BS/23/11

Rnj Partnership LLP

Duke Street

Specification

14-11-2023

Contents

C20
Demolition

General requirements

110 Desk study/ survey

1. Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of: The structure or structures to be deconstructed/ demolished.
2. Report and method statements: Submit, describing:
   - 2.1. Form, condition and details of the structure or structures, the site, and the surrounding area.
     - 2.1.1. Extent: As elevation drawing
   - 2.2. Type, location and condition of features of historical, archaeological, geological or ecological importance.
   - 2.3. Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and dust generated during deconstruction or demolition.
   - 2.4. Identity and location of services above and below ground, including those required for the contractor's use, and arrangements for their disconnection and removal.
   - 2.5. Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
   - 2.6. Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
   - 2.7. Proposed programme of work, including sequence and methods of deconstruction or demolition.
   - 2.8. Details of specific pre-weakening required.
   - 2.9. Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
   - 2.10. Arrangements for control of site transport and traffic.
3. Format of report: PDF

120 Extent of deconstruction/ demolition

1. General: Subject to retention requirements specified elsewhere, deconstruct/ demolish parapet wall to rear walkway and section of outer leaf brickwork to ground floor flats below rear walkway, down to top of window heads; remove existing walkway membrane.

150 Features to be retained

1. General: Keep in place and protect the following: All parts of the building, except those outlined in section C20/120.

Services affected by deconstruction and demolition

210 Services regulations

1. Work carried out to or affecting new and/ or existing services: Carry out in accordance with the requirements of individual private service providers

230 Services disconnection arranged by contractor

1. General: Arrange with the appropriate authorities and responsible private organizations for disconnection of services, and removal of fittings and equipment owned by those authorities prior to starting deconstruction or demolition

250 Live foul and surface water drains

1. Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings: Leave clean and in working order at completion of deconstruction or demolition work

270 Services to be retained

1. Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction or demolition
2. Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner

Deconstruction and demolition work

310 Workmanship

1. Standard: Demolish structures in accordance with BS 6187.
2. Operatives
   2.1. Appropriately skilled and experienced for the type of work.
   2.2. Holding, or in training to obtain, relevant Construction Skills certification of competence.
3. Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction and demolition to be used.

320 Gas and vapour risks

1. Precautions: Prevent fire or explosion caused by gas and vapour from tanks, pipes, etc.

330 Dust control

1. General: Minimize airborne dust by periodically spraying deconstruction and demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris
2. Lead dust: Submit method statement for control, containment and clean-up regimes.

340 Health hazards

1. Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the works.

350 Adjoining property

1. Temporary support and protection: Provide. Maintain and alter, as necessary as work proceeds. Do not leave unnecessary or unstable projections.
2. Defects: Report immediately on discovery.
3. Damage: Minimize disturbance. Repair promptly to ensure safety, stability, weather protection and security.
4. Support to foundations: Do not disturb.

360 Structures to be retained

1. Extent: As drawings
2. Parts which are to be kept in place: Protect. Give notice and notify service authority or owner of damage arising from the execution of the works.
3. Interface between retained structures and deconstruction or demolition: Cut away and strip out with care to minimize the amount of making good needed

370 Partly demolished structures

1. General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.

2. Temporary works: Prevent overloading due to debris.
3. Access: Prevent access by unauthorized persons.

380 Dangerous openings

1. General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
2. Access: Prevent access by unauthorized persons.

391 Asbestos-containing materials – unknown occurrences

1. Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction and demolition work. Avoid disturbing such materials.
2. Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 Unforeseen hazards

1. Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction or demolition.
2. Removal: Submit details of proposed methods for filling, removal, etc.

450 Site condition at completion

1. Debris: Clear away and leave the site in a clean, tidy and secure condition.

Materials arising

510 Contractor's property

1. Components and materials arising from the deconstruction and demolition work: Property of the contractor, except for designated items which remain the property of the employer
2. Action: Remove from site as work proceeds, where not to be reused or recycled for site use

520 Recycled materials

1. Materials arising from deconstruction and demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
2. Evidence of compliance: Submit full details and supporting documentation.
    2.1. Verification: Allow adequate time in programme for verification of compliance.

Ω End of Section

F10
Brick/ block walling

Types of walling

110 Clay facing brickwork

1. Description: To match existing or approved by Planning/conservation officer- rear elevation from above ground floor window to top of parapet wall to walkway, where brickwork is to be dismantled & rebuilt
2. Bricks: To BS EN 771-1.
    2.1. Manufacturer: Contractor's choice
        2.1.1. Product reference: Submit proposals
    2.2. Recycled content: Submit proposals
3. Mortar: As section Z21.
    3.1. Standard: To BS EN 998-2
    3.2. Mix: 1:¼:3 cement:lime:sand
    3.3. Additional requirements: Coloured mortar to match existing
4. Bond: To match existing (Stretcher)
5. Joints: Recessed
6. Features: Solider Bond Band dividing ground floor & first floor; Soldier Course above structural openings to match existing or approved

