other appropriate traffic sign.
Collaps-ible Bollard	Countersunk Fold Down Bollard		Dimensions	Height: 650mm, length 1000mm, depth: 150mm. Diameter: 89mm.
			Materials	Zinc coated galvanised steel with retro-reflective bands.
			Colour	Polyester powder coated in Jet Black RAL 9005.
			Appearance	To incorporate lockable cover to eliminate trip hazards when bollard is stored in the collapsed position.

		  **Broxap BX01 5550**	Drainage	To avoid corrosion, drainage/irrigation must be considered when installing the countersunk bollards to avoid rain water ponding in the opening below the general road surface.

4 Town Centre Area

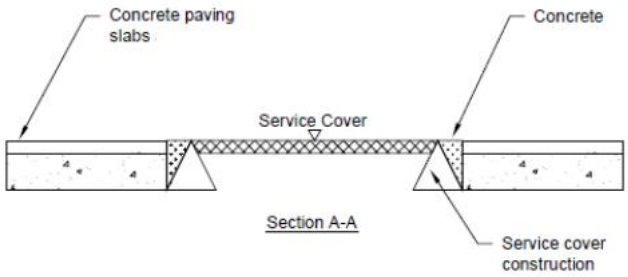
In the Town Centre Specification areas of Southwark, the carriageways are bituminous pavements and/or small modular paving unit surfaced carriageway. The footways are large element natural stone flags (including the plateaus of vehicle accesses), and one or more types of block paver used to raised tables, inset parking bays and the plateaus of heavily used vehicle accesses.

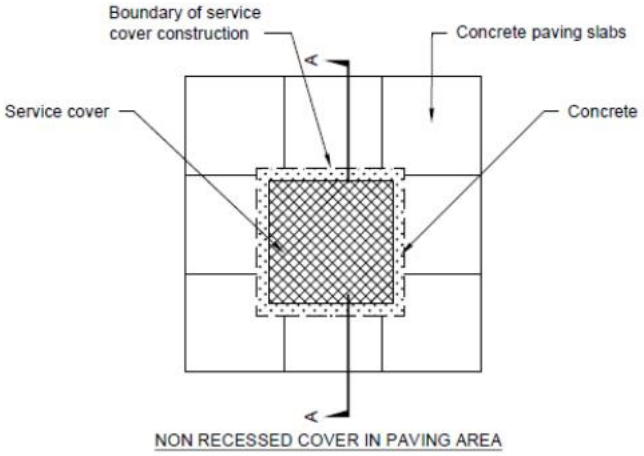
In the Town Centre, granite stone flags 600 x 750 x 80mm are used in light vehicle overrun areas. Laid to BS 7533-8:2003.



As with World Centre and Heritage sites, in areas of heavy vehicle overrun the paving shall be reinforced by increasing the flag thickness to 90mm and its breaking load from 15 KN to 21KN.

In town centre footways (and other general areas), utility covers may be flush with a 50mm thick concrete surround.





In Town Centre areas any precast concrete kerb is to be replaced with 300mm wide granite kerbs.

Granite stone cubes are required at the rear of the footway/footpath to delineate between public highway and private land. In Heritage or World Centre areas the granite edging is to be replaced with Yorkstone cubes or possibly Yorkstone slabs, cut to 50x150mm and laid on end to BS 7533-4:1998.

Appearance: the colour, veining, texture, etc. of the natural stone shall be identified visually, typically by a reference sample of the same stone suitable for providing a general description of visual appearance. A reference sample shall

be provided by the supplier of the stone according to BS EN 1341:2012.

A reference sample shall be an adequate number of pieces (typically three pieces) of natural stone of sufficient size to indicate the general appearance of the finished work. The dimensions of individual pieces shall be at around 300mm by 300mm and shall indicate the range of appearance regarding the colouring, the vein pattern, the physical structure and the surface finish. In particular the reference sample shall show specific characteristics of the stone, such as typical holes, glass seams, spots, crystalline veins and rusty spots. The reference sample does not imply strict uniformity between the sample itself and the actual supply; natural variations may always occur. If the processing of the stone involves the use of patching, fillers or other similar products for natural holes, faults or cracks, then the reference sample shall similarly display the impact of the same on the finished surface. All the characteristics as shown by the reference sample shall be considered typical of the stone and not as flaws, therefore they shall not become a reason for rejection, unless their concentration becomes excessive and the typical character of the stone is lost.

The name and address of the manufacturer or the supplier of the stone, as well as the denomination of the stone in accordance with Section 4.1 of BS EN 1341:2012 and/or information on the treatment in accordance with section 4.1.2 or the above standard shall be indicated on the reference sample. Any comparison between production sample and reference sample shall be carried out by placing the reference sample against the production samples and viewing them at a distance of about 2m under normal daylight conditions and recording any visible differences in the characteristics of the stones.

4.1	Town Centre Area Surfacing Materials Palette			
Heavy overrun footway	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1**		Dimensions	600mm wide x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
Light overrun footway	Granite natural stone slab paving (600x750x80). Silver Grey **F-NS(80)-G1 or F-NS(90)-G1**		Dimensions	600mm wide x 750mm long x 80mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).

			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
Main footway/ footpath surface channel	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1** Slabs cut to appropriate width as described in Design Standards 130 and 118 to form surface channel detail.		Dimensions	Various width x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
Trim	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012) : Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer

				may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 Mpa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Apparent density and open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Vehicle Crossing plateau surface (occasional access)	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1**		As above.	As above.
Vehicle Crossing plateau surface (frequent use access)	Imitation granite sett precast concrete blocks (208x173x80). Silver grey. **B-PC(80)-G1a**	 Mix of B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Bulk density of facing	(BS EN 1338:2003): ≥375kg/m3.

			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks (208x173x80). Mid grey. **B-PC(80)-G1b**	 Mix of B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be mid grey as Munsell Colour (Neutral Scale) N 6/_30.0% R. Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Bulk density of facing	(BS EN 1338:2003): ≥375kg/m3.
			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build-up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing

	Imitation granite sett precast concrete blocks (208x173x80). Mid grey. **B-PC(80)-G1c**	 Mix of B-PC(80)-G1a, BPC(80)- G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be dark grey as Munsell Colour (Neutral Scale) N 5/_19.8% R Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Bulk density of facing	(BS EN 1338:2003): ≥375kg/m3.
			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build-up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw resistance	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
Vehicle Crossing ramp surface	Imitation granite sett precast concrete blocks (208x173x80). **B-PC(80)-G1a B-PC(80)-G1b B-PC(80)-G1c**	Mix of B-PC(80)-G1a, BPC(80)- G1b and B-PC(80)-G1c	As above.	To be laid in an evenly distributed mix of proportions 20% G1a, 60% G1b and 20% G1c. Other colour mixes may be permitted by Level 1 Departure or instructed by Approving Officers

Main Carriage way surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver grey to BS EN 1338:2003 **B-PC(AS)-G1c**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 -15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R.. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003 **B-PC(AS)-G1b** Mixed with	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 -15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing

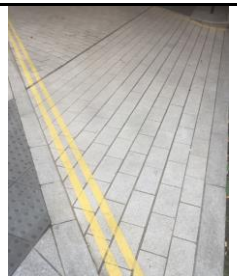
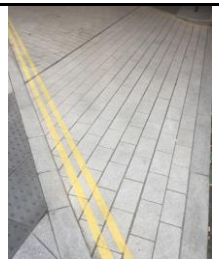
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark grey to BS EN 1338:2003 **B-PC(AS)-G1c**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge.	Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
			Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 -15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.

Parking Bay Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London
	Imitation granite sett precast concrete blocks. Anti-shift units.	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
	Imitation granite sett precast concrete blocks. Infiltration joint units. Silver grey to BS EN 1338:2003 200x100x80mm **B-PC(W80)-G1a**	 Use only where rooting zones extend beneath parking bays. See SSDM DS 601. To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge.	Dimensions	BS EN 1338:2003 100mm wide x 200mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation process ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Spacer nibs to side. Specialist nibs to promote ingress of surface water whilst preventing migration of jointing material. Extent of protrusion to be ≤ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.

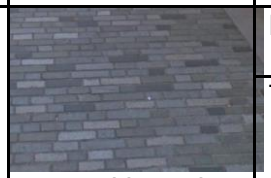
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Infiltration joint units. Mid grey to BS EN 1338:2003 200x100x80mm **B-PC(W80)-G1b**	 Use only where rooting zones extend beneath parking bays. See SSDM DS 601. To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge.	Dimensions	BS EN 1338:2003 100mm wide x 200mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation process ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Spacer nibs to side. Specialist nibs to promote ingress of surface water whilst preventing migration of jointing material. Extent of protrusion to be ≤ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 6/_30%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Infiltration joint		Dimensions	BS EN 1338:2003 100mm wide x 200mm long x 80mm thick.
			Upper arris	BS EN 1339:2003 Moulded flat chamfer subsequently lightly abraided due to upper face texturisation process ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm

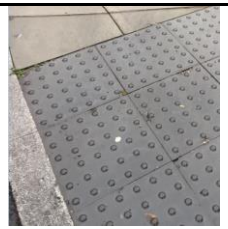
	units. Dark grey to BS EN 1338:2003 200x100x80mm **B-PC(W80)-G1c**	Use only where rooting zones extend beneath parking bays. See SSDM DS 601. To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge.	Spacer nibs	Spacer nibs to side. Specialist nibs to promote ingress of surface water whilst preventing migration of jointing material. Extent of protrusion to be ≤ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
Raised Table Plateau Surface and Traffic Carpet Plateau Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.

Raised Table Ramp Surface and Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
Traffic Carpet Plateau Surface Reserve Materials	Imitation granite sett precast concrete blocks.	**B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c**	As above.	Use may be acceptable in place of anti-shift units if it can be demonstrated that achievable cover is limited. Use may also sometimes be permitted to compliment anti-shit units. However, as these units may only be laid in a stretcher bond, use is likely to be limited to small areas that are tightly constrained by edge or intermediary restraints.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/STR**		As above. For laying in stretcher/ stack bond.	As above.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums after applying permitted dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa

	Granite sett (240x160x160). Sawn to sides. Silver grey, Mid grey, Dark Grey or Grey-Red **B-NS-G4(160)-SW**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite.	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians) sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	Open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
	Granite sett (240x160x160). Cropped to sides. Silver grey, Mid grey, Dark Grey or Grey-Red. **B-NS-G4(160)-CR**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite.	Dimensions	(BS EN 1342:2012): 240mm long x 160mm wide x 160mm thickness.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.

	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	Granite sett (200x100x100). Cropped to sides. Silver grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G3(100)-CR**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Hewn/cropped. Texture - base (BS EN 1342:2012): Hewn/cropped.
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.

		Grey colour units may be an extrusive igneous rock basalt.	Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 Mpa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	CED Temple Setts Granite sett (90 x150 x Varies) Split sides. Flamed top. Bluish Grey, Blue Grey, Basalt black, Green or Red mix. **S816-300-AAG**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite.	Dimensions	Nominal (BS EN 1342:2012): 90mm wide x 150mm depth x Varies (325, 275,225,175 and 125)
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Bluish Grey, Blue Grey, Basalt black, Green and Red mix.
			Texture	Split sides. Sawn top and bottom, Upper face subsequently coarse textured (flamed treatment).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 65 USRV
	Narrow pressed imitation clay pavers (215x52x70). Red-brown. **B-ICP-1a**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on these dimensions may be permitted by agreement with approving officers. Rectangular plan & section. All opposing faces planar to each other. All adjacent faces perpendicular to each other.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.
			Colour	Subtly varying red-brown to all sides ranging through approximate Munsell Colours 5YR 6/2, 5YR 6/3, 5YR 6/4, 5YR 5/2, 5YR 5/3 and 5YR 5/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Acid resistance	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Fire performance	(BS EN 1344:2002): Class A1.

	Narrow pressed imitation clay pavers (212x52x70). Grey-buff. **B-ICP-1c**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by agreement with approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.
			Colour	Subtly varying grey-buff to all sides ranging through approximate Munsell Colours 2.5Y8/1, 2.5 7/1, 2.5Y 6/1, 2.5Y 6/2 and 2.5YR5/1
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Skid resistance	(BS EN 1344:2002): Class A1.
Tactile surfacing Controlled crossing	Blister tactile precast concrete paving slab Dark grey 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency
			Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type B1
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Tactile surfacing Un-controlled crossing	Blister tactile granite natural stone paving slab (90mm thickness). Silver grey. **T(B)-NS/G(90)**		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 90mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.

		Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341: 2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.	Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of different grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Tactile surface Corduroy	Corduroy tactile precast concrete paving slab Dark grey 400x400x65mm **T(C)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper/lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Profile Feature	DD/CEN/TS 15209:2008 Type R1
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency
			Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type R1
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Tactile surface Ladder/ Tramline	Ladder/ tramline tactile precast concrete paving slab	 See SSDM DS	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper/lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Profile Feature	DD/CEN/TS 15209:2008 Type R3
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency

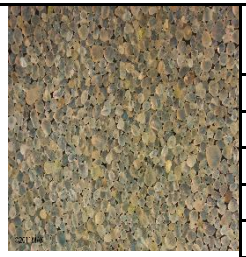
	Dark grey 400x400x65mm **T(L)-PC2**	207 about the use of tactile pavers.	Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type R3
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering resistance	BS EN 1339:2003 Class 3(D)
			Method of manufacture	Units may be single layer or two-layer press with separate facing layer
Reserve Footway Paving Materials	Granite natural stone slab paving (450x600x80). Silver Grey. **F-NS(80)-G2**	 Use will only be appropriate within light overrun areas unless use of a bound/rigid construction is required / permitted	Dimensions	(BS EN 1341:2012): 450mm wide x 600mm long x 80mm thick.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by the unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of different grain sizes and colours to be fairly even. Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Slip Resistance	Wet - mean (BS EN 1341:2012): ≥ 65 USRV
			Breaking load	Breaking strength, flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.

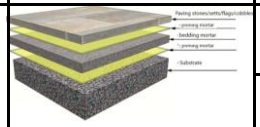
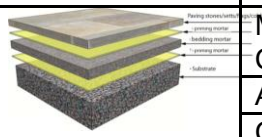
			Weathering resistance	Freeze/thaw mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%
	Granite natural stone slab paving (200x300x85). Silver Grey. **F-NS(85)-G3**		Dimensions	(BS EN 1341:2012): 200mm wide x 300mm long x 85mm thick.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2).
			Lower arris	Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by the unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of different grain sizes and colours to be fairly even. Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	(BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Slip Resistance	Wet - mean (BS EN 1341:2012): ≥ 65 USRV
			Breaking load	Breaking strength, flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Durability, freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.

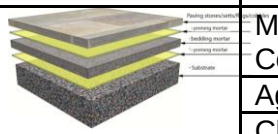
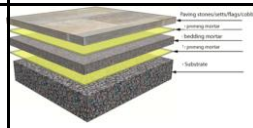
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/STR**		As above.	As above.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	As above.	As above.
	Granite sett (200x100x100). **B-NS-G3(100)-SW** or **B-NS-G3(100)-CR**		As above. Silver Grey, Mid Grey, Mid Grey or Grey-Red. Sawn or cropped to sides.	As above. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
	Granite sett (240x160x160). **B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**		As above. Silver Grey, Mid Grey, Mid Grey or Grey-Red. Sawn or cropped to sides.	As above. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
	Narrow pressed imitation clay pavers (215x52x70). Red-brown. **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Narrow pressed imitation clay pavers (212x52x70). Grey-buff. **B-ICP-1c**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.

	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**	 Use will only be appropriate to lightly trafficked surfaces and will require the use of a bound/rigid construction. Having a cropped upper face - this surface is not accessible. Alternative paths for vulnerable pedestrians need to be provided.	Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Texture - upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required, may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture – sides and base (BS EN 1342:2012): Hewn/cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Precast concrete blocks to BS EN 1338:2003. Light grey 200x100x60mm **B-PC(60)-B1a**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: light grey to Munsell colour 7.5YR 8.25/0.5.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured

	Precast concrete blocks to BS EN 1338:2003. Mid grey 200x100x60mm **B-PC(60)-B1b**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: mid grey to Munsell colour (Neutral scale) N6.0/_30%R.
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured
	Precast concrete blocks to BS EN 1338:2003. Dark grey 200x100x60mm **B-PC(60)-B1c**	 May be laid as a single colour or as a mix of two different colours	Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: dark grey to Munsell colour (Neutral scale) N4.75/_17.6%R
			Bulk density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.

	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone	For use where there might be cleansing issues (vacuum cleaners	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water

	flags and concrete blocks or clay pavers **L-X1**	sucking out jointing sand).		
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. . A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**	 BS 7533-4/2006, Table 4, clause 5.4.4.1	Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.

			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar for bound construction **L-MHX**		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1

			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%

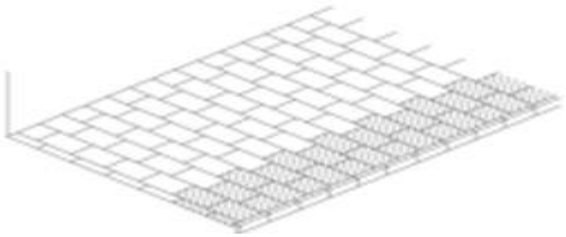
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

5 Heritage Specification Area

In the Heritage Specification areas of Southwark, the carriageways are bituminous or natural stone setts. The footway is a single type of flag paving (including the plateaus of vehicle accesses) and one or more types of block paver used to raised tables, inset parking bays and the plateaus of heavily used vehicle accesses.

Yorkstone paving is natural stone which has been quarried, cut and dressed into paving slabs. It is a fine-grained, hard sandstone and millstone. It is produced in a range of surface finishes and slab sizes containing buff and grey colour bands. Laid to BS 7533-4:2006, 63mm thick slabs, with a length to width ratio of 1.5 to 1, in random lengths of 300/450/600/750mm.

Due to its exceptional weathering qualities (with the material looking better as it ages) and its long life Yorkstone is an appropriate material in historic and sensitive high-profile sites. Yorkstone is traditionally laid in random courses, which allows a range of stone sizes to be used. However, in streets with narrow footways or with vehicle overrun problems, 400 x 200 x 75 slabs to be used.



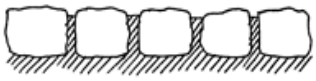
Where there may be heavy over-run the front two courses shall be reinforced by using thicker flags (up to 75mm) and increasing the cementitious bound base course to 200mm and the laying course to a 30MPA compressive strength 25mm thick bedding mortar.

Granite is a most hard, stain resistant and durable natural paving material. It has a long tradition of use in London for carriageways and kerbs. As with other paving bedded on concrete, utility company reinstatements and maintenance work does not affect the bond of the adjacent paving. Broken-out setts or kerb are difficult to damage and can normally be reused. Laid to BS 7533-7:1998.

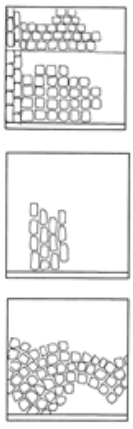
Granite kerbs laid 300mm wide are preferred in the Heritage area, but as space in historic streets may be limited, 150mm wide granite kerbs may be used where appropriate.

Granite setts have excellent slip characteristics and, due to surface and joint variations, they slow up vehicles. Level or dressed granite setts are available second hand: these are as comfortable to walk on as brick or concrete block, but more slip-resistant, due to the quartz crystal composition of the material.

Dimensions:
100x100x100mm
200x100x100mm
240x160x160mm



The width of joints to be kept to a minimum.



Bond patterns - 3 types

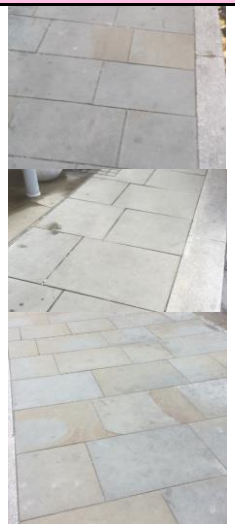
Care is needed in certain locations with oil drips in the pointing and heavy vehicles “rocking” the granite ribbons containing the panel of setts. Setts can also be used in crossovers and barrel drops and as deterrent paving to discourage pedestrian use. Fine specification is needed in footways and pedestrianised areas to give a surface smooth enough for some users. If historic setts are re-used then an alternative smooth route should be available for people with mobility problems.

Appearance: the colour, veining, texture, etc. of the natural stone shall be identified visually, typically by a reference sample of the same stone suitable for providing a general description

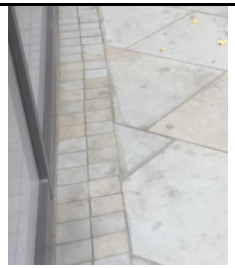
of visual appearance. A reference sample shall be provided by the supplier of the stone according to BS EN 1341:2012.

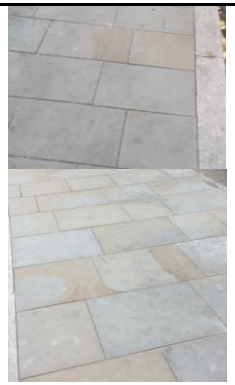
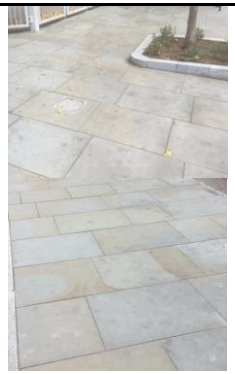
A reference sample shall be an adequate number of pieces (typically three pieces) of natural stone of sufficient size to indicate the general appearance of the finished work. The dimensions of individual pieces shall be at around 300mm by 300mm and shall indicate the range of appearance regarding the colouring, the vein pattern, the physical structure and the surface finish. In particular the reference sample shall show specific characteristics of the stone, such as typical holes, glass seams, spots, crystalline veins and rusty spots. The reference sample does not imply strict uniformity between the sample itself and the actual supply; natural variations may always occur. If the processing of the stone involves the use of patching, fillers or other similar products for natural holes, faults or cracks, then the reference sample shall similarly display the impact of the same on the finished surface. All the characteristics as shown by the reference sample shall be considered typical of the stone and not as flaws, therefore they shall not become a reason for rejection, unless their concentration becomes excessive and the typical character of the stone is lost.

The name and address of the manufacturer or the supplier of the stone, as well as the denomination of the stone in accordance with Section 4.1 of BS EN 1341:2012 and/or information on the treatment in accordance with section 4.1.2 or the above standard shall be indicated on the reference sample. Any comparison between production sample and reference sample shall be carried out by placing the reference sample against the production samples and viewing them at a distance of about 2m under normal daylight conditions and recording any visible differences in the characteristics of the stones.

5.1	Heritage Area Surfacing Materials Palette			
Heavy overrun footway	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**		Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild more banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Durability, freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
Light overrun footway	Yorkstone natural stone slab paving (mixed gauges and lengths, 63mm thick). Grey blue buff. **F-NS(63)-Y1** Or	 Use may be permitted if it can be demonstrated that achievable cover is limited	Dimensions	Work dimensions (BS EN 1341:2012): 63mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours:

	Yorkstone natural stone slab paving (single-size 600x750x63). Grey blue buff. **F-NS(63)-Y2**	and (if laid unbound) a non-visually intrusive edge restraint can be designed into the pavement to transition from the thicker slabs used to Heavy Overrun areas. Unit aspect (e.g. Y1 or Y2) should match that used to zone		GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild more banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm..
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
Main footway/ footpath surface channel	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**	 Slabs cut to appropriate width to form surface channel detail.	Dimensions	Various width x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%

Trim	Yorkstone natural stone cube (100x100x75). Grey blue buff. **B-NS(75)-Y1**		Dimensions	Nominal (BS EN 1338:2003): 100mm long x 100mm wide x 75mm thick.
			Deviations	Dimensional tolerances: As BS EN 1338:2003.
			Upper arris	(BS EN 1338:2003): Square/sharp.
			Lower arris	(BS EN 1338:2003): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV.
			Water absorption	Water absorption (BS EN 1342:2012): ≤ 2%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/STR**	 For use as part of raised kerb edge to tree pits and planting areas or raised lip kerb edge to staggered crossings	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in stretcher bond or stack bond.
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2.
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa

Vehicle crossing plateau surface Occasional use	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick) or (single size, 600x750x75mm thick).Grey blue buff. **F-NS(75)-Y1** Or **F-NS(75)-Y2**		As above.	As above.
	Yorkstone natural stone slab paving (mixed gauges and lengths, 63mm thick) or (single-size 600x750x63). Grey blue buff. **F-NS(63)-Y1** Or **F-NS(63)-Y2**		As above. Use may be permitted if a bound/rigid construction has been permitted or is required. Unit aspect (e.g. Y1 or Y2) should match that used to footway.	As above.
Vehicle crossing plateau surface Frequent use	Imitation granite sett precast concrete blocks (208x173x80). Silver grey. **B-PC(80)-G1a** To be laid in an evenly distributed mix of proportions 60% G1a, 20% G1b and 20% G1c.	 Mix of B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though

				overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Density of facing	(BS EN 1338:2003): ≥375kg/m3.
			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build-up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of Manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks (208x173x80). Mid grey. **B-PC(80)-G1b** To be laid in an evenly distributed mix of proportions 60% G1a, 20% G1b and 20% G1c.	 Mix of B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be mid grey as Munsell Colour (Neutral Scale) N 6/_30.0% R. Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Density of facing	(BS EN 1338:2003): ≥375kg/m3.
			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build-up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

