OUR TOWN HALL

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M40 NBS SPECIFICATION
STONE/ CONCRETE/ QUARRY/ CERAMIC TILING/ MOSAIC

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OUR TOWN HALL PROJECT

CLAUSE SUFFIX LETTERS

This Purcell Specification is based upon the National Building Specification (NBS). The Contractor's attention is drawn to the suffix letters **A**, **B** and * that occur after some of the clause numbers in the work sections.

These suffix letters are used as follows:

- * is used for a new clause, not found in the NBS
- **A** is used for an NBS clause which has been altered in the Purcell Standard Specification.
- B is used for a new clause in this particular Job Specification or against an existing clause from the Purcell Standard Specification amended for this project.

No liability is accepted for the incorrect application of this convention in this Specification.

Rev	By	Description	Date	Authorised
-	VT	FOR TENDER	29/11/19	DH
01	VT	FOR TENDER Clauses Added: - **110A** Tiling to WCs and Adjacent Corridors Floor - **111A** Tiling to Cores and Adjacent Corridors - **113** Tiling to Wetwalls, Partitions, Splashbacks - **114** Tiling to Skirting WCs and Adjacent Corridors Floor - **116** Yorkstone Flags to LG Areas - **125** Tiling to Walls to Core Areas - **140** Quarry Tiles to LG Corridors and Other Areas Above Limecrete - **150A** THRESHOLD - TYPE 1/TYPE 3/TYPE 7 Porcelain Tile to Porcelain Tile / Porcelain Tile to Ceramic Tile / Ceramic Tile to Ceramic Tile - **150B** THRESHOLD - TYPE 2/ TYPE 11 Porcelain Tile to Linoleum / Ceramic Tile to Linoleum - **150C** THRESHOLD - TYPE 4/TYPE 5 Porcelain Tile to Terrazzo Tile / Ceramic Tile to Terrazzo Tile - **150D** THRESHOLD - TYPE 6 Terrazzo Tile to Existing Floor - **150E** THRESHOLD - TYPE 8/ TYPE 9 Ceramic Tile to Existing Floor/ Porcelain Tile to Existing Floor - **150F** THRESHOLD - TYPE 10 Terrazzo Tile to Terrazzo Tile - **200** Norcros Adhesive Products - **310** Existing Backgrounds/Bases Generally - **330A** Existing Plaster - **380** New Plaster - **390** Plasterboard Backgrounds	27/03/2020	NM
02	VT	Clause: 116 Yorkstone Clause amended	09/06/2020	NM
03	VT	FOR TENDER - Included further references to drawings - Added Movement Joints references to all tiles - Removed Schluter-DITRA decoupling layer - Quarry Tiles and Yorkstone setting out Clauses Added: - **815** Sealant Movement Joints - **825** Strip Movement Joints	21/08/2020	NM

04	DW	Clause 116 – Movement joint to Yorkstones omitted. Clause 140 – Movement joints to Quarry Tiles omitted. Clause 825 – Product reference amended. Clauses 110A, 111, 111A, 113, 114, and 125 are not to be used as 'Construction Status' as they are as 'Tender Status' within other Work Packages.	16/10/2020	NM
05	VT	Clause 825 product reference amended Clause 825A, 826 and 827 added Clause 110A, 111A, 114 addition of grout and adhesive thickness Clause 125 adhesive and grout product amended and thickness added Clauses 110A, 111, 111A, 113, 114, and 125 are not to be used as 'Construction Status' as they are as 'Tender Status' within other Work Packages.	06/11/2020	NM
06	NM	- Clause 113 re added. - Clause 116 – Yorkstone flags – bedding and mortar reference amended to refer to external stonework specification. Clauses 110A, 111, 111A, 113, 114, and 125 are not to be used as 'Construction Status' as they are as 'Tender Status' within other Work Packages.	18/12/20	NM
07	VT	Clause 110A - Colour reference added. References amended. Sign off procedures added. Clause 111 – Colour reference added. Clause 111A - Colour reference added. References amended. Sign off procedures added. Clause 111A - Colour reference added. References amended. Sign off procedures added. Clause 114 - Colour reference added. References amended. Sign off procedures added. Clause 116 – Amended to include reclaiming requirements. Clause 116A – Added. Clause 125 - Colour reference added. References amended. Sign off procedures added. Clause 140 – Product amended. Sign off procedures added. References amended. Clause 145 – Added. Clause 146 – Added. Clause 815- Added	14/04/21	NM
08	MJBS	Clause 113 – Colour reference changed to Victorian white. Clause 125 – Amended to omit terracotta wall tile and add ceramic wall tile Cause 130 – New clause to reference Hoptonwood stone tiling	04/03/22	AB
09	MJBS	Clause 113 – Reference to 150 x 75mm Craven Dunnill Jackfield tiles to heritage toilets added	21/10/22	AB
10	AH	Updated to LL Comment	12/12/22	AB
11	ND	Tiling specials product code added to clause 125	11/04/23	AH
12	AH	Clause 125b renamed to 125 and clause 125 removed following confirmation of tiling scheme. Tiling sizes corrected.	04/05/23	AH
13	AA	Clause 113 Tile sizing changed from 150x75 to 152x75 and sub clauses added to clause 125	02/06/2023	AH
14	LG	Clause 113 movement joint amended to 825 rather than 824 Floor trim added in response to RFI LLCL-RFI-000662 Kerastar colour changed due to discontinuation in response to LLCL-EWN-002893	25/03/2024	AH
15	AH	Clause 110A, 111A and 114 amended	15/04/2024	AD
16	AH	Clause 111A amended to 300x300mm at thresholds	03/09/2024	GO
17	AH	Clause 115 added	02/07/2025	AD
18	MJBS	Clause 113 amended to include reference for colour to heritage toilets tiling.	22/01/2026	GO