255 Concrete blockwork

1. Description: To rebuild inner leaf of parapet wall
2. Blocks: To BS EN 771-3.
    2.1. Manufacturer: Contractor's choice
    2.2. Configuration: Group 1
    2.3. Compressive strength
        2.3.1. Mean value: 7.3 N/mm²
        2.3.2. Characteristic value: 7.3 N/mm²
        2.3.3. Category: I
    2.4. Freeze/ thaw resistance: Frost-resistant
    2.5. Work sizes (length x width x height): 440 x 100 x 215 mm
        2.5.1. Tolerance category: D2
3. Mortar: As section Z21.
4. Bond: Stretcher
5. Joints: Flush

Testing

410 Compressive strength of mortar for each walling type

1. Testing authority: A UKAS-accredited laboratory
2. Test method: To BS EN 1015-11.
3. Preliminary tests procedure: As follows:
    3.1. Specimens
        3.1.1. Number of specimens: Six.

3.1.2. Type: 40 x 40 x 160 mm prism.

3.1.3. Preparation: At least six weeks before walling commences.

3.2. Specimen testing: Half of specimens at seven days. Remainder at 28 days.

3.2.1. Retarded mixes: Extend curing periods to include retardation period.

4. Site tests procedure: As follows.

4.1. Number of specimens: Six per 150m² of walling or per storey whichever the more frequent.

4.2. Specimen types: As preliminary test, but prepared during construction.

4.3. Specimen testing: Half of specimens at seven days. Remainder at 28 days.

4.3.1. Retarded mixes: Extend curing periods to include retardation period.

5. Required test mean compressive strength at 28 days (N/mm²): To be within the following range:

6. Results: Submit.

415 Fresh mortar cement content

1. Test method: BREMORTEST in accordance with Building Research Establishment Information Paper 8/89

2. Test specimens: Test mortar for the following wall types: F10/ 255 .

3. Results: Submit.

Workmanship generally

430 Conditioning of clay bricks and blocks

1. Bricks and blocks delivered warm from manufacturing process: Do not use until cold.

2. Absorbent bricks in warm weather: Wet to reduce suction. Do not soak.

440 Conditioning of concrete bricks/ blocks

1. Autoclaved concrete bricks/ blocks delivered warm from manufacturing process: Do not use.

2. Age of nonautoclaved concrete bricks/ blocks: Do not use until at least four weeks old.

3. Avoidance of suction in concrete bricks/ blocks: Do not wet.

3.1. Use of water retaining mortar admixture: Submit details.

460 Mortar designations

1. Mix proportions: For a specified designation select a mix from the following:

1.1. Designation (i) (BS EN 998-2 M12 equivalent)

1.1.1. 1:0-¼:3 (Portland cement:lime:sand with or without air entraining additive).

1.1.2. 1:3 (Portland cement:sand and air entraining additive).

1.2. Designation (ii) (BS EN 998-2 class M6 equivalent)

1.2.1. 1:½:4-5 (Portland cement:lime:sand with or without air entraining additive).

1.2.2. 1:3 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).

1.2.3. 1:2½-3½ (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).

1.2.4. 1:3-4 (Portland cement:sand and air entraining additive).

1.3. Designation (iii) (BS EN 998-2 class M4 equivalent)

1.3.1. 1:1:5-6 (Portland cement:lime:sand with or without air entraining additive).

1.3.2. 1:3½-4 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).

1.3.3. 1:4-5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).

1.3.4. 1:5-6 (Portland cement:sand and air entraining additive).

1.4. Designation (iv) (BS EN 998-2 class M2 equivalent)

1.4.1. 1:2:8-9 (Portland cement:lime:sand with or without air entraining additive).

1.4.2. 1:4½ (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).

1.4.3. 1:5½-6½ (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).

1.4.4. 1:7-8 (Portland cement:sand and air entraining additive).

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

500 Laying generally

1. Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
2. AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
3. Clay block joints
   3.1. Thin-layer mortar: Lay blocks on a full bed.
   3.2. Interlocking perpends: Butted.
4. Bond where not specified: Half-lap stretcher.
5. Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

520 Accuracy

1. Courses: Level and true to line.
2. Faces, angles and features: Plumb.
3. Permissible deviations
   3.1. Position in plan of any point in relation to the specified building reference line and/ or point at the same level: ± 10 mm.
   3.2. Straightness in any 5 m length: ± 5 mm.
   3.3. Verticality up to 3 m height: ± 10 mm.
   3.4. Verticality up to 7 m height: ± 14 mm.
   3.5. Overall thickness of walls: ± 10 mm.
   3.6. Level of bed joints up to 5 m (brick masonry): ± 11 mm.
   3.7. Level of bed joints up to 5 m (block masonry): ± 13 mm.