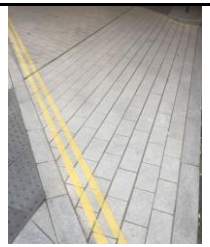
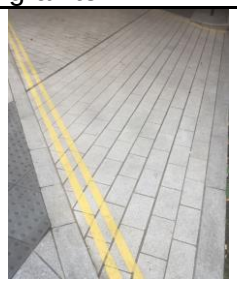
			Method of Manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation granite sett precast concrete blocks (208x173x80). Mid grey. **B-PC(80)-G1c** To be laid in an evenly distributed mix of proportions 60% G1a, 20% G1b and 20% G1c.	 Mix of B-PC(80)-G1a, BPC(80)- G1b and B-PC(80)-G1c	Dimensions	Nominal (BS EN 1338:2003): 208mm wide x 173mm long x 80mm thick.
			Upper arris	(BS EN 1339:2003): Moulded flat chamfer subsequently lightly abraded due to upper ace texturisation process. ≤4mm horizontal. ≤2mm vertical.
			Lower arris	(BS EN 1338:2003): Square.
			Facing layer thickness	(BS EN 1338:2003): ≥6mm. Precast concrete block to BS EN 1338:2003. Facing layer to be ≥50% exposed stent (or other secondary granite aggregates). Facing layer to also include black blast furnace slag (or other secondary or recycled aggregates) in Imitation of mafic accessory minerals found in natural stone granite. Backing layer not to contain any stent (or other secondary granite aggregates).
			Spacer nibs	Spacer nibs to side: Yes ≤1.75mm.
			Colour	Colour (facing layer): Overall colour when viewed by the naked eye at a distance of 2m under natural light to be dark grey as Munsell Colour (Neutral Scale) N 5/_19.8% R Upon close visual inspection to be composed of grey, black, white and glassy aggregate grains as described below, though overall ground mass colour to be as described above. Colour (bed face and sides beneath facing layer): Generic grey.
			Density of facing	(BS EN 1338:2003): ≥375kg/m3.
			Texture	Flat to all faces. Facing layer to be lightly shot blasted to the satisfaction of the approving officer to expose stent and other decorative aggregates in face mix and remove parent material from mould whilst avoiding excessive texturisation likely to promote substantial build-up of surface grime.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
Vehicle Crossing Ramp Surface	Mix of **B-PC(80)-G1a, BPC(80)-G1b and B-PC(80)-G1c**		As above.	As above. To be laid in an evenly distributed mix of proportions 60% G1a, 20% G1b and 20% G1c.

Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver grey to BS EN 1338:2003 **B-PC(AS)-G1a**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
			Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003 **B-PC(AS)-G1b** Mixed with	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.

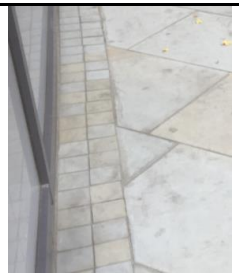
			Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark grey to BS EN 1338:2003 **B-PC(AS)-G1c**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
			Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites

				experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
Parking Bay Surface	Bituminous mixture surface course		As above.	As above.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a B-PC(AS)-G1b B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
Raised Table Ramp Surface and Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	As above.
Traffic Carpet Plateau Surface Reserve Materials	Mix of B-**PC(80)-G1a, B-PC(80)-G1b** and **B-PC(80)-G1c**		As above.	As above. To be laid in an evenly distributed mix of proportions 60% G1a, 20% G1b and 20% G1c.
	Granite sett (240x160x160). Sawn to sides. Silver grey, Mid grey, Dark Grey or Grey-Red		Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.

	B-NS-G4(160)-SW	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite.	Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians) sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	Open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
	Granite sett (240x160x160). Cropped to sides. Silver grey, Mid grey, Dark Grey or Grey-Red. **B-NS-G4(160)-CR**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite.	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thickness.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
	CED Temple Setts		Dimensions	Nominal (BS EN 1342:2012): 90mm wide x 150mm depth x Varies (325, 275,225,175 and 125)

	Granite sett (90 x150 x Varies) Split sides. Flamed top. Bluish Grey, Blue Grey, Basalt black, Green or Red mix. **S816-300-AAG**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite.	Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Bluish Grey, Blue Grey, Basalt black, Green and Red mix.
			Texture	Split sides. Sawn top and bottom, Upper face subsequently coarse textured (flamed treatment).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 65 USRV
	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW** **Granite sett (200x100x100). Cropped to** sides. Silver grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G3(100)-CR**	 Natural intrusive igneous rock sett to BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).

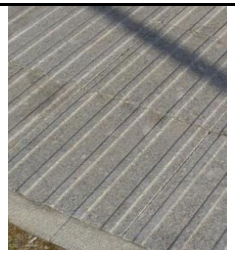
	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Hewn/cropped. Texture - base (BS EN 1342:2012): Hewn/cropped.
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012) : Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV

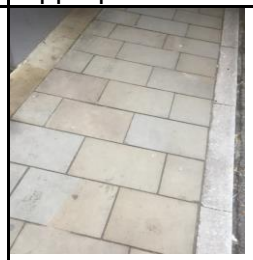
			Density	Apparent density and open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa
	Yorkstone natural stone cube (100x100x75). Grey blue buff. **B-NS(75)-Y81**	 Sedimentary carboniferous sandstone sett to BS EN 1342: 2012. Caution should be exercised using these units within carriageway areas as York stone tends to	Dimensions	Nominal (BS EN 1338:2003): 100mm long x 100mm wide x 75mm thick.
			Upper/lower arris	(BS EN 1338:2003): Square/sharp.
			Tolerance	Dimensional tolerances: As BS EN 1338:2003.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV

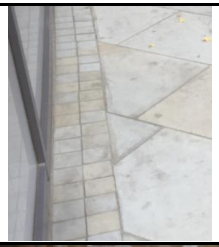
		stain heavily with vehicle over-run.	Density	Means (BS EN 1342:2012): ≥ 2400 kg/m3 / ≤ 5.75%.
			Water absorption	(BS EN 1342:2012): ≤ 2%.
	Yorkstone natural stone cube (200x100x75). Grey blue buff. **B-NS(75)-Y2**	 Sedimentary carboniferous sandstone sett to BS EN 1342:2012 Caution should be exercised using these units within carriageway areas as yorkstone tends to stain heavily with vehicle over-run.	Dimensions	Nominal (BS EN 1338:2003): 200mm long x 100mm wide x 75mm thick.
			Upper/lower arris	(BS EN 1338:2003): Square/sharp.
			Tolerance	Dimensional tolerances: As BS EN 1338:2003.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	(BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Means (BS EN 1342:2012): ≥ 2400 kg/m3 / ≤ 5.75%.
			Water absorption	(BS EN 1342:2012): ≤ 2%.
	Narrow pressed Imitation clay pavers (212x52x70). Grey-buff. **B-ICP-1c**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.
			Colour	Subtly varying grey-buff to all sides ranging through approximate Munsell Colours 2.5Y8/1, 2.5 7/1, 2.5Y 6/1, 2.5Y 6/2 and 2.5YR5/1
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Skid resistance	(BS EN 1344:2002): Class A1.

	Narrow pressed imitation clay pavers (185x45x90). Bronze. **B-ICP-2a**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 185mm long x 45mm wide x 90mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Arris	Rounded/tumbled to all sides.
			Colour	Subtly varying through buff-yellow and gold within and between units, all with a grey patina, to approx. Munsell Colours 2.5Y 8/2, 2.5Y 8/3, 2.5Y 7/3, 2.5 Y 7/4, 2.5y 7/6 and 2.5YR 7/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T3
			Acid resistance	(BS EN 1344:2002): Class C.
Tactile surfacing Controlled crossing	Blister tactile granite natural stone paving slab (90mm thickness). Silver grey. **T(B)-NS/G(80)**	 Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341: 2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish	Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5Mpa.

		requirements are met.	Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Tactile surfacing Un - Controlled crossing	Blister tactile yorkstone natural stone paving slab (75 mm thickness). Blue grey buff. **T(B)-NS/Y(75)**		Dimensions	(400mm wide x 400mm long x 75mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density & Porosity	means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
			Breaking load	Breaking strength, flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Durability, freeze/ thaw resistance	Mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Tactile surface Corduroy	Corduroy tactile granite natural stone paving slab (80mm thickness). Silver grey. **T(C)-NS/G(80)**		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should

				remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Tactile Surface Ladder / Tramline	Ladder/tram line tactile granite natural stone paving slab (80mm thick). Silver grey. **T(L)-NS/G(80)**		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R3.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5Mpa.

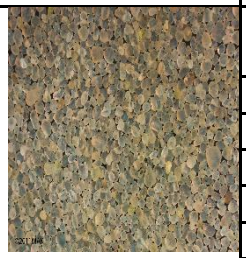
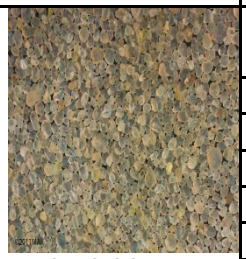
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Reserve Footway Materials	Westfield Buff Multi Yorkstone natural stone paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y4 or** Westfield Buff Multi Yorkstone natural stone paving (mixed gauges and lengths, 63mm thick). Grey blue buff. **F-NS(63)-Y4**	 This alternative natural stone may be used instead of the Scoutmoor Yorkstones **F-NS(75)-Y1** Or **F-NS(75)-Y2** and **F-NS(63)-Y1** Or **F-NS(63)-Y2** as appropriate	Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (85-90%) blue-grey with some (10-15%) buff highlights.
			Appearance	Hard, fine grained sandstone.
			Texture	Hard, fine grained sandstone.
			Compressive strength	139 MPa
			Flexural strength	16.4 MPa
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	74 wet – TLR slider test
			Water absorption	2.40%
			Density and porosity	2473 kg/m3 typically
	Yorkstone natural stone slab paving (300 wide x variable 200-450 length x 75 thick). Grey blue buff. **F-NS(75)-Y3**		Dimensions	(BS EN 1341:2012): 300mm wide x 200/300/450mm random length x 75mm thick. May be used in 300x450x75mm single size where agreed in advance with approving officer.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.

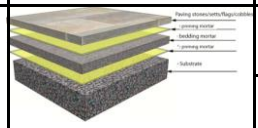
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Yorkstone natural stone cube (100x100x75). Grey blue buff. B-NS(75)-Y1		As above.	As above.
	Yorkstone natural stone cube (200x100x75). Grey blue buff. **B-NS(75)-Y2**		As above. Sedimentary carboniferous sandstone sett to BS EN 1342:2012	As above.
	Granite cube (80x80x80). Cropped sides. **B-NS-G2(80)-CR-STR**		As above.	As above. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red.
	Granite sett (200x100x100). Sawn or cropped to sides. **B-NS-G3(100)-SW** or **B-NS-G3(100)-CR**		As above.	As above.

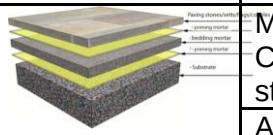
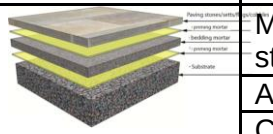
	Granite sett (240x160x160). Sawn or cropped to sides.		**B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**.	As above.
	Narrow pressed imitations clay pavers (212x52x70). Grey-buff. **B-ICP-1c**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Narrow pressed imitation clay pavers (185x45x90). Bronze. **B-ICP-2a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**	 Use will only be appropriate to lightly trafficked surfaces and will require the use of a bound/rigid construction. The cropped upper face is not accessible so alternative paths for vulnerable pedestrians.	Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Texture - upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture – sides and base (BS EN 1342:2012): Hewn/cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.

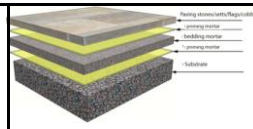
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Silver grey. 208/173x173x60 **B-PC(W60)-G1a**	Only likely as a no dig pavement construction over rooting zones of existing trees. 	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25/_46.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted & to be ≥ 50% exposed stent. Facing layer may also include blast furnace slag/recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite face mix materials to be 1-3mm diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Mid grey. 208/173x173x60 **B-PC(W60)-G1b**	 Only likely as a	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6/_30.0%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3

		no dig pavement construction over rooting zones of existing trees.	Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted & to be ≥ 50% exposed stent. Facing layer may also include blast furnace slag/recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite face mix materials to be 1-3mm diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Dark grey. 208/173x173x60 **B-PC(W60)-G1c**	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 60mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted & to be ≥ 50% exposed stent. Facing layer may also include blast furnace slag/recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite face mix materials to be 1-3mm diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.

Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound footway concrete stabs,		Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss

	natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-X1**	For use where there might be cleansing issues (vacuum cleaners sucking out jointing sand).	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**		Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm

		BS 7533-4/2006, Table 4, clause 5.4.4.1	Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Min. Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

	for bound construction **L-MHX**		Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Min. Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Min. Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.

	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Min. Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

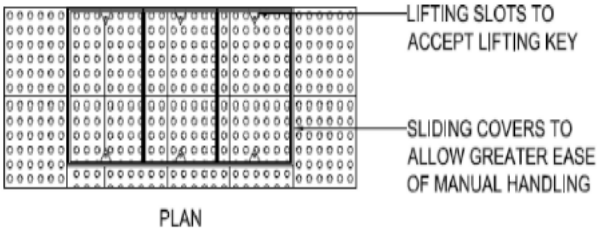
6 World Centre Specification Area

In the World Centre Specification areas of Southwark, the carriageways are bituminous or natural stone setts. The footway is a single type of flag paving (including the plateaus of vehicle accesses) and one or more types of block paver used to raised tables, inset parking bays and the plateaus of heavily used vehicle accesses. There are two options for the paving flags, Yorkstone Flag paving, which is also the preferred paving material for Heritage Areas, or natural granite flag paving.

