

Preambles

St Anselm Hall, Manchester

Roof Replacement & Remedial Works

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C20

Demolition

General requirements

110 Desk study/ survey

1. Scope: before starting deconstruction work, examine available information, and carry out a survey of the existing structure to be deconstructed.
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:** All affected areas as identified on the tender drawings.
 - 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.
 - 2.11. **Special requirements:** Disposal methods for redundant materials including special measures for prescribed materials.
3. **Format of report:** Electronic.

120 Extent of deconstruction/ demolition

1. General: subject to retention requirements specified elsewhere, deconstruct/ demolish structures/ elements as detailed on the tender drawings.

140 Benchmarks

1. **Unrecorded benchmarks and other survey information:** Give notice when found. Do not remove marks or destroy the fabric on which they are found

150 Features to be retained

1. General: keep in place and protect all structures / features / fitting no specifically identified for removal. The Contractor is to note that the building and curtilage structures, fixtures, fittings etc. have statutory Grade II designation therefore suitable protection to be provided to retained elements and only those elements prescribed are to be removed.

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 by-laws and regulations of the relevant statutory authority or statutory undertaker

220 Location and marking of services

1. **Services affected by deconstruction/ demolition work:** Locate and mark positions

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 and organizations, where agreed prior to starting deconstruction or demolition.

250 Live drainage systems and watercourses

1. **Unrecorded features:** Give notice if unrecorded pipes, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered.
2. **Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:** Protect and maintain normal flow. Leave clean and in working order at completion.

260 Service bypass connections

1. **General:** Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction or demolition is taking place and to adjoining sites and properties
2. **Minimum notice to adjoining owners and all affected occupiers:** 48 hours.
3. **Timing:** Complete bypass of services before disconnection.

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 works
2. **Repairs to services:** Complete as directed, and to the satisfaction of the service authority or owner

Deconstruction and demolition work

310 Workmanship

1. **Operatives**
 - 1.1. Appropriately skilled and experienced for the type of work.
 - 1.2. Holding, or in training to obtain, relevant [Construction Skills](#) certification of competence.
2. **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. Hold appropriate qualification or training certificates for their role.

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. **Dust suppression and reduction:** Submit method statement for control, containment and clean-up regimes
 - 2.1. **Lead dust:** Submit documentation outlining additional lead dust controls

340 Health hazards

1. **Precautions:** Protect site operatives and the general public from health hazards, including those 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 and provide an assessment of impact.
3. **Damage:** Minimize disturbance. Repair promptly to ensure safety, stability, weather protection and security.
4. **Support to foundations:** Do not disturb.

370 Partly demolished structures

1. **General:** Leave in a stable condition, with adequate temporary support and bracing at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
2. **Temporary works:** Prevent overloading due to debris and machinery.
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:** Stop work and give immediate notice of suspected asbestos-containing materials when they are 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.

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 the site waste management plan.

Ω End of Section

C41

Repairing/ renovating/ conserving masonry

Generally/ preparation - Not Used

Workmanship generally

150 Power tools

1. **Usage for the removal of mortar:** Not permitted

155 Putlog scaffolding

1. **Usage:** Not permitted; unless by prior agreement. Details of fixing locations and rationale required to inform decision process.

160 Protection of masonry units and masonry

1. **Masonry units:** Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.
2. **Masonry:** Prevent damage, particularly to arrises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable nonstaining slats, boards, tarpaulins, etc. Remove protection on completion of the work.

170 Disturbance to retained masonry

1. **Retained masonry in the vicinity of repair works:** Disturb as little as possible.
2. **Existing retained masonry:** Do not cut or adjust to accommodate new or reused units.
3. **Retained loose masonry units and those vulnerable to movement during repair works:** Prop or wedge so as to be firmly and correctly positioned.

180 Workmanship

1. **Skill and experience of site operatives:** Appropriate for types of work on which they are employed.

185 Adverse weather

1. **General:** Do not use frozen materials or lay masonry units on frozen surfaces.
2. **Air temperature:** Do not bed masonry units or repoint:
 - 2.1. In cement-gauged mortars when ambient air temperature is at or below 3°C and falling or unless it is at least 1°C and rising, unless mortar has a minimum temperature of 4°C when laid and the masonry is adequately protected.
 - 2.2. In hydraulic lime:sand mortars when ambient air temperature is at or below 5°C and falling or unless it is at least 3°C and rising.
 - 2.3. In non-hydraulic lime:sand mortars in cold weather, unless approval is given.
3. **Temperature of the work:** Maintain above freezing until mortar has fully set.
4. **Rain, snow and dew:** Protect masonry by covering during precipitation, and at all times when work is not proceeding.
5. **Hot conditions and drying winds:** Prevent masonry from drying out rapidly.
6. **New mortar damaged by frost:** Rake out and replace.

Materials/ production/ accessories

215 Material samples

1. **Representative samples of designated materials:** Submit before placing orders.
 - 1.1. **Designated materials:**
 - Sands for bedding and pointing
 - Sands for mortar repairs
2. **Retention of samples:** Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.

220 Recording profiles

1. **Profiles:** Take measurements from existing masonry units, as instructed, to allow accurate matching of replacements.
2. **Recording in situ:** If there are no suitable joints to allow use of inserts, seek instructions.
3. **Drawings and templates:** Prepare as necessary. Templates must be clearly and indelibly marked to identify use and location.

260 Bricks

1. **Standard:** To [BS EN 771-1](#)
2. **Manufacturer:** Submit proposals
3. **Size:** Existing salvaged material from previous takedowns if suitable. Any shortfall to be made up from new/second hand brick exactly matching the existing in colour, texture, size and weathering qualities. Representative samples for comparison with the existing are to be provided for approval before confirming order.
4. **Special shapes:** Not required.

265 Salvaged and second-hand bricks

1. **Source:** Existing salvaged material from previous takedowns if suitable. Any shortfall to be made up from new/second hand brick exactly matching the existing in colour, texture, size and weathering qualities. Representative samples for comparison with the existing are to be provided for approval before confirming order.
2. **Condition**
 - 2.1. Free from matter such as mortar, plaster, paint, bituminous materials and organic growths.
 - 2.2. Sound, clean and reasonably free from cracks and chipped arrises.

Dismantling/ rebuilding

310 Dismantling masonry for reuse

1. **Masonry units to be reused:** Remove carefully and in one piece.
 - 1.1. **Treatment:** Clean off old mortar, organic growths and dirt, and leave units in a suitable condition for rebuilding.
 - 1.2. **Identification:** Mark each unit clearly and indelibly on a concealed face, indicating its original position in the construction. Transcribe makings to drawings/ photographs.

320 Rebuilding

1. **Description:** To isolated areas of external / internal masonry walls as required in conjunction with prescribed remedial works.
2. **Replacement materials:** Bricks, as clause 260 / 265.
3. **Mortar:** As section Z21.

- 3.1. **Mix:** Contractor to allow for obtaining analysis of existing mortar samples. Provisionally, to be confirmed following analysis of existing: 1 part NHL 3.5 hydraulic lime : 2.5 parts sand (nominally by volume).
- 3.2. **Sand source/ type:** Well-graded crushed stone / sand, to approval.
4. **Rebuilding:** To match previous face and joint lines, joint widths and bonding. Adequately bonded to retained work/ backing masonry, as appropriate.
5. **Joint surfaces:** Dampen, as necessary, to control suction.
6. **Laying masonry units:** On a full bed of mortar; perpend joints filled.
7. **Exposed faces:** Remove mortar and grout splashes immediately.
8. **Joints:** Mortar finished smooth and flush with masonry surface, to match existing.
9. **Other requirements:** None

Replacements and insertions

330 Preparation for replacement masonry

1. **Defective material:** Carefully remove to the extent agreed. Do not disturb, damage or mark adjacent retained masonry.
2. **Existing metal fixings, frame members, etc.:** Report when exposed.
3. **Redundant metal fixings:** Remove.
4. **Recesses:** Remove projections and loose material; leave joint surfaces in a suitable condition to receive replacement units. Protect from adverse weather if units are not to be placed immediately.

365 Replacement of bricks

1. **Description:** To isolated areas of external / internal masonry walls as required in conjunction with prescribed remedial works.
2. **Bricks:** Clay, as clause 260 or 265.
3. **Mortar:** As section Z21.
 - 3.1. **Standard:** Not applicable
 - 3.2. **Mix:** Provisionally, to be confirmed following analysis of existing: 1 part NHL 3.5 hydraulic lime : 2.5 parts sand.
 - 3.3. **Sand source/ type:** Well-graded crushed stone / sand, to approval
4. **Fixings:** Not required
5. **Joints:** Mortar finished smooth and flush with masonry surface, to match existing.
6. **Other requirements:** None

385 Laying replacement masonry units

1. **Exposed faces of new material:** Keep to agreed face lines.
2. **Faces, angles and features:** Align accurately. Set out carefully to ensure satisfactory junctions with existing masonry and maintain existing joint widths.
3. **Joint surfaces:** Dampen to control suction as necessary.
4. **Laying units:** On a full bed of mortar, all joints filled.
5. **Exposed faces:** Keep clear of mortar and grout.

410 Corroded metal fixings

1. **Removal:** Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
2. **Replacement:** Compatible fixings; obtain instructions.

Tooling/ dressing stone in situ - Not Used**Mortar repairs - Not Used****Crack repairs/ ties/ reinforcement - Not Used****Grouting rubble filled cores - Not Used****Pointing/ repointing****810 Preparation for repointing**

1. **Existing mortar:** Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of: 40 mm
 - 1.1. **Loose or friable mortar:** Seek instructions when mortar beyond specified recess depth is loose or friable and/ or if cavities are found.
2. **Raked joints:** Remove dust and debris.

820 Pointing

1. **Description:** To areas identified on the tender drawings and scaffold fixing repair locations.
2. **Preparation of joints:**
 - Rake out existing mortar.
 - Carefully brush away loose mortar.
 - Dampen joints, as necessary, to control suction.
3. **Mortar:** As section Z21.
 - 3.1. **Standard:** [BS EN 998-2](#)
 - 3.2. **Mix:** 1:3 ready-mixed non-hydraulic lime putty:sand
 - 3.3. **Sand source/ type:** Crushed stone fine pointing sand, to approval
4. **Joint profile/ finish:** Double struck, to match existing profile.

840 Pointing with tools/ irons

1. **General:** Press mortar well into joints using dampened pointing tools/ irons that fit into the joints, so that they are fully filled.
2. **Face of masonry:** Keep clear of mortar. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly.

860 Brushed finish to joints

1. **Timing:** After initial mortar set has taken place remove laitance and excess fines by brushing, to give a coarse texture. Do not compact mortar.

Ω End of Section

C51

Repairing/ renovating/ conserving timber

General

110 Inspection

1. **Purpose:** To confirm nature and extent of repair/ renovation/ conservation work shown on drawings, and described in survey reports and schedules of work
2. **Parties involved:**
 - Contract administrator
 - Contractor's representative
 - Structural engineer
3. **Timing:** As outlined within the Schedule of Works pertaining to each section of work.
4. **Instructions issued during inspection:** Confirm in writing, with drawings and schedules as required, before commencing work

130 Opening up

1. **Purpose:** To reveal previously concealed areas of structure or fabric not recorded during initial surveys
2. **Extent:** As detailed on the tender drawings and associated schedules in line with prescribed removals / take downs.
3. **Timing:** As outlined within the Schedule of Works pertaining to each section of work.
 - 3.1. **Period of notice:** At least two working days
4. **Retained building structure/ fabric:** Do not damage or destabilize

150 Timber procurement

1. Timber (including timber for wood-based products) obtained from well-managed forests and/ or plantations in accordance with:
 - 1.1. The laws governing forest management in the producer country or countries.
 - 1.2. International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
2. Documentation, provide either in accordance with the chain of custody certification scheme requirements:
 - 2.1. documentary evidence (that has been or can be independently verified) regarding the provenance of all timber supplied; or
 - 2.2. evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
3. **Chain of Custody Certification scheme:** In accordance with UK Government Timber Procurement Policy (UKTPP) i.e. FSC, GiB or PEFC

Structural repairs/ alterations - Not Used

Products

310 Structural softwood (graded direct to strength class)

1. **Description:** For Joists, Purlins, Rafter etc. following inspection and review.
2. **Strength class:** To [BS EN 338](#) C24
3. **Treatment**

- 3.1. **Preservative treatment:** Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
 - 3.1.1. **Design service life:** 40 years
- 3.2. **Fire-retardant impregnation treatment:** As section Z12 and [Wood Protection Association \(WPA\)](#) Type INT 1 (Internal, dry)
- 4. **Moisture content (maximum) at time of installation:** 12%
- 5. **Other requirements:** Wane not permitted.

350 Ungraded softwood

- 1. **Description:** For internal non-structural use (i.e. framing etc.).
- 2. **Quality of timber:** Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section
- 3. **Surface finish:** Sawn generally, regularised for wall battens.
- 4. **Treatment**
 - 4.1. **Preservative treatment:** Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.

490 Coach screws

- 1. **Description:** For 'sistering' floor / ceiling joists.
- 2. **Standard:** To [DIN 571](#)
- 3. **Material:** Stainless steel
- 4. **Tensile strength (minimum):** 550 N/mm²
- 5. **Finish as delivered:** Sherardized

Execution

600 Workmanship

- 1. **Skill and experience of site operatives:** Appropriate for types of work on which they are employed.
 - 1.1. **Documentary evidence:** Submit on request.

610 Temporary supports/ propping

- 1. **General:** Provide adequate temporary support at each stage of repair work to prevent damage, overstressing or uncontrolled collapse of any part of the structure.
- 2. **Bearings for temporary supports/ propping:** Suitable to carry loads throughout repair operations.

620 Protection of timber and wood components before and during installation

- 1. **Storage:** Keep dry, under cover, clear of the ground and with good ventilation. Support sections/ components on regularly spaced, level bearers on a dry, firm base.
- 2. **Handling:** Do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.

650 Dimensions generally

- 1. **Site dimensions:** Take as necessary before starting fabrication.
 - 1.1. **Discrepancies with drawings:** Report without delay and obtain instructions before proceeding.

665 Cross section dimensions of non-structural softwood

1. **Dimensions:** Dimensions in this specification and shown on drawings are finished sizes.
2. **Maximum permitted deviations from finished sizes:** As stated in [BS EN 1313-1](#), clause 6 for sawn sections.

680 Warping of timber

1. **Bow, spring, twist and cup:** Not greater than the limits set down in [BS 4978](#) or [BS EN 14081-1](#) for softwood, or [BS 5756](#) for hardwood

690 Processing treated timber

1. **Cutting and machining:** Carry out as much as possible before treatment.
2. **Extensively processed timber:** Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
3. **Surfaces exposed by minor cutting and/ or drilling:** Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

760 Repair of members – cutting out members

1. **Extent of timber removal:** Cut out full cross section of member where wood is defective or decayed, plus 300 mm of sound wood.
2. **Joint profile:** Square cut

860 Moisture content checking

1. **Procedure:** Check moisture content of timber sections with an approved electrical moisture meter.
2. **Test results:** Keep records of all tests. If moisture content falls outside specified range, obtain instructions.

Completion

910 Mechanically fastened joints

1. **General:** Inspect accessible bolted, coach screwed and timber pegged joints and tighten fasteners if necessary.
 - 1.1. **Timing:** On Completion and at end of Defects Liability Period or Rectification Period.