535 Height of lifts in walling using cement-gauged or hydraulic lime mortar

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

545 Levelling of separate leaves

1. Locations for equal levelling of cavity wall leaves: As follows:
   1.1. Every course containing vertical twist type ties or other rigid ties.
   1.2. Every third tie course for double triangle/ butterfly ties.
   1.3. Courses in which lintels are to be bedded.

595 Lintels

1. Bearing: Ensure full length masonry units occur immediately under lintel ends.

610 Support of existing work

1. Joint above inserted lintel or masonry: Fully consolidated with semidry mortar to support existing structure.

620 Block bonding new walls to existing

1. Pocket requirements: Formed as follows:
   1.1. Width: Full thickness of new wall.
   1.2. Depth (minimum): 100 mm.
   1.3. Vertical spacing
      1.3.1. Brick to brick: 4 courses high at 8 course centres.
      1.3.2. Block to block: Every other course.
2. Pocket joints: Fully filled with mortar.

635 Jointing

1. Profile: Consistent in appearance.

645 Accessible joints not exposed to view

1. Jointing: Struck flush as work proceeds.

665 Pointing

1. Joint preparation: Remove debris. Dampen surface.
2. Mortar: As section Z21.
   2.1. Standard: Not applicable
   2.2. Mix: 1:3 masonry cement:sand

671 Fire-stopping

1. Avoidance of fire and smoke penetration: Fit tightly between cavity barriers and masonry. Leave no gaps.

690 Adverse weather

1. General: Do not use frozen materials or lay on frozen surfaces.
2. Air temperature requirements: Do not lay bricks/ blocks:
   2.1. In cement-gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.
   2.2. In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising, or as manufacturer's/ supplier's recommendations.
   2.3. In thin-layer mortars when outside the limits set by the mortar manufacturer.
3. Temperature of walling during curing: Above freezing until hardened.
4. Newly erected walling: Protect at all times from:
   4.1. Rain and snow.
   4.2. Drying out too rapidly in hot conditions and in drying winds.

Additional requirements for facework

710 The term facework

1. Definition: Applicable in this specification to brick/ block walling finished fair.
   1.1. Painted facework: The only requirement to be waived is that relating to colour.

730 Brick/ Concrete block samples

1. General: Before placing orders with suppliers submit for approval of appearance labelled samples of the following: …….
2. Selection of samples: Representative of the range in variation of appearance.

760 Appearance

1. Brick/ block selection: Do not use units with damaged faces or arrises.
2. Cut masonry units: Where cut faces or edges are exposed cut with table masonry saw.
3. Quality control: Lay masonry units to match relevant reference panels.
   3.1. Setting out: To produce satisfactory junctions and joints with built-in features and components.
   3.2. Coursing: Evenly spaced using gauge rods.
4. Lifts: Complete in one operation.
5. Methods of protecting facework: Submit proposals.

790 Putlog scaffolding

1. Use: Not permitted in facework.

800 Toothed bond

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

830 Cleanliness

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

Ω End of Section

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

Cavities

120 Cleanliness

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

131 Bed joint weep holes

1. Form: Open 10 mm diameter hole.
2. Locations: Through outer leaf immediately above base of cavity at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
3. Provision: At not greater than 600 mm centres and not less than two over each opening.

180 Cavity closers

1. Description: 15mm cavity closer
2. Manufacturer: Contractor's choice
3. Accessories: To include integral dpc

180 Plastics cavity closers

1. Manufacturer: Cavity Trays Ltd or equal and approved
    1.1. Contact details
        1.1.1. Address: Administration Centre
        Lufton Trading Estate
        Yeovil
        Somerset
        BA22 8HU
        1.1.2. Telephone: +44 (0)1935 474769
        1.1.3. Web: www.cavitytrays.com
        1.1.4. Email: enquiries@cavitytrays.co.uk
    1.2. Product reference: Cavi 60 Type 170 Cavity Closer
2. To fit cavity width:
3. Length (effective):
4. ThermalConductivity: 0.035 W/mK.
5. Thermal resistance: 2.60 m² K/W.

Reinforcing/ fixing accessories

220 Wall ties

1. Manufacturer: Contractor's choice
2. Material/ finish: Stainless steel
3. Sizes: 200 mm

225 Fixing ties in masonry cavity walls

1. Embedment in mortar beds (minimum): 50 mm.
2. Placement: Sloping slightly downwards towards outer leaf, without bending. Drip centred in the cavity and pointing downwards.

3. Spacing: Staggered in alternate courses.
   3.1. Horizontal centres: 750 mm
   3.2. Vertical centres: 400 mm
4. Provision of additional ties: Within 225 mm of reveals of unbonded openings and at the vertical reveals of unsupported masonry.
   4.1. Spacing:

241 Wall starters/ connectors

1. Standard: To BS EN 845-1
2. Manufacturer: Contractor's choice
3. Material/ finish: Austenitic stainless steel - BS EN 845-1 material/ coating reference 1

291 Special fixings

1. Type: Submit proposals.
2. Material/ finish: To PD 6697, clause 5.3.2.
3. Performance: Of type, size, strength and number necessary to resist loads likely to occur during the life of the building, and prevent lateral displacement or pulling apart of construction.
4. Placement: Fill pockets with bedding mortar finished flush where exposed to view.