The World Centre areas can often coincide with Heritage areas, for example historic areas of the Thames waterfront subjected to significant tourist volumes. Where this occurs the World Centre Option A Surfacing Materials Palette shall always be preferred.

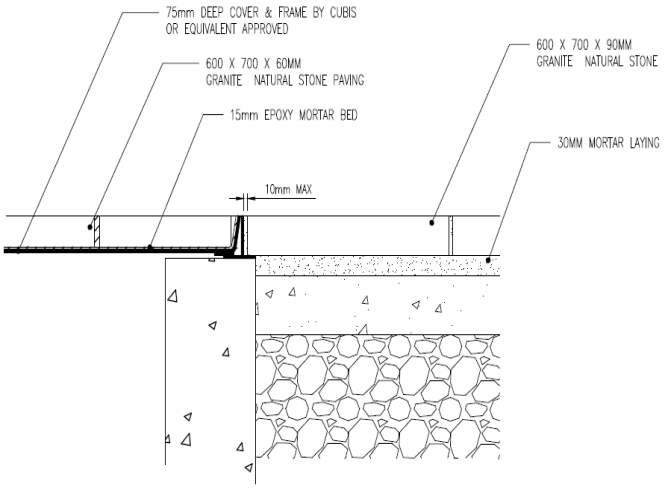
Where the World Centre area does not coincide with a Heritage Area (i.e. where the buildings are more modern and not historic), then the World Centre Option B Surfacing materials Palette may be used as well as the Option A Surfacing Materials Palette providing the agreement is given by approving officers of Southwark Council.

In these higher profile footways there is always a preference for recessed covers and frames to be used.



UTILITY COVER ARRANGEMENTS IN BLISTER PAVING

It should be noted that there may be an additional maintenance cost when requiring recessed covers for statutory undertakers' apparatus. Some utility companies will only undertake to maintain the standard covers, and not the recessed frames. A commuted sum may be required to cover the additional maintenance burden.



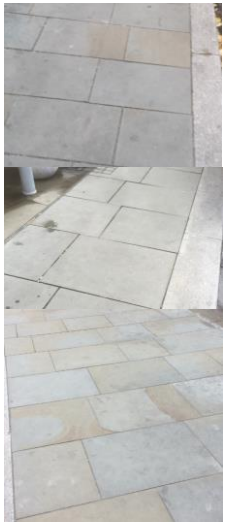
RECESSED UTILITY COVER DETAIL

Granite kerbs laid 300mm wide are preferred for the World centre area.

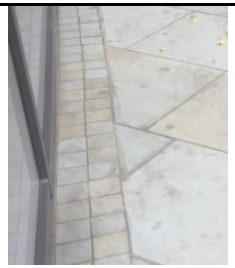
Appearance: the colour, veining, texture, etc. of the natural stone shall be identified visually, typically by a reference sample of the same stone suitable for providing a general description of visual appearance. A reference sample shall be provided by the supplier of the stone according to BS EN 1341:2012.

A reference sample shall be an adequate number of pieces (typically three pieces) of natural stone of sufficient size to indicate the general appearance of the finished work. The dimensions of individual pieces shall be at around 300mm by 300mm and shall indicate the range of appearance regarding the colouring, the vein pattern, the physical structure and the surface finish. In particular the reference sample shall show specific characteristics of the stone, such as typical holes, glass seams, spots, crystalline veins and rusty spots. The reference sample does not imply strict uniformity between the sample itself and the actual supply; natural variations may always occur. If the processing of the stone involves the use of patching, fillers or other similar products for natural holes, faults or cracks, then the reference sample shall similarly display the impact of the same on the finished surface. All the characteristics as shown by the reference sample shall be considered typical of the stone and not as flaws, therefore they shall not become a reason for rejection, unless their concentration becomes excessive and the typical character of the stone is lost.

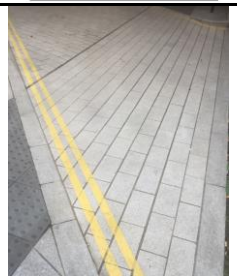
The name and address of the manufacturer or the supplier of the stone, as well as the denomination of the stone in accordance with Section 4.1 of BS EN 1341:2012 and/or information on the treatment in accordance with section 4.1.2 or the above standard shall be indicated on the reference sample. Any comparison between production sample and reference sample shall be carried out by placing the reference sample against the production samples and viewing them at a distance of about 2m under normal daylight conditions and recording any visible differences in the characteristics of the stones.

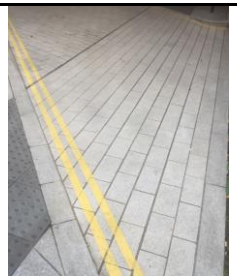
6.1	World Centre - Option A - Surfacing Materials Palette			
Heavy overrun footway	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**		Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Durability, freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
Light overrun footway	Yorkstone natural stone slab paving (mixed gauges and lengths, 63mm thick). Grey blue buff. **F-NS(63)-Y1** Or Yorkstone natural stone slab paving	 Use may be permitted if it can be demonstrated that achievable cover is limited and a non-visual intrusive edge	Dimensions	Work dimensions (BS EN 1341:2012): 63mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.

	(single-size 600x750x63). Grey blue buff. **F-NS(63)-Y2**	restraint can be designed into the pavement to transition from the thicker slabs used to Heavy Overrun areas. Unit aspect (e.g. Y1 or Y2) should match that used to zone	Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm..
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
Main footway/ footpath surface channel	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**	 Slabs cut to appropriate width to form surface channel detail.	Dimensions	Various width x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
Trim	**Yorkstone natural stone cube**		Dimensions	Nominal (BS EN 1338:2003): 100mm long x 100mm wide x 75mm thick.
			Deviations	Dimensional tolerances: As BS EN 1338:2003.
			Upper arris	(BS EN 1338:2003): Square/sharp.

	(100x100x75). Grey blue buff. B-NS(75)-Y1		Lower arris	(BS EN 1338:2003): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV.
			Water absorption	Water absorption (BS EN 1342:2012): ≤ 2%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/STR**	 For use as part of raised kerb edge to tree pits and planting areas or raised lip kerb edge to staggered crossings	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in stretcher bond or stack bond.
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa

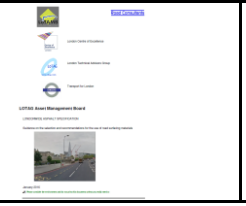
Vehicle crossing plateau surface Occasional use	Yorkstone natural stone slab paving **F-NS(75)-Y1** Or **F-NS(75)-Y2**		As above (mixed gauges and lengths, or (single size, 600x750x75mm thick).Grey blue buff.	As above.
Vehicle crossing plateau surface Frequent use	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW** To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	Granite sett (200x100x100). Cropped to sides. Silver grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G3(100)-CR** To be laid in an evenly	 Natural intrusive igneous rock sett in accordance with	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not

	distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	BS EN 1342:2012.		trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
Vehicle crossing ramp surface	**Granite sett (200x100x100). B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.
Main Carriage way surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Granite sett (240x160x160). Sawn to sides. Silver grey, Mid grey, Dark Grey or Grey-Red **B-NS-G4(160)-SW**	 Natural intrusive igneous rock sett in accordance with BS EN	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey. Other colour mixtures may be permitted or instructed by Approving Officers.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not

		1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.		trafficked by pedestrians) sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	Open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
	Granite sett (240x160x160). Cropped to sides. Silver grey, Mid grey, Dark Grey or Grey-Red. **B-NS-G4(160)-CR**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thickness.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey. Other colour mixtures may be permitted or instructed by Approving Officers.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thickness.

	Granite sett (200x100x100). **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver grey to BS EN 1338:2003 **B-PC(AS)-G1a**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing

	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003 **B-PC(AS)-G1b** Mixed with	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark		Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
			Dimensions	150mm wide x 300mm long x 100mm thick.

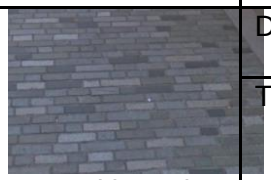
	grey to BS EN 1338:2003 **B-PC(AS)-G1c**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
Parking Bay Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.

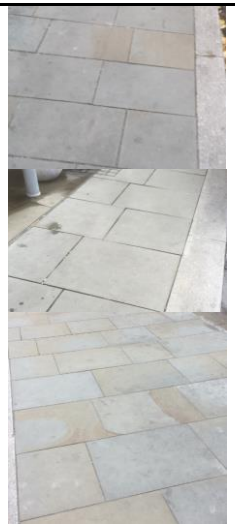
	Granite sett (240x160x160). **B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**		As above. Cropped or sawn to sides.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Granite sett (200x100x100). **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Silver grey. 208/173x173x60 **B-PC(W80)-G1a** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25/_46.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close

	the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.			distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Mid grey. 208/173x173x60 **B-PC(W80)-G1b** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6/_30.0%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks	Only likely as a no dig pavement construction	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.

	Infiltration joint units. Dark grey. 208/173x173x60 **B-PC(W80)-G1c** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.	over rooting zones of existing trees. 	Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Granite sett (240x160x160). **B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**		As above. Cropped or sawn to sides.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.

	Granite sett (200x100x100). **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
Raised Table Ramp Surface/ Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
Traffic Carpet Plateau Reserve Materials	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey as oil stains should not be as conspicuous on small units.
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.

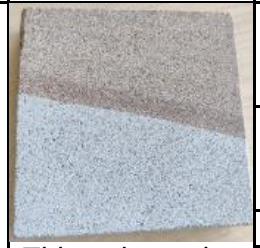
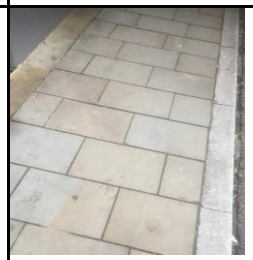
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density and porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums after applying permitted dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2.
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa
	CED Temple Setts Granite sett (90 x150 x Varies) Split sides. Flamed top. Bluish Grey, Blue Grey, Basalt black, Green or Red mix.	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To	Dimensions	Nominal (BS EN 1342:2012): 90mm wide x 150mm depth x Varies (325, 275,225,175 and 125)
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Bluish Grey, Blue Grey, Basalt black, Green and Red mix.
			Texture	Split sides. Sawn top and bottom, Upper face subsequently coarse textured (flamed treatment).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.

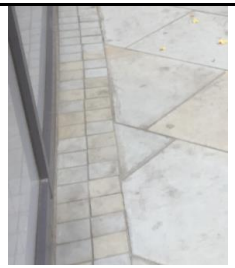
	S816-300-AAG	be a true granite/granitoid or commercial granite.	Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 80 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 65 USRV
	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**	 Caution should be exercised in the use of York-stone within carriageway areas as it tends to stain heavily from vehicle over-run.	Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Durability, freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Narrow pressed imitation clay pavers (212x52x70). Grey-buff. **B-ICP-1c**	 Units should be	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.

		laid on 50mm wide face so as to be 70mm deep	Colour	Subtly varying grey-buff to all sides ranging through approximate Munsell Colours 2.5Y8/1, 2.5 7/1, 2.5Y 6/1, 2.5Y 6/2 and 2.5YR5/1
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Skid resistance	(BS EN 1344:2002): Class A1.
	Narrow pressed imitation clay pavers (185x45x90). Bronze. **B-ICP-2a**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 185mm long x 45mm wide x 90mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Arris	Rounded/tumbled to all sides.
			Colour	Subtly varying through buff-yellow and gold within and between units, all with a grey patina, to approx. Munsell Colours 2.5Y 8/2, 2.5Y 8/3, 2.5Y 7/3, 2.5 Y 7/4, 2.5y 7/6 and 2.5YR 7/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T3
			Acid resistance	(BS EN 1344:2002): Class C.
Tactile surfacing Controlled crossing	Blister tactile granite natural stone paving slab (90mm thickness). Silver grey. **T(B)-NS/G(80)**	 Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with	Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.

		BS EN 1341: 2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion.	Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Tactile surfacing Un - Controlled crossing	Blister tactile yorkstone natural stone paving slab (75 mm thickness). Blue grey buff. **T(B)-NS/Y(75)**		Dimensions	(400mm wide x 400mm long x 75mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density & Porosity	means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
			Breaking load	Lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Durability, freeze/ thaw resistance	Mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Dimensions	400mm wide x 400mm long x 80mm thick (excluding profile features).