19	MJBS	Amendments to Hoptonwood stone clause 130.	31/03/2026	GO
20	MJBS	Clause 116A amended to specify alternative Yorkstone	23/06/2026	GO
21	MJBS	Clause 130 amended to include greater depth of adhesive render and use of metal lath.	24/07/2026	GO

M40 Stone/ concrete/ quarry/ ceramic tiling/ mosaic

To be read with Preliminaries/ General conditions.

TYPES OF TILING/ MOSAIC

110A TILING TO WCS AND ADJACENT CORRIDORS FLOOR

- Tiles: Kerastar.
  - Manufacturer/ Supplier: Johnson Tiles.
    Product reference: KER563.
  - Colour: Range Kerastar. Category Mocha Speckle. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Finish: Natural
  - Size: 300x300mm - 600x600mm at thresholds. Please refer to OTH-PUR-THZZ-DWG-A-8152 to 8155 for location of different types.
  - Thickness: 8.3mm.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1,
    -2 and -3: 36+ dry / 36+ wet.
  - Allow for Rocktop RT517 tiles for Wet Barefoot areas (i.e. showers)
- Background/ Base: 6mm Dukkatile backerboard.
  - Preparation: Following timber floor board repairs, prepare timber floor and install new 6mm Dukka tile backerboard, screw fixed to existing floorboards. Following timber floor board repairs, prepare timber floor and install new 6mm Dukka tile backerboard, screw fixed to existing floorboards. Apply joint reinforcement tape (dry area application only) before commencing the tiling work. In wet areas, tape all joints with Dukkaboard Waterproof Tape..
- Intermediate substrate: Not required.
- Bedding: Adhesive to BS EN 12004:
  - Ardex X77 or similar approved.
  - Ardex WPC waterproofing layer.
- Joint width: 3mm. All joints to be flush.
- Grout: Ardex-Flex FS or similar approved - Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Type/ classification: Not applicable.
  - Admixture: None.
- Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of British Standard BS 5385: Part 1; 2018, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation. Vertical joint to all corners & movement joints to perimeter of whole room to all tiles. Refer to NBS M40 825 for product.
- Accessories: Please refer to OTH-PUR-THZZ-DWG-A-8152 to 8155 for different thresholds.
  - Refer to NBS M40/114 for skirting.
  - Refer to drawings OTH-PUR-TH-ZZ-DWG-A-8152 to 8155 for location; to drawing OTH-PUR- TH-ZZ-DWG-A-8161 for floor tiling details; to drawing OTH-PUR-TH-ZZ-DWG-A-5670 for IPS types and details.
  - All access hatches and manhole covers within floors to receive inset finish to match.

111 TILING TO WELFARE UNIT TYPE 1 and 2

- Tiles: Select Collection
  - Manufacturer: Johnson Tiles
- Product reference: CHG10A
  - Colour: Select Collection. Chroma range. Alloy. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process via sample approval process.
  - Finish: Ceramic Gloss
  - Size: 300x100mm
- Background/ Base: 18mm Plywood screw fixed to 45mm x 75mm timber stud at 400mm C/Cs
  - Preparation: As clause 210, 310 &390.
- Bedding: - Adhesive to BS EN12004:
  - Ardex X77 or similar approved.
  - Ardex WPC waterproofing layer
- Joint width: 3mm. All joints to be flush.
- Grout: Ardex-Flex FS or similar approved. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process via sample approval process.
- Movement joints: As per tile manufacturers specification.
- Accessories: None required

111A TILING TO CORES AND ADJACENT CORRIDORS

Tiles: Ceramic Tiles.