Flexible damp-proof courses/ cavity trays

320 Damp-proof courses – plastics

1. Standard: To BS EN 14909 and BS 6515
2. Manufacturer: Contractor's choice
3. Material: Ethylene propylene

345 Site-formed flexible sheet cavity trays – plastics

1. Standard: To BS EN 14909 and BS 6515
2. Material: Polypropylene
3. Manufacturer: Contractor's choice

Installation of dpcs/ cavity trays

415 Installation of horizontal dpcs

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

435 Installation of stepped dpcs in external walls

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

455 Installation of coping/ capping dpcs

1. Coping: Reinstall existing slate coping stones

2. Placement: Bed in one operation to ensure maximum bond between masonry units, mortar and dpc.

465 Sealing of dpcs

1. Description: PARAPET WALLS
2. Overlaps and junctions: Seal with Adhesive recommended by dpc manufacturer.

475 Installation of site-formed cavity trays

1. Requirements to prevent downward ingress of water
   1.1. Profiles: To match those shown on drawings. Firmly secured.
   1.2. Joint treatment: Use continuous length wherever possible, otherwise lap at least 100 mm and seal to produce a free draining and watertight installation.
   1.3. Horizontal cavity trays: Support using cavity closer.
   1.4. Sloping cavity trays: Prevent sagging.
   1.5. Cleanliness: Free from debris and mortar droppings.

485 Installation of cavity trays over openings and other cavity bridgings

1. Length: To extend not less than 150 mm beyond ends of lintels/ bridgings.

Joints

610 Movement joints with sealant

1. Description: To ground floor rear elevations & above parapet wall
2. Creating movement joint:: Allow for cutting out 10mm movement joint to existing brickwork to lower section of rear elevation upon which the new blockwork is being built off
3. Joint preparation and sealant application: As section Z22.
4. Filler: Closed cell polyethylene foam
   4.1. Thickness: 10mm
   4.2. Manufacturer: Contractor's choice
   4.3. Placement: Build in as work proceeds with no projections into cavities and to correct depth to receive sealant system.
5. Sealant
   5.1. Designation: ISO 11600-F-20LM
   5.2. Manufacturer: Contractor's choice
   5.3. Colour: To match render

Proprietary sills/ lintels/ copings/ dressings

755 Prefabricated steel lintels

1. Standard: To BS EN 845-2.
2. Manufacturer: Contractor's choice
3. Types: Combined
4. Material/ finish: Austenitic stainless steel - material/ coating reference L1
5. Sizes: As per existing window and door openings
6. Placement: Bed on mortar used for adjacent work.
   6.1. Bearing length (minimum): 150 mm

761 Natural stone coping units laid in hydraulic lime:sand mortar

1. Standard: To BS 5642-2.
2. Manufacturer: Reuse existing slate copings to parapet wall
3. Mortar for bedding/ jointing: Hydraulic lime:sand as section Z21.
   3.1. Hydraulic lime: Moderately hydraulic lime
   3.2. Sand source/ type: Sharp, well-graded sand to approval
   3.3. Mix: 1:2 NHL 3.5 hydraulic lime:sharp, well-graded sand
4. Joints: Full and finished flush.
5. Placement: Lay on a full bed of mortar to line and level.

Miscellaneous items - Not Used

Ω End of Section

F31
Precast concrete sills/ lintels/ copings/ features

Types of component

105 Precast Lintel

1. Description: LINTELS
2. Concrete: Components manufacturer's 'proprietary' concrete.
   2.1. Identity: Manufacturer's mix reference
3. Conformity: To BS 8500-2 and the recommendations of
   3.1. BS 8500-1, Annex A.4 for the specified exposure class.
   3.2. Evidence: Submit third-party certification from a UKAS-accredited laboratory.
4. Exposure Class: To comply with BS 8500-1
5. Reinforced components: Submit proposals for type of reinforcement and cover.
6. Matching sample for finish to visible faces: As existing

130 Concealed precast lintels

1. Standard: To BS EN 845-2.
   1.1. Verification of performance: Submit calculations or test certificates.

General requirements

210 Moulds

1. Permissible fabrication and operating tolerances: Length 0 to +6 mm, other dimensions ±3 mm.

220 Concrete generally

1. Specification: To BS 8500-2 and BS EN 206.
2. Producer: Accredited to BS 8500-2 requirements where product conformity certification is required.