920 Dating timbers used in structural repairs

1. **Principal replacement members:** Mark by carving or branding with date of repair and, when appropriate, initials of carpenter, in characters 20-25 mm high.
2. **Location of marks:** Unobtrusive

Ω End of Section

C52

Fungus/ beetle eradication

To be read with preliminaries/ general conditions.

120 Associated work

1. **Work shown to be necessary by survey:** Ensure that dry conditions have been established and treatments to timber have been satisfactorily completed prior to commencement of associated works.

140 Opening up/ Cutting out/ Removal of building fabric

1. **Extent:** Areas as detailed within the tender documentation affected by direct water ingress; areas beyond that indicated submit proposals and seek approval.
2. **Retained building fabric:** Maintain stability and do not damage.

150 Drying out of building fabric

1. **Drying conditions:** Establish as soon as possible.
2. **Drying methods:** Submit proposals for achieving effective permanent ventilation

162 Preparation generally for preservative/ Fungicide treatments to timbers/ Masonry

1. **Furnishings/ components/ finishes within treated areas:** Prevent staining and other adverse effects.
2. **Water supplies:** Do not contaminate.
3. **Electrical equipment and supplies:** Isolate circuits as required and prevent ingress of treatment fluids.
4. **Cleanliness:** Remove loose material, dust and debris from surfaces to be treated.

210 Dry rot

1. **Fruiting bodies:** Do not disturb. If heat treatment is not employed, spray with fungicide.
 - 1.1. **Removal:** Remove carefully. Clean surfaces.
2. **Infected material to be removed:** Remove carefully, causing minimum disturbance and damage to adjacent building fabric; dispose of safely at a tip approved by a waste regulation authority. Prevent contamination of other parts of the building.
3. **Infected material to be retained:** Obtain instructions

220 Wet rot

1. **Decayed timber to be removed:** Cut out until sound timber is reached.
 - 1.1. **Disposal of previously treated timber:** At a tip approved by a waste regulation authority.
2. **Decayed timber to be retained:** Obtain instructions

240 Salvaged materials

1. **Sound, uninfected materials:** Give notice before reusing/ recycling.

310 Timber preservatives/ Masonry fungicides generally

1. **Products:** Registered by the [Health and Safety Executive \(HSE\)](#) and listed on the COPR of approved biocidal products.
2. **Application:** In accordance with statutory conditions of approval given on product labels and as manufacturers' recommendations.

323 Timber preservative treatment

1. **Description:** To existing retained timber exposed to dry rot fungal outbreak.
2. **Manufacturer:** Submit proposals
 - 2.1. **Product reference:** Third-party certified retreatment system
3. **Preservative type:** Water based glycol boron formulation.
4. **Tint:** Not required.
5. **Treatment method:** To suit type, scale and location of fungal attack and as per the manufacturer's recommendations.

343 Masonry fungicide treatment

1. **Manufacturer:** Submit proposals
2. **Fungicide type:** Water based glycol boron formulation
3. **Tint:** Not required
4. **Treatment method:** To suit type, scale and location of fungal attack as per the manufacturer's recommendations.

Ω End of Section

G20

Carpentry/ timber-framing/ first fixing

General

100 Alterations

1. **Cross references:** Section C51 - 'Repairing/ renovating/ conserving timber'.

105 Timber procurement

1. **Timber and wood-derived products::** To originate from an independently verifiable legal and sustainable source, in accordance with: the [UK Forestry Standard \(UKFS\)](#); the [UK Timber and Timber Products Regulations \(UKTR\)](#); and the [Convention on International Trade in Endangered Species of Wild Fauna and Flora \(CITES\)](#).
2. **Documentation:** Category A evidence ([UKTPP](#)).
3. **Chain of custody certification:** In accordance with the [UKTPP](#), i.e. the [Forest Stewardship Council \(FSC\)](#), [Grown in Britain \(GiB\)](#) or [Programme for the Endorsement of Forest Certification \(PEFC\)](#).

160 Grading and marking of structural timber

1. **Standard:** Timber strength graded by approved grading body to [BS EN 14081-1](#).
2. **Marking:** Timber to be individually marked in accordance with UK National Annex to [BS EN 14081-1](#), and be CE/ UKCA marked.
3. **Submittals :** Manufacturer to provide Declaration of Performance (DoP) certificate and CE/ UKCA marking documentation.
4. **Timber dry-graded for use in Service Class 1 and 2:** Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DG' (dry-graded).
5. **Timber wet-graded for use in Service Class 3:** Graded at an average moisture content above 20%.
6. **Structural timber members cut from graded sections:** Regraded to approval and marked accordingly.

Products

210 Structural softwood (graded direct to strength class)

1. **Description:** For Joists and Rafters.
2. **Strength grading:** Strength-graded and marked in accordance with [BS EN 14081-1](#).
3. **Performance**
 - 3.1. **Structure:** Refer to tender documentation and prescribed works:

3.1.1. **Service class:** Service Class 1, 2 and 3 as required for use:

Service class 1	Dry conditions characterized by a moisture content in the materials corresponding to a temperature of 20°C, and the relative humidity of the surrounding air only exceeding 65% for a few weeks per year. In such moisture conditions, most timber will attain an average moisture content not exceeding 12%.	Warm roofs, intermediate floors, timber-frame walls, internal and party walls.
Service class 2	Humid conditions characterized by a moisture content in materials corresponding to a temperature of 20°C, and the relative humidity of the surrounding air only exceeding 85% for a few weeks per year. In such moisture conditions, most timber will attain an average moisture content not exceeding 20%.	Cold roofs, ground floors, external timber frame walls, external uses where member is protected from direct wetting.
Service class 3	External conditions characterized by higher moisture contents than Service Class 2.	External us

4. **Product characteristics**

4.1. **Strength class:** C24.

4.2. **Target size:** To match existing profiles; to be verified upon exposure of element.

4.2.1. **Tolerance class:**

Tolerance Class 1 (BS EN 336)	
Thicknesses and widths ≤ 100 mm	(-1, +3) mm
Thicknesses and widths > 100 mm and ≤ 300 mm	(-2, +4) mm
Thicknesses and widths > 300 mm	(-3, +5) mm
Tolerance Class 2 (BS EN 336)	
Thicknesses and widths ≤ 100 mm	(-1, +1) mm
Thicknesses and widths > 100 mm and ≤ 300 mm	(-1.5, +1.5) mm
Thicknesses and widths > 300 mm	(-2, +2) mm

4.3. **Preservative treatment:** Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.

4.3.1. **Use class:**

- UC1 - All woods in normal pitched roofs excluding tiling battens and valley gutter members. Floorboards, architraves, internal joinery, skirtings. All wood in upper floors not built into solid external walls.
- UC2 - Tiling battens, wood in pitched roofs with high condensation risk, wood in flat roofs, ground floor joists, wood joists in upper floors built into external walls.
- UC3 - External joinery including roof soffits and fascia, bargeboards, etc., valley gutter wood.

4.4. **Flame-retardant treatment:** None required.

4.5. **Surface finish:** Exposed elements refer to [section M60](#).

270 Ungraded softwood

1. **Description:** For non-structural use and framing.

2. **Classification:** Timber classified in accordance with rules defined in [BS EN 942](#).

2.1. **Wood species:** Supplier's choice.

2.2. **Moisture content:**

- External joinery – maximum moisture content of supplied timber to be 19%.
- Internal joinery for buildings with room temperatures between 12–21° – maximum moisture content of supplied timber to be 13%.
- Internal joinery for buildings with room temperatures above 21° – maximum moisture content of supplied timber to be 10%.

3. **Quality of timber:** Free from decay, insect attached and with no knots wider than half the width of the section.

4. **Surface finish:** Sawn generally, regularized for battens.

5. **Surface coating:** Visible elements refer to [section M60](#).

310 Structural plywood

1. **Description:** For flat roofs, gutter linings etc.

2. **Standard:** Structural plywood to [BS EN 636](#), in compliance with [BS EN 13986](#).

2.1. **Marking :** Each board or package to be marked in accordance with clause 7 of [BS EN 13986](#), and to be CE/ UKCA marked.

2.2. **Submittals:** Manufacturer to provide Declaration of Performance (DoP) certificate and CE/ UKCA marking documentation.

3. **Performance**

3.1. **Structure:** Refer to tender documents and prescribed works.

3.1.1. **Service class:** Service Class 3.

4. **Product characteristics**

- 4.1. **Technical class:** Exterior.
- 4.2. **Bonding quality:** Class 3.
- 4.3. **Surface appearance:** In compliance with [BS EN 635-1](#).
 - 4.3.1. **Appearance class:** II.
 - 4.3.2. **Finish:** Unsanded.
- 4.4. **Dimensions**
 - 4.4.1. **Panel size:** Contractor's choice to suit requirements.
 - 4.4.2. **Nominal thickness:** 18 mm.
 - 4.4.3. **Tolerances:** Dimensional tolerances to [BS EN 315](#).
- 4.5. **Preservative treatment:** Plywood must be treated in compliance with [BS 8417](#).
 - 4.5.1. **Use class:** Roof sarking to Use Class 3.
 - 4.5.2. **Desired service life:** 50 years.
 - 4.5.3. **Preservative type:** Organic-solvent.
- 4.6. **Flame-retardant treatment:** Flame-retardant impregnation to [section Z12](#).
 - 4.6.1. **Service Environment:** Flame retardant impregnation to NBS section Z12 and Wood Protection Association Commodity Specification FR3, Type EXT.
- 4.7. **Surface coating:** None required.

311 Non-structural plywood

- 1. **Description:** For non-structural general use.
- 2. **Standard:** Non-structural plywood, for use in construction, to [BS EN 636](#), in compliance with [BS EN 13986](#).
 - 2.1. **Marking:** Each board or package to be marked in accordance with clause 7 of [BS EN 13986](#), and be CE/ UKCA marked.
 - 2.2. **Submittals:** Manufacturer to provide Declaration of Performance (DoP) certificate and CE/ UKCA marking documentation.
- 3. **Product characteristics**
 - 3.1. **Technical class:** Exterior.
 - 3.2. **Bonding quality:** Class 3.
 - 3.3. **Surface appearance:** In compliance with [BS EN 635-1](#).
 - 3.3.1. **Appearance class:** II.
 - 3.3.2. **Finish:** Unsanded.
 - 3.3.3. **Edges:** Square.
 - 3.4. **Dimensions**
 - 3.4.1. **Panel size:** Contractor's choice to suit requirements.
 - 3.4.2. **Nominal thickness:** 18 mm;
 - 3.4.3. **Tolerances:** Dimensional tolerances to [BS EN 315](#).
 - 3.5. **Preservative treatment:** Plywood must be treated in compliance with [BS 8417](#).
 - 3.5.1. **Use class:** External plywood to Use Class 4.
 - 3.5.2. **Desired service life:** 30 years.
 - 3.5.3. **Preservative type:** Organic-solvent.
 - 3.6. **Flame-retardant treatment:** Flame-retardant impregnation to [section Z12](#).
 - 3.6.1. **Service environment:** Type EXT.
 - 3.7. **Surface coating:** None required.

Workmanship generally

401 Cross section dimensions of structural softwood and hardwood

1. **Dimensions:** Dimensions in this specification are target sizes as defined in [BS EN 336](#).
2. **Tolerance class:** Tolerance Class 1 (T1) for sawn surfaces and Tolerance Class 2 (T2) for further processed surfaces. Maximum permitted deviations are as stated in [BS EN 336](#), clause 4.3. Tolerance Class 1 (T1) for sawn surfaces and Tolerance Class 2 (T2) for further processed surfaces. Maximum permitted deviations are as stated in [BS EN 336](#), clause 4.3.

402 Cross section dimensions of non-structural softwood

1. **Dimensions:** Dimensions in this specification are target sizes.
2. **Maximum permitted deviations:** Permitted deviations for non-structural sawn softwood to [BS EN 1313-1](#), clause 6 for sawn sections.

420 Warping of timber

1. **Bow, spring, twist and cup:** Maximum warp for structural timber shall be no greater than permitted values given in Table A.2 in [BS EN 14081-1](#).

430 Selection and use of timber

1. **Timber members damaged, crushed or split beyond the limits permitted by their grading:** Do not use.

435 Notches, holes and joints in timber

1. **Notches and holes**
 - 1.1. **General:** Avoid if possible and consult structural engineer before any cutting, notching or significant drilling of structural timber.
 - 1.2. **Sizes:** Minimum needed to accommodate services.
 - 1.3. **Position:** Do not locate near knots or other defects.
 - 1.4. **In same joist:** Minimum of 100 mm apart horizontally.
 - 1.5. **Notches in joists**
 - 1.5.1. **Position:** Locate at top. Form by sawing down to a drilled hole.
 - 1.5.2. **Depth (maximum):** 0.15 x joist depth.
 - 1.5.3. **Distance from supports:** Between 0.1 and 0.2 x span.
 - 1.6. **Holes in joists**
 - 1.6.1. **Position:** Locate on neutral axis.
 - 1.6.2. **Diameter (maximum):** 0.25 x joist depth.
 - 1.6.3. **Centres (minimum):** Three x diameter of largest hole.
 - 1.6.4. **Distance from supports:** Between 0.25 and 0.4 of span.
 - 1.7. **Notches in roof rafters, struts and truss members:** Not permitted.
 - 1.8. **Holes in struts and columns:** Locate on neutral axis.
 - 1.8.1. **Diameter (maximum):** 0.25 x minimum width of member.
 - 1.8.2. **Centres (minimum):** Three x diameter of largest hole.
 - 1.8.3. **Distance from ends:** Between 0.25 and 0.4 of span.
2. **Scarf joints, finger joints and splice plates:** Do not use without approval.

440 Processing treated timber

1. **Cutting and machining:** Carry out as much as possible before treatment.

2. **Extensively processed timber:** Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
3. **Surfaces exposed by minor cutting/ drilling:** Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

450 Moisture content

1. **Moisture content of wood and wood-based products at time of installation:**
 - Should not be more than 20% for service class 1 environments.
 - Should not be more than 20% for service class 2 environments.
 - Should not be more than 24% for service class 3 environments.

451 Moisture content testing

1. **Procedure:** When instructed, test timber sections with an approved electrical moisture meter.
2. **Test sample:** Test 5%, but not less than ten lengths of each cross section in the centre of the length.
3. **Test results:** 90% of values obtained to be within the specified range. Provide records of all tests.

530 Painted finishes

1. **Structural timber to be painted:** Primed as specified before delivery to site.

540 Clear finishes

1. **Structural timber to be clear finished:** Keep clean and apply first coat of specified finish before delivery to site.

550 Exposed timber

1. **Planed structural timber exposed to view in completed work:** Prevent damage to and marking of surfaces and arrises.

Jointing timber

570 Jointing/ fixing generally

1. **Generally:** Where not specified precisely, select methods of jointing and fixing and types, sizes and spacings of fasteners in compliance with [section Z20](#).

615 Bolt/ screw assemblies

1. **Description:** Rafter and Joist 'sister' connections.
2. **Designation:** Stainless steel bolts to [BS EN ISO 3506-1](#), Grade A4.
3. **Size:** M12 thru bolts with double sided toothed connectors.
4. **Coating applied by manufacturer:** Galvanised.
5. **Nuts and washers:** Material grade and finish to suit bolts.
6. **Washer dimensions:** Diameter/ side length of washers in contact with timber faces to be a minimum of three times bolt diameter, with a thickness of not less than 0.3 times bolt diameter.