- Manufacturer/ Supplier: Mosa.
  Product reference: Global Collection/ Globalgrip.
- Colour: speckled earth brown – 74440V
- Finish: Unglazed Ceramic.
- Size: 300x300x8mm - Allow for Mosa Core Collection Solids 300x300x8mm at thresholds. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process. Please refer to OTH-PUR-THZZ-DWG-A-8152 to 8155 for location of different types.
- Thickness: 8mm.
- Slip potential:
  Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 36+ dry / 36+ wet.
  Background/ Base: 6mm Dukka tile backerboard.
- Preparation: Following timber floor board repairs, prepare timber floor and install new 6mm Dukka tile backerboard, screw fixed to existing floorboards. Apply joint reinforcement tape (dry area application only) before commencing the tiling work. In wet areas, tape all joints with Dukkaboard Waterproof Tape..
  Intermediate substrate: -. Bedding:
  Adhesive to BS EN 12004:
- 3-5mm Ardex X77 or similar approved.
- Ardex WPC waterproofing layer.
  Joint width: 3mm. All joints to be flush..
  Grout: Ardex-Flex FS or similar approved. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of British Standard BS 5385: Part 1; 2018, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation. Vertical joint to all corners & movement joints to perimeter of whole room to all tiles. Refer to NBS M40 825 for product.
  Accessories: Please refer to OTH-PUR-TH-ZZ-DWG-A-8152 to 8155 for different thresholds.
- Refer to drawings OTH-PUR-TH-ZZ-DWG-A-8147 to 8151 and to drawing OTH-PUR-TH-ZZ- DWG-A-8161 for floor tiling details.
- All access hatches and manhole covers within floors to receive inset finish to match.

113 TILING TO WETWALLS, PARTITIONS, SPLASHBACKS

- Tiles: Bespoke Tiles for Heritage WC's, Wet walls, Partitions, Splashbacks.
  - Manufacturer/ Supplier: Craven Dunnill.
    Product reference: N/A.
  - Colour: Victorian White. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Colour to heritage toilets (GF-045, GF-046, GF-047 and 02-27, 02-029, 02-30) to be 'Cream No.9' as per physical sample submitted to and approved by Purcell that matches existing tile colour.
  - Finish: Glazed.
  - Size: 150x150mm.
    152x75mm to ground and 2nd floor heritage toilets (GF-045, GF-046, GF-047 and 02-27, 02-029, 02-30).
  - Thickness: 8.3mm.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable.
    Surface roughness (Rz) (minimum) BS 1134: Not applicable.
    - Background/ Base: Refer to NBS K10/206.
      - Preparation: As clause 210, 310 & 390.
- Bedding: As clause 651 – Ensuring solid bed fixing is achieved.
  - Adhesive to BS EN 12004: 5mm Norcros Standard Set Flexible Grey S1 Tile Adhesive.
- Joint width: 2mm. All joints to be flush.
- Grout: Norcros Stop Mould Flexible Wall Tile Grout - White to match tiles. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Type/ classification: BS EN 13888 CG2.
  - Admixture: None.
- Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of British Standard BS 5385: Part 1; 2018, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation. Vertical joint to all corners. Refer to M40 825 for movement joint.
- Accessories: Fill perimeter movement joints with Norcros 4 Into 1 Silicone Sealant, colour to match grout clause 815.
  - Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering.
  - Refer to drawings OTH-PUR-TH-ZZ-DWG-A-8152 to 8155 for locations; to drawing OTH- PUR- TH-ZZ-DWG-A-5670 for IPS types and details.

114 TILING TO SKIRTING WCS AND ADJACENT CORRIDORS FLOOR

- Tiles: Kerastar Cove sit-in.
  - Manufacturer/ Supplier: Johnson Tiles.
    Product reference: KER563.
  - Colour: Range Kerastar. Category Mocha Speckle. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Finish: Unglazed Porcelain.
  - Size: 200x100mm / Corner - 100x30mm Cove sit-in Int. & Ext. Angles.
  - Thickness: 8.3mm.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable.
- Background/ Base: Refer to NBS K10/206.
  - Preparation: As clause 210, 310 & 390.
- Intermediate substrate: Not required.
- Bedding: 3-5mm Adhesive to BS EN 12004:
  - Ardex X77 or similar approved;
  - Ardex WPC waterproofing layer;
- Joint width: 3mm.
- Grout: Ardex-Flex FS or similar approved. Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Type/ classification: Not applicable.
  - Admixture: None.
- Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of

British Standard BS 5385: Part 1; 2018, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation. Vertical joint to all corners & movement joints to perimeter of whole room to all tiles. Refer to M40 825 for movement joint.

