



FRANKHAM

**BASEPOINT BUSINESS PARK, TILBURY
THURROCK COUNCIL**

**RIBA STAGE F1 SPECIFICATION
MASONRY**

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F10 Block walling

REFER ALSO TO SPECIFICATION OF PROJECT STRUCTURAL & CIVILS ENGINEER

To be read with Preliminaries/ General Conditions.

TYPES OF WALLING

- 110 STACK BONDED CONCRETE BLOCKWORK TO BE PAINTED FOR INTERNAL WALL FACES WITH STAINLESS STEEL BED REINFORCEMENT (WALL TYPE 1)
Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court, Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Evalite Paint Grade
Mean compressive strength: 7.3 N/sq mm
Work size(s): 100 mm wide x 440 mm long x 215 mm high.
Density: 1450 kg/m³
Finish/colour: Paint Grade Standard Finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Stack bonded.
Joints: Bucket handle.
Note: Stainless steel bed reinforcement required - to Structural Engineer Specification
Note: Where Wall Type 1 faces onto toilet areas, a raked out joint with unpainted blockwork is required to receive a wet render and plaster application for painting.
- 111 STRETCHER BOND CONCRETE BLOCKWORK TO BE PAINTED FOR INTERNAL WALL FACES WITH STAINLESS STEEL BED REINFORCEMENT (WALL TYPE 4)
Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court, Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Evalite Paint Grade
Mean compressive strength: 7.3 N/sq mm
Work size(s): 100 mm wide x 440 mm long x 215 mm high.
Density: 1450 kg/m³
Finish/colour: Paint Grade Standard Finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Half Lap Stretcher.
Joints: Bucket handle.
Note: Stainless steel bed reinforcement required - to Structural Engineer Specification
- 112 STRETCHER BOND CONCRETE BLOCKWORK TO BE PAINTED FOR INTERNAL WALL FACES WITH NO BED REINFORCEMENT (WALL TYPE 5)
Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court, Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Evalite Paint Grade
Mean compressive strength: 7.3 N/sq mm
Work size(s): 100 mm wide x 440 mm long x 215 mm high.
Density: 1450 kg/m³
Finish/colour: Paint Grade Standard Finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Half Lap Stretcher.
Joints: Bucket handle.
- 120 STACK BONDED CONCRETE BLOCKWORK TO BE PAINTED FOR INTERNAL WALL USE WITH STAINLESS STEEL BED REINFORCEMENT (WALL TYPE 2)
Blocks: Medium Density.

Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court,
Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Evalite Paint Grade
Mean compressive strength: 7.3 N/sq mm
Work size(s): 140 mm wide x 440 mm long x 215 mm high.
Density: 1450 kg/m³
Finish/colour: Paint Grade Standard Finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Stack bonded.
Joints: Bucket handle.
Note: Stainless steel bed reinforcement required - to Structural Engineer Specification
Note: Where Wall Type 2 faces onto toilet areas, a raked out joint with unpainted
blockwork is required to receive a wet render and plaster application for painting.

121 STRETCHER BOND CONCRETE BLOCKWORK TO BE PAINTED FOR INTERNAL WALL
USE WITH NO BED REINFORCEMENT (WALL TYPE 3)

Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court,
Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Evalite Paint Grade
Mean compressive strength: 7.3 N/sq mm
Work size(s): 140 mm wide x 440 mm long x 215 mm high.
Density: 1450 kg/m³
Finish/colour: Paint Grade Standard Finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Half Lap Stretcher.
Joints: Bucket handle.
Note: Where Wall Type 3 faces onto toilet areas, a raked out joint with unpainted
blockwork is required to receive a wet render and plaster application for painting.

130 STRETCHER BOND CONCRETE BLOCKWORK UNPAINTED FOR EXTERNAL WALL
FACES WITH STAINLESS STEEL BED REINFORCEMENT (WALL TYPE 9)

Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court,
Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Fenlite
Mean compressive strength: 10.4 N/sq mm
Work size(s): 100 mm wide x 440 mm long x 215 mm high.
Density: 1350 kg/m³
Finish/colour: Standard finish
Mortar: As section Z21.
Mix: Group 3 Above DPC
Bond: Half Lap Stretcher.
Joints: Flush.
Note: Stainless steel bed reinforcement required - to Structural Engineer Specification

131 STRETCHER BOND CONCRETE BLOCKWORK UNPAINTED FOR EXTERNAL WALL
FACES WITH NO BED REINFORCEMENT (WALL TYPE 10)

Blocks: Medium Density.
Manufacturer: FORTERRA BUILDING PRODUCTS LTD. 5 Grange Park Court,
Roman Way, Northampton, NN4 5EA (T: 01604 707600)
Reference: Forterra Fenlite
Mean compressive strength: 10.4 N/sq mm
Work size(s): 100 mm wide x 440 mm long x 215 mm high.
Density: 1350 kg/m³
Finish/colour: Standard finish
Mortar: As section Z21.
Mix: Group 3 Above DPC

Bond: Half Lap Stretcher.
Joints: Flush.