Erection and installation

760 Temporary bracing

1. **Provision:** As necessary to maintain structural timber components in position and to ensure complete stability during construction.

775 Bearings

1. **Timber surfaces which are to transmit loads:** Finished to ensure close contact over the whole of the designed bearing area.
2. **Packings:** Where provided, to cover the whole of the designed bearing area.
 - 2.1. **Crushing strength:** Not less than timber being supported.
 - 2.2. **In external or inaccessible locations:** Rot and corrosion proof.

850 Inspection generally

1. **Structural timber-work:** Give reasonable notice before covering up.

860 Bolted joint inspection

1. **Timing:** Inspect all accessible bolts at the end of the defects liability period and tighten if necessary.

910 Eaves soffit ventilation

1. **Soffit boards:** Fixed to leave a continuous ventilation opening not less than 25 000 mm²/m for full length of eaves.
2. **Insect mesh:** 3-4 mm mesh screen fixed across the opening to prevent large insect entry.

950 Fascias/ barges/ soffits

1. **Description:** Replacement sections of existing soffits, fascia, kneelers, eaves gutter boards where identified to be defective following inspection.
2. **Material:** Softwood sawn timber.
3. **Finish:** Sanded; primed for coating in accordance with specification M60.
4. **Colour:** To match existing.
5. **Nominal depth:** To match existing.
6. **Edge profile:** Square.
7. **Accessories:** As required to complete the installation.
8. **Other requirements:** Profiles to be confirmed and existing profiles matched once suitable access provided.
9. **Support:** 50 x 38 mm preservative treated softwood at maximum 500mm centres.
 - 9.1. Provide additional support at joints.
10. **Fixings:** 65 mm polytop stainless steel nails.

Ω End of Section

H62

Natural slating

Types of slating

105 Roof slating Using New Slates

1. **Description:** Existing pitched roofs as identified on the tender drawings and associated schedules.
2. **Substrate:**
 - Existing square edged sawn softwood sarking boards over rafters.
 - Existing rafters at centres to be confirmed.

Limited observations of roof spaces have identified evidence of both slating battens direct to rafters and also sarking boards over rafters. The Contractor is to validate and confirm existing construction once existing coverings removed.

The Contractor is to report any existing underlays to the CA and allow for removal where relevant, following confirmation from CA.
3. **Pitch:** Nominally 35°; Contractor to verify.
4. **Underlay:** Proctor Group Dalex Roofshield, or equivalent, Vapour Permeable Underlay.
 - 4.1. **Direction:** Parallel to eaves.
 - 4.2. **Headlap (minimum):** 100 mm.
5. **Counter battens**
 - 5.1. **Counter batten size:** 38 x 25 mm.
 - 5.2. **Counter batten fixing:** 65 x 3.35 mm galvanized annular ring shank nails.
6. **Battens**
 - 6.1. **Batten size:** 50 x 25 mm.
 - 6.2. **Batten fixing:** 65 x 3.35 mm galvanized annular ring shank nails.
7. **Slates**
 - 7.1. **Procurement and samples:** Where new slates are required, the Contractor is to allow for obtaining samples from the listed suppliers in order to identify suitable match to existing once suitable access available. Alternative UK natural slates will be considered, the Contractor is to provide details as required. All replacement slates are to be approved by the CA and Local Authority representative prior to procurement.
 - 7.2. **Supplier:** Burlington Slate Ltd, Cavendish House, Kirkby-in-Furness, Cumbria, LA17 7UN
 - 7.2.1. **Product reference:** Burlington Blue.
 - 7.3. **Supplier:** Welsh Slate, Penrhyn Quarry, Bethesda, Bangor, Gwynedd, LL57 4YG
 - 7.3.1. **Product reference:**
 - Penrhyn Heath Blue Natural Roofing Slate.
 - Ffestiniog Blue Grey Natural Roofing Slate.
 - Cwt-Y-Bugall Dark Blue Grey Natural Roofing Slate.
 - 7.4. **Type:** Blue-grey natural roofing slate; samples to be approved.
 - 7.5. **Size:** Sized to match existing coursing and gauge.
 - 7.6. **Headlap (minimum):** 100/150mm.
8. **Fixing:** Slating to be laid with laps and coursing (including diminishing where applicable) to match existing. The difference between one gauge and the next to be 1/4". Head nail holes to be not less than 25 mm from the head of the slate. Slates to be fixed with large headed copper clout nails with jagged shanks to BS 1202, Part 2, Table 2, 12 SWG and 50 mm long.
9. **Accessories:** Eaves support tray where applicable.

105 Roof slating Using Retained Slates

1. **Description:** Existing pitched roofs as identified on the tender drawings and associated schedules.

2. **Substrate:**

- Existing square edged sawn softwood sarking boards over rafters.
- Existing rafters at centres to be confirmed.

Limited observations of roof spaces have identified evidence of both slating battens direct to rafters and also sarking boards over rafters. The Contractor is to validate and confirm existing construction once existing coverings removed.

The Contractor is to report any existing underlays to the CA and allow for removal where relevant, following confirmation from CA.

3. **Pitch:** Nominally 35°; Contractor to verify.

4. **Underlay:** Proctor Group Dalex Roofshield, or equivalent, Vapour Permeable Underlay.

4.1. **Direction:** Parallel to eaves.

4.2. **Headlap (minimum):** 100 mm.

5. **Counter battens**

5.1. **Counter batten size:** 38 x 25 mm.

5.2. **Counter batten fixing:** 65 x 3.35 mm galvanized annular ring shank nails.

6. **Battens**

6.1. **Batten size:** 50 x 25 mm.

6.2. **Batten fixing:** 65 x 3.35 mm galvanized annular ring shank nails.

7. **Slates**

7.1. **Salvaged slates:** Where roof pitches are to be stripped and re-slatted existing slates are to be carefully removed and stored for re-instatement. The Contractor is to allow for sorting removed slates before re-covering and allow for re-holing / dressing as necessary. All slates should 'ring' when struck, and all cracked, dull, soft or pitted slates are to be discarded. Head nail holes to be not less than 25mm from the head of the slate. Any shortfall in required re-covering quantities is to be confirmed with the CA prior to re-slating. Replacement / shortfall slates are to be procured from suitable UK quarries in accordance with the specification requirements; new or sound second-hand slates are to match existing in type, size, thickness, colour and texture. samples are to be provided and be approved by the ca prior to re-instatement.

Allow for cleaning all loose debris from sound, retained slates and sorting in accordance to length and thickness and arranged in stacks equivalent to each course length, stacked vertically on their heads (i.e. peg holes downwards).

The Contractor is to allow for a 60% retained / 40% new.

8. **Fixing:** Slating to be laid with laps and coursing (including diminishing where applicable) to match existing. Slates to be single nailed except for the top course and every third course which are to be doubled nailed

to prevent wind uplift. The difference between one gauge and the next to be 1/4". Head nail holes to be not less than 25 mm from the head of the slate. Slates to be fixed with large headed copper clout nails with jagged shanks to BS 1202, Part 2, Table 2, 12 SWG and 50 mm long.

9. **Accessories:** Eaves support tray where applicable.

Performance

210 Basic workmanship

1. **General:** Fix slating and accessories to make the whole sound and weathertight at earliest opportunity.
2. **Setting out:** To true lines and regular appearance, with neat fit at edges, junctions and features.
3. **Fixings for slating accessories:** As recommended by manufacturer.
4. **Gutters and pipes:** Keep free of debris. Clean out at completion.

220 Removing existing slating

1. **General:** Carefully remove slates, battens, underlay, etc. with minimum disturbance of adjacent retained slating.
2. **Undamaged slates:** Set aside for reuse. The Contractor is to allow for sorting removed slates before re-covering and allow for re-holing / dressing as necessary. All slates should 'ring' when struck, and all cracked, dull, soft or pitted slates are to be discarded. Head nail holes to be not less than 25mm from the head of the slate. Allow for cleaning all loose debris from sound, retained slates and sorting in accordance to length and thickness and arranged in stacks equivalent to each course length, stacked vertically on their heads (i.e. peg holes downwards).

235 Vapour-permeable sheets Type B

1. **Manufacturer:** [A Proctor Group Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** The Haugh
Blairgowrie
Perthshire
PH10 7ER
 - 1.1.2. **Telephone:** [+44 \(0\)1250 872261](tel:+441250872261)
 - 1.1.3. **Web:** <https://www.proctorgroup.com>
 - 1.1.4. **Email:** reception@proctorgroup.com
 - 1.2. **Product reference:** [Proctor Air® - Roofing Membrane](#)
2. **Standard:** To EN 13859-1.
3. **Performance criteria**
 - 3.1. **Water vapour properties:** Water vapour resistance to EN ISO 12572, 0.015 m; 0.075 MN·s/g.
 - 3.2. **Fire performance:** Reaction to fire: To EN 13501-1, Class F.
 - 3.3. **Tensile properties:** Tensile strength before ageing to EN 12311-1, 420 N (MD); 336 N (CD).
4. **Class (minimum):** W1.
5. **Material:** Polypropylene.
6. **Weight (minimum):** 170 g/m².
7. **Air permeability:** To EN 12114, 35 m³/m².h.50Pa.
8. **Elongation to break:** To EN 12311-1, 95% (MD); 94% (CD).
9. **Roll size:** 1 x 50 m.
10. **Tear resistance MD/CD:** To EN 12310-1, 188 N (MD); 172 N (CD).

240 Installing underlay

1. **Handling:** Do not tear or puncture.
2. **Laying:** Maintain consistent tautness.
3. **Vertical laps (minimum):** 100 mm wide, coinciding with supports and securely fixed.

4. **Fixing:** Galvanized steel, copper or aluminium 20 x 3 mm extra-large clout head nails.
5. **Eaves:** Where exposed, use an external-grade (UV-resistant) underlay or a proprietary eaves support product.
6. **Penetrations:** Use proprietary underlay seals or cut underlay to give a watertight fit around pipes and components.
7. **Ventilation paths:** Do not obstruct.

245 Battens/ counter battens

1. **Timber:** Sawn softwood.
 - 1.1. **Species:** In accordance with [BS 5534](#), clause 4.11.1.
 - 1.2. **Permissible characteristics and defects:** Not to exceed limits in [BS 5534](#), annex D.
 - 1.3. **Grading:** Factory pre-graded with site check for grading of knots, wane, fissures and splits.
 - 1.4. **Moisture content at time of fixing and covering (maximum):** 22%.
2. **Preservative treatment:** As [section Z12](#) and [Wood Protection Association \(WPA\) publication Code of practice: Industrial Wood Preservation](#).

255 Fixing counter battens on rigid sarking

1. **Fixing:** Through rigid sarking into rafters at not more than 300 mm centres.

259 Fixing counter battens on rafters

1. **Fixing:** Into rafters at not more than 300 mm centres.

265 Fixing battens

1. **Setting out:** Align parallel to ridge in straight horizontal lines to gauge of slates. Align on adjacent areas.
2. **Batten length (minimum):** Sufficient to span over three supports.
3. **Joints in length:** Square cut. Butt centrally on supports. Joints must not occur more than once in any group of four battens on one support.
4. **Additional battens:** Provide where unsupported laps in underlay occur between battens.
5. **Fixing:** Each batten to each support. Splay fix at joints in length.

275 Fixing slates

1. **Setting out:** Lay slates with an even overall appearance with slightly open (maximum 5 mm) butt joints. Align tails.
2. **Slate thickness:** Consistent in any one course. Lay with thicker end as tail.
3. **Ends of courses:** Use extra-wide slates to maintain bond and to ensure that cut slates are as large as possible. Do not use slates less than 150 mm wide.
4. **Top course:** Head-nail short course to maintain gauge.
5. **Fixing:**
 - Under eaves: twice head nailed.
 - Eaves course: 1 head nail and 1 cheek nail.
 - 2nd course: 1 head nail.
 - 3rd course: 1 head nail.
 - 4th course: 1 head nail and 1 cheek nail.
 - 5th course: 1 head nail.
 - 6th course: 1 head nail
 - 7th course: 1 head nail and 1 cheek nail etc.
 - Topper course: Twice head nailed through bedding mortar whilst mortar is still curing.

- Perimeters, valleys, penetrations etc.: No less than two fixings per slate
- 5.1. **Nails:** Copper clout to [BS 1202-2](#).
- 5.2. **Nail dimensions:** Determine in accordance with [BS 5534](#) to suit site exposure, withdrawal resistance and slate supplier's recommendations.

290 Mortar bedding/ pointing

1. **Mortar:** As [section Z21](#), 1:1:6 lime:cement:sand, with plasticizing admixtures permitted.
 - 1.1. **Bond strength providing resistance to uplift:** In accordance with [BS 5534](#).
2. **Weather:** Do not use in wet or frosty conditions or when imminent.
3. **Preparation of concrete and clay tile accessories to be bedded:** Wet and drain surface water before fixing.
4. **Appearance:** Finish neatly as work proceeds and remove residue.

Roof slating edges/ junctions/ features

305 Generally

1. **Fittings and accessories:** As recommended by slate supplier, do not improvise.
 - 1.1. **Exposed fittings and accessories:** To match slate colour and finish.
2. **Cut slates:** Cut only where necessary, to give straight, clean edges.
3. **Flashings:** Fix with or immediately after slating. Form neatly.

355 Ventilator or eaves trays

1. **Fixing:** To provide free passage of air over insulation.
2. **Underlay support:** 12 mm plywood, as section G20.
 - 2.1. **Extent:** Continuous to prevent water retaining troughs.
3. **Gutter:** Dress underlay or underlay support tray to form drip into gutter.
4. **Undercourse and first course slates:** Fix with tails projecting 50 mm over gutter or to centre of gutter, whichever dimension is the lesser.

365 Unventilated eaves

1. **Underlay support:** 12 mm plywood, as section G20.
 - 1.1. **Extent:** Continuous to prevent water retaining troughs.
2. **Gutter:** Dress underlay or underlay support tray to form drip into gutter.
3. **Undercourse and first course slates:** Fix with tails projecting 50 mm over gutter or to centre of gutter, whichever dimension is the lesser.

555 Mortar-bedded and mechanically fixed tile hips

1. **Underlay:** Lay courses over hip.
 - 1.1. **Overlaps (minimum):** 150 mm.
2. **Hip tile fixing battens:** 38 x 25 mm supported on batten brackets.
3. **Roof slates:** Cut and fix closely at hip.
4. **Hip irons:** Galvanized steel in accordance with [BS 5534](#), clause 4.15.4.
 - 4.1. **Fixing:** To hip rafter or hip batten with not less than two zinc-coated steel screws.
5. **Hip tiles**
 - 5.1. Existing hip tiles are to be carefully removed, cleaned and stored for reinstatement. Additional replacement units are to be sourced as required to match existing in profile, material and appearance.
 - 5.2. **Bedding:** On mortar, continuous to edges and solid to joints.

- 5.3. **Fixing:** Secure all hip tiles to hip rafters or hip tile fixing battens with self-sealing non-ferrous through fixings.
- 5.4. **Bottom hip tiles:** Shape neatly to align with corner of eaves and fill ends with mortar and slips of tile finished flush.

660 Side abutments

1. **Underlay:** Turn up not less than 100 mm at abutments.
2. **Abutment slates:** Cut as necessary. Fix close to abutments.
3. **Soakers:** Interleave with abutment slates. Fix by turning down over head of abutment slates.

670 Top edge abutments

1. **Underlay:** Turn up not less than 100 mm at abutments.
2. **Top slate courses:** Fix close to abutments.