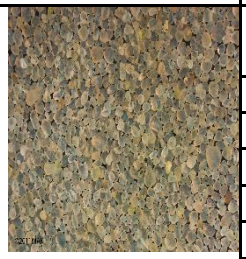
Tactile surface Corduroy	Corduroy tactile granite natural stone paving slab (80mm thickness). Silver grey. **T(C)-NS/G(80)**		Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Tactile Surface Ladder / Tramline	Ladder/tram line tactile granite natural stone paving slab (80mm thick). Silver grey. **T(L)-NS/G(80)**		Dimensions	400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R3.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection

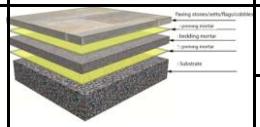
				to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Reserve Footway Materials	Westfield Buff Multi Yorkstone natural stone paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y4 or** Westfield Buff Multi Yorkstone natural stone paving (mixed gauges and lengths, 63mm thick). Grey blue buff. **F-NS(63)-Y4**	 This alternative natural stone may be used instead of the Scoutmoor Yorkstones **F-NS(75)-Y1** Or **F-NS(75)-Y2** and **F-NS(63)-Y1** Or **F-NS(63)-Y2** as appropriate	Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (85-90%) blue-grey with some (10-15%) buff highlights.
			Appearance	Hard, fine grained sandstone.
			Texture	Hard, fine grained sandstone.
			Compressive strength	139 MPa
			Flexural strength	16.4 MPa
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	74 wet – TLR slider test
			Water absorption	2.40%
			Density and porosity	2473 kg/m3 typically
	Yorkstone natural stone slab paving (300 wide x variable 200-450 length x 75 thick). Grey blue buff.		Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (85-90%) blue-grey with some (10-15%) buff highlights.
			Appearance	Hard, fine grained sandstone.
			Texture	Hard, fine grained sandstone.

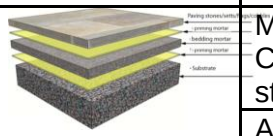
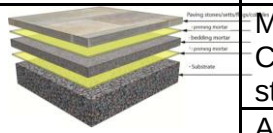
	F-NS(75)-Y3		Compressive strength	139 MPa
			Flexural strength	16.4 MPa
			Weathering resistance	Freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	74 wet – TLR slider test
			Water absorption	2.40%
			Density and porosity	2473 kg/m3 typically
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Yorkstone natural stone cube (100x100x75). Grey blue buff. **B-NS(75)-Y1**		Dimensions	Nominal (BS EN 1338:2003): 100mm long x 100mm wide x 75mm thick.
			Deviations	Dimensional tolerances: As BS EN 1338:2003.
			Upper arris	(BS EN 1338:2003): Square/sharp.
			Lower arris	(BS EN 1338:2003): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV.
			Water absorption	Water absorption (BS EN 1342:2012): ≤ 2%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Yorkstone natural stone cube (200x100x75). Grey blue buff.		Dimensions	Nominal (BS EN 1338:2003): 200mm long x 100mm wide x 75mm thick.
			Upper/lower arris	(BS EN 1338:2003): Square/sharp.
			Tolerance	Dimensional tolerances: As BS EN 1338:2003.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell

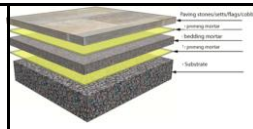
	B-NS(75)-Y2			Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
		Sedimentary carboniferous sandstone sett to BS EN 1342:2012 Caution should be exercised using these units within carriageway areas as yorkstone tends to stain heavily with vehicle over-run.	Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	(BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Means (BS EN 1342:2012): ≥ 2400 kg/m3 / ≤ 5.75%.
			Water absorption	(BS EN 1342:2012): ≤ 2%.
	Granite cube (80x80x80). **B-NS-G2(80)-CR-STR**		As above. Cropped sides. Silver Grey, Mid Grey, Dark Grey or Grey-Red.	As above.
	Granite sett (200x100x100). **B-NS-G3(100)-SW** or **B-NS-G3(100)-CR**		As above. Sawn or cropped sides.	As above.

	Granite sett (240x160x160). Sawn or cropped sides.		**B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**.	As above.
	Narrow pressed clay pavers (212x52x70). Grey-buff. **B-CP-1c**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Narrow pressed clay pavers (185x45x90). Bronze. **B-CP-2a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**	 Use will only be appropriate to lightly trafficked surfaces and will require the use of a bound/rigid construction. The cropped upper face is not accessible so alternative paths for vulnerable pedestrians.	Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Texture - upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture – sides and base (BS EN 1342:2012): Hewn/cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.

			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound		Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3

	footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-X1**	For use where there might be cleansing issues (vacuum cleaners sucking out jointing sand).	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**		Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm

		BS 7533-4/2006, Table 4, clause 5.4.4.1	Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1.
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

	for bound construction **L-MHX**		Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

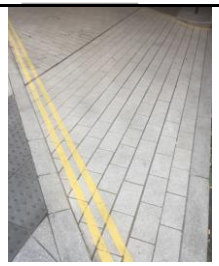
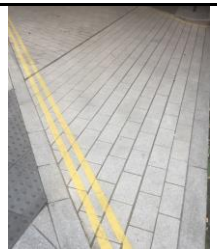
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Min. Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

6.2	World Centre - Option B - Surfacing Materials Palette			
Heavy overrun footway	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1**		Dimensions	600mm wide x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
Light overrun footway	Granite natural stone slab paving (600x750x80). Silver Grey **F-NS(80)-G1 or F-NS(90)-G1**		Dimensions	600mm wide x 750mm long x 80mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.

			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Dimensions	600mm wide x 750mm long x 80mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
Main footway/ footpath surface channel	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1**	 Slabs cut to appropriate width as described in Design Standards 130 and 118 to form surface channel detail.	Dimensions	Various width x 750mm long x 90mm thick
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2).
			Upper arris	Upper arris (BS EN 1341:2012): Square/sharp.
			Lower arris	Lower arris (BS EN 1341:2012): Square/sharp.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341:2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.
			Texture	Texture (BS EN 1341:2012): Fine textured (diamond sawn) to all sides. Upper face subsequently coarse textured (flamed treatment).
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 12.5 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet – mean (BS EN 1341:2012): ≥ 65 USRV.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Dimensions	Various width x 750mm long x 90mm thick
Trim	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red

	bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/ cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Apparent density and open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Vehicle crossing plateau surface Occasional use	Granite natural stone slab paving (600x750x90). Silver Grey **F-NS(90)-G1**		As above.	As above.
Vehicle crossing plateau surface Frequent use	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW** To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.

		granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	Granite sett (200x100x100). Cropped to sides. Silver grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G3(100)-CR** To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
Vehicle crossing ramp surface	**Granite sett (200x100x100).** Cropped or sawn to sides. Silver grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G3(100)-CR** or		As above. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.

	B-NS-G3(100)-SW			
Main Carriage way surface	Bituminous mixture surface course.			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Granite sett (240x160x160). Sawn to sides. Silver grey, Mid grey, Dark Grey or Grey-Red **B-NS-G4(160)-SW**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey. Other colour mixtures may be permitted or instructed by Approving Officers.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians) sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	Open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
	Granite sett (240x160x160). Cropped to sides. Silver grey, Mid grey, Dark Grey or Grey-Red. **B-NS-G4(160)-CR**	 Natural intrusive	Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick.
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Note that the associated +/- variation is a requirement rather than a permissible tolerance in order to permit laying in arcs and avoid creation of a sheer plane. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey. Other colour mixtures may be permitted or instructed by Approving Officers.

		igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.	Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Dimensions	Nominal (BS EN 1342:2012): 240mm long x 160mm wide x 160mm thick.
	Granite sett (200x100x100).. **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver grey to BS EN 1338:2003 **B-PC(AS)-G1a**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher bond running	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell Colour (Neutral Scale) N 7.25/_46.8% R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates.

		perpendicular to the dominant carriageway edge.		Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003 **B-PC(AS)-G1b** Mixed with	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.

			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark grey to BS EN 1338:2003 **B-PC(AS)-G1c**	  To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.	Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
			Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

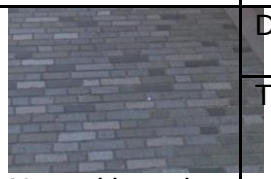
Parking Bay Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Granite sett (240x160x160). **B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**		As above. Cropped or sawn to sides.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Granite sett (200x100x100). **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Silver grey. 208/173x173x60 **B-PC(W80)-G1a** To be laid in an evenly distributed mix		Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25/_46.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3

	of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Mid grey. 208/173x173x60 **B-PC(W80)-G1b** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6/_30.0%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between

	edge. Other colour mixes may be or instructed by Approving Officers.			matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Dark grey. 208/173x173x60 **B-PC(W80)-G1c** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.

Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Granite sett (240x160x160). **B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**		As above. Cropped or sawn to sides.	As above. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Granite sett (200x100x100). **B-NS-G3(100)-CR** or **B-NS-G3(100)-SW**		As above. Cropped or sawn to sides. Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	As above. Use may be acceptable if it can be demonstrated that achievable cover is limited and prevents use of deeper items. To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
Raised Table Ramp Surface/ Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.

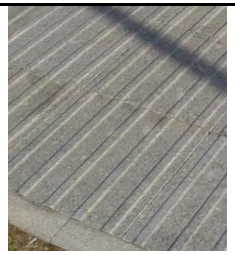
Traffic Carpet Plateau Reserve Materials	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey as oil stains should not be as conspicuous on small units.
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density and porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums after applying permitted dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2.
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%

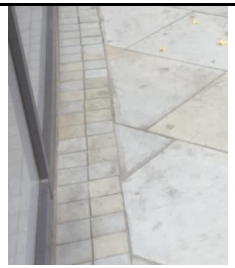
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa
	CED Temple Setts Granite sett (90 x150 x Varies) Split sides. Flamed top. Bluish Grey, Blue Grey, Basalt black, Green or Red mix. **S816-300-AAG**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/granitoid or commercial granite.	Dimensions	Nominal (BS EN 1342:2012): 90mm wide x 150mm depth x Varies (325, 275,225,175 and 125).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Bluish Grey, Blue Grey, Basalt black, Green and Red mix.
			Texture	Split sides. Sawn top and bottom, Upper face subsequently coarse textured (flamed treatment).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 80 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 65 USRV
	Yorkstone natural stone slab paving (mixed gauges and lengths, 75mm thick). Grey blue buff. **F-NS(75)-Y1** Or Yorkstone natural stone slab paving (single size, 600x750x75mm thick). Grey blue buff. **F-NS(75)-Y2**	 Caution should be exercised in the use of York-stone within carriageway areas as it tends	Dimensions	Work dimensions (BS EN 1341:2012): 75mm thick. Mixed width gauges of 300/450/600/750mm. Random length though with max length:width ratio to any unit of 1.5:1.0 and vice versa.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Durability, freeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV.

		to stain heavily from vehicle over-run.	Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Narrow pressed clay pavers (212x52x70). Grey-buff. **B-CP-1c**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.
			Colour	Subtly varying grey-buff to all sides ranging through approximate Munsell Colours 2.5Y8/1, 2.5 7/1, 2.5Y 6/1, 2.5Y 6/2 and 2.5YR5/1
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Skid resistance	(BS EN 1344:2002): Class A1.
	Narrow pressed clay pavers (185x45x90). Bronze. **B-CP-2a**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 185mm long x 45mm wide x 90mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Arris	Rounded/tumbled to all sides.
			Colour	Subtly varying through buff-yellow and gold within and between units, all with a grey patina, to approx. Munsell Colours 2.5Y 8/2, 2.5Y 8/3, 2.5Y 7/3, 2.5 Y 7/4, 2.5y 7/6 and 2.5YR 7/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T3
			Acid resistance	(BS EN 1344:2002): Class C.
Tactile surfacing Controlled crossing	Blister tactile granite natural stone paving slab (90mm		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).

	thickness). Silver grey. **T(B)-NS/G(80)**	 Natural plutonic micro-granodiorite or micro-tonalite granitoid stone slab in accordance with BS EN 1341: 2012. Other 'commercial' granites with less than 20% quartz may be accepted at the approving officer's discretion providing general finish requirements are met.	Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5Mpa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Mean (BS EN 1341:2012): ≥ 65USRV.
Tactile surfacing Un - Controlled crossing	Blister tactile yorkstone natural stone paving slab (75 mm thickness). Blue grey buff. **T(B)-NS/Y(75)**		Dimensions	(400mm wide x 400mm long x 75mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type B1.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.

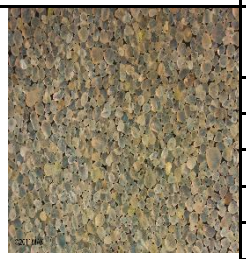
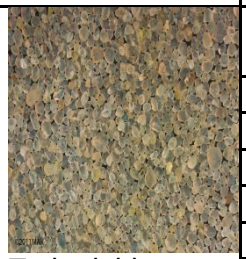
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density & Porosity	means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
			Breaking load	Breaking strength, flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Durability, freeze/ thaw resistance	Mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Tactile surface Corduroy	Corduroy tactile granite natural stone paving slab (80mm thickness). Silver grey. **T(C)-NS/G(80)**		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R1.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.