- Accessories: Shadow gap bead as NBS K10/ 206.
  - Refer to drawings OTH-PUR-TH-ZZ-DWG-A-8152 to 8155 for location; to drawing OTH-PUR- TH-ZZ-DWG-A-8161 for floor tiling details; to drawing OTH-PUR-TH-ZZ-DWG-A-5670 for IPS types and details.

115 CERAMIC TILE TRIMS

- Schlüter-JOLLY-AE – Decorative finishing and edge protection profile in solid anodised aluminium, for external wall corners and tile edge protection.
- Materials & Finish
  Material: Solid anodised aluminium.
  Finish: Polished chrome (ACP).
- Sizes
  Length: 2.5 m standard length.
  Profile height: 9 mm (to suit 8 mm tiles).
  Visible edge: Approximately 3.5 mm, 90° angled external corner.
- Accessories
  Supplied with matching 9 mm external corner piece and plug-in connectors (1 corner + 4 connectors).
- Performance & Compliance
  Integrated joint spacer ensures a uniform 1.5 mm grout gap.
- Installation
  Trowel adhesive and fully embed the anchoring leg beneath tile.
  Ensure upper edge of trim sits flush with tile surface.
  Use supplied corner pieces at external junctions.
- Warranty
  5-year manufacturer's warranty under standard conditions.

Refer to drawing OTH-PUR-TH-ZZ-DWG-A-6548 for details

116 YORKSTONE FLAGS USING RECLAIMED YORKSTONE FROM SITE

LG floors with Yorkstone Flags as Type Yb in drawings OTH-PUR-TH-LG-DWG-A-5697 to 5700

- Reclaimed Yorkstone: Salvaged from site, including Albert Square and surrounding areas.

- Condition: Yorkstones will only be approved for re-use only if they are free from fungus, have no deep or extensive cracks, or damaged corners or arises, and are free from old mortar and deleterious matter. Cleaning of salvaged Yorkstone - To avoid damaging yorkstone, old mortar is to be removed and cleaned off using hand tools and brushes.
- Size: Baseline size for Flags is 900 x 600mm. Existing flags to be cut down for consistent 600mm width (to allow for consistent bond) and 900mm length with +/- 50mm tolerance on length to minimise cutting requirements and to increase number of stones that are acceptable for re use. Flags to be arranged in stretcher bond with flush joints at 9m width (=/-2mm)

For supplementary yorkstone or elsewhere the contractor is to:
(1) Use materials reclaimed from other areas of alterations on the site as a first choice - See description for 'Reclaimed Yorkstone' above.
(2) Use reclaimed materials from off site as a second choice - which will only be deemed acceptable if documentary proof can be provided showing the full chain of custody for reclaimed elements, and is subject to approval of Architect, Client and LPA.
(3) As a final choice, new Yorkstone Flags can be used as clause M40/116A.

All new/ reclaimed yorkstone to match the existing as closely as possible and Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.

Background/ Base:

Stone/ concrete/ quarry/ ceramic tiling/ mosaic

- Preparation: Following alterations to replace existing floor build up with new limecrete slab build up, floor to receive Yorkstone flags to whole space (except trench covers) with breathable lime cement joints. See detail OTH-PUR-TH-ZZ-DWG-A-5657.
  - Bedding: Refer to M40 145 for bedding and M40 146 for grouting. Jointing 9mm +/- 2mm. All joints to be flush.
  - Movement joints: Not Required on York stone Flags on Limecrete or existing Ground Bearing Slabs.
- Accessories: None required
- Please refer to drawings OTH-PUR-TH-LG-DWG-A-5697 to 5700 for locations.
- All access hatches and manhole covers within floors to receive inset finish to match.

116A NEW YORKSTONE FLAGS New flags for Internal Thresholds and new supplementary Yorkstone Flags