690 Roof windows

1. **Underlay:** Turn up not less than 100 mm at window surrounds under integral flashings/ soakers.
2. **Roof slates:** Cut as necessary and fix closely all round.

740 Mortar-bedded and mechanically fixed tile ridges

1. **Underlay:** Lay courses over ridge.
 - 1.1. **Overlap (minimum):** 150 mm.
2. **Ridge tile fixing battens:** 50 x 25 mm.

The top course of slates should finish high enough so that the ridge tiles cover them by minimum 75mm. The top tile batten should be set down from the ridge.
3. **Ridge tiles**
 - 3.1. **Tiles:** Existing tiles to be retained; cleaned and re-instated. Where replacement units are required due to material failure replacements are to be sourced to match existing and approved by the CA.
 - 3.2. **Bedding:** On mortar, continuous to edges and solid to joints.
 - 3.3. **Fixing:** Secure all ridge tiles to ridge boards or supplementary ridge battens with self-sealing non-ferrous fixings.
 - 3.4. **Gable end ridge tiles:** Fill ends with mortar and slips of tiles finished flush.

800 Change of roof pitch

1. **Slating substrate work:** Fix timber tilting fillet to support flashing and courses of slates above change of pitch.
2. **Roof slates:** Make weathertight with flashing.
 - 2.1. **Courses above change of pitch:** Fix undercourse and first course slates.
 - 2.2. **Courses below change of pitch:** Cut top two courses as necessary to maintain gauge. Head-nail top course.

Vertical slating edges/ junctions - Not Used

Ω End of Section

H71**Lead sheet fully supported roof and wall coverings/ flashings****Types of leadwork****209 Gutter lining – box, parapet, tapered and flat roof valley**

1. **Substrate:** Existing assumed timber boards. The Contractor is to notify any deficiencies in substrate prior to relining (provisionally should reforming gutters be required new 24mm softwood sarking boards, with new sumps to outlet point to be provided). Assess and provide report on condition of existing gutter board substrates aim is to reuse existing sarking where sound - subject to review by CA following receipt of report from the Contractor.
 - 1.1. **Preparation:** Make good, as clause 620 and 640; Contractor to establish and give notice if it is unsuitable.
2. **Sheet underlay:** Building paper to [BS 1521](#), Class A1 as clause 645.
3. **Type of lead:** Rolled to [BS EN 12588](#)
 - 3.1. **Thickness:** 3.55 mm (Code 8)
4. **Pretreatment:** Apply chalk slurry coat to the underside of the lead and allow it to dry before laying, followed by a chalk paste coat after bossing but before final fixing
5. **Joints in direction of fall:** Wood-cored roll
 - 5.1. **Spacing:** On centre line of gutter
6. **Cross joints:** Minimum 70 mm drip without splash lap and as per clause 860.
 - 6.1. **Spacing:** Not exceeding 3000 mm.
7. **Outlets:** Reline existing catch pits and lead chute outlets to hopper heads, existing discharge locations to be retained and replicated.

230 Valley gutter lining to slate/ tile roofs

1. **Substrate:** Existing timber boarding and / or plywood on rafters (centres to be confirmed).

Limited observations of roof spaces have identified evidence of both slating battens direct to rafters and also sarking boards over rafters. The Contractor is to validate and confirm existing valley construction once existing coverings removed.
2. **Preparation:** Make good, as clause 620 and 640; Contractor to establish and give notice if it is unsuitable.
3. **Sheet underlay:** Building paper to [BS 1521](#), Class A1
4. **Type of lead:** Rolled to [BS EN 12588](#)
 - 4.1. **Thickness:** 3.15 mm (Code 7)
5. **Pretreatment:** Apply chalk slurry coat to the underside of the lead and allow it to dry before laying, followed by a chalk paste coat after bossing but before final fixing
6. **Laying:** Over and beyond tilting fillets
7. **Lengths:** not more than: 1500 mm.
 - 7.1. **Cross joints:** lapped not less than:150 mm.
 - 7.2. **Fixing:** Sacrificial flashings fixed below line of slates as clause 500.

410 Apron flashings

1. **Description:** This clause contains the principal components for the apron flashings generally; refer to tender drawings for lead flashing requirements.
2. **Lead sheet**
 - 2.1. **Type of lead:** Rolled to BS EN 12588.

2.2. **Thickness:** 2.00 or 2.24 mm (Code 5)

3. Dimensions

3.1. Lengths: not more than 1500 mm.

3.2. **End-to-end joints:** Laps of not less than 150 mm.

3.3. **Upstand:** Not less than 75 mm.

3.4. Cover to abutment: not less than: 100 mm.

4. **Fixing:** Plugged and screwed with stainless steel screws and washers into raggle formed in upstand. Lower edge held in position by welded Code 5 lead clips at max 400mm centres.

420 Cover flashings

1. **Description:** This clause contains the principal components for the apron flashings generally; refer to tender drawings for lead flashing requirements.

2. **Sheet underlay:** Building paper to BS 1521, Class A1

3. Lead sheet

3.1. **Type of lead:** Rolled to BS EN 12588.

3.2. **Thickness:** 2.65 mm (Code 6)

4. Dimensions

4.1. Lengths: not more than: 1500 mm.

4.2. **End-to-end joints:** Laps of not less than 150 mm.

4.3. **Cover:** Overlap to upstand of not less than 100 mm.

5. **Fixing:** Plugged and screwed with stainless steel screws and washers into raggle formed in upstand. Lower edge held in position by welded Code 6 lead clips at max 400mm centres.

440 Soakers and step flashings

1. **Description:** This clause contains the principal components for the apron flashings generally; refer to tender drawings for lead flashing requirements.

2. Lead sheet

2.1. **Type of lead:** Rolled to BS EN 12588.

2.2. **Thickness:** 1.75-2.00 mm (Code 4)

2.3. Dimensions

2.3.1. **Length:** Slate/ tile gauge + lap + 25mm.

2.3.2. **Upstand:** Not less than 100mm.

2.3.3. **Underlay:** Not less than 100mm.

2.4. **Fixing:** By roofer.

3. Soakers:

3.1. Dimensions:

3.1.1. **Length:** Slate/ tile gauge + lap + 25mm.

3.1.2. **Upstand:** Not less than 75mm.

3.1.3. **Underlay:** Not less than 100mm.

3.2. **Fixing:** Fold the top edge over the top of the slate to prevent slipping. Ensure the vertical part of the soaker extends up the wall by at least 75mm.

4. Step flashings

4.1. Dimensions

4.1.1. Lengths: not more than: 1500 mm.

4.1.2. **End-to-end joints:** Laps of not less than 100mm.

4.1.3. **Cover:** Overlap to soaker upstands of not less than 75 mm.

- 4.2. **Fixing:** Lead wedges at every course.

472 Chimney flashings to slate/ plain tile roofs

1. **Description:** This clause contains the principal components for the replacement OF chimney flashings to pitched roofs.
2. **Lead front apron**
 - 2.1. **Type of lead:** Rolled to BS EN 12588.
 - 2.2. **Thickness:** 2.00 or 2.24 mm (Code 5)
 - 2.3. **Dimensions**
 - 2.3.1. **Length:** Width of chimney, plus not less than 150 mm underlap to each side flashing.
 - 2.3.2. **Upstand:** Not less than 75 mm.
 - 2.3.3. **Cover to roof:** not less than: 150 mm.
 - 2.4. **Fixing:** Lead wedges into bed joint.
3. **Lead soakers**
 - 3.1. **Type of lead:** Rolled to BS EN 12588.
 - 3.2. **Thickness:** 1.25 or 1.32 mm (Code 3).
 - 3.3. **Dimensions**
 - 3.3.1. **Length:** Slate/ tile gauge + lap + 25 mm.
 - 3.3.2. **Upstand:** Not less than 75 mm.
 - 3.3.3. **Underlap:** Not less than 100 mm.
4. **Lead step flashings**
 - 4.1. **Type of lead:** Rolled to BS EN 12588.
 - 4.2. **Thickness:** 2.00 or 2.24 mm (Code 5)
 - 4.3. **Dimensions**
 - 4.3.1. **Lengths:** Not more than 1500mm.
 - 4.3.2. **End-to-end joints:** Laps of not less than 100 mm.
 - 4.3.3. **Front end:** Turn 75 mm around chimney over apron.
 - 4.3.4. **Cover:** Overlap to soaker upstands of not less than 75 mm.
 - 4.4. **Fixing:** Lead wedges at every course.
5. **Lead back gutter**
 - 5.1. **Type of lead:** Rolled to BS EN 12588.
 - 5.2. **Thickness:** 2.00 or 2.24 mm (Code 5)
 - 5.3. **Dimensions**
 - 5.3.1. **Length:** Width of chimney, plus not less than 100 mm overlap to each side flashing.
 - 5.3.2. **Upstand:** Not less than 100 mm.
 - 5.3.3. **Gutter sole:** Not less than 150 mm.
 - 5.3.4. **Cover up roof:** Not less than 225 mm.
6. **Lead back gutter cover flashing**
 - 6.1. **Thickness:** 2.00 or 2.24 mm (Code 5)
 - 6.2. **Dimensions**
 - 6.2.1. **Length:** Width of chimney, plus not less than 100 mm overlap to each side flashing.
 - 6.2.2. **Cover:** Overlap to back gutter upstand of not less than 75 mm.
 - 6.3. **Fixing:** Lead wedges into bed joint.

500 Sacrificial flashings beneath slate drips

1. Lead
 - 1.1. **Thickness:** 1.75 or 1.80mm (Code 4).
 - 1.2. **Size:** 150 - 200mm width.
 - 1.3. **Laps:** 100mm.
2. Dimensions
 - 2.1. **Lengths:** Not more than 1500mm.
3. **Fixing:** Code 4 lead clips welded to gutter lining at 500mm centres.
4. **Other requirements:** Flashing to extend 100mm beyond the line of the slates and up against the tilting fillet beneath the slates.

General requirements/ preparatory work

510 Workmanship generally

1. **Standard:** In accordance with BS EN 14783, BS EN 12588, BS 6915 and the latest edition of [Rolled lead sheet - the complete manual](#) published by the [Lead Sheet Training Academy \(LSTA\)](#).
2. **Fabrication and fixing:** To provide a secure, free-draining and completely weathertight installation.
3. **Operatives:** Trained in the application of lead coverings/ flashings. Submit records of experience on request.
4. **Preforming:** Measure, mark, cut and form lead prior to assembly, wherever possible.
5. **Marking out:** With pencil, chalk or crayon. Do not use scribes or other sharp instruments without approval.
6. **Bossing and forming:** Straight and regular bends, leaving sheets free from ripples, kinks, buckling and cracks.
7. **Solder:** Use only where specified.
8. **Sharp metal edges:** Fold under or remove as work proceeds.
9. **Finished work:** Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
10. **Protection:** Prevent staining, discolouration and damage by subsequent works.

515 Lead welding

1. **In situ lead welding:** Is permitted, subject to completion of a 'hot work permit' form and compliance with its requirements. No 'hot works' permitted after 1pm. Where possible all hot works are to be carried out on a separate scaffolding from the main building.

520 Lead sheet

1. **Production method:**
 - Rolled, to BS EN 12588 Rolled.
 - BS EN 12588 Machine-cast and [British Board of Agrément \(BBA\)](#)-certified.
 - Sand-cast, from lead that is free from bitumen, solder, other impurities, inclusions, laminations, cracks, air, pinholes and blowholes. To code thicknesses but with a tolerance (by weight) of +/-10%.
2. **Identification:** Labelled to show compliance with the harmonized standard (hEN) BS EN 14783 where appropriate, and detail of the thickness/ code, weight and type.

560 Control samples

1. **General:** Complete areas of the finished work, and obtain approval of appearance before proceeding:

2. **Size:** To be confirmed and agreed with the CA.
3. **Location:** To be confirmed and agreed with the CA.

610 Suitability of substrates

1. **Condition:** Dry and free of dust, debris, grease and other deleterious matter.

620 Preparation of existing timber substrates

1. **Remedial work:** Adjust boards to level and securely fix. Punch in protruding fasteners, and plane or sand them to achieve an even surface.
2. **Defective boards:** Give notice.
3. **Moisture content:** Not more than 22% at time of covering. Give notice if greater than 16%.

630 Plywood overlay

1. **Standard:** Manufactured to an approved national standard and to BS EN 636, section 8 (plywood for use in humid conditions).
 - 1.1. **Sheet size:** 2400 or 1200 x 1200 mm and 9 mm thick.
2. **Moisture content:** Not more than 22% at time of covering. Give notice if greater than 16%.
3. **Laying:** Parallel to perimeter edges, with cross joints staggered, and a 0.5–1 mm gap between sheets.
4. **Fixing:** With 25 mm annular ringed shank copper or stainless steel nails, at 300 mm grid centres over the area of each sheet, and at 150 mm centres along edges, set in 10 mm from perimeter edges and in pairs across joints.
 - 4.1. **Nail heads:** Set flush with or just below the surface.

640 Timber for use with leadwork

1. **Quality:** Planed, free from wane, pitch pockets, decay and insect attack (ambrosia beetle excepted).
2. **Moisture content:** Not more than 22% at the time of fixing and covering. Give notice if greater than 16%.
3. **Preservative treatment:** Organic solvent as section Z12 and Wood Protection Association Commodity Specification C8.

645 Sheet underlay

1. **Material:** Building paper to [BS 1521](#), Class A1

650 Laying sheet underlay

1. **Handling:** Prevent tears and punctures.
2. **Laying:** Butt or overlap jointed on to a dry substrate.
 - 2.1. **Fixing edges:** With copper or stainless steel staples, or clout nails.
 - 2.2. **Roof edges and abutments:** Do not lay over roof edges, but do turn up at abutments
 - 2.3. **Wood core rolls:** Fixed over sheet underlay.
 - 2.4. **Protection:** Keep dry and cover with lead at the earliest opportunity.

Fixing lead

705 Head fixing lead sheet

1. **Top edge:** Secured with two rows of fixings, 25 mm and 50 mm from the top edge of the sheet, at 75 mm centres in each row, evenly spaced and staggered.

2. **Sheets less than 500 mm deep:** May be secured with one row of fixings, 25 mm from the top edge of the sheet, and evenly spaced at 50 mm centres.

710 Fixings

1. **Nails to timber substrates:** Copper clout nails to BS 1202-2, or stainless steel (austenitic) clout nails to BS 1202-1.
 - 1.1. **Shank type:** Annular ringed, helical threaded or serrated.
 - 1.2. **Shank diameter:** Not less than 2.65 mm for light duty, or 3.35 mm for heavy duty.
 - 1.3. **Length:** Not less than 20 mm, or equal to substrate thickness.
2. **Screws to concrete or masonry substrates:** Brass or stainless steel.
 - 2.1. **Diameter:** Not less than 3.35 mm.
 - 2.2. **Length:** Not less than 19 mm.
 - 2.3. **Washers and plastic plugs:** Compatible with screws and lead.
3. **Screws to composite metal decks:** Self-tapping, as recommended by the deck and lead manufacturer/ supplier for clips.