250 Reinforcement

1. Carbon steel reinforcement: As appropriate to BS 4449, BS 4482 and BS 4483.
   1.1. Cutting and bending: To BS 8666.
2. Galvanized reinforcement: Galvanized to BS EN ISO 1461 after cutting. Chromate treated.
3. Stainless steel reinforcement: To BS 6744.
   3.1. Designation 1.4301.
   3.2. Cutting and bending: To BS 8666.
4. Non-structural reinforcement: Include to resist shrinkage and handling stresses.
5. Bimetallic corrosion and staining: Prevent by appropriate selection and use of materials.
6. Condition at time of placement: Clean, free of corrosive pitting, loose materials and substances that adversely affect reinforcement, concrete, or bond between the two.
7. Fixing: Accurate and secure.
   7.1. Method: Wire tying, approved steel clips or tack welding if permitted.
   7.2. Concrete cover: Maintain free of all tying wire or clips.

255 Quality assurance of reinforcement

1. Reinforcement to BS 4449, BS 4483 and BS 6744: Obtain valid

2. certificates of approval for product conformity issued by the
3. UK Certification Authority for Reinforcing Steels.

260 Casting and curing

1. Placing of concrete: Thoroughly compact.
2. Protection against drying out: Methods and duration to BS EN 13369.
3. Immature components: Avoid movement, vibration, overloading, physical shock, rapid cooling and thermal shock.
4. Delivery to site: Minimum 14 days after casting.

261 Cutting

1. Cutting of precast concrete components: Not permitted.

262 Records

1. Records for each type of component: Maintain details including:
   1.1. Unique identification number.
   1.2. Identification of the producer.
   1.3. Identification of the place of production.
   1.4. Correlation with records of mixes, including batch numbers.
   1.5. Date of each stage of manufacture.
   1.6. Dates and results of all tests, checks and inspections, including certification where relevant.
   1.7. Dimensions related to specified levels of accuracy.
   1.8. Specific location in the finished work.
   1.9. Weight of the unit.
   1.10. Damage and making good.
   1.11. Any other pertinent data, e.g. if unit is a production control unit.
2. Availability of records for inspection: On request.

Fair-faced components - Not Used

Installation

420 Laying

1. Mortar for bedding and jointing: As section Z21.
   1.1. Type: Factory-made to BS EN 998-2
   1.2. Mix: As used for adjacent work
   1.3. Packing: If required use slate.
2. Bedding components: On full bed of mortar.
3. Removal of marks, stains and extraneous mortar on visible faces: Rubbing not permitted.

430 Support of existing work over new lintels

1. Joint above lintels: Fully fill and compact with semidry mortar.

Ω End of Section

J31
Liquid-applied waterproof walkway/roof coatings

Types of coating

110 Cold deck walkway/roof coating

1. Description: Apply new liquid-applied waterproof coating to first floor external access walkway and inner leaf of parapet
2. Substrate: Existing concrete floor slab
   2.1. Preparation: Remove existing membrane and apply screed to create sufficient falls to drainage inlets
3. Waterproof coating: Sikafloor® Pronto RB-28 or equal and approved

   Horizontal Surface
   1. Primer Sikafloor®-10 Pronto N
   2. Wearing layer + broadcast Sikafloor®-32 Pronto (filled 1:2 with Sikafloor® Pronto Filler) + standard or coloured quartz sand (0.6–1.2 mm)
   3. Seal / Top coat Sikafloor®-18 Pronto

   Vertical
   1. Primer Sikafloor®-10 Pronto N
   2. Base layer + light broadcast Sikafloor®-32 Pronto (unfilled) + standard or coloured quartz sand (0.6–1.2 mm)
   3. Wearing layer + excess broadcast Sikafloor®-32 Pronto (unfilled) + standard or coloured quartz sand (0.6–1.2 mm)
   4. Seal / Top coat Sikafloor®-18 Pronto

Performance

202 Contractor's design of roofing

1. Design responsibility: Determine methods in attaching roofing
2. Structural and fire requirements
   2.1. Generally: As sections B50 and B05.
   2.2. Modifications: None
   2.3. Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.
3. Functional requirements
   3.1. Performance: As specified in this section
4. Design and production information: As Preliminaries section A31
5. Timing of submissions: As Preliminaries section A31

210 Walkway/Roof performance

1. General: Firmly adhered, free-draining and weathertight.

225 Avoidance of interstitial condensation

1. Risk of interstitial condensation in roof construction: Assess in accordance with BS 5250.
2. Vapour control layer: If necessary, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

230 Thermal performance

1. Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
   1.1. Thermal transmittance of roof (maximum):
   1.2. Compressive strength of insulation (minimum) at 10% compression:
   1.3. Substrate surface: Suitably even, stable and robust to receive roof coatings.
   1.4. Insulation compliance: To a relevant European Standard, or Agrément-certified.