Tiles: Yorkstone flags
- Supplier: Hardscape Ltd
- Type: Appleton.
- Quality: Free from vents, cracks, fissures, discolouration, or other defects that may adversely affect strength, durability or appearance. Thoroughly seasoned, dressed and worked in accordance with shop drawings prepared by the supplier.
- Finish: - Fine Sawn - to be supplied and agreed prior to ordering.
- Size: Flags: 600 x 900mm.
  Trench covers: width to suit trench cover as drawing OTH-PUR-TH-ZZ-DWG-A-5657. Threshold sizes vary to suit opening depths: refer to drawings OTH-PUR-TH-LG-DWG-A- 5657 to 59, 5667 and 5660 for details and Limecrete floor plans for locations: OTH-PUR-TH- LG-DWG-A-5697 - 5700 show where these types occur. Final dims to be verified and confirmed with architect on site.
- Thickness: 75mm slabs. Minimum 10mm bedding allowance of 50mm to take up any tolerances at threshold - Refer to details.
  Slip potential:
- Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: 63/55 dry/wet. Background/
  Base:
- Preparation: Following alterations to replace existing floor build up with new limecrete slab build up, floor to receive Yorkstone flags to whole space (except trench covers) with breathable lime cement joints. See detail OTH-PUR-TH-ZZ-DWG-A-5657.
  -Bedding: Refer to M40 145 for bedding and M40 146 for grouting. Jointing 9mm +/- 2mm. All joints to be flush.
  -Movement joints: Not Required on Yorkstone Flags on Limecrete or existing Ground Bearing Slabs.
  - Accessories: None required
  - Please refer to drawings OTH-PUR-TH-LG-DWG-A-5697 to 5700 for locations.
  - All access hatches and manhole covers within floors to receive inset finish to match.

  Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.

125 TILING TO WALLS TO CORE AREAS

- Tiles: Unglazed Ceramic Heritage Tile
  - Manufacturer/ Supplier: Craven Dunnill Jackfield
    Product reference/ Colour: Heritage range
  - Work Package Contractor to provide batch of tiles 1sqm minimum representative sample for Architect, Client and LPA sign off via sample approval process to agree recipe prior to fabrication.
  - Finish: Unglazed.
  - Thickness: 12mm
  - Size: Decorative scheme to include regular tiles in the following sizes:
    125.1 152 x 26mm border tile in colour 'Oatmeal' (darker brown)
    125.2 152 x 75 regular wall tile and skirting tile in colour 'Linen' (light brown)
  - Specials to include:
  - Dado tile, stop-end dado tile, right angle corner bead, all in 'Oatmeal' as below:
  - **125.4** Dado tile 152 x 75 in ‘Oatmeal’ product reference: MTHDADOAT
  - **125.5** Corner bead 152 x 38 in ‘Oatmeal’ product reference: MTHQUADOAT
  - **125.6** Dado stop-end tile 152 x 75 in ‘Oatmeal’ to be at the end of the dado that is not a corner. product reference: MTHDADSENDOAT
  - **125.7** End bead to be a cut corner bead 152 x 38 in ‘Oatmeal’ to be at the end of tiles that are not on a corner or concealed by other elements such as architrave or window frame. product reference: MTHQUADOAT
  - Installation principles:
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable. Background/

Base:
- Preparation: As clause 210, 310 and 390.

Bedding:
- Adhesive: To BS EN 12004 - 5mm AdhereCal or similar approved. Refer to M40/146.

Grout: 2mm AdhereCal or similar approved. Refer to M40/146. Pre-mixed colour grout. Work Package Contractor to provide colour samples for Architect, Client and LPA sign off prior to ordering via sample approval process.

Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of British Standard BS 5385: Part 1; 2018, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation. Vertical joint to all corners. Refer to M40 825 for movement joint.

- Flexible sealant: Bostik S115 Silicone Sealant - Work Package Contractor to provide colour samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
- Refer to Work Package List for relevant drawings

130 NEW STONE TILING, AND REPAIRS TO EXISTING, TO 1ST FLOOR LLOYD ST CORE AND GOODS LIFT

- Tiles: Hopton Wood stone; existing and new to match existing where required if retained amount is insufficient

Product reference/ Colour: Hoptonwood stone to match existing

- Work Package Contractor to provide batch of tiles 1sqm minimum representative sample for Architect, Client and LPA sign off via sample approval process.
- Thickness: approx 23mm to match existing
- Size: To match existing sizing and coursing.
- Installation principles: allow bronze angle bead approx 35 x 35mm to top of any new tiled walls at 1500mm above ffl or around openings where edge of tile is visible.
- Preparation: As clause 210, 310 and 390.
  - Remove remains of adhesive/ mortar dabs from existing walls
  - Carefully remove remains of adhesive/mortar dabs from back of salvaged stone in order to retain stone for re-use. Method of removal to be proposed and approved by architect prior to work commencing.
- Repair methods:
  - Identify stone tiles removed and re-fix in original locations
  - Indent. Match suitable colour/grain variance from salvaged stone and cut to fit recess.
  - Stabilisation. 20mm dia stainless steel pennywashers on M6 100m long stainless steel screws. 4 no. per tile fixed at corners 75mm min from nearest edge. Head and washer to be recessed from surface and covered with resin and Hoptonwood stone dust mix.
  - Infill for cracks/small holes/cover of fixings. Acrylic-based resin mixed with pulverized Hoptonwood stone dust, ratio of 1:12.
  - Generally fix tiles from bottom up as to support existing tiles fixed to wall, facilitating removal of existing temporary batten supports.
- Bedding:

Render: Ardex AM 100 to existing walls to approx. 14mm thickness to bring wall plane out to adhesive depth. Can be laid up to 30mm where existing depth requires; use Expamet internal galvanized mild steel expanded mesh (or equivalent) as required for areas of greater depth.