715 Clips

1. **Material**
 - 1.1. **Lead clips:** Cut from sheets of same thickness/ code as sheet being secured.
 - 1.2. **Copper clips**
 - 1.2.1. **Thickness:** 0.70 mm
 - 1.2.2. **Temper:** BS EN 1172, Designation R220 in welts, seams and rolls; R240 elsewhere, and dipped in solder if exposed to view.
 - 1.3. **Stainless steel clips**
 - 1.3.1. **Thickness:** 0.71 mm
 - 1.3.2. **Grade:** BS EN 10088-1, 1.4301(304), terne-coated if exposed to view.
2. **Dimensions**
 - 2.1. **Width:** 50 mm where not continuous.
 - 2.2. **Length:** To suit detail.
3. **Fixing clips:** Secure each to substrate with either two screw or three nail fixings not more than 50mm from edge of lead sheet. Use additional fixings where lead down-stands exceed 75mm.
4. **Fixing lead sheet:** Welt clips around edges and turn over 25 mm. Welt clips around edges and turn over 25 mm.

770 Wedge fixing into joints/ chases

1. **Joint/ chase:** Rake out to a depth of not less than 25 mm.
2. **Lead:** Dress into joint/ chase.
 - 2.1. **Fixing:** Lead wedges at not more than 450 mm centres, at every change of direction, and with at least two for each piece of lead.
3. **Sealant:** Neutral cure silicone; Contractor to submit proposals.
 - 3.1. **Application:** As section Z22.

790 Screw fixing into joints/ chases

1. **Joint/ chase:** Rake out to a depth of not less than 25 mm.
2. **Lead:** Dress into joint/ chase and up back face.
 - 2.1. **Fixing:** Into back face with stainless steel screws and washers and plastics plugs at not more than 450 mm centres, at every change of direction, and with at least two fixings for each piece of lead.

3. **Sealant:** Neutral cure silicone; Contractor to submit proposals.

- 3.1. **Application:** As section Z22.

Jointing lead

810 Forming details

1. **Method:** Bossing or lead welding, except where bossing is specifically required.
2. **Lead-welded seams:** Neatly and consistently formed.
 - 2.1. **Seams:** Do not undercut or reduce sheet thickness.
 - 2.2. **Filler strips:** Of the same composition as the sheets being joined.
 - 2.3. **Butt joints:** Formed to a thickness of one third more than the sheets being joined.
 - 2.4. **Lap joints:** Formed with 25 mm laps and two loadings to the edge of the overlap.
3. **Bossing:** Carried out without thinning, cutting or otherwise splitting the lead sheet.
 - 3.1. **Details where bossing must be used:** Not applicable.

860 Drips with splash laps

1. **Underlap:** Dress into rebate along the top edge of the drip.
 - 1.1. **Fixing:** One row of nails at 50 mm centres on the centre line of the rebate.
2. **Overlap:** Dress over the drip and form a 40 mm splash lap.

970 Patination oil

1. **Location:** All exposed locations.
2. **Application:** As soon as practical, apply a smear coating to the lead, evenly in one direction and in dry conditions.

Ω End of Section

J41

Reinforced bitumen membrane roof coverings

Types of roof covering

110 Built-up reinforced bitumen membrane warm deck roof covering

1. **Description:** Existing flat roofs as identified on the tender drawings and associated schedules.
2. **Substrate:** Existing beam and block concrete deck (FR1).

Limited observations of existing flat roof decks have been undertaken; existing beam and block construction is visible beneath FR1; the existing deck to FR2 needs to be confirmed once suitable access available. The Contractor is to validate and confirm existing construction once existing coverings removed.

The Contractor is to report any existing underlays to the CA and allow for removal where relevant, following confirmation from CA.

2.1. Preparation:

- Remove existing waterproof covering.
 - The Contractor should allow to inspect the deck following the removal of the current waterproofing system. Any areas of deck identified as being defective, should be carefully removed and replaced to ensure future structural integrity.
3. **Air and vapour control layer (AVCL):** Reinforced bitumen membrane to [BS 8747](#), Class S1P1 as clause 395.
 4. **Insulation:** Rigid urethane foam board, as [clause 420](#).
 5. **Overlay to insulation:** Not required.
 6. **Waterproof covering**
 - 6.1. **First layer:** Built-up reinforced bitumen waterproofing, as [clause 400](#).
 - 6.1.1. **Attachment:** Torch-on bonding.
 - 6.2. **Intermediate layer:** Built-up reinforced bitumen waterproofing, as [clause 400](#).
 - 6.2.1. **Attachment:** Torch-on bonding.
 - 6.3. **Top layer/ capsheet:** Built-up reinforced bitumen waterproofing, as [clause 400](#).
 - 6.3.1. **Colour:** Grey.
 - 6.3.2. **Attachment:** Torch-on bonding.
 7. **Flashings and detail work:** Additional layer of SBS-modified bitumen membrane, mineral-surfaced.
 8. **Surface protection:** Not required.
 9. **Accessories:** Angle fillets, as [clause 335](#).
Perimeter trims, as [clause 345](#).
Additional as as required by the system manufacturer to complete the installation.
 10. **Additional items**
 - 10.1. Supply and install by mechanical fixing, OSB3 or external grade ply to the stone perimeter coping details (vertically) and then extend the membranes up the perimeter detail and finish with a GRP trim.
 - 10.2. Cut new chases into brickwork upstands. This should be done before installing the cap sheet to avoid brick dust and debris staining the cap sheet. The chase is to be a minimum of 25mm deep and 150mm above the finished surface level. Install once bent plastisol coated metal counter-flashing, this is to be face fixed into the brickwork (above the 150mm upstand at 300mm centres. All chases should be brushed clean and sealed using sealant primer prior to the application of sealant.

Performance

210 Roof performance

1. **General:** Secure, free-draining and weathertight.

Products

320 Non-bituminous primers

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
 - 1.2. **Product reference:** [Bauder Quick Dry Bitumen Primer - Black](#)
2. **Characteristics**
 - 2.1. **Viscosity (maximum):** 1000 CPS at 20°C.
3. **Execution:** In accordance with the system manufacturers requirements.
4. **Drying time:** 3–6 hours.
5. **Shelf life:** 12 months (unopened).
6. **CoverageArea:** 4–8 L/m².
7. **Application temperature:** 5–25°C.

325 Non-bituminous primers

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
 - 1.2. **Product reference:** [Bauder PU Insulation Adhesive - Tin](#)
2. **Form:** One-component, foaming, moisture-curing polyurethane.
3. **Open time (minimum):** Curing time: 30 minutes.
4. **Colour:** Brown.
5. **Shelf life:** 12 months.
6. **Application temperature:** 5–30°C.
7. **Viscosity:** 4000 CPS.
8. **Solids content:** 100%.

330 Timber trims, etc.

1. **Quality:** Planed. Free from wane, pitch pockets, decay and insect attack (except ambrosia beetle damage).
2. **Moisture content at time of covering (maximum):** 22%.
3. **Preservative treatment:** As recommended by bitumen membrane manufacturer.

335 Angle fillets

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
2. **Material:** As supplied by insulation manufacturer.
 - 2.1. **Size (minimum):** As per system manufacturers requirements; triangular in section.
3. **Restriction:** Fillets under torch-on bitumen membranes to be non-combustible.

345 Roof membrane perimeter trims

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
 - 1.2. **Product reference:** [Bauder GRP Termination Bar](#)
2. **Description:** Termination bars.
3. **Fire performance**
 - 3.1. **Fire resistance:** Manufacturer's standard.
 - 3.2. **Reaction to fire:** Manufacturer's standard.
4. **Material:** GRP.
5. **Size:** 2.5 mm thick, 82 mm width/ depth.
6. **Colour:** Black.
7. **Length (maximum):** 2.5 m.

395 Reinforced bitumen roofing - AVCL

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk

United Kingdom
IP3 0DH

1.1.2. Telephone: [+44 \(0\)1473 257671](tel:+44(0)1473257671)

1.1.3. Web: <https://www.bauder.co.uk/>

1.1.4. Email: info@bauder.co.uk

1.2. Product reference: [Bauder Super AL-E Torch-On Air & Vapour Control Layer](#)

2. Material

2.1. Bitumen modification: Elastomeric.

3. Thickness (minimum): 3.5 mm.

4. Weight (minimum): 4.5 kg/m².

5. Surface finish

5.1. Top: Mica.

5.2. Underside: Thermofusible polyethylene.

6. Colour: Grey.

7. Third-party certification: BBA Certificate 10/4744, Environmental Product Declaration S-P-00414, BRE Green Guide A+ to B rating (depending on deck type).

8. Reinforcement: Polyester coated aluminium foil + 60 g/m² glass fleece.

9. Tensile Strength: ≥400/50 N/mm.

10. Elasticity: ≥2%.

11. Water vapour transmission: ≥1500.

12. Watertightness: Type B (passed).

13. Reaction to fire: Class E.

14. Water vapour resistance: 7500 MNs/g.

400 Reinforced bitumen roofing system (First Layer) Type A

1. Manufacturer: [Bauder Ltd](#)

1.1. Contact details

1.1.1. Address: 70 Landseer Road

Ipswich

Suffolk

United Kingdom

IP3 0DH

1.1.2. Telephone: [+44 \(0\)1473 257671](tel:+44(0)1473257671)

1.1.3. Web: <https://www.bauder.co.uk/>

1.1.4. Email: info@bauder.co.uk

1.2. Product reference: [BauderFLEX G4E underlayer](#)

2. Standard: To BS EN 13707.

3. Material

3.1. Carrier material: Glass fibre.

3.2. Bitumen modification: Elastomeric.

4. Thickness (minimum): 4 mm.

5. Weight (minimum): 4.8 kg/m².

6. Surface finish

6.1. Top: Mica.

6.2. Underside: Thermofusible polyethylene.

7. Colour: Black.

8. **Third-party certification:** BBA certificate 10/4744, EPD S-P-00768.
9. **Elongation:** Length and transverse: $\geq 2\%$.
10. **Width (minimum):** 1000 mm.
11. **Reaction to fire:** Class E.
12. **Watertightness:** Passed.
13. **Tensile Strength:** Length and transverse: $\geq 1200/50$ N/mm.

400 Reinforced bitumen roofing sheets (Capping Layer) Type B

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
 - 1.2. **Product reference:** [Bauder K5K Capping Sheet \(Charcoal Grey\)](#)
2. **Material**
 - 2.1. **Bitumen modification:** SBS Elastomeric.
3. **Thickness (minimum):** 5.2 mm.
4. **Weight (minimum):** Brown: 6 kg/m²; Charcoal Grey: 6.5 kg/m².
5. **Surface finish**
 - 5.1. **Top:** Mineral chippings.
 - 5.2. **Underside:** Thermofusible polyethylene.
6. **Colour:** Charcoal Grey.
7. **Third-party certification:** BBA Certificate 10/4744, Environmental Product Declaration S-P-00414, BRE Green Guide A+ to B (dependent on deck type).
8. **Reaction to fire:** Class E.
9. **Watertightness:** Type B - Passed.
10. **Tensile Strength:** Length and Transverse: $\geq 100/50$.

420 Polyisocyanurate (PIR) insulation

1. **Manufacturer:** [Bauder Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** 70 Landseer Road
Ipswich
Suffolk
United Kingdom
IP3 0DH
 - 1.1.2. **Telephone:** [+44 \(0\)1473 257671](tel:+44(0)1473257671)
 - 1.1.3. **Web:** <https://www.bauder.co.uk/>
 - 1.1.4. **Email:** info@bauder.co.uk
 - 1.2. **Product reference:** [Bauder PIR FA-TE Flatboard Insulation](#)
2. **Standard:** To BS EN 13165.
3. **Third-party certification:** BBA Certificate 16/5365, EPD-IVP-20140207-IBE1-EN.

4. **Fire performance:** To EN 13501-1: Class E.
5. **Thermal conductivity (maximum):** 0.022 W/mK.
6. **Compressive strength at 10% deformation:** ≥ 0.12 N/mm².
7. **Cross section:** Uniform thickness.
8. **Thickness (nominal):** 120 mm.
9. **Face size (length x width):** 1200 x 600 mm.
10. **Density:** 30 kg/m³.
11. **Facing:** Aluminium foil.
12. **Edges:** Square.

Execution generally

515 Adverse weather

1. **General:** Do not lay coverings in high winds, wet or damp conditions or in extremes of temperature unless effective temporary cover is provided over working area.
2. **Unfinished areas of roof:** Keep dry. Protect edges of laid membrane from wind action.

520 Incomplete work

1. **End of working day:** Provide temporary seal to prevent water infiltration.
2. **On resumption of work:** Cut away tail of membrane from completed area and remove from roof.

530 Applying primers

1. **Coverage per coat (minimum):** As per system manufacturers requirements.
2. **Surface coverage:** Even and full.
3. **Coats:** Fully bond. Allow volatiles to dry off thoroughly between coats.

Substrates/ air and vapour control layers/ warm deck roof insulation

610 Suitability of substrates

1. **Substrates generally:** Secure, clean, dry, smooth, and free from frost, contaminants, voids and protrusions.
2. **Preliminary work. Complete, including::**
 - Grading to correct falls.
 - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
 - Fixing of battens, fillets and anchoring plugs/ strips.
3. **Moisture content and stability of substrate:** Must not impair roof integrity.

625 Removing existing coverings

1. **Mechanical stripping:** Not permitted.
2. **Exposed substrate:** Do not damage.

640 Fixing timber trims

1. **Fasteners:** Sherardized steel screws
2. **Fixing centres (maximum):** 400 mm

670 Laying air and vapour control layer

1. **Attachment:** Secure fully bonded.

2. **Side and end laps:** 100 mm and 150 mm, respectively. Seal using materials and method recommended by bitumen membrane manufacturer.
3. **Joints in second layer (where applicable):** Stagger by half a membrane.
4. **Penetrations:** Fully seal using bonding or taping methods recommended by manufacturer.
5. **Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like:**
 - Enclosed with vapour control layer.
 - Dressed up sufficiently, providing 50 mm (minimum) seal when overlapped by the roof covering.
 - Turned back 150 mm (minimum) over the insulation and sealed down.

680 Laying warm deck roof insulation

1. **Setting out**
 - 1.1. Long edges: Fully support and run at right angles as directed by the system manufacturer.
 - 1.2. **End edges:** Adequately support.
 - 1.3. **Joints:** Butt together.
 - 1.4. **End joints:** Stagger.
2. **Bedding:** Full bed of bonding compound.
3. **Mechanical fixing:** Not required.
4. **Protection to exposed edges of insulation:** Reduced thickness treated timber batten, outer edge chamfered at changes in level.
5. **Completion:** Boards must be in good condition, well-fitting and stable.

Waterproof membranes/ accessories

710 Laying reinforced bitumen membranes generally

1. **Direction of laying:** Unrolled up the slope.
 - 1.1. Where practicable, install so that water drains over and not into laps.
2. **Side and end laps:** As recommended by bitumen membrane manufacturer
3. **Head and side laps:** Offset.
4. **Intermediate and top layer/ capsheet:** Fully bond.
5. **Successive layers:** Apply without delay. Do not trap moisture.
6. **Strips of bitumen membrane for 'linear' details:** Cut from length of roll.
7. **Completed coverings:** Firmly attached, fully sealed, smooth, weatherproof and free-draining.

740 Torch-on bonding of reinforced bitumen membranes

1. **Bond:** Full over whole surface, with no air pockets.
2. **Excess compound at laps of top layer/ capsheet:** Leave as continuous bead.

775 Skirtings and upstands

1. **Angle fillets:** Fix by bitumen bonding or nailing.
2. **Venting first layer of bitumen membrane:** Stop at angle fillet. Fully bond in bitumen for 300 mm strip around perimeters. Overlap onto upstand with strips of [BS 8747](#), Class S1P1 bitumen membrane, fully bonded.
3. **Other layers of bitumen membrane:** Carry in staggered formation up upstand, with each layer fully bonded. Where practicable, carry top layer over top of upstand.
4. **Upstands**
 - 4.1. **At ends of rolls:** Form with bitumen membrane carried up without using separate strip.
 - 4.2. **Elsewhere:** Form with matching strips of bitumen membrane, maintaining laps.

- 4.3. **Additional fixing of bitumen membranes:** As recommended by bitumen membrane manufacturer

785 Fixing perimeter trims

1. **First/ Intermediate layers bitumen membrane:** Lay over roof edge upstand. Project free edge 25 mm from wall or fascia.
2. **Trim**
 - 2.1. **Setting out (minimum):** 3 mm clear from wall or fascia.
 - 2.2. **Fasteners:** 65 mm stainless steel countersunk wood screws
 - 2.3. **Fixing:** 30 mm from ends and at 300 mm (maximum) centres.
 - 2.4. **Jointing sleeves:** Fix one side only.
 - 2.5. **Corner pieces:** Purpose-made.
3. **Completion**
 - 3.1. **Contact surfaces:** Prime.
 - 3.2. **Joints:** Cover with 150 mm-long pads of bitumen membrane, bonded to trim.
4. **Completion of bitumen membrane**
 - 4.1. **Top layer/ capsheet:** Butt joint to rear edge of trim.
 - 4.2. **Cover strip:** Fully bond to trim and top layer/ capsheet of bitumen membrane. Carry over roof edge upstand and lap 75 mm onto roof.
 - 4.2.1. **Cover strip material:** As top layer/ capsheet bitumen membrane

Surfacing - Not Used

Completion

910 Inspection

1. **Interim and final roof inspections:** Submit reports.

940 Completion

1. **Roof areas:** Clean.
2. **Outlets:** Clear.
3. **Work necessary to provide a weathertight finish:** Complete.
4. **Storage of materials on finished surface:** Not permitted.
5. **Completed membrane:** Do not damage. Protect from chemicals, traffic and adjacent or high-level working.

Ω End of Section

K20**Timber board flooring/ sarking/ linings/ casings****To be read with preliminaries/ general conditions.****120 Timber board flooring**

1. **Description:** For replacement floor boards internal rooms as detailed on the tender drawings.
2. **Substrate:** Timber joists at centres to be confirmed.
3. **Boards**
 - 3.1. **Standard:** To [BS EN 14342](#).
 - 3.1.1. **Evidence of compliance:** Submit.
 - 3.2. **Reaction-to-fire classification:** Class A2_{fl} or better
 - 3.3. **Wood species:** European whitewood
 - 3.4. **Quality:** To [BS EN 13990](#), Grade A
 - 3.5. **Finished face width (exposed width after fixing):** To match existing.
 - 3.6. **Finished thickness:** To match existing.
 - 3.7. **Edge profile:** Square-edged
 - 3.8. **Moisture content at time of fixing:** 9–13%
4. **Fixing:** Secret-nailed with 40 mm lost head nails
 - 4.1. **Fixing centres:** In accordance with [BS 8201](#).

220 Timber board sarking

1. **Description:** Replacement timber sarking boards to pitched roofs.

Limited observations of roof spaces have identified evidence of sarking boards over rafters. The Contractor is to validate and confirm existing construction once existing coverings removed and report any condition deficiencies.

The Contractor is to report any existing underlays to the CA and allow for removal where relevant, following confirmation from CA.

2. **Substrate:** Timber rafters; centres to be confirmed once existing coverings removed.
3. **Boards:** Free from decay, insect attack (except ambrosia beetle damage) and wane.
 - 3.1. **Wood species:** European redwood
 - 3.2. **Quality:** Blue stain, fissures, knot holes and loose or unsound knots not permitted on exposed face (underside) of boards
 - 3.3. **Surface finish:** Sawn
 - 3.4. **Edge profile:** Square-edged
 - 3.5. **Finished face width (exposed width after fixing):** 137 mm
 - 3.6. **Finished thickness:** 22 mm
 - 3.7. **Moisture content at time of fixing:** Not more than 19%.
4. **Treatment**
 - 4.1. **Standard:** To section Z12 'Preservative/ flame-retardant treatment' and the Wood Protection Association (WPA) publication 'Code of Practice: Industrial Wood Preservation'
 - 4.2. **Type:** Microemulsion
 - 4.2.1. **Preservative treatment:** Organic solvent
 - 4.2.2. **Fire-retardant treatment:** EXT
5. **Fixing:** 65 mm x 3.35 mm galvanized annular ringed shank nails, two per board to each rafter

6. **Termination of sarking at roof edges and junctions:** In accordance with drawings and specification for roof covering.

Workmanship

310 Workmanship generally

1. **Protection during and after installation:** Keep boards dry. Protect from dirt, stain and damage until completion.
2. **Boards to be used internally:** Do not install until building is watertight.
3. **Methods of fixing, and fasteners:** As section Z20 'Fixings and adhesives'.
4. **Moisture content of timber supports at time of fixing boards:** Not more than 18%.

330 Moisture content of timber

1. **Conditions during and after installation:** Control ambient temperature and humidity conditions to maintain moisture content at average level specified in [BS EN 942](#), Table B.1 for the relevant service condition until completion.
2. **Test for moisture content:** When instructed, using an approved moisture meter.

370 Fixing boards

1. **Environmental conditions:** Do not fix boards when ambient temperature is at or below 0°C, or above 30°C.
2. **Generally:** Fix boards securely to each support to give flat, true surfaces free from undulations, lipping, splits and protruding fasteners.
3. **Timber movement:** Position boards and fixings to prevent cupping, springing, excessive opening of joints and other defects.
4. **Heading joints:** Tightly butted, central over supports and at least two board widths apart on any one support.
5. **Edges:** Plane off proud edges.
6. **Exposed nail heads:** Neatly punch below surface.

Ω End of Section

L10**Windows/ rooflights/ screens/ louvres****Clauses - Not Used****General****115 Timber procurement**

1. **Timber (including timber for wood-based products):** Obtained from well-managed forests and/ or plantations, in accordance with:
 - 1.1. The laws governing forest management in the producer country or countries.
 - 1.2. International agreements such as the [Convention on International Trade in Endangered Species of wild fauna and flora \(CITES\)](#).
2. **Documentation:** Provide either in accordance with chain of custody certification scheme requirements:
 - 2.1. Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
 - 2.2. Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
3. **Chain of custody certification scheme:** In accordance with [UK Timber Procurement Policy \(UKTPP\)](#), i.e. [FSC](#), [GiB](#) or [PEFC](#)

120 Pre-construction survey

1. **Procedure:** Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
2. **Designated items:** Rooflights as identified for replacement on the tender drawings.
3. **Primary support structure:** Carry out survey sufficient to verify that required accuracy and security of erection can be achieved.
4. **Timing:** Before fabrication.

Products**460 Framed rooflights Type A**

1. **Description:** Rooflight RL1 (Flat Roof 1).
2. **Manufacturer:** [The Rooflight Co.](#)
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Unit T1, Bourton Industrial Park
Bourton-on-the-Water
Gloucestershire
United Kingdom
GL54 2HQ
 - 2.1.2. **Telephone:** [+44 \(0\)1993 833155](#)
 - 2.1.3. **Web:** <https://www.therooflightco.com>
 - 2.1.4. **Email:** hello@therooflightco.com
 - 2.2. **Product reference:** The Conservation Lantern Rooflight
3. **Form:** Lantern.
4. **Size:** 1500 x 3000 mm.
5. **Frame**
 - 5.1. **Material:** Steel.

5.2. Finish

5.2.1. Coating: Polyester Powder Coated to BS EN ISO 12944.

5.2.2. Colour: Black (RAL 9005).

6. Glazing or infill

6.1. Type: Insulating glass units.

6.2. Construction: 4mm SGG Planitherm® Total + (Low E) toughened inner, 16 mm argon cavity, 4 mm SGG Planilux® toughened outer pane.

7. Integral kerb: Insulated timber kerb to be formed on site.

8. Operation

8.1. Type: Pole winder and winding crank.

9. Accessories: None.

10. Standard: To BS EN 1279-2.

11. Third-party certification: BSI Kitemark and KM 93754.

460 Framed rooflights Type B

1. Description: Rooflights RL2, RL3, RL4 and RL (Pitched Roof 1)

2. Manufacturer: [The Rooflight Co.](#)

2.1. Contact details

2.1.1. Address: Unit T1, Bourton Industrial Park
Bourton-on-the-Water
Gloucestershire
United Kingdom
GL54 2HQ

2.1.2. Telephone: [+44 \(0\)1993 833155](tel:+44(0)1993833155)

2.1.3. Web: <https://www.therooflightco.com>

2.1.4. Email: hello@therooflightco.com

2.2. Product reference: [Bespoke Rooflights](#)

3. Form: Pitched; fenestration to match existing.

4. Size: As drawing; Contractor to verify.

5. Product performance

5.1. Whole window U-value: 1.4 W/m²K.

6. Frame

6.1. Material: Carbon steel.

6.2. Finish

6.2.1. Coating: Polyester powder coating.

6.2.2. Colour: Black (RAL 9005).

7. Glazing or infill

7.1. Type: Insulating glass units.

7.2. Construction: 4 mm SGG Planilux Toughened Outer, 16 mm 90% Argon Cavity, 4 mm SGG Planitherm One II (Low E) Toughened Inner.

7.3. Colour: Clear.

7.4. Coating: Self-cleaning.

8. Integral kerb: Insulated kerb to be formed on site.

9. Operation

9.1. Type: Fixed casement.

10. Accessories: Not required.

- 11. **Electric actuators:** Not required.
- 12. **Standard:** To BS EN1279-2.
- 13. **Third-party certification:** BSI Kitemark and KM 93754.

Execution

710 Protection of components

- 1. **General:** Do not deliver components to site that cannot be installed immediately or placed in clean, dry-floored and covered storage.
- 2. **Stored components:** Stack them vertically or near-vertically on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

750 Building in

- 1. **General:** Not permitted unless indicated on drawings.
 - 1.1. Brace and protect components to prevent distortion and damage during construction of adjacent structure.

820 Ironmongery

- 1. **Fixing:** In accordance with any third-party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- 2. **Checking/ adjusting/ lubricating:** Carry out at completion and ensure correct functioning.

Ω End of Section

M10

Cement based levelling/ wearing screeds

Types of screed

160 Proprietary self smoothing levelling screeds

1. **Description:** To floor identified to receive new vinyl floor covering.
2. **Substrate:** Existing boarded timber floor with chipboard underlay.
3. **Screed manufacturer:** Contractor's choice
 - 3.1. **Product reference:** Commensurate with system flooring as per clause M50/150.
4. **Screed construction:** Fully bonded, as clause 260
5. **Thickness**
 - 5.1. **Nominal:** As per the screed manufacturers recommendations.
 - 5.2. **Minimum:** 6 mm
 - 5.3. **Maximum:** 20 mm
6. **Standards:** In accordance with BS 8204-7.
7. **Flatness/ Surface regularity class:** SR2.
8. **Finish to receive:** 2mm sheet flooring.
9. **Other requirements:** None.

Generally/ preparation

210 Suitability of substrates

1. **General**
 - 1.1. Suitable for specified levels and flatness/ regularity of finished surfaces. Consider permissible minimum and maximum thicknesses of screeds.
 - 1.2. Sound and free from significant cracks and gaps.
2. **Concrete strength:** In accordance with BS 8204-1, Table 2.
3. **Cleanliness:** Remove plaster, debris and dirt.
4. **Moisture content:** To suit screed type. New concrete slabs to receive fully or partially bonded construction must be dried out by exposure to the air for minimum six weeks.

220 Proprietary levelling/wearing screeds

1. **General:** Materials, mix proportions, mixing methods, minimum/ maximum thicknesses and workmanship must be in accordance with recommendations of screed manufacturer.
2. **Standard:** In accordance with BS 8204-3

260 Fully bonded construction

1. **Preparation:** Generally in accordance with BS 8204-1.
2. **Removing mortar matrix:** Shortly before laying screed, expose coarse aggregate over entire area of hardened substrate.
3. **Texture of surface:** Suitable to accept screed and achieve a full bond over complete area.
4. **Bonding coat:** M10/130.

Batching/ mixing

330 Mixing

1. **Water content:** Minimum necessary to achieve full compaction, low enough to prevent excessive water being brought to surface during compaction.
2. **Mixing:** Mix materials thoroughly to uniform consistency. Mixes other than no-fines must be mixed in a suitable forced action mechanical mixer. Do not use a free fall drum type mixer.
3. **Consistency:** Use while sufficiently plastic for full compaction.
4. **Ready-mixed retarded screed mortar:** Use within working time and site temperatures recommended by manufacturer. Do not retemper.

340 Adverse weather

1. **Screeds surface temperature:** Maintain above 5°C for a minimum of four days after laying.
2. **Hot weather:** Prevent premature setting or drying out.

Laying - Not Used

Finishing/curing

510 Finishing generally

1. **Timing:** Carry out all finishing operations at optimum times in relation to setting and hardening of screed material.
2. **Prohibited treatments to screed surfaces**
 - 2.1. Wetting to assist surface working.
 - 2.2. Sprinkling cement.

540 Trowelled finish to levelling screeds

1. **Floating:** To an even texture with no ridges or steps.
2. **Trowelling:** To a uniform, smooth but not polished surface, free from trowel marks and other blemishes, and suitable to receive specified flooring material.

Ω End of Section

M20

Plastered/ rendered/ roughcast coatings

Clauses

Read with conjunction with Preliminaries and general condition

Types of coating

310 Hydraulic limes (Ceiling Plaster)

1. **Description:** To newly plastered ceilings as detailed on the tender drawings.
2. **Substrate:** Existing timber lathe ceilings.
 - 2.1. **Preparation:**
 - Brush clean.
 - Replace timber lathing (as required per clause 587).
3. **Manufacturer:** [Saint-Astier®](#)
 - 3.1. **Contact details**
 - 3.1.1. **Address:** 75 Cowcross Street
LONDON
United Kingdom
EC1M 6EL
 - 3.1.2. **Telephone:** [+44 7534 806947](#)
 - 3.1.3. **Web:** <https://www.saint-astier.co.uk>
 - 3.1.4. **Email:** contact_uk@saint-astier.com
 - 3.2. **Product reference:** Hydraulic NHL3.5
4. **Undercoats**
 - 4.1. **Mix:** 1:2–3 (course) with hair reinforcement
 - 4.1.1. **Sand:** To [BS EN 13139](#), grading to approval
 - 4.2. **Thickness (excluding dubbing out and keys):** Base 10 - 12 mm and float 7-10 mm
5. **Final coat**
 - 5.1. **Mix:** Subject to site trials 1:1 (fine)
 - 5.1.1. **Sand:** To [BS EN 13139](#), grading to approval
 - 5.2. **Thickness:** 3–5 mm
 - 5.3. **Finish:** Plain wood float to match existing.

310 Hydraulic limes (External Render)

1. **Description:** To new areas of external render as identified on the tender drawings.
2. **Substrate:** Existing brickwork / stonework.
 - 2.1. **Preparation:** To areas identified to receive new lime-based render; ensure suitable substrate keying surface for areas of new render. Remove any loose material and ensure substrate clean and free of vegetation; dampen the surface to prevent rapid suction of water from the render (typically a mist spray will suffice; however, on porous walls several applications of water the previous day and in the hours before rendering may be required). Where evident, salts should be brushed from the surface and cleaned away from the structure, do not wash down.

Stainless steel rib lath is to be placed over any timber embedded in masonry and at edges as required to minimise risk of movement / cracking of render. Large voids should be “dubbed out” with commensurate mix. To control suction and to form a mechanical key, a

thin harling / stipple coat is to be applied to existing masonry comprising lime mortar and water; nominally 3-4mm thickness.

3. **Manufacturer:** [Saint-Astier®](#)

3.1. **Contact details**

3.1.1. **Address:** 75 Cowcross Street
LONDON
United Kingdom
EC1M 6EL

3.1.2. **Telephone:** [+44 7534 806947](tel:+447534806947)

3.1.3. **Web:** <https://www.saint-astier.co.uk>

3.1.4. **Email:** contact_uk@saint-astier.com

3.2. **Product reference:** Hydraulic NHL3.5

4. **Undercoats**

4.1. **Mix:** 1:2-2.25

4.1.1. **Sand:** To [BS EN 13139](#), grading to approval

4.2. **Thickness (excluding dubbing out and keys):** Base 10–12 mm and float 10–12 mm.

5. **Final coat**

5.1. **Mix:** Subject to site trials 1-2.5.

5.1.1. **Sand:** To [BS EN 13139](#), grading to approval

5.2. **Thickness:** 4mm

5.3. **Finish:** As approved sample to match existing.

6. **Accessories:** As required to complete the installation in accordance with the system manufacturer.

310 Hydraulic limes (Wall Plaster)

1. **Description:** To newly plastered walls as detailed on the tender drawings.

2. **Substrate:** Existing internal masonry walls.

2.1. **Preparation:**

- Brush clean.
- Bonding coat recommended by lime manufacturer

3. **Manufacturer:** [Saint-Astier®](#)

3.1. **Contact details**

3.1.1. **Address:** 75 Cowcross Street
LONDON
United Kingdom
EC1M 6EL

3.1.2. **Telephone:** [+44 7534 806947](tel:+447534806947)

3.1.3. **Web:** <https://www.saint-astier.co.uk>

3.1.4. **Email:** contact_uk@saint-astier.com

3.2. **Product reference:** Hydraulic NHL3.5

4. **Undercoats**

4.1. **Mix:** 1:3 (course) with hair reinforcement

4.1.1. **Sand:** To [BS EN 13139](#), grading to approval

4.2. **Thickness (excluding dubbing out and keys):** First 8–10 mm and second 6–8 mm

5. **Final coat**

5.1. **Mix:** Subject to site trials 1:2 (fine)

5.1.1. **Sand:** To [BS EN 13139](#), grading to approval

5.2. **Thickness:** 3–5 mm

5.3. **Finish:** Plain wood float to match existing.

General

413 Samples

1. **General:** Provide representative samples of the following::

- Replacement mouldings
- Sands for undercoats and final coat for external render.

418 Control samples

1. **Complete sample areas, being part of the finished work, in locations as follows:** External rendering, location and extent to be agreed.

421 Scaffolding

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

424 Special protection of historic plasterwork

1. **General:** Prevent damage and disturbance to retained plasterwork.
2. **Protection methods:** Submit proposals.

Materials and marking of mortar

445 Pigment for coloured mortars

1. **Standard:** To [BS EN 12878](#).

478 Hydraulic lime

1. **Standard:** To [BS EN 459-1](#).
 - 1.1. **Type:** Natural hydraulic lime (NHL).

492 Hair reinforcement

1. **Proportions (approximate):** 5 kg hair to 1 m³ of coarse aggregate.
2. **Condition:** Clean, free from grease and other impurities. Well teased before adding to the mix.
3. **Distribution:** Evenly throughout with no balling into lumps.
4. **Storage period for haired mortar (maximum):** Four weeks.

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. **Mixes0:** 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.

541 Bonding agent application

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

551 Removal and renewal of existing plaster/ render

1. **Location and extent:**
 - Agree, at least on a provisional basis, before work commences. Minimize extent of removal and renewal.
 - Refer to drawing no. 9140_09 for initial identified locations.

556 Removing defective existing render

1. **Render for removal:** Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
2. **Removing defective render:** Cut out to regular rectangular areas with straight edges.
 - 2.1. **Horizontal and vertical edges:** Square cut or slightly undercut.
 - 2.2. **Bottom edges to external render:** Do not undercut.
 - 2.3. **Render with imitation joints:** Cut back to joint lines.
3. **Cracks**
 - 3.1. **Fine hairline cracking/ crazing:** Leave.
 - 3.2. **Other cracks:**
 - Hairline Cracks (1.5mm - 4mm): Use fine lime filler, pressing it into the crack with a filler knife.
 - Small to Medium Cracks: Slightly open, or "V-cut," the crack using a knife or scraper to allow better bonding, then damp the area before filling and layers not exceeding 8mm in a single pass.
 - Deep Cracks: Use a coarser filler for the initial, deeper layers and finish with a finer filler, avoiding a single, deep application.

Preparation: Always dampen the crack with water before applying filler to avoid excessive drying.

4. **Dust and loose material:** Remove from exposed substrates and edges.

566 Removing defective existing plaster

1. **Plaster for removal:** Detached, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
 - 1.1. **Hollow, detached areas:** Not identified previously for removal; obtain instructions
2. **Stained plaster:** Submit proposals
3. Removing defective plaster. Cut back to a square, sound edge.
4. **Faults in substrate (structural deficiencies, damp, etc.):** Submit proposals.
5. **Cracks**
 - 5.1. **Fine hairline cracking/ crazing:** Leave.
 - 5.2. **Other cracks:**
 - Hairline Cracks (1.5mm - 4mm): Use fine lime filler, pressing it into the crack with a filler knife.
 - Small to Medium Cracks: Slightly open, or "V-cut," the crack using a knife or scraper to allow better bonding, then damp the area before filling and layers not exceeding 8mm in a single pass.
 - Deep Cracks: Use a coarser filler for the initial, deeper layers and finish with a finer filler, avoiding a single, deep application.

Preparation: Always dampen the crack with water before applying filler to avoid excessive drying.

6. **Dust and loose material:** Remove from exposed substrates and edges.

568 Existing damp affected plaster/ render

1. **Plaster affected by rising damp:** Remove to a height of 300 mm above highest point reached by damp or 1 m above dpc, whichever is higher.
2. **Perished and salt contaminated masonry**
 - 2.1. **Mortar joints:** Rake out.
 - 2.2. **Masonry units:** Submit proposals.
3. **Faults in substrate (structural deficiencies, additional sources of damp, etc.):** Submit proposals.
4. **Drying out substrates:** Establish drying conditions. Leave walls to dry for as long as possible before plastering.
5. **Dust and loose material:** Remove from exposed substrates and edges.

584 Record castings

1. **Timing:** Make castings before commencing repair work, to enable accurate reproductions to be made.
2. **Items for casting:**
 - Ceiling cornice / friezes.
 - Picture rails.
 - Dado rails.
3. **Identification:** Mark clearly to identify original location.

587 Replacing timber laths

1. **Defective plaster and laths:** Remove. Prevent disturbance to adjacent sound plaster.
 - 1.1. **Defective laths:** Cut back to supporting timbers.

- 1.2. **Cavities:** Keep clear of debris.
2. **Supports for laths:** Sound and firmly fixed. Provide additional supports where necessary.
3. **New lathing:** Timber, as clause 626

589 Refixing sound timber laths through plaster

1. **Application of repair:** To loose but otherwise sound laths on sound framework.
2. **Method:** Cut out plaster patches to sound, undercut edges. Screw laths back to framework using screws and washers.
 - 2.1. **Screws:** Brass or stainless steel.
 - 2.2. **Washers:** Metal to match screws.
 - 2.2.1. **Inner washer:** 25 mm diameter.
 - 2.2.2. **Outer washer:** 38 mm diameter; mesh size 1.5 mm.
 - 2.3. **Fixing centres:** 400mm
3. **Replastering:** 1:1 lime:lime putty
 - 3.1. **Finish:** Flush with existing.

592 Consolidating existing timber lath and plaster ceilings

1. **General:** Achieve effective consolidation of plasterwork to supporting structure.
2. **Methods:** Submit proposals

Backings/ beads/ joints

626 Timber lathing

1. **Type/ Section size:** 30–38 x 6 mm riven laths preferred.
 - 1.1. **Quality of timber:** Free from decay, insect attack (except pinhole borers), splits, shakes. No knots wider than half the width of the section.
2. **Preservative treatment:** Not required
3. **Moisture content at time of installation (maximum):** 16%.
4. **Installation:** Space laths 8-10 mm apart in straight lines.
 - 4.1. **Joints:** 3 mm wide centred over supports. Stagger at not more than every eighth lath.
 - 4.2. **Nails:** At every support.
 - 4.2.1. **Type:** 25 mm (minimum) galvanized clout nails
 - 4.3. **Counter laths:** To faces or sides of timber supports wider or deeper than 75 mm.

630 Beads/ stops for internal use

1. **Standard:** In accordance with [BS EN 13914-2](#), Table 2.
2. **Material:** Plastics/ PVC or Stainless steel to [BS EN 13658-1](#) commensurate with the lime materials.

636 Beads/ stops for external use

1. **Standard:** In accordance with [BS EN 13914-1](#), Table 4.
2. **Material:** Plastics/ PVC or Stainless steel to BS EN 13658-1 commensurate with the lime materials.

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.

646 Crack control at junctions between dissimilar solid substrates

- 1. **Locations:** Where defined movement joints are not required. Where dissimilar solid substrate materials are in same plane and rigidly bonded or tied together.
- 2. **Crack control materials**
 - 2.1. **Isolating layer:** Building paper to [BS 1521](#).
 - 2.2. **Metal lathing:** Stainless steel ribbed expanded metal Externally: Stainless steel ribbed expanded metal
- 3. **Installation:** Fix metal lathing over isolating layer. Stagger fixings along both edges of lathing.
- 4. **Width of installation over single junctions**
 - 4.1. **Isolating layer:** 100 mm
 - 4.2. **Lathing:** 300 mm
- 5. **Width of installation across face of dissimilar substrate material (column, beam, etc. with face width not greater than 450 mm)**
 - 5.1. **Isolating layer:** 25 mm (minimum) beyond junctions with adjacent substrate.
 - 5.2. **Lathing:** 100 mm (minimum) beyond edges of isolating layer.

Mouldings/ decorative plasterwork

680 Fibrous plaster mouldings

- 1. **Description:** Existing ceiling / wall articulation.
- 2. **Type:** Reproduction of existing.
- 3. **Noggings, bearers, etc. to support mouldings:** Accurately position and securely fix.
- 4. **Installation:** True to line and level.
 - 4.1. **Fixing:** New sections are to be fixed in position using a proprietary jointing adhesive commensurate with backing substrate and moulding; apply adhesive along junction of retained section prior to pressing new section against. Squeeze joint ensuring full adhesive coverage and remove excess. For large section use panel pins / screws to secure until adhesion complete. Fill any gaps between joints with commensurate joining compound and sand smooth. Prepare new surfaces in readiness to receive commensurate decoration.
 - 4.2. **Framing, fixing points and joints:** Reinforce.
- 5. **Finishing:** Smooth, to correct profile and with flush joints.

685 Solid cast plaster

- 1. **Description:** Existing ceiling / wall articulation.
- 2. **Type:** Reproduction of existing.
- 3. **Installation:** Fix securely and accurately.
 - 3.1. **Fixing:** New sections are to be fixed in position using a proprietary jointing adhesive commensurate with backing substrate and moulding; apply adhesive along junction of retained section prior to pressing new section against. Squeeze joint ensuring full adhesive coverage and remove excess. For large section use panel pins / screws to secure until adhesion complete. Fill any gaps between joints with commensurate joining compound and sand smooth. Prepare new surfaces in readiness to receive commensurate decoration.
- 4. **Finishing:** Smooth, to correct profile and with flush joints.

689 In situ run plaster mouldings

- 1. **Description:** Existing ceiling / wall articulation.

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M20
Plastered/ rendered/ roughcast coatings

2. **Template profile:** Give notice before commencing setting out.
3. **Core mix:** Retarded 1:3 gypsum:coarse aggregate (coarse aggregate 1:3 lime:sand)
 - 3.1. **Keying:** Key surface of core and undercoats.
4. **Mitres:** Form as running out work proceeds.
5. **Final coats:** Run to a consistent profile with sharp arrises.
 - 5.1. **Mix:** Gypsum:lime putty 1:1.
6. **Keying for enrichments:** Lightly scour contact areas of final coat.
 - 6.1. **Finishing:** Clean off droppings and clean out mitres.

695 Reproduction of existing plaster mouldings

1. **Moulds and casts generally:** Prepare moulds from original plaster face. Reproduce profiles and details accurately.
2. **Quantity of moulds:** Sufficient to complete the required number of casts and maintain a consistent appearance.
3. **Casting material:** Plaster of Paris.
4. **Inserts:** As necessary to give strength and rigidity to the mouldings and provide secure fixings.

Internal plastering

710 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 out:** Prevent excessively rapid or localized drying out.

715 Flatness/ surface regularity

1. **Sudden irregularities:** Not permitted.
2. **Deviation of plaster surface:** Measure from underside of a straight edge placed anywhere on surface.
 - 2.1. **Permissible deviation (maximum) for plaster not less than 13 mm thick:** 3 mm in any consecutive length of 1800 mm.

718 Junction of new plasterwork with existing

1. **New plasterwork:** Finish flush with original face of existing plasterwork to form a seamless junction.

720 Dubbing out

1. **General:** Correct substrate inaccuracies.
2. **New smooth dense concrete and similar surfaces:** Dubbing out prohibited unless total plaster thickness is within range recommended by plaster manufacturer.
3. **Thickness of any one coat (maximum):** 10 mm.
4. **Mix:** As undercoat.
5. **Application:** Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Cross scratch surface of each coat.

725 Undercoats generally

1. **General:** Rule to an even surface. Cross scratch to provide a key for the next coat.
2. **Undercoats on metal lathing:** Work well into interstices to obtain maximum key.
3. **Undercoats gauged with Portland cement:** Do not apply next coat until drying shrinkage is substantially complete.

777 Smooth finish

1. **Appearance:** A tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks. Avoid water brush, excessive trowelling and over polishing.

778 Wood float finish

1. **Appearance:** An even overall texture. Finish with a dry wood float as soon as wet sheen has disappeared.

786 Plastering on timber lathing

1. **Application of undercoat:** Force between laths to form continuous keys.

788 Nonhydraulic lime plaster undercoats

1. **Suction control:** Dampen substrate.
2. **Application:** Apply firmly. Trowel to an even surface. Consolidate/ scour as necessary to control shrinkage. Cross scratch to provide an undercut key for the next coat. Do not penetrate through the coat.
 - 2.1. **Key for final coats:** Lightly scratch using a wood 'devil' float.
3. **Curing coatings:** Keep damp by light spraying with water until coating is sufficiently firm.

789 Three layer nonhydraulic lime plaster final coat

1. **Suction control:** Dampen undercoat.
2. **Application**
 - 2.1. **First layer:** Use steel trowel.
 - 2.2. **Second layer:** Use wood float in the opposite direction to the first layer.
 - 2.3. **Third layer:** Use a steel trowel in the same direction as second layer.
3. **Consolidation/ scouring:** As necessary to control shrinkage. Use a wood cross grain float.
4. **Finishing:** Dampen with a stock brush. Polish with a steel trowel. Finish with a damp stock brush.
5. **Drying:** Keep damp by light spraying with water until coating is sufficiently firm.

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.

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.

856 Final coat – plain floated finish

1. **Finish:** Even, open texture free from laitance.

861 Final coat – scraped finish

1. **Finish:** Scraped to expose aggregate and achieve an even 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 lime 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.
3. **Shrinkage:** Thoroughly consolidate/ scour each coat one or more times as necessary to control shrinkage.

Completion - Not Used

Ω End of Section

M40**Stone/ concrete/ quarry/ ceramic tiling/ mosaic****Types of tiling/ mosaic****110 Tiling**

1. **Description:** Ceramic wall tiles between worktop and base units to kitchenette.
2. **Tiles:** White Gloss Ceramic Wall Tile - 150 x 150mm
 - 2.1. **Manufacturer/ supplier:** Contractor's choice
 - 2.2. **Colour:** White
 - 2.3. **Finish:** Gloss
 - 2.4. **Size:** 150 x 150mm
 - 2.5. **Thickness:** 5.4mm
3. **Background/ base:** Plastered wall linings.
 - 3.1. **Preparation:** Clean and dry, as recommended by the tile manufacturer.
4. **Intermediate substrate:** Not required
5. **Bedding:** Adhesive bed – notched trowel method, as clause 650.
 - 5.1. **Reinforcement:** Not applicable
 - 5.2. **Adhesive:** As recommended by the tile manufacturer.
6. **Joint width:** As spacer lugs
7. **Grout:** White
 - 7.1. **Type/ classification:** CG1
 - 7.2. **Admixture:** None
8. **Movement joints:** Not required.
9. **Accessories:** None

General**210 Suitability of backgrounds/ bases**

1. **Background/ base tolerances:** To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.

Preparation**310 Existing backgrounds/ bases generally**

1. **Efflorescence, laitance, dirt and other loose material:** Remove.
2. **Deposits of oil, grease and other materials incompatible with the bedding:** Remove.
3. **Tile, paint and other nonporous surfaces:** Clean.
4. **Wet backgrounds:** Dry before tiling.

330 Existing plaster

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

360 Existing paint

1. **Paint with unsatisfactory adhesion:** Remove so as not to impair bedding adhesion.

380 New plaster

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

Fixing

510 Fixing generally

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

530 Setting out

1. **Joints:** True to line, continuous and without steps.
 - 1.1. **Joints on walls:** Horizontal, vertical and aligned round corners.
2. **Cut tiles:** Minimize number, maximize size and locate unobtrusively.
3. **Joints in adjoining floors and walls:** Align.

650 Adhesive bed – notched trowel method (walls)

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

Movement joints/ grouting/ completion

875 Grouting

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

Performance - Not Used

Ω End of Section

M50**Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting****Types of covering****150 Polyvinyl chloride (PVC) sheets Type A**

1. **Description:** Vinyl safety flooring to areas identified on the tender drawings and associated schedules.
2. **Manufacturer:** [Polyflor Ltd](#)
 - 2.1. **Contact details**
 - 2.1.1. **Address:** PO Box 3
Radcliffe New Road
Whitefield
Manchester
M45 7NR
 - 2.1.2. **Telephone:** [+44 \(0\)161 767 1122](tel:+44(0)1617671122)
 - 2.1.3. **Web:** <https://www.polyflor.com/>
 - 2.1.4. **Email:** info@polyflor.com
 - 2.2. **Product reference:** Polysafe Wood fx PUR
3. **Standard:** To BS EN 13845.
4. **Use class:** To BS EN ISO 10874, class 23, 34 and 43.
5. **Slip potential**
 - 5.1. **Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum):** R10/ ≥36 (wet test - 4S Rubber/Slider 96).
 - 5.2. **Surface roughness (Rz) (minimum):** ≥20µm.
6. **Recycled content:** 10%.
7. **Width:** 2000 mm.
8. **Thickness:** 2 mm.
9. **Colour and pattern:** To be confirmed from the manufacturers standard range.
10. **Acoustic underlay:** Not required.

170 Flat-needed carpets Type A

1. **Description:** Carpet sheet flooring to areas identified on the tender drawings and associated schedules.
2. **Manufacturer:** [Burmatex Ltd](#)
 - 2.1. **Contact details**
 - 2.1.1. **Address:** Victoria Mills
The Green
Ossett
West Yorkshire
United Kingdom
WF5 0AN
 - 2.1.2. **Telephone:** [+44 \(0\)1924 262525](tel:+44(0)1924262525)
 - 2.1.3. **Web:** <https://www.burmatex.co.uk>
 - 2.1.4. **Email:** marketing@burmatex.co.uk
 - 2.2. **Product reference:** Academy - Carpet Sheet
3. **Standard:** To BS EN 1307.
4. **Classification**

- 4.1. **Level of use class:** To BS EN 1307, class 33.
5. **Recycled content:** 25% (minimum) to BS EN ISO 14021.
6. **Width:** 2000 mm.
7. **Colour and pattern:** To be confirmed from the manufacturers standard range.
8. **Pattern:** Ribbed.
9. **Castor chair rating (to BS EN 985):** Pass.
10. **Static loading (to BS 4939:1987 (2003)):** Recovery >80% (24 hours).
11. **Dynamic loading (to BS ISO 2094:1999 (2005)):** Loss <20% (1000 impacts).
12. **Static electricity:** Body voltage test (to BS ISO 6356:2000): <2 kV.
13. **Weight:** 940 g/m².
14. **Thickness:** 5.5 mm.
15. **Length:** 30 m.
16. **Flammability:** Euroclass Efl-s1.
17. **Sound performance:** Reduction in impact noise (to BS EN ISO 10140-3:2010): 19 dB.
18. **Noise at 1000 Hz:** To BE EN ISO 140-8: part 8:1998, 30.7 dB.
19. **Sound absorption coefficient:** BS EN 354:2003.
20. **Colour fastness:** Light (to BS EN ISO 105 – BO2): grade 6 (minimum); shampoo (to BS 1006: UK-TB:1990): grade 4 (minimum).
21. **Thermal resistance:** Tog rating 0.84 m²K/W.
22. **Environmental specifics:** EPD-assessed.
23. **Colour (Light reflectance value (LRV)):** 10.38.

General requirements

210 Workmanship generally

1. **Base condition after preparation:** Rigid, dry, sound, smooth and free from grease, dirt and other contaminants
2. **Finished coverings:** Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains
3. **Operatives:** Appropriately skilled and experienced for the type of work

220 Samples

1. **Covering samples:** Submit samples representative of each floor type prior to placing orders
2. **Purpose:** To obtain approval of appearance from client

250 Layout – sheet materials

1. **Seams:** Minimize occurrences of seams and cross seams, where possible
 - 1.1. **Position:** Away from heavy traffic areas, doorways, lift entrances, stair noses and areas of narrow access
2. **Pattern:** As per manufacturer's instructions.
Line of patten parallel to long wall lines / travel direction. Pattern to match along seams.
3. **Transition joints:** All joints in doorways to be located underneath the door.

330 Commencement

1. **Required condition of works prior to laying floor-covering materials**
 - 1.1. Building is weathertight and well dried out.
 - 1.2. Wet trades have finished work.

- 1.3. Paintwork is finished and dry.
- 1.4. Conflicting overhead work is complete.
- 1.5. Floor service outlets, duct covers and other fixtures around which materials are to be cut are fixed.
- 1.6. Provisions have been made to allow for ventilation during and after laying of materials.

340 Conditioning

1. **Prior to laying:**
 - Condition materials by unpacking and separating in spaces where they are to be laid. Maintain resilient flooring rolls in an upright position.
 - Condition materials by unpacking and separating in spaces where they are to be laid. Unroll carpet and keep flat on a supporting surface.
2. **Conditioning time and temperature (minimum):** As recommended by manufacturer, with time extended by a factor of two for materials stored or transported at a temperature of less than 10°C immediately prior to laying

Preparing bases

420 Existing bases

1. **Notification:** Before commencing work, the contractor is to confirm that existing bases will, after preparation, be suitable to receive coverings.
2. **Suitability of bases and conditions within any area:** Base to be sound, rigid, level, properly secured and dry.

470 Bases from which existing floor coverings have been removed

1. **Substrate:** Clear of covering and as much adhesive as possible. Skim with smoothing underlayment compound to give smooth, even surface.

520 Timber boarding/ strip flooring

1. **Substrate:** Boards/ strips securely fixed and acceptably level with no protruding fasteners. Plane, sand or apply smoothing underlayment compound to give a smooth, even surface.

530 Particleboard flooring

1. **Grade:** Type 4 – loadbearing, dry conditions.
2. **Substrate:** Existing assume timber floorboards; to be verified once existing flooring removed.
 - 2.1. **Gaps between boards:** Not more than 1 mm
 - 2.2. **Level:** Sand off areas raised up to 1 mm.
 - 2.3. **Priming:** As required by covering adhesive manufacturer.
3. **Equilibrium moisture content at time of laying covering:** To be installed when the board moisture content is in equilibrium with its in service conditions. Nominally 7–9 %; as in-service conditions.

570 Carpet underlay

1. **Standard:** To [BS EN 14499](#)
2. **Properties**
 - 2.1. **Type:** High Density 9mm PU Foam commensurate with sheet carpet flooring as per clause 170.
 - 2.2. **Tog rating:** 1.5 - 24
 - 2.3. **End use classification:** GD/U to [BS EN 14499](#)

Laying coverings

620 Colour consistency

1. **Finished work in any one area/ room:** Colour of individual pieces of floor covering to match. Finished floor to be free from banding or patchiness.
 - 1.1. **Requirement:** Use material from the same batch by the same manufacturer

650 Seams

1. **Requirement:** Closely butted with pile securely held in place. Direction of pile lay matching as per manufacturer's instructions.
2. **Patterns:** Matched along seams where applicable.
3. **Joints:** Neat, smooth, strongly bonded, flush with finished surface as per manufacturer's instructions.

740 Floor cover strips Type A

1. **Manufacturer:** [Gradus](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** Chapel Mill
Park Green
Macclesfield
Cheshire
SK11 7LZ
 - 1.1.2. **Telephone:** [+44 \(0\)1625 428922](tel:+44%201625428922)
 - 1.1.3. **Web:** <https://www.gradus.com>
 - 1.1.4. **Email:** imail@gradus.com
 - 1.2. **Product reference:** [MTS Multi-trim System - Aluminium \(ATT42/ PBT12\)](#)
2. **Dimensions:** 8–12 mm gauge, 42 mm top.
3. **Profile:** Twin top.
4. **Material:** Anodized aluminium top with PVC-U base.
5. **Finish:** Etched.
6. **Colour:** Etched silver.
7. **Fixing:** Mechanical and adhesive fix: consult Gradus for further guidance.

780 Trafficking after laying

1. **Traffic-free period:** In accordance with adhesive manufacturer's instructions

Completion

820 Finishing

1. **Description:** Sheet carpet flooring.
2. **Cleaning:** Vacuum carpet to remove any loose fibres and as per manufacturers' instructions.
3. **Treatment:** As per floor-covering manufacturer's instructions
4. **Temporary protection:** Cover all trafficked areas with a suitable carpet protection film.

830 Finishing rubber flooring

1. **Cleaning:**
 1. Wash floor with a cleaner recommended by covering manufacturer.
 2. Wet-vacuum or mop up residue.

3. Rinse with clean water. Wet vacuum or mop up and allow to dry.
2. **Final treatment:** As per manufacturer's recommendations

880 Leftover material

1. **Spare covering material:** Retain suitable material for patching/ repairs. On completion, submit pieces for selection. Hand over selected pieces to the employer.
2. **Waste disposal:** Safely in accordance with material safety data sheets and in accordance with relevant regulations

Ω End of Section

M60

Painting/clear finishing

Coating systems

130 Gloss paint (External)

1. **Description:** To existing / new external timberwork (fascia, soffit, barge-boards etc.) as identified on the tender drawings.
2. **Manufacturer:** Contractor's choice
3. **Surfaces:** Uncoated and previously decorated.
 - 3.1. **Preparation:**
 - Degrease and provide key.
 - Ensure surfaces are clean and dry.
 - Remove all loose and defective coatings.
4. **Initial coats:** As recommended by manufacturer
 - 4.1. **Number of coats:** As required to provide uniform even coverage.
5. **Undercoats:** As recommended by manufacturer
 - 5.1. **Number of coats:** As required to provide uniform even coverage.
6. **Finishing coats:** Full gloss
 - 6.1. **Number of coats:** As required to provide uniform even coverage.

130 Gloss paint (Internal)

1. **Description:** To existing / new internal timberwork (skirtings, architraves etc.) as identified on the tender drawings.
2. **Manufacturer:** Contractor's choice
3. **Surfaces:** Uncoated and previously decorated.
 - 3.1. **Preparation:**
 - Degrease and provide key.
 - Ensure surfaces are clean and dry.
 - Remove all loose and defective coatings.
4. **Initial coats:** As recommended by manufacturer
 - 4.1. **Number of coats:** As required to provide uniform even coverage.
5. **Undercoats:** As recommended by manufacturer
 - 5.1. **Number of coats:** As required to provide uniform even coverage.
6. **Finishing coats:** Full gloss
 - 6.1. **Number of coats:** As required to provide uniform even coverage.

170 Hydraulic lime coatings Render

1. **Description:** New and existing lime based render.
2. **Manufacturer:** Saint-Astier®
 - 2.1. **Contact details**
 - 2.1.1. **Address:** 75 Cowcross Street
LONDON
United Kingdom
EC1M 6EL
 - 2.1.2. **Telephone:** +44 7534 806947
 - 2.1.3. **Web:** <https://www.saint-astier.co.uk>

2.1.4.Email: contact_uk@saint-astier.com

2.2. **Product reference:** Badilith Lime Paint or equivalent approved.

3. **Surfaces:** New and existing lime based render.

3.1. **Preparation:**

- Ensure surfaces are clean and dry.
- Brush down to remove surface contaminants.
- As per the system manufacturers requirements.

4. **Initial coats:** Silicon borne primer; as recommended by manufacturer

4.1. **Number of coats:** As required to provide uniform even coverage.

5. **Undercoats:** As recommended by manufacturer

5.1. **Number of coats:** As required to provide uniform even coverage.

6. **Finishing coats:** Silicate masonry paint / limewash.

6.1. **Number of coats:** As required to provide uniform even coverage.

195 Silicate-based lime plaster coatings

1. **Description:** New and existing lime plastered internal surfaces.

2. **Manufacturer:** Earthborn or equivalent approved.

2.1. **Contact details**

2.1.1.Address: Earthborn
Frodsham Business Centre
Bridge Lane
Frodsham
WA6 7FZ

2.1.2.Telephone: +44 (0)1928 734 171

2.1.3.Web: [Eco Friendly Paint & Breathable Claypaint | Earthborn](#)

2.1.4.Email: sales@earthbornpaints.co.uk

2.2. **Product reference:** Breathable Claypaint (Matt Finish)

3. **Surfaces:** New and existing lime plastered internal surfaces.

3.1. **Preparation:** Ensure surfaces are clean and dry and in accordance with the manufacturers requirements.

4. **Initial coats:** As recommended by manufacturer

4.1. **Number of coats:** As required to provide uniform even coverage.

5. **Undercoats:** