

F10

**F10 BRICK / BLOCK WALLING**

**Revision Information**

Rev.	Detail	Date	Issue	Prepared	Checked
0	CONSTRUCTION	23.02.07	Construction	nh	

**RECEIVED**  
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To be read with Preliminaries/ General conditions.

F10 Brick/ block walling

## TYPES OF WALLING

### 111 CLAY FACING BRICKWORK FORMING EXTENSIONS TO EXISTING WALLS

**Location:** To extended walls/parapets of building at 3rd floor level.

**Drawings:**

**Bricks:** To BS 771-1:2003 Cat II.

- Manufacturer: ( head office ) Wienerberger Ltd, Cheadle Royal Business Park, Cheshire  
Tel: (0161) 491 8200
- Product reference: TERCA St Johns Red hand made
- Special shapes: None.

**Mortar:** As section Z21.

- Mix: Unilit 35M premixed natural hydraulic lime mortar - to include a limewash pigment to match the colour of the mortar to the existing brickwork.
- Mix proportions: Seek advice from manufacturer.
- Manufacturer: Telling Lime Products Limited, Primrose Avenue, Fordhouses, Wolverhampton, WV10 8AW. Tel: 01902 789 777. Fax: 01902 398 777. Email: info@telling.co.uk Web: www.telling.co.uk
- Product reference: Unilit 35M hydraulic lime mortar.

**Preparation:** The substrate must be clean and free of all traces of oil and grease. When the substrate has been treated with an impregnating product (silicones or similar) it is recommended to consult the supplier or manufacturer.

- Application: Mix Unilit 35M with clean water - 4.5 to 5.25 litres of water to 30 kg of powder depending on the temperature and substrate. Mix manually or mechanically for 3 to 4 minutes. Apply by trowel to the desired bed depth. Avoid overworking the face of the mortar and do not steel trowel finish, or strike the face of the mortar with a pointing iron, which would close off the pore structure. Allow approximately 1-2 days before brushing the mortar down with a stiff bristle brush to reveal the aggregate and give a weathered finish.

Unilit 35M can be applied to damp but not saturated backgrounds, dampen down excessively dry backgrounds or masonry prior to application. Do not use mortar if the substrate has been saturated by rainfall, as this will affect the bond and weatherproofing of the mortar. Do not apply in temperatures below 5°C or above 40°C. The mortar remains workable for 2 hours and dries in 24-48 hours. Protect from frost for 48 to 72 hours.

**Bond:** English bond to match existing. Note: Care must be taken to ensure that where new and old brickwork is toothed together that this is done to produce a clean, flush transition between old and new.

**Joints:** Penny pointed to match existing. New pointing depth to match existing to ensure consistency across elevation.

**Features:** Caststone cills & copings as clause F30.

**Brickwork/Mortar Tinting:** By Building Cosmetic Services Ltd, 4 Portland Arcade, King Street, Southwell, Nottinghamshire, NG25 0EH. Tel: (01636) 815364, Fax: (01636) 813608.

- Location: To all areas of new brickwork/mortar.
- Tinting solution: Iron oxide pigment to BS1014(1975) suspended in potassium silicate solution.
- Application: Brush applied to achieve an even colour match as close as possible to that of the existing brickwork below.

- Other requirements: Brickwork to be relatively dry prior to application. Acrylic resin base to be used as necessary. Tinted area to be protected from rain for 48 hours after final application.

**Allowance for making good:** Allow 5sqm total. Required in various areas following reducing of cills to form doors, removal of existing ductwork/ventilation in strip-out.

### 316 CLAY COMMON BRICKWORK FOR INFILLING OPENINGS IN EXISTING WALLS

**Location:** Infill required to existing openings formed by the removal of windows and doors to ground floor and above - as indicated on the drawings. Infill to be full depth of indicated openings.

**Drawings:** L(1-), L(2-) series, A(21) series

**Bricks:** To BS EN 771-1.

- Type: HD.
  - Size: 215 x 102.5 x 65 mm.
  - Mean compressive strength (minimum): Not required.
  - Durability designation: F1.
  - Density: Gross dry: Not applicable; Net dry: Not applicable.
  - Water absorption: Not applicable-all brickwork internal.
  - Water absorption to BS 3921 Appendix E: Not applicable-all brickwork internal.
  - Configuration: Frogged.
  - Additional requirements: None.
- Mortar:** As section Z21.
- Standard: To BS EN 998-2.
  - Mix: 1:1:6 cement:lime:sand.
  - Additional requirements: None.
- Bond:** To match walls either side of opening - brickwork toothed in to existing.