Adhesive and grout: Ardex S 28 W to 3mm depth. Colour to match existing and to be approved. Client and LPA to sign off prior to ordering via sample approval process.

- Cleaning. De-ionised water and chamois leather to all stone.

140 QUARRY TILES TO LG floors with Type Ya as shown in drawings OTH-PUR-TH-LG- DWG-A-5697 to 5700

- Tiles: Quarry Tiles
  - Manufacturer: Gres Aragon
  - Product reference: Quarry NaturalTiles
  - Colour: Red (Cod. 902481 [MC580]). Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
  - Finish: Natural Unglazed.
  - Size: 150x150mm
  - Thickness: 12mm
- Slip potential:
  - Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1,

-2 and -3: 63/55 dry/wet.

- Background/ Base:
  - Preparation: Following alterations to replace existing floor build up with new limecrete slab build up, floor to receive New Quarry tiles to whole space (except trench covers) with breathable lime cement joints. See detail OTH-PUR-TH-ZZ-DWG-A-5657.
- Bedding: AdhereCal. Refer to M40/146. Adhesive laid with a 10mm combed trowel that compresses down to around 6-8mm when the tiles are bedded.
- Joint width: 8-10mm. AdhereCal. Refer to M40/146. Pre mixed coloured grout - Work Package Contractor to provide samples for Architect, Client and LPA sign off prior to ordering via sample approval process.
- Movement joints: None required due to Quarry tiles being located on Limecrete slab. If there is deviation from specified limecrete slab, requirement for movement joints to be confirmed and agreed with manufacturer of alternative.
- Accessories: None required
- Please refer to drawings OTH-PUR-TH-LG-DWG-A-8110 to 8113 for location and setting out.

145 BEDDING FOR YORKSTONE FLAGS LG floors with Yorkstone Thresholds and Type Yb as shown in drawings OTH-PUR-TH-LG-DWG-A-5697 to 5700.

- Bedding mortar: As section Z21
  - Mix 1 : 2.5 NHL 3.5 Natural Hydraulic Lime : Aggregate
  - Lime: St Astier NHL3.5
  - Aggregate: 2 parts sand : 0.5 parts fine crushed stone
  - Sand source/ type: Leighton Buzzard sharp sand
  - Crushed stone: Crossland HIll crushed sieved sandstone 300 microns dow
- Depth as drawing OTH-PUR-TH-LG-DWG-A-5660

146 BEDDING AND JOINTING LG floors with Type Ya (jointing and bedding) and Type Yb and Yorkstone Thresholds (jointing only) as shown in drawings OTH-PUR-TH-LG-DWG-A-5697 to 5700. Wall tiling to core areas as per NBS M40/125.

- Manufacturer: Secil Tek
  - Product reference: AdhereCal - NHL adhesive mortar
- Depth and joints width: As specified on Architects drawing - refer to specific tiling clauses for relevant drawings.

150A THRESHOLD - TYPE 1/TYPE 3/TYPE 7 Porcelain tile to porcelain tile / Porcelain tile to ceramic tile / Ceramic tile to ceramic tile

- Manufacturer: Schlüter-Systems Ltd.
  - Web: www.schluterspecifier.co.uk.
  - Email: pr@schluter.co.uk.
  - Product reference: Schlüter-DECO-M M90D .
- Material: Antique Brass.
- Locations: As specified on Architects drawings

150B THRESHOLD - TYPE 2/ TYPE 11 Porcelain tile to linoleum / Ceramic tile to linoleum

- Manufacturer: Schlüter-Systems Ltd.
  - Web: www.schluterspecifier.co.uk.
  - Email: pr@schluter.co.uk.
  - Product reference: Schlüter-SCHIENE-M M60 .
- Material: Antique Brass.
- Locations: As specified on Architects drawings

150C THRESHOLD - TYPE 4/TYPE 5 Porcelain tile to terrazzo tile / Ceramic tile to terrazzo tile

- Manufacturer: Schlüter-Systems Ltd.
  - Web: www.schluterspecifier.co.uk.
  - Email: pr@schluter.co.uk.
  - Product reference: Schlüter-DECO-M M90D .
- Material: Antique Brass.
- Locations: As specified on Architects drawings

150D THRESHOLD - TYPE 6 Terrazzo tile to existing floor

- Manufacturer: Schlüter-Systems Ltd.
  - Web: www.schluterspecifier.co.uk.
  - Email: pr@schluter.co.uk.
  - Product reference:Schlüter-TERRAZZO-M.