TESTING

- 410 COMPRESSIVE STRENGTH OF MORTAR FOR EACH WALLING TYPE
Refer to Specification of Project Structural Engineer
- 415 FRESH MORTAR CEMENT CONTENT
Refer to Specification of Project Structural & Civil Engineer

WORKMANSHIP GENERALLY

- 460 MORTAR GROUPS
Refer to Specification of Project Structural & Civil Engineer
- 500 LAYING GENERALLY
Refer to Specification of Project Structural & Civil Engineer

520 ACCURACY

Courses: Level and true to line.

Faces, angles and features: Plumb.

Permissible deviations:

Position in plan of any point in relation to the specified building reference line and/ or point at the same level :

± 2 mm.

Straightness in any 5 m length

± 2 mm.

Verticality up to 3 m height

± 2 mm.

Verticality up to 7 m height

± 5 mm.

Overall thickness of walls

± 2 mm.

Level of bed joints up to 5 m

± 2 mm.

Level of bed joints up to 5 m

± 2 mm.

Note: Because most concrete blockwork is on view and certain built elements abut and require accurate jambs (e.g. door sets), the accuracy standards above are significantly tighter than normal British Standard recommendations.

- 535 HEIGHT OF LIFTS IN WALLING USING CEMENT GAUGED OR HYDRAULIC LIME MORTAR
Refer to Specification of Project Structural & Civil Engineer

- 545 LEVELLING OF SEPARATE LEAVES
Refer to Specification of Project Structural & Civil Engineer

- 595 LINTELS
Bearing: Ensure full length masonry units occur immediately under lintel ends.

- 635 JOINTING
Profile: Consistent in appearance.

- 645 ACCESSIBLE JOINTS NOT EXPOSED TO VIEW
Jointing: Struck flush as work proceeds.

- 671 FIRE STOPPING
Avoidance of fire and smoke penetration: Fit tightly between cavity barriers and masonry. Leave no gaps.

- 690 ADVERSE WEATHER
General: Do not use frozen materials or lay on frozen surfaces.
Air temperature requirements: Do not lay bricks/ blocks:
In cement gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.

In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising.

Temperature of walling during curing: Above freezing until hardened.

Newly erected walling: Protect at all times from:

Rain and snow.

Drying out too rapidly in hot conditions and in drying winds.

ADDITIONAL REQUIREMENTS FOR FACEWORK

710 THE TERM FACEWORK

Definition: Applicable in this specification to block walling finished fair.

Painted facework: The only requirement to be waived is that relating to colour.

740 REFERENCE PANEL(S):

Prepare panel(s) as set out below and, after drying out, obtain approval of appearance before proceeding.

Construct panels in an approved location using randomly sampled blocks but rejecting any that are damaged .

Walling types: F10/110 & 120 & 130 & 140, including sample movement joints.

Size of panel: 1.0 m x 1.0 m.

Sample to include an example of a 10 mm movement joint filled with mastic/silicone seal to a colour to match the adjacent painted wall colour (white).

750 COLOUR CONSISTENCY OF MASONRY UNITS

Colour range: Submit proposals of methods taken to ensure that units are of consistent and even appearance within deliveries.

Conformity: Check each delivery for consistency of appearance with previous deliveries and with approved reference panels; do not use if variation is excessive.

Finished work: Free from patches, horizontal stripes and racking back marks.

760 APPEARANCE

Block selection: Do not use units with damaged faces or arises.

Cut masonry units: Where cut faces or edges are exposed, cut with table masonry saw.

Quality control: Lay masonry units to match relevant reference panels.

Setting out: To produce satisfactory junctions and joints with built-in elements and components.

Coursing: Evenly spaced using gauge rods.

Lifts: Complete in one operation.

Methods of protecting facework: Submit proposals.

830 CLEANLINESS

Facework: Keep clean.

Mortar on facework: Allow to dry before removing with stiff bristled brush.

F30 Accessories/ sundry items for brick/ block/ walling

To be read with Preliminaries/ General Conditions.

REINFORCING/ FIXING ACCESSORIES

- 220 WALL TIES BETWEEN DOUBLE SKINS OF BLOCKWORK
Refer to Project Structural Engineer's Drawings and Specification.
- 251 WALL HEAD RESTRAINT TIES BETWEEN CONCRETE BLOCKWORK AND STEEL RAFTERS
Refer to Project Structural Engineer's Drawings and Specification.
- 255 WIND POSTS
Refer to Project Structural Engineer's Drawings and Specification.
- 260 ANGLE SUPPORTS BETWEEN WINDPOSTS AT GROUND FLOOR LEVEL
Refer to Project Structural Engineer's Drawings and Specification.
- 270 MESH JOINT REINFORCEMENT TO STACK & STRETCHER BONDED BLOCKWORK PARTITION BED JOINTS
Refer to Structural Engineer's drawings for locations.
Manufacturer: Ancon, President Way, President Park, Sheffield S4 7UR (T: 0114 275 5224).
Product reference: AMR 5mm diameter wire.
Type: Welded wire ladder type .
Material: Austenitic stainless steel.
Width: 40mm less in width than wall or leaf.
Placement: Lay on an even bed of mortar in a continuous strip with full laps at angles.
Keep back 20 mm from face of external work, 12 mm back from face of internal work finish joint to normal thickness.
Lap length (minimum): 225mm.
- 281 LATERAL RESTRAINT PROPRIETARY SLIP TIES FOR MOVEMENT JOINTS IN BLOCKWORK
Refer to Project Structural Engineer's Drawings and Specification.
- 283 LATERAL RESTRAINT PROPRIETARY SLIP TIES FOR MOVEMENT JOINTS BETWEEN BLOCKWORK AND STEEL COLUMNS
Refer to Project Structural Engineer's Drawings and Specification.