Products

310 Sealant primers

1. Manufacturer: Sika Limitedor equal and approved
   1.1. Contact details
      1.1.1. Address: Watchmead
      Welwyn Garden City
      Hertfordshire
      AL7 1BQ
      1.1.2. Telephone: +44 (0)1707 394444
      1.1.3. Web: www.sika.co.uk
      1.1.4. Email: enquiries@uk.sika.com
   1.2. Product reference: Primer Sikafloor®-10 Pronto N

353 Waterproof coating

1. Manufacturer: Sika or equal and approved
   1.1. Product reference: Sikafloor® Pronto RB-28 or equal and approved
2. Type: Acrylic resin
3. Primer: As J31/310
4. Application: Embedment coat 3.6 kg/m², topcoat 0.6-0.8 kg/m²
5. Reinforcement: Not required
6. Colour: Grey
7. Minimum dry film thickness: 3 mm

Execution generally

410 Adverse weather

1. Do not apply coatings
   1.1. In wet conditions or at temperatures below 5°C, unless otherwise permitted by coating manufacturer.
   1.2. In high winds (speeds > 7 m/s), unless adequate temporary windbreaks are erected adjacent to working area.
2. Unfinished areas of roof: Keep dry.

420 Suitability of substrates

1. Substrates generally
   1.1. Secure, clean, dry, smooth, free from frost, contaminants, loose material, voids, protrusions and organic growths.
   1.2. Compatible with coating system.

2. Preliminary work: Complete, including:
   2.1. Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
   2.2. Fixing of battens, fillets and anchoring plugs/ strips.
3. Moisture content and stability: Must not impair integrity of roof.

Existing substrates

510 Removing existing coverings

1. Mechanical stripping: Permitted
2. Exposed substrate: Do not damage.

520 Preliminary power wash to existing coverings

1. Timing: Before renewing existing coverings, water jet-clean all areas. Allow to dry.

525 Renewing existing substrates/ coverings

1. Areas to be renewed: As drawing
2. Timing: Remove only sufficient substrates/ coverings as will be renewed and made weathertight on same day.

565 Existing gutters/ outlets

1. Dirt, debris and build-up of previous coverings/ coatings: Remove to restore free flow of water.

575 Final power wash to existing coverings

1. General: Water jet-clean all areas. Allow to dry.

New substrates/ vapour control layers/ warm deck roof insulation - Not Used

Roof coating system

710 Adhesion tests

1. Requirement: Carry out a trial coating to determine priming requirements and/ or system suitability.
2. Test results: Submit and arrange for inspection.

720 Applying primers/ conditioners

1. Coverage per coat (minimum): 0.4 kg/m^2
2. Surface coverage: Brushed well in to ensure local or full area coverage according to type.
3. Coats: Allow to dry before overcoating.

740 Movement joints in substrate

1. Debonding tape: Apply over movement joints.
2. Reinforcement strip: Apply over debonding tape.
   2.1. Bedding: Preliminary coating application.
   2.2. Joints: Lap in length.
   2.3. Bond: Continuous over whole surface, with no air pockets.
   2.4. Condition at completion: Smooth.

760 Application of roof coatings

1. Thickness: Monitor by taking wet/ dry film thickness readings.

2. Continuity: Maintain full thickness of coatings around angles, junctions and features.
3. Rainwater outlets: Form with watertight joints.
4. Drainage systems: Do not allow liquid coatings to enter piped rainwater or foul systems.
5. Edge trims: Apply coatings over horizontal leg of trim and into recess.

Surfacing

810 Blinding

1. Applying dusting powder: To coating surfaces at end of curing period to neutralize tackiness.

Completion

910 Inspection

1. Coating surfaces: Check when cured for discontinuities.
    1.1. Defective areas: Apply another coating.

930 Flood test

1. Condition of roof prior to testing
    1.1. Coating: Complete to a stage where integrity can be tested.
    1.2. Surface: Clean.
2. Outlets: Externally cover and seal. Protect against damage from water pressure using temporary kerbs. Do not use plugs to seal outlets.
3. Flood levels: Submit proposals. In no case higher than existing kerbs.
4. Flood duration: 24 hours
5. Inspection: Regular to detect leaks.
6. Completion of test: Slowly drain roof. Do not overload or flood outlets.
7. Test results: Submit.

940 Completion

1. Roof areas: Clean.
    1.1. Outlets: Clear.
    1.2. Flashings: Dressed into place.
2. Work necessary to provide a weathertight finish: Complete.
3. Storage of materials on finished surface: Not permitted.
4. Completed coatings: Protect against damage.