### 381 ENGINEERING BRICKWORK FORMING INFILL TO EXISTING OPENINGS

**Location:** Infill required to existing openings formed by the removal of windows and doors to basement - as indicated on the drawings. Infill to be full depth of indicated openings.

**Drawings:** L(1-), L(2-) series, A(21) series

**Engineering bricks:** To BS 3921.

- Class A.
  - Manufacturer: Contractor's choice.
- Product reference: Contractor's choice.
- Mortar:** As section Z21.
- Standard: To BS EN 998-2.
  - Mix: Group 1 as clause 460 with sulfate resisting cement.
  - Additional requirements: None.

**Bond:** To match walls either side of opening - brickwork toothed in to existing.

**Joints:** Flush.

## WORKMANSHIP GENERALLY

### 430 CONDITIONING OF CLAY AND CALCIUM SILICATE BRICKS

- Bricks delivered warm from manufacturing process: Do not use until cold.
- Absorbent bricks in warm weather: Wet to reduce suction. Do not soak.

### 460 MORTAR GROUPS

- Mix proportions: For a specified group select a mix design from the following:

Group	1	2	3	4
PC*:lime:sand with or without air entraining additive				
	1:0-0.25:3	1:0.5-4.5	1:1.5-6	1:2:8-9
Masonry cement:sand containing PC* and lime in approx ratio 1:1, and an air entraining additive				
-	1:3	1:3.5-4		1:4.5
Masonry cement:sand containing PC* and inorganic materials other than lime and air entraining additive				
-	1:2.5-3.5	1:4-5	1:5.5-6.5	
PC*:sand and air entraining additive				
	1:3	1:3-4	1:5-6	1:7-8

PC\* = Portland cement

- Batching: Mix proportions by volume.
- Mortar type: Continuous throughout any one type of masonry work.

### 500 LAYING GENERALLY

- Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
- Bond where not specified: Half lap stretcher.
- Vertical joints in facework: Even widths. Plumb at every fifth cross joint.

### 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  $\pm 10$  mm.

- Straightness in any 5 m length  $\pm 5$  mm.
- Verticality up to 3 m height  $\pm 10$  mm.
- Verticality up to 7 m height  $\pm 14$  mm.
- Overall thickness of walls  $\pm 10$  mm.
- Level of bed joints up to 5 m  
(brick masonry)  $\pm 11$  mm.
- Level of bed joints up to 5 m  
(block masonry)  $\pm 13$  mm.

#### 535 HEIGHT OF LIFTS IN WALLING USING CEMENT GAUGED OR HYDRAULIC LIME MORTAR

- Quoins and advance work: Rack back.
- Lift height (maximum): 1.2 m above any other part of work at any time.
- Daily lift height (maximum): 1.5 m for any one leaf.

#### 561 COURSING BRICKWORK WITH EXISTING

- Gauge: Line up with existing brick courses.

#### 580 LAYING FROGGED BRICKS

- Single frogged bricks: Frog uppermost.
- Double frogged bricks: Larger frog uppermost.
- Frog cavity: Fill with mortar.

#### 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 smoked 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.
  - In thin joint mortar glue when outside the limits set by the mortar manufacturer.
- 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 brick/ block walling finished fair.
- Painted facework: The only requirement to be waived is that relating to colour.

**730 BRICK/ CONCRETE BLOCK SAMPLES**

- General: Before placing orders with suppliers submit for approval of appearance labelled samples of the following: Bricks as in clause F10/111 .
- Selection of samples: Representative of the range in variation of appearance.

**740 FINISHED MASONRY WORK REFERENCE PANELS**

- General: Before proceeding to construct the following walling types, construct panels as specified. Give notice when panels are dry.
- Selection of masonry units: Randomly to BS EN 771-1 .
- Panel types:
  - Walling type: F10/111 .
- Location: To be confirmed .
- Size: 1.5 x 1.5 m .
- Other requirements: None .

**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**

- Brick/ block selection: Do not use units with damaged faces or arrises.
- 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.

#### **790 PUTLOG SCAFFOLDING**

- Use: Not permitted in facework.

#### **800 TOOTHED BOND**

- New and existing facework in same plane: Bond together at every course to achieve continuity.

#### **830 CLEANLINESS**

- Facework: Keep clean.
- Mortar on facework: Allow to dry before removing with stiff bristled brush.
- Removal of marks and stains: Rubbing not permitted.