Stone/ concrete/ quarry/ ceramic tiling/ mosaic
Material: Antique Brass.
Locations: As specified on Architects drawings.

150E THRESHOLD - TYPE 8/ TYPE 9 Ceramic tile to existing floor/ Porcelain tile to existing floor

- Manufacturer: Schlüter-Systems Ltd.
  - Web: www.schluterspecifier.co.uk.
  - Email: pr@schluter.co.uk.
  - Product reference: Schlüter-RENO-MU 125/100 .
- Material: Antique Brass.
- Locations: As specified on Architectsdrawings.

150F THRESHOLD - TYPE 10 Terrazzo tile to terrazzo tile
Manufacturer: Schlüter-Systems Ltd.
- Web: www.schluterspecifier.co.uk.
- Email: pr@schluter.co.uk.
- Product reference:Schlüter-TERRAZZO-M.

Material: Antique Brass.
Locations: As specified on Architects drawings.

151A TILE EDGE TRIM

GENERAL

200 NORCROS ADHESIVE PRODUCTS

- Will be applied in accordance with the site
work instructions on the manufacturer's product data sheets. All Norcros products are covered with a Lifetime guarantee when used in accordance with the manufacturer's instructions.

210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- New background drying times(minimum):
  - Concrete walls: 6 weeks.
  - Brick/ block walls: 6 weeks.
  - Rendering: 2 weeks.
  - Gypsum plaster: 4 weeks.
- New base drying times(minimum):
  - Concrete slabs: 6 weeks.
  - Cement:sand screeds: 3 weeks.

215 FALLS IN THE BASES

- General: Give notice if falls areinadequate.

250 SAMPLES

- General: Submit representative samples of the following: Each type of Tile.

260 CONTROL SAMPLES

- General: Complete sample areas, being part of finished work, in locations as follows: To be agreed with Architect.
  - Approval of appearance: Obtain before proceeding.
- Floor covering slip resistance testing: Not required.

PREPARATION

310 EXISTING BACKGROUNDS/BASES GENERALLY

- Efflorescence, laitance, dirt and other loose material: Remove.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.

- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.

330 EXISTING PLASTER

- Defective areas: Remove plaster that is loose, soft, friable, badly cracked or affected by efflorescence. Cut back to straight horizontal and vertical edges.
- Making good: Use plaster or nonshrinking filler.

330A EXISTING PLASTER

- Defective areas: Remove plaster that is loose, soft, friable, badly cracked or affected by efflorescence. Cut back to straight horizontal and vertical edges.
- Making good.

380 NEW PLASTER

- Plaster: Dry, solidly bedded, free from dust and friable matter.
- Plaster primer: Apply if recommended by adhesive manufacturer.

390 PLASTERBOARD BACKGROUNDS

- Boards: Dry, securely fixed and rigid with no protruding fixings and face to receive decorative finish exposed.

FIXING

510 FIXING GENERALLY

- Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
  - Variegated tiles: Mix thoroughly.
- Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
- Use of admixtures with cementitious adhesives: Only admixtures approved by adhesive manufacturer.
- Cut tiles: Neat and accurate.
- Fixing: Provide adhesion over entire background/ base and tile backs.
- Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
- Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.

530A SETTING OUT

- Joints: True to line, continuous and without steps.
  - Joints on walls: Horizontal, vertical and aligned round corners.
  - Joints in floors: Parallel to the main axis of the space or specified features.
- Cut tiles: Minimise number, maximise size and locate unobtrusively.
- Joints in adjoining floors and walls: Align.
- Joints in adjoining floors and skirtings: Align.
- Movement joints: Where locations are not indicated, submit proposals.

550 FLATNESS/ REGULARITY OF TILING/ MOSAICS

- Sudden irregularities: Not permitted.
- Deviation of surface: Measure from underside of a 2 m straightedge with 3 mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 6 mm, i.e. a tolerance of $\pm$ 3 mm.

560 LEVEL OF TILING ACROSS JOINTS

- Deviation (maximum) between tile surfaces either side of any type of joint:
  - 1 mm for joints less than 6 mm wide.
  - 2 mm for joints 6 mm or greater in width.