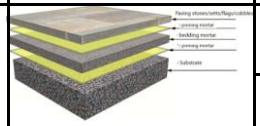
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Tactile Surface Ladder / Tramline	Ladder/tram line tactile granite natural stone paving slab (80mm thick). Silver grey. **T(L)-NS/G(80)**		Dimensions	Nominal (BS EN 1341:2012): 400mm wide x 400mm long x 80mm thick (excluding profile features).
			Tolerances	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper/ lower arris	(BS EN 1341:2012): Square/sharp.
			Profile feature	(DD/CEN/TS 15209:2008): Type R3.
			Colour	Pale grey to off-white. No or extremely minimal coloured feldspar mineral grains. Overall Munsell Colour (Neutral Scale) when viewed by the unaided eye at a distance of 2m under natural light to be N8.25 - N8.5, though the material's composition from individual white, grey and black grains should remain visibly evident even when viewed in this way. Dark Mafic mineral grains to have lightness value of 0-1 on the Munsell Colour Scale.
			Appearance	Cloudy/glassy finish due to flaming. Visibly coarse textured when viewed by then unaided eye at a distance of 2m under natural light. On close inspection to be verging on the porphyritic. Grain sizes to range from approx. 0.5mm to 5mm. Size of grains to generally increase with lightness, with mafics typically in the range of 0.5-1.0mm. Both occasional lighter phenocrysts of up to 10mm in size and feint quartz veining may be permissible subject to intensity and distribution. Overall distribution of grain sizes and colours to be fairly even.
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 0.35%.
			Apparent density	Mean (BS EN 1341:2012): ≥ 2600kg/m^3 /≤1.25%.
			Breaking load	Flexural Strength – lower expected value (BS EN 1341:2012): ≥ 12.5MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 18mm.
			Weathering resistance	Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Wet - mean (BS EN 1341:2012): ≥ 75 USRV
Reserve Footway Materials	Yorkstone natural stone slab paving (300 wide x variable 200-450 length x 75 thick). Grey blue buff. **F-NS(75)-Y3**		Dimensions	(BS EN 1341:2012): 300mm wide x 200/300/450mm random length x 75mm thick. May be used in 300x450x75mm single size where agreed in advance with approving officer.
			Deviations	Tolerances on plan dimensions (BS EN 1341:2012): Class 2 (P2). Tolerances on diagonals (BS EN 1341:2012): Class 2 (D2). Tolerances on thickness (BS EN 1341:2012): Class 2 (T2).
			Upper arris	(BS EN 1341:2012): Square/sharp.
			Lower arris	(BS EN 1341:2012): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell colours:

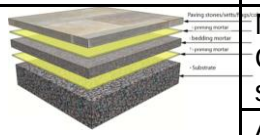
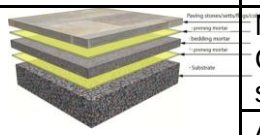
				GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild more banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1341:2012): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Flexural strength - lower expected value (BS EN 1341:2012): ≥ 19.0 MPa.
			Abrasion resistance	Higher expected value (BS EN 1341:2012): ≤ 23mm.
			Weathering resistance	Feeze/thaw resistance - mean flexural strength (BS EN 1341:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 20%.
			Slip resistance	Slip resistance wet - mean (BS EN 1341:2012): ≥ 75 USRV
			Water absorption	Higher expected value (BS EN 1341:2012): ≤ 2.0%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
	Yorkstone natural stone cube (100x100x75). Grey blue buff. **B-NS(75)-Y1**		Dimensions	Nominal (BS EN 1338:2003): 100mm long x 100mm wide x 75mm thick.
			Deviations	Dimensional tolerances: As BS EN 1338:2003.
			Upper arris	(BS EN 1338:2003): Square/sharp.
			Lower arris	(BS EN 1338:2003): Square/sharp.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsel Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Breaking strength, compressive strength - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV.
			Water absorption	Water absorption (BS EN 1342:2012): ≤ 2%.
			Density and porosity	Means (BS EN 1341:2012): ≥ 2400 kg/m3 / ≤ 5.75%
			Dimensions	Nominal (BS EN 1338:2003): 200mm long x 100mm wide x 75mm thick.

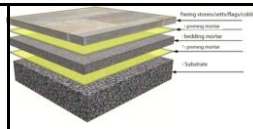
	Yorkstone natural stone cube (200x100x75). Grey blue buff. **B-NS(75)-Y2**	 Sedimentary carboniferous sandstone sett to BS EN 1342:2012 Caution should be exercised using these units within carriageway areas as yorkstone tends to stain heavily with vehicle over-run.	Upper/lower arris	(BS EN 1338:2003): Square/sharp.
			Tolerance	Dimensional tolerances: As BS EN 1338:2003.
			Colour	Predominantly (80-85%) blue-grey with some (15-20%) buff. Faint 'smokey' dark grey swirls/wisps throughout. Blue-greys to be between Munsell Colours: GLEY 1_8/N, GLEY 1_7/N, and N 6.5/_36.2% R. Grey-buffs to be between Munsell Colours: 2.5Y 7/1, 2.5Y 6/1, 2.5 Y 7/2 and 2.5Y 6/2.
			Appearance	Transition between areas of different colour to be generally smooth though mild banding to occasional units acceptable subject to visual assessment. As above, to include faint 'smokey' dark grey swirls/wisps throughout.
			Texture	(BS EN 1338:2003): Fine textured (sawn to all sides). Shall not be flamed or shot blasted.
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 125 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	(BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Means (BS EN 1342:2012): ≥ 2400 kg/m3 / ≤ 5.75%.
			Water absorption	(BS EN 1342:2012): ≤ 2%.
	Granite cube (80x80x80). Cropped sides. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		As above.	As above.
	Granite sett (200x100x100). Sawn or cropped sides. **B-NS-G3(100)-SW** or **B-NS-G3(100)-CR**		As above.	As above.

	Granite sett (240x160x160). Sawn or cropped sides.		**B-NS-G4(160)-SW** or **B-NS-G4(160)-CR**	As above.
	Narrow pressed clay pavers (212x52x70). Grey-buff. **B-CP-1c**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Narrow pressed clay pavers (185x45x90). Bronze. **B-CP-2a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep	As above.
	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**	 Use will only be appropriate to lightly trafficked surfaces and will require the use of a bound/rigid construction. The cropped upper face is not accessible so alternative paths for vulnerable pedestrians.	Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Texture - upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Texture – sides and base (BS EN 1342:2012): Hewn/cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.

			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound		Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)

	footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-X1**	For use where there might be cleansing issues (vacuum cleaners sucking out jointing sand).	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water.
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**	 BS 7533-4/2006, Table 4, clause 5.4.4.1	Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

	for bound construction **L-MHX**		Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

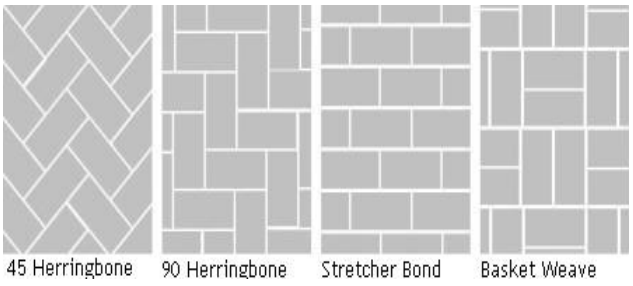
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Min. Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

7 Docks Specification Areas

In the Docks Specification areas of Southwark, the carriageways are historically block pavers, but may also be bituminous pavements. The footways are either concrete or imitation clay pavers (including the plateaus of vehicle accesses). And one type of block paver used to raised tables; inset parking bays and the plateaus of heavily used vehicle accesses.

Red coloured narrow pressed clay block pavers, 212 x 52 x 70mm were the preferred surfacing material, laid on the 52mm wide face so as to be 70mm deep to reinforce the character of the redevelopment in this Dockland area, although in recognition of the increased “carbon cost” of baking clay pavers, and imitation red concrete “clay paver” would be preferred. However, red brindle coloured precast concrete block pavers, 200 x 100 x 80mm are a frequently utilised alternative.

Block pavers are typically laid in Basket weave bond to BS 7533-6:2006 on the footways and in a Herringbone bond to BS 7533-3:2006 on carriageways.



To ensure that concrete blocks last longer in future (e.g. surfaces do not abrade so quickly and colour doesn’t bleach out); their method of manufacture should be to BS EN 1338:2003, incorporating a two layer press, with a separate facing layer. The units should be vapour cured for a minimum of 12 hours to reduce the risk of efflorescence before packing. The facing layer should be ≥6mm and have a bulk density ≥375kg/m^3.

Kerbs are laid to present a 300mm wide face and are made from granite.

A reference sample of the imitation clay pavers or the red brindle concrete blocks shall be provided by the supplier (typically three pieces).

7.1	Docks Area - Surfacing Materials Palette			
Heavy overrun footway	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**	 Units should be laid on 50mm wide face so as to be 70mm deep	Dimensions	Nominal (BS EN 1344:2002): 215mm long x 52mm wide x 70mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Tolerances	Dimensional tolerances range (BS EN 1344:2002): Class R1. Dimensional tolerances mean (BS EN 1344:2002): Class U3.
			Colour	Red to all sides to approximate. Munsell Colour System 7.5R5/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T4
			Skid resistance	(BS EN 1344:2002): Class A1.
Light overrun footway	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Main footway/ footpath surface channel	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Trim	Granite cube (80x80x80). Cropped to	Front boundary	Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.

	sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/ cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density	Apparent density and open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Street Furniture Base	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**		Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to non-pedestrian areas). Sides and base (BS EN 1342:2012): Hewn/ cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.

			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Vehicle crossing plateau surface Occasional use	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Vehicle crossing plateau surface Frequent use	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Vehicle crossing ramp surface	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Main Carriage way surface	Bituminous mixture surface course.			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.

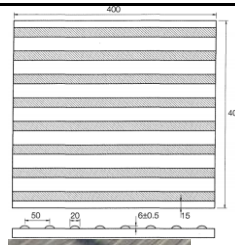
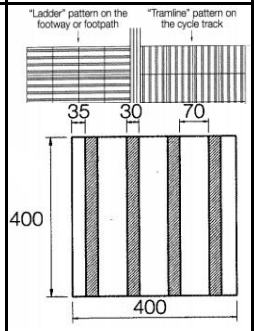
	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
Parking Bay Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Precast concrete blocks to BS EN 1338:2003 Red Brindle (200x100x80). **B-PC(80)- B1**		Dimensions	100mm wide x 200mm long x 80mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: red family colour brindle, comprising of a blend of brick-reds, browns and a few greys, and sometimes orange blocks.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured

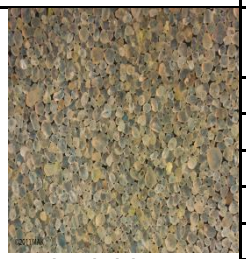
Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Narrow concrete imitation clay pavers (212x52x70). Red **B-ICP-1a**		As above. Units should be laid on 50mm wide face so as to be 70mm deep.	As above.
	Precast concrete blocks to BS EN 1338:2003 Red Brindle (200x100x80). **B-PC(80)- B1**		As above.	As above.
Raised Table Ramp Surface/ Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
Traffic Carpet Plateau Reserve Materials	Granite cube (80x80x80). Cropped to sides. For laying in stretcher /		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2

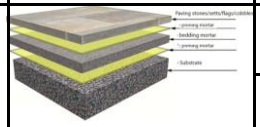
	stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite	Colour	Silver Grey as oil stains should not be as conspicuous on small units.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to non-pedestrian areas).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density and porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums after applying permitted dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2
			Colour	Silver grey, mid grey, dark grey or grey-red.
			Texture	Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by employer may be hewn/cropped as an alternative (only acceptable in areas not trafficked by pedestrians).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa.
	Granite sett (200x100x100).	Natural intrusive igneous rock sett	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).

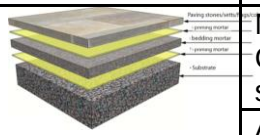
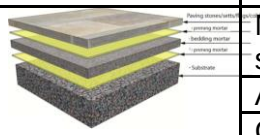
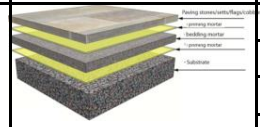
	Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-SW** To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	in accordance with BS EN 1342:2012. To be a true granite/ granitoid or commercial granite. 	Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only non-pedestrians areas). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
	Granite sett (200x100x100). Sawn to sides. Silver Grey, Mid Grey, Mid Grey or Grey-Red. **B-NS-G3(100)-CR** To be laid in an evenly distributed mix of 60% Silver Grey, 20% Mid Grey and 20% Dark Grey.	 Natural intrusive igneous rock sett in accordance with BS EN 1342:2012.	Dimensions	Nominal (BS EN 1342:2012): 200mm long x 100mm wide x 100mm thickness (10/20/10 designation).
			Tolerances	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to non-pedestrian areas). Texture - sides (BS EN 1342:2012): Coarse textured (diamond sawn then sand blasted or bush hammered/fine picked). Texture - base (BS EN 1342:2012): May be either hewn/cropped or fine textured (sawn).
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Freeze/thaw resistance	Under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Breaking strength	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Skid resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV

	Narrow pressed imitation clay pavers (185x45x90). Bronze. **B-ICP-2a**	Units should be laid on 50mm wide face so as to be 70mm deep 	Dimensions	Nominal (BS EN 1344:2002): 185mm long x 45mm wide x 90mm thick. Minor variants (+/- 4mm) on the preceding dimensions may be permitted by approving officers. Rectangular plan and section. All opposing faces planar to one another. All adjacent faces perpendicular to one another.
			Arris	Rounded/tumbled to all sides.
			Colour	Subtly varying through buff-yellow and gold within and between units, all with a grey patina, to approx. Munsell Colours 2.5Y 8/2, 2.5Y 8/3, 2.5Y 7/3, 2.5 Y 7/4, 2.5y 7/6 and 2.5YR 7/4.
			Texture	Flat faces with tumbled edges. No further texturisation.
			Water absorption	(BS EN 771-1:2011): Class W3.
			Abrasion resistance	(BS EN 1344:2002): Class A3 (+).
			Freeze/thaw	(BS EN 1344:2002): Class FP100.
			Density/porosity	(BS EN 1344:2002): Class C.
			Breaking strength	Transverse breaking load (BS EN 1344:2002): Class T3
			Acid resistance	(BS EN 1344:2002): Class C.
Tactile surfacing Controlled crossing	Blister tactile precast concrete paving slab Dark grey 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer
Tactile surfacing Un - Controlled crossing	Blister tactile precast concrete paving slab Buff colour 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Buff upper face.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm

			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer
Tactile surface Corduroy	Corduroy tactile precast concrete paving slab Dark grey 400x400x65mm **T(C)-PC2**		Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features)
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency
			Appearance	Smooth with no exposed aggregate in upper face
			Profile Feature	DD/CEN/TS 15209:2008 Type R1
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture Method	Units may be single layer or two-layer press with separate facing layer
Tactile Surface Ladder / Tramline	Ladder/tram line tactile granite natural stone paving slab (80mm thick). Silver grey. **T(L)-NS/G(80)**		Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer
Reserve Footway Materials	Precast concrete blocks to BS EN 1338:2003 Red Brindle (200x100x80). **B-PC(60)- B1**		Dimensions	100mm wide x 200mm long x 60mm thick.
			Upper arris	Pencil chamfered ≤ 1.5mm vertical chamfer dimension, ≤ 2.5mm horizontal chamfer dimension. Chamfer to be flat as moulded.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Colour	Facing layer: red family colour brindle, comprising of a blend of brick-reds, browns and a few greys, and sometimes orange blocks.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3

			Texture	Flat to all faces (except nibs ≤ 1.75mm to sides). No decorative texturing.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Manufacture method	Two-layer press with separate facing layer. Units to be vapour cured.
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

Unbound jointing sand	Sharp sand jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-X1**	For use where there might be cleansing issues (vacuum cleaners sucking out jointing sand).	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water.
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**		Minimum Flexural strength	30 MPa
			Min. Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass

		BS 7533-4/2006, Table 4, clause 5.4.4.1	Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Min. Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar for bound construction **L-MHX**		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1

			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
Bound jointing mortar Bound jointing mortar	Jointing mortar for bound construction **J-MH1** Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004 5 -8mm joint gap BS 7533-10 /2004	Min. Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix.
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
			Min. Compressive strength	25 N/mm^2
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.

			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Min. Compressive strength	40 N/mm^2
	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Curing time	1 hour to reach structural strength 40 N/mm^2
	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix.
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
			Min. Compressive Strength	50 N/mm^2
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss.
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

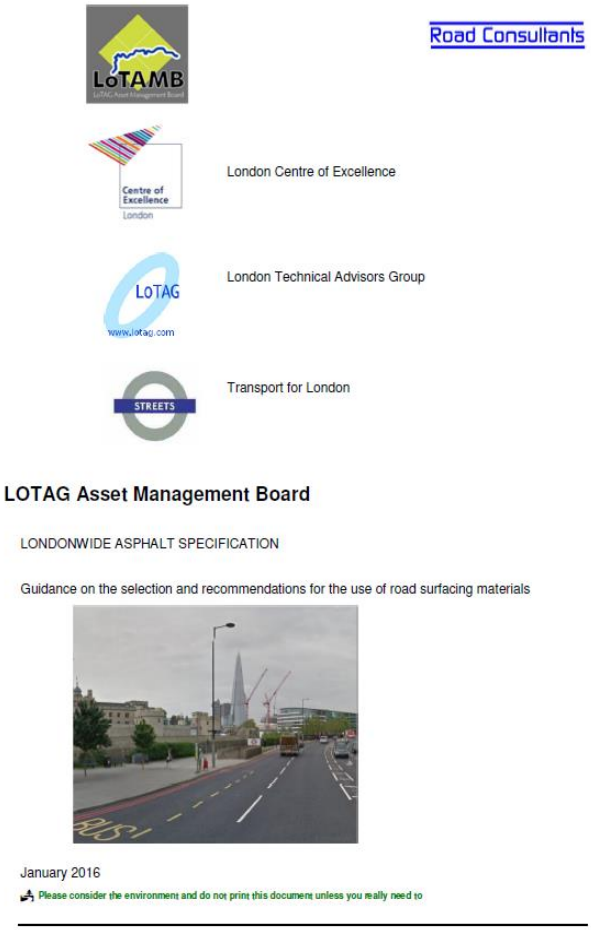
8 Village Specification Areas

In the Village Specification areas of Southwark, the carriageways are bituminous; the footways are either bituminous or a single type of flag paving (including the plateaus of vehicle accesses) and one type of block paver used to raised tables, inset parking bays and the plateaus of heavily used vehicle accesses.

Asphalt is a generic name applied to all road and pavement materials produced by mixing bitumen with various aggregates. It is generally a black material that provides a level, non-slip surface for pedestrians and vehicles. The product offers good value for money, durability and waterproofing characteristics.

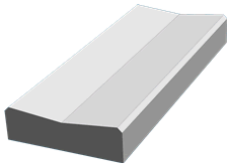
It is used in the Village because it is an existing distinctive part of the look and feel of the area.

Southwark has adopted the London wide asphalt specification 2016 promoted by LOTAG and TfL.



Kerbs are granite and generally laid to present a 300mm wide face.

8.1	Village Area - Surfacing Materials Palette			
Heavy overrun footway	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
Light overrun footway	Bituminous mixture surface course.		As above.	As above.
Main footway/ footpath surface channel	Precast concrete paving slab, pimple finish, grey, steel reinforced to BS EN 1339:2003 600x600x70mm **F-PC-B1(70)**	 Slabs need to be cut to widths as described in SSDM DS 130 and DS 118 to form surface channel detail.	Dimensions	600mm wide x 600mm long x 70 or 72mm thick.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or beading.
			Lower arris	BS EN 1339:2003 Square with no bevel or beading.
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency.
			Appearance	No exposed aggregate in upper face.
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure.
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
			Dimensions	600mm wide x 600mm long x 70 or 72mm thick regular plan and section. However, upper face to have shallow 'V' profile with valley located down centre of unit. Depth of valley verses unit thickness at edges to be 15mm. Gradient of valley sides to be ≥ 1:20. Except for upper face and base, all other opposing faces to be planar to one another and all adjacent faces to be perpendicular to one another.

	Precast concrete paving slab, pimple finish – V profile channel unit, grey **F-PC-B1(X)**	 Shallow V-profile unit may be used to avoid need for cutting slabs to width	Dimensions	600mm wide x 600mm long x 70 or 72mm thick regular plan and section. However, upper face to have shallow 'V' profile with valley located down centre of unit. Depth of valley verses unit thickness at edges to be 15mm. Gradient of valley sides to be ≥ 1:20. Except for upper face and base, all other opposing faces to be planar to one another and all adjacent faces to be perpendicular to one another.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L)
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency.
			Appearance	No exposed aggregate in upper face.
			Texture	Pimple textured upper face.
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure.
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
Trim	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2.
			Colour	Silver Grey, Mid Grey, Dark Grey or Grey-Red.
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/ cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Freeze/thaw resistance, under normal conditions - mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV

			Density	Apparent density and open porosity - means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Street Furniture Base	Granite mosaic (50x50x50). Silver Grey or Mid Grey. **B-NS-G1(50)-CR**		Dimensions	Work dimensions - nominal (BS EN 1342:2012): 50mm width x 50mm length x 50mm thick (5/5/5 designation).
			Deviations	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2. Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Density and porosity	Means (BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Colour	Silver Grey or Mid Grey.
			Appearance	Natural plutonic igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative (generally only acceptable to areas not trafficked by pedestrians). Sides and base (BS EN 1342:2012): Hewn/ cropped.
			Slip Resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Breaking load	Lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm.
			Weathering resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
Vehicle crossing plateau surface Occasional use	Bituminous mixture surface course.		As above.	As above.
Vehicle crossing plateau surface Frequent use	Bituminous mixture surface course.		As above.	As above.

Vehicle crossing ramp surface	Bituminous mixture surface course.		As above.	As above.
Main Carriage way surface	Bituminous mixture surface course.			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Mid grey to BS EN 1338:2003 **B-PC(AS)-G1b** Mixed with	 To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge. 	Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6.0 /_30.0% Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.

			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation granite sett precast concrete blocks. Anti-shift units. Dark grey to BS EN 1338:2003 **B-PC(AS)-G1c**	 To be laid in a distributed mix of 80% G1b and 20% G1c in a stretcher bond perpendicular to the dominant c/way edge. 	Traffic bonding requirement	Side face nib and base face treatments to achieve sufficient frictional interlock between units and laying course to permit laying as BS 7533-1:2001 in sites experiencing 3 million design life standard axles or greater in stretcher bond and without intermediary restraints.
			Dimensions	150mm wide x 300mm long x 100mm thick.
			Upper arris	BS EN 1338:2003 Chamfered 2mm vertical chamfer dimension, 4mm horizontal chamfer dimension. Chamfer to be flat as moulded then lightly abraded due to texturisation for upper face of unit.
			Lower arris	BS EN 1338:2003 Square
			Facing layer thickness	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	To be as SF-Kooperation VS units or similar approved. Side faces to include substantial nibs located at regular ≤ 42mm centres so as to interlock between nibs of opposing units. Each nib to protrude by 3mm from side of unit and be approximately 13mm wide with chamfer to top and sides. Top of nibs to be 5 - 15mm recessed beneath upper face. Method of interlock to be such that individual units may still be removed by vertical lifting following installation.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5 /_19.8%R. Grey, black and white grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

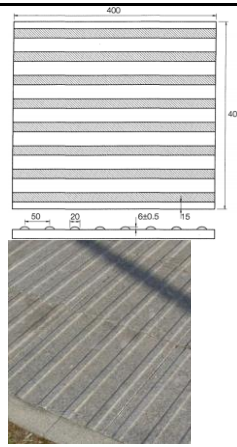
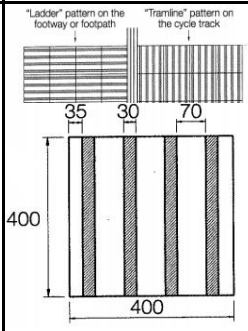
Parking Bay Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Silver grey. 208/173x173x60 **B-PC(W80)-G1a** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is silver grey as Munsell colour (neutral scale) N 7.25/_46.8%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)

	Approving Officers.		Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Mid grey. 208/173x173x60 **B-PC(W80)-G1b** To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.	 Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is mid grey as Munsell colour (neutral scale) N 6/_30.0%R. Grey, black and white and glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
	Imitation Granite Setts precast concrete blocks Infiltration joint units. Dark grey. 208/173x173x60 **B-PC(W80)-G1c**	Only likely as a no dig pavement construction over rooting zones of existing trees.	Dimensions	Mix of 208 and 173mm long x 173mm long x 80mm thick.
			Upper arris	BS EN 1338:2003 Moulded flat chamfer subsequently lightly abraded due to upper face texturisation ≤ 4mm horizontal ≤ 2mm vertical.
			Lower arris	BS EN 1338:2003 Square
			Facing layer	BS EN 1338:2003 ≥ 6mm
			Spacer nibs	Specialist nibs to side to promote ingress of water whilst preventing migration of jointing material. Extent of nib protrusion ≥ 6mm.
			Colour	Facing layer overall colour when viewed from a distance of 2m is dark grey as Munsell colour (neutral scale) N 5/_19.8%R. Grey, black and white and

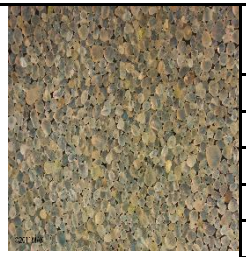
	To be laid in an evenly distributed mix of 60% G1a, 20% G1b and 20% G1c in a stretcher bond running perpendicular to the dominant carriageway edge. Other colour mixes may be or instructed by Approving Officers.			glassy aggregate grains to stand out from back ground colour. Bed face and sides beneath facing layer: generic grey.
			Density of facing	BS EN 1338:2003.≥ 375kg/m^3
			Texture	Flat to all faces (except nibs). Facing layer to be lightly shot blasted. Facing layer to be ≥ 50% exposed stent (or other secondary granite aggregates. Facing layer may also include blast furnace slag or recycled aggregates in imitation of natural stone granite. Monochrome salt and pepper appearance. Crushed granite and other face mix materials to be 1 -3mm in diameter with none exceeding 5mm. Even overall distribution of different grain types. Close distribution of matic granules with typical spacing of 0.4 - 0.75mm between matic granules > 1mm in diameter. Typical spacing between glinting mica imitation granules not to exceed 10mm between granules > 0.5mm diameter.
			Water absorption	BS EN 1338:2003 Class 2(B)
			Abrasion resistance	BS EN 1338:2003 Class 3(H) or Class 4(I)
			Freeze/thaw	BS EN 1338:2003 Class 3(D)
			Method of manufacture	Two-layer press with separate facing layer. Units to be vapour cured for a minimum of 12 hours to reduce risk of efflorescence before packing.
Raised Table Plateau Surface and Traffic Carpet Surface	Bituminous mixture surface course			See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
	Imitation granite sett precast concrete blocks. Anti-shift units. Silver, Mid and Dark grey to BS EN 1338:2003	 **B-PC(AS)-G1a** **B-PC(AS)-G1b** **B-PC(AS)-G1c**	As above.	To be laid in an evenly distributed mix of 20% G1a, 60% G1b and 20% G1c in a stretcher Bond running perpendicular to the dominant carriageway edge.

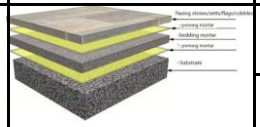
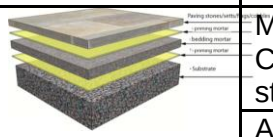
Raised Table Ramp Surface/ Traffic Carpet Ramp Surface	Bituminous mixture surface course		As above.	See SSDM Standard DS 601 for details of permitted bituminous mixture surface materials for different NRSWA road categories and trafficking circumstances. See also the London Asphalt Specification for details of acceptable proprietary mixes for use across London.
Traffic Carpet Plateau Reserve Materials	Granite cube (80x80x80). Cropped to sides. For laying in stretcher / stack bond. Silver Grey, Mid Grey, Dark Grey or Grey-Red. **B-NS-G2(80)-CR-STR**		Dimensions	80mm wide x 80mm long x 80mm thick. No undersized units to be included in delivery as units intended to be laid in stretcher or stack bond not an arc.
			Deviations	Deviations on face irregularity (BS EN 1342:2012): Class 2.
			Tolerance	Tolerances on nominal plan dimensions and thickness (BS EN 1342:2012): Class 2. Tolerances on undercut of sides (BS EN 1342:2012): Class 2
			Colour	Silver Grey as oil stains should not be as conspicuous on small units.
			Appearance	Natural intrusive igneous rock sett in accordance with BS EN 1342:2012. To be a true granite, granitoid or commercial granite. In the case of Dark Grey colour units may be an extrusive igneous rock basalt.
			Texture	Upper face (BS EN 1342:2012): Coarse textured as standard (diamond sawn then bush hammered/fine picked). Where required by the Employer may be hewn/cropped as an alternative. Sides and base (BS EN 1342:2012): Hewn/cropped (generally only acceptable to areas not trafficked by pedestrians).
			Breaking load	Compressive - lower expected value (BS EN 1342:2012): ≥ 180 MPa.
			Abrasion resistance	Higher expected value (BS EN 1342:2012): ≤ 23mm
			Weathering resistance	Mean compressive strength (BS EN 1342:2012): Results to be declared. Change between 0 cycles and 56 cycles to be ≤ 15%.
			Slip resistance	Wet mean (BS EN 1342:2012): ≥ 70 USRV
			Density and porosity	(BS EN 1342:2012): ≥ 2600 kg/m3 / ≤ 1.25%
			Water absorption	Higher expected value (BS EN 1342:2012): ≤ 0.35%.
	Granite cube 80x80x80mm grey to BS EN 1342:2012 **B-NS-G2(80)-CR/ARC**	 For laying in arcs.	Dimensions	80mm wide x 80mm long x 80mm thick (8/8/8 designation). For laying in arcs. Undersize units: Units to be produced for laying in arc patterns with 5% of units included in delivery having lengths and widths smaller than the permitted minimums after applying permitted dimensional tolerances (e.g. smaller than 80mm).
			Tolerances	Normal plan dimensions and thickness, undercut of sides and deviations on face irregularity to BS EN 1342:2012 Class 2.
			Colour	Silver grey, mid grey, dark grey or grey-red.

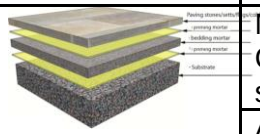
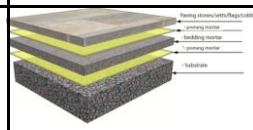
			Texture	Coarse textured as standard, (diamond sawn then bush hammered/fine picked).
			Water absorption	Higher expected value BS EN 1342:2012 ≤ 0.35%
			Abrasion resistance	Higher expected value BS EN 1342:2012 ≤ 23mm
			Freeze/thaw resistance	Under normal conditions mean compressive strength (BS EN 1342:2012) results to be declared, Change between 0 cycles and 56 cycles to be ≤ 15%.
			Density/porosity	BS EN 1342:2012 ≥ 2500kg/m^3 / ≤ 1.25%
			Breaking strength	Lower expected value BS EN 1342:2012 ≥ 180 MPa
Tactile surfacing Controlled crossing	Blister tactile precast concrete paving slab Dark grey 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
Tactile surfacing Un - Controlled crossing	Blister tactile precast concrete paving slab Buff colour 400x400x65mm **T(B)-PC2**	 See SSDM DS 207 about the use of tactile pavers.	Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Buff upper face.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.

Tactile surface Corduroy	Corduroy tactile precast concrete paving slab Dark grey 400x400x65mm **T(C)-PC2**		Dimensions	400mm wide x 400mm long x 65mm thick (excluding profile features).
			Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type R1
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
Tactile Surface Ladder / Tramline	Ladder/tram line tactile granite natural stone paving slab (80mm thick). Silver grey. **T(L)-NS/G(80)**		Deviations	BS EN 1339:2003 Table 1, Class 3 and Table 2, Class 3.
			Upper arris	BS EN 1339:2003 Square with no bevel or rounding.
			Lower arris	BS EN 1339:2003 Square with no bevel or rounding.
			Colour	Dark grey upper face as Munsell colour 2.5Y 4/1 with no inconsistency.
			Appearance	Smooth with no exposed aggregate in upper face.
			Profile Feature	DD/CEN/TS 15209:2008 Type B1.
			Spacer nibs to sides	Optional. Where provided ≤ 1.75mm
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 17.7KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
Reserve Footway Materials	Precast concrete paving slab, pimple finish, grey, steel reinforced to BS EN 1339:2003 600x600x70mm **F-PC-B1(70)**		Dimensions	600mm wide x 600mm long x 70 or 72mm thick.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L).
			Upper arris	BS EN 1339:2003 Square with no bevel or beading.
			Lower arris	BS EN 1339:2003 Square with no bevel or beading.
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency.
			Appearance	No exposed aggregate in upper face.
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 20.65 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be steel reinforced to reduce fragmentation in case of failure.
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.

	Precast concrete paving slab, pimple finish, grey, fibre reinforced to BS EN 1339:2003 600x600x70mm		Dimensions	600mm wide x 600mm long x 70mm thick.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L).
			Upper arris	BS EN 1339:2003 Square with no bevel or beading.
			Lower arris	BS EN 1339:2003 Square with no bevel or beading.
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency.
			Appearance	No exposed aggregate in upper face.
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 15.1 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be fibre reinforced to reduce fragmentation in case of failure.
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
	F-PC-B2(70) Precast concrete paving slab, pimple finish, grey, to BS EN 1339:2003 600x600x63mm **F-PC-B1(63)**	 For use in areas of light over-run only.	Dimensions	600mm wide x 600mm long x 63mm thick.
			Deviations	BS EN 1339:2003 Table 1, Class 3(R) and Table 2, Class 3(L).
			Upper arris	BS EN 1339:2003 Square with no bevel or beading.
			Lower arris	BS EN 1339:2003 Square with no bevel or beading.
			Colour	Light grey upper face as Munsell colour SY 7 5/0.5 with no inconsistency.
			Appearance	No exposed aggregate in upper face.
			Texture	Pimple textured upper face
			Breaking load	BS EN 1339:2003 Class 140(14).≥ 15.1 KN
			Abrasion resistance	BS EN 1339:2003 Class 4(I)
			Weathering	BS EN 1339:2003 Class 3(D)
			Special requirements	Units to be fibre reinforced to reduce fragmentation in case of failure.
			Manufacture method	Units may be single layer or two-layer press with separate facing layer.
Unbound bedding sand	Sharp sand bedding for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.

	Quartz arenite sand bedding for unbound carriageway concrete blocks or clay pavers **L-QZ4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation. < 1 – 2% fines.
			Particle size	1 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
	Quartz arenite sand bedding for unbound permeable carriageway concrete blocks or clay pavers **L-QZ2/6**	 To be laid 50mm thick	Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 6mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.
Unbound jointing sand	Sharp sand jointing sand for unbound footway concrete stabs, natural stone flags and concrete blocks or clay pavers **L-SS1**	 Primarily sea dredged coarse sand or washed grit sand with no organic matter to BS EN 12620:2013	Particle size	0 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass).
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1% passing 0.063mm sieve.
	Stabilised jointing sand for unbound footway concrete stabs, natural stone	For use where there might be cleansing issues (vacuum cleaners	2 options	Sharp sand as above with a water miscible stabilising jointing liquid.
				A dry sharp sand and cement mix, brushed into the joints and then moistened with water.

	flags and concrete blocks or clay pavers **L-X1**	sucking out jointing sand).		
	Stabilised jointing gravel for unbound footway concrete stabs, natural stone flags & concrete blocks or clay pavers **L-X2**	For use with wider joints.	options	0 - 8mm gravel with a water miscible stabilising jointing liquid. .
				A dry 0 - 8mm gravel and cement mix, brushed into the joints and then moistened with water.
Bedding mortar	Bedding mortar for bound construction **L-MH1**	 BS 7533-4/2006, Table 4, clause 5.4.4.1	Minimum Flexural strength	30 MPa
			Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm.
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix.
			Cement	Portland Cement CEM1 complying with BSEN 197-1.
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Bedding mortar for bound construction **L-MH2**	 BS 7533-10 /2004 Type B	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4

			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Bedding mortar for bound construction **L-MH3**	 BS 7533-10 /2004 Type A	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Rapid set bedding mortar for bound construction **L-MHX**		Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Weak bedding mortar for bound construction **L-MWK12**	For use where there is no vehicle overrun. Plastic Mortar: Class M12 to BS EN 998-2: 2005 (e.g. a 1:3 cement:sand mix)	Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix.
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.

Bound jointing mortar	Jointing mortar for bound construction **J-MH1**	BS 7533-10 /2004 5 -8mm joint gap	Minimum Compressive Strength	50 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix.
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
	Jointing mortar for bound construction **J-MH2**	BS 7533-10 /2004	Minimum Compressive strength	25 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
	Jointing mortar for bound construction **J-MH3**	BS 7533-10 /2004	Minimum Compressive strength	40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.

	Rapid set jointing mortar for bound construction **J-MHX**	BS 7533-10 /2004	Curing time	1 hour to reach structural strength 40 N/mm^2
			Aggregate size	Maximum aggregate size in bedding mortar: 2.8mm
			Chloride Ion content	≤ 0.1% of mass
			Acid soluble sulphate	(SO_4) ≤ 5%of mass of cement in mix
			Cement	Portland Cement CEM1 complying with BSEN 197-1
			Water cement ratio	≤ 0.4
			Water sulphate content	(As SO_4) ≤ 1.4gramme/litre. Water from water company (not sea or tidal waters), to BS EN 1008.
			Temperature	Temperature of mixed mortar: 5 to 25 degrees centigrade.
			Water absorption	Of mixed mortar ≤ 0.4%
Permeable Jointing Sand	Quartz Arenite jointing sand for permeable joints **J-QZ2/4**		Description	Almost pure quartz sand composed of > 90% quartz, chert or quartose rock fragments. Very hard particles to prevent fragmentation.
			Particle size	2 – 4mm
			Oven dried density	>2000kg/m^3
			Sulphur Content	< 1% by mass. (Acid soluble sulphur content <0.8% by mass)
			AIV	Aggregate Impact Value < 30%
			Abrasion resistance	Los Angeles Value <30% loss
			Flakiness Value	< 30
			Elongation Index	< 30
			Fines Value	$f_{1.0}$ as BS EN 12620, less than 1- 2% passing 0.063mm sieve.

Appendix 1 - Regulating Plan

(see website https://geo.southwark.gov.uk/connect/analyst/mobile/#/main?mapcfg=Southwark%20Streetscape%20Design%20Manual%20-%20SSDM)