JOINT

- 610 MOVEMENT JOINTS WITH SEALANT TO BLOCKWORK
Filler: Aerofil closed cell linked foam polyethylene strip compressed to fill 10mm wide gap.
Build in as the work proceeds ensuring no projections into cavities and correct depth of joint to receive sealant system.
Manufacturer: Adshead Ratcliffe & Co. Ltd, Derby Road, Belper, Derbyshire, DE56 1WJ UK (T: 01773 826661)
Sealant: Arbomeric MP10 low modulus modified polymer sealant.
Colour: White.
Prepare joints and apply sealant as Section Z22
Size: 10 mm x 10 mm plus depth of filler.

- 611 AIR SEALING MOVEMENT JOINTS WITH SEALANT BETWEEN TOPS OF BLOCKWORK WALLS & RAFTERS AND JAMBS OF BLOCKWORK WALLS & STEEL COLUMNS
 Filler: 15mm diameter (heads) & 15mm diameter (jambs) Foam Backer Rods
 Firmly compress backer rods into all interfaces to be air sealed to achieve air permeability of no more than 5m³/m²/hr @ 50 pascals, in conjunction with sealant.
 Manufacturer: Hodgson Sealants Ltd, Belprin Road, Beverley, East Yorkshire, HU17 0LN (T: 01482 868321)
 Sealant: Silfix U9 low modulus silicone sealant.
 Colour: White
 Prepare joints and apply sealant as Section Z22
 Size: 15 mm x 10 mm plus depth of backer rods (heads) & 15mm x 10mm plus depth of backer rods (jambs).
- 616 FIRE RESISTANT MOVEMENT JOINTS BETWEEN BLOCKWORK LEAFS AND ASSOCIATED STRUCTURAL MEMBERS
 Fire resistant filler:
 Manufacturer: PFC Corofil Fire Strip Products, Davis Road, Chessington, Surrey, KT9 1TU.
 Reference: C 144 Firestop Strips of 50 mm wide x **depth to suit gap + 5mm** x 1000 mm length to achieve 1 hour fire resistance - refer to Fire Strategy drawings for locations.
 Additional requirement: Corofil infill mastic (white coloured) to be used to complete gap filling to joints between blockwork and associated structural members
- 630 UNEXPOSED CONTRACTION JOINTS
 Formation: Close butt as work proceeds.
- 650 POINTING IN FLASHINGS
 Joint preparation: Free of debris and lightly wetted.
 Pointing mortar: As for adjacent walling.
 Placement: Fill joint and finish flush.

PROPRIETARY SILLS/ LINTELS/ COPINGS/ DRESSINGS

- 741 PREFORMED ALUMINIUM COLOUR COATED CAPPINGS TO ALL PARAPETS
 Manufacturer: **Either**: Kingspan Fabrications, Sherburn, Malton, North Yorkshire, YO17 8PQ (T: 01944 712207) **or** Contour Casings, Stafford Park 12, Telford, TF3 3BJ (T: 01952 290498) **or** Plasmet Ltd, Barton Moss Road, Eccles, Manchester, M30 7RL (T: 0161 707 3141)
 Reference: 'Secret Fix' Capping System to external profiles as shown on Architect's Drawings in 3mm thick PPC aluminium supplied fabricated in maximum possible lengths with concealed anti rattle butt straps and no visible fixings.
 Additional requirements: Anti rattle butt straps are required to be bonded (not loose butts) to be fixed to one end of sections with chemical adhesive with 3mm wide expansion gaps.
 Galvanised concealed sections under cappings in 150mm wide material to be fixed back to continuous WBP plywood backings as shown on Architect's Drawings.
 Colour: Dark Grey (RAL 7021).
- 745 PRESTRESSED CONCRETE LINTELS
 Standard: To BS EN 845-2.
 Manufacturer: Stressline Limited, Foxbank Industrial Estate, Stoney Stanton, Leicester, LE9 4LX (T: 0870 750 3167).
 Types: Prestressed concrete.
 Sizes: To suit spans involved and fire resistance required.
 Placement: Bed on mortar used for adjacent work. Prop at not more than 1.2 m centres. Retain props in position for not less than 14 days or until mortar has matured, whichever is longer. Bearing length (minimum): 150mm.