Ω End of Section

M20
Plastered/ rendered/ roughcast coatings

Types of coating

120 Cement:lime:sand roughcast (harling)

1. Description: Apply render to render to ground floor flat rear elevations and outside leaf of parapet wall
2. Substrate: Concrete common blockwork, as section F10
   2.1. Preparation: Stipple keying coat
3. Cement: lime:sand mortar:
   3.1. Type: Ready to use, retarded mortar or ready-mixed lime:sand
   3.2. Pigment: To be confirmed
4. Undercoats
   4.1. Mix (cement:lime:sand): First and second coats 1:0.5:4–4.5
      4.1.1. Cement type: Contractor's choice Contractor's choice
   4.2. Thickness (excluding dubbing out and keys): Two coats, overall 10–14 mm
5. Final coat
   5.1. Mix (cement:lime:sand:coarse aggregate): 1:1:4:2
      5.1.1. Cement type: Contractor's choice
   5.2. Coarse aggregate: To BS EN 12620.
      5.2.1. Type/ Source: Angular crushed stone
      5.2.2. Single size: 4/10 mm
   5.3. Finish: Roughcast.
6. Accessories: Stops and beads

General

413 Samples

1. General: Provide representative samples of the following: Stippled plaster, 1 m² panel.

418 Control samples

1. Complete sample areas, being part of the finished work, in locations as follows: External rendering, to 1m2 section of elevation

421 Scaffolding

1. General: Prevent putlog holes and other breaks in coatings.

Materials and marking of mortar

438 Cements for mortars

1. Cement: To BS EN 197-1.
   1.1. Types: Portland cement, CEM I.
2. Portland slag cement, CEM II.
3. Portland fly ash cement, CEM II.
   3.1. Strength class: 32.5, 42.5 or 52.5.
4. White cement: To BS EN 197-1.

4.1. Type: Portland cement, CEM1.

4.2. Strength class: 52.5.

5. Sulfate resisting Portland cement: To BS EN 197-1.

5.1. Strength class: 42.5.

440 Sand for cement gauged mortars

1. Standard: To BS EN 13139.

1.1. Grading: 0/2 or 0/4 (CP or MP); Category 2 fines.

2. Colour and texture: Consistent. Obtain from one source.

443 Lime for cement gauged mortars

1. Standard: To BS EN 459-1.

1.1. Type: CL 90S.

445 Pigment for coloured mortars

1. Standard: To BS EN 12878.

449 Admixtures for cement gauged mortars

1. Suitable admixtures: Select from:

1.1. Air entraining (plasticizing) admixtures: To BS EN 934-2 and compatible with other mortar constituents.

1.2. Other admixtures: Submit proposals.

2. Prohibited admixtures: Calcium chloride and any admixture containing calcium chloride.

450 Chloride content of mortars

1. Chloride content (maximum): 0.1% by dry mass.

495 Mixing

1. Render mortars (site prepared)

1.1. Batching: By volume. Use clean and accurate gauge boxes or buckets.

1.2. Mix proportions: Based on damp sand. Adjust for dry sand.

1.3. Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.

2. Mixes: Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.

3. Contamination: Prevent intermixing with other materials.

497 Cold weather

1. General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.

2. External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising. Maintain temperature of work above freezing until coatings have fully hardened.

3. Internal work: Take precautions to enable internal coating work to proceed without detriment when air temperature is below 3°C.

Preparing substrates

510 Suitability of substrates

1. Soundness: Free from loose areas and significant cracks and gaps.

2. Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.

3. Tolerances: Permitting specified flatness/ regularity of finished coatings.
4. Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

527 Raking out for key

1. Joints in existing masonry: Rake out to a depth of 13 mm (minimum).
   1.1. Dust and debris: Remove from joints.

531 Roughening for key

1. Substrates: Roughen thoroughly and evenly.
   1.1. Depth of surface removal: Minimum necessary to provide an effective key.

538 Stipple key

1. Materials
   1.1. Cement: To BS EN 197-1.
   1.2. Sand: Clean, coarse.
2. Mix proportions (cement:sand): 1:1.5–2.
3. Consistency: Thick slurry, well stirred.
4. Application: Brushed and stippled to form deep, close textured key.
5. Curing: Controlled to achieve a firm bond to substrate.

541 Bonding agent application

1. General: Apply evenly to substrate to achieve effective bond of plaster/ render coat. Protect adjacent joinery and other surfaces.

Backings/ beads/ joints

636 Beads/ stops for external use

1. Standard: In accordance with BS EN 13914-1, Table 4.
2. Material: Galvanized steel to BS EN 13658-2

640 Beads/ stops generally

1. Location: External angles and stop ends except where specified otherwise.
2. Corners: Neat mitres at return angles.
3. Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
   3.1. Beads/ stops for external render: Fix mechanically.
4. Finishing: After coatings have been applied, remove surplus material while still wet, from surfaces of beads/ stops exposed to view.

650 Movement joints

1. Manufacturer: Contractor's choice
2. Installation: Centred over joint in substrate.

653 Sealant movement joints with stop bead edgings

1. Description:
2. Stop beads:
3. Installation: Centred over joint in substrate.

3.1. Joint width: 10mm

4. Sealant
   4.1. Manufacturer: Contractor's choice

Mouldings/ decorative plasterwork - Not Used

Internal plastering - Not Used

External rendering

810 Application generally

1. Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
2. Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
   2.1. Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
3. Drying: Prevent excessively rapid or localized drying out.