570 MORTAR BEDDING

- Bedding mix:
  - Cement: Portland to BS EN 197-1, type CEM I/42.5.
  - Sand for walls: Fine aggregate to BS EN 13139. Grading designation: 0/2 (CP or MP) category 2 fines.
  - Sand for floors: Fine aggregate to BS EN 13139.

Grading designation: 0/4 (MP) category 1 fines and between 20%-66% passing a 0.5 sieve.

- Batching: Select from:
  - Batch by weight.
  - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
- Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.

650 ADHESIVE BED - NOTCHED TROWEL METHOD (WALLS)

- Application: By 3 mm floated coat of adhesive to dry background in areas of approximately 1 m². Comb surface.
- Tiling: Press tiles firmly onto floatcoat.

651 ADHESIVE BED - NOTCHED TROWEL AND BUTTERING METHOD (WALLS)

- Application: By floated coat of adhesive to dry background in areas of about 1 m². Comb surface.
- Tiling: Apply thin even coat of adhesive to backs of dry tiles. Fill any ribbed, deep keyed or button profiles. Press tiles firmly onto float coat.
- Finished adhesive thickness: 3 mm or within the range allowed by the adhesive manufacturer.

652 ADHESIVE BED - BUTTERING METHOD (WALLS)

- Tiling: Apply even coat of adhesive to backs of dry tiles. Fill any ribbed, deep keyed or button profiles.
- Finished adhesive thickness: 3 mm or within the range allowed by the adhesive manufacturer.

MOVEMENT JOINTS/ GROUTING/ COMPLETION

815 SEALANT MOVEMENT JOINTS In wall tiling M40/113, M40/125

- Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
  - Width: 5mm.
- Sealant: Resin expansion joint.
  - Colour: Grey. Subject to sample approval by Architect.
  - Preparation and application: As section Z22.

825 STRIP MOVEMENT JOINTS Horizontally in floor tiling M40/110A, M40/111A and M41/112A & vertically in wall tiling M40/113

- Manufacturer: Schlüter-Systems Ltd..
  - Product reference: Schlüter®-DILEX-BWS height to suit tiles and adhesive.
  - Colour: Joint Grey (JG). Subject to sample approval by Architect.
- Joint width: 5 mm.
- Fixing to base: Adhesive onsubstrate.
- Joints: Extend through tiles and bedding to base.

825A STRUCTURAL STRIP MOVEMENT JOINTS In floor tiling M40/110A, M40/111A and M41/112A

- Manufacturer: Schlüter-Systems Ltd..
  - Product reference: Schlüter®-DILEX-KS height to suit tiles and adhesive..
  - Colour: Stainless Steel. Subject to sample approval by Architect.
- Joint width: Max 15 mm.
- Fixing to base: Adhesive onsubstrate.
- Joints: Extend through tiles and bedding to base.

825B STRUCTURAL STRIP MOVEMENT JOINTS In floor tiling M40/110A, M40/111A and M41/112A

- Manufacturer: Schlüter-Systems Ltd..
  - Product reference: Schlüter®-DILEX-KS height to suit tiles and adhesive..
  - Colour: Stainless Steel. Subject to sample approval by Architect.
- Joint width: Max 15 mm.
- Fixing to base: Adhesive onsubstrate.
- Joints: Extend through tiles and bedding to base.

826 PERIMETER STRIP MOVEMENT JOINT To perimeter of rooms where floor tiling occurs

- Manufacturer: Schlüter-Systems Ltd.

- Product refrence: Schlüter®-DILEX-AHK height to suit tiles and adhesive.
- Colour: Grey (G). Subject to sample approval by Architect.

- Joint width: angled joint width 7mm/ 5mm in plan.
- Fixing to base: Adhesive tosubstrate
- Joints: Extend through tiles and bedding to base.

827 CORNER STRIP MOVEMENT JOINT To coroner of rooms where floor tiling and wall tiling occurs
Manufacturer: Schlüter-Systems Ltd.

- Product refrence: Schlüter®-DILEX-EF height to suit tiles and adhesive.
- Colour: Grey (G). Subject to sample approval by Architect. Joint width: 5mm
  Fixing to base: Adhesive to substrate
  Joints: Extend through tiles and bedding to base.

875 GROUTING

- Sequence: Grout when bed/adhesive has set sufficient to prevent disturbance of tiles.
- Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
- Grouting: Fill joints completely, tool to profile, clean off surface. Leave free from blemishes.
  - Profile: Flush.
- Polishing: When grout is hard, polish tiling with a dry cloth.

885 COLOURED GROUT

- Staining of tiles: Not permitted.
- Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply a protective sealer to tiles and repeat trial.