820 Dubbing out rendering

1. General: Correct substrate inaccuracies.
2. Thickness of any one coat (maximum): 16 mm.
   2.1. Total thickness (maximum): 20 mm, otherwise obtain instructions.
3. Mix: As undercoat.
4. Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Comb surface of each coat.

830 Anchored mesh reinforcement

1. Application of first undercoat: Through and round mesh to fully bond with solid substrate.

840 Undercoats generally

1. General: Rule to an even surface. Comb to provide a key for the next coat. Do not penetrate the coat.
2. Undercoats on metal lathing: Work well into interstices to obtain maximum key.

845 Thrown undercoats for lime:sand roughcast (harling)

1. Application of undercoats and dubbing out: Throw from a casting trowel or scoop.
2. Finishing: Press back to give an even thickness without smoothing the surface.

866 Final coat – roughcast (harling) finish

1. Finish: Left as cast with an even thickness and texture.

880 Curing and drying

1. General: Prevent premature setting and uneven drying of each coat.
2. Curing coatings: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water.
   2.1. Curing period (minimum): As the render manufacturer's recommendations
   2.2. Final coat: Hang sheeting clear of the final coat.

3. Drying: Allow each coat to dry thoroughly, with drying shrinkage substantially complete before applying next coat.
4. Protection: Protect from frost and rain.

885 Curing and drying nonhydraulic lime render

1. General: Prevent premature setting and uneven drying of each coat.
2. Curing coatings: Keep each coat damp by covering with sheeting hung clear of coating. Spray with water until sufficiently firm.
   2.1. Sheeting: Damp hessian and polyethylene sheeting
3. Shrinkage: Thoroughly consolidate/ scour each coat one or more times as necessary to control shrinkage.

Ω End of Section

R10
Rainwater drainage systems

General - Not Used

System performance - Not Used

Products

450 Insulation to internal pipelines

1. Description:: Install insulation to existing internal cast iron downpipes below drainage inlets to walkway
2. Material: Preformed flexible closed cell split tube
3. Thermal conductivity (maximum): 0.045 W/m·K
4. Manufacturer: Rockwool or equal & approved
   4.1. Product reference: RockLap H&P Pipe Sections or equal & approved
5. Thickness: 25 mm

Custom made products - Not Used

Execution

680 Fixing insulation to internal pipelines and gutters

1. Fixing: Secure and neat. Provide continuity at supports and leave no gaps. Fix split pipe insulation with the split on 'blind' side of pipeline.
   1.1. Method: Contractor's choice

Completion - Not Used

Ω End of Section

Z21
Mortars

Cement gauged mortars

110 Cement gauged mortar mixes

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

120 Sand for site made cement gauged masonry mortars

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

131 Ready-Mixed lime:sand for cement gauged masonry mortars

1. Standard: To BS EN 998-2.
2. Lime: Nonhydraulic to BS EN 459-1.
    2.1. Type: CL 90S.
3. Pigments for coloured mortars: To BS EN 12878.

160 Cements for mortars

1. Cement: To BS EN 197-1 and CE marked.
    1.1. Types: Portland cement, CEM I.
        1.1.1. Portland limestone cement, CEM II/A-L or CEM II/A-LL.
2. Portland slag cement, CEM II/B-S.
3. Portland fly ash cement, CEM II/B-V.
    3.1. Strength class: 32.5, 42.5 or 52.5.
4. White cement: To BS EN 197-1 and CE marked.
    4.1. Type: Portland cement, CEM I.
    4.2. Strength class: 52.5.
5. Sulfate resisting Portland cement
    5.1. Type: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
6. To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
    6.1. Strength class: 32.5, 42.5 or 52.5.
7. Masonry cement: To BS EN 413-1 and CE marked.
    7.1. Class: MC 12.5.

190 Retarded ready to use cement gauged mortar

1. Standard: To BS EN 998-2.
2. Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.
    2.1. Type: CL 90S.
3. Pigments for coloured mortars: To BS EN 12878.

4. Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
   4.1. Retempering: Restore workability with water only within prescribed time limits.

200 Storage of cement gauged mortar materials

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

Lime:sand mortars

310 Lime:sand mortar mixes

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

320 Sand for lime:sand masonry mortars

1. Type: Sharp, well graded.
   1.1. Quality, sampling and testing: To BS EN 13139.
   1.2. Grading/ Source: As specified elsewhere in relevant mortar mix items.

345 Admixtures for hydraulic lime:sand mortars

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

350 Storage of lime:sand mortar materials

1. Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
2. Ready prepared nonhydraulic lime putty: Prevent drying out and protect from frost.
3. Nonhydraulic lime:sand mortar: Store on clean bases or in clean containers that allow free drainage. Prevent drying out or wetting and protect from frost.
4. Bagged hydrated hydraulic lime: Store off the ground in dry conditions.

Ω End of Section

Specification created using NBS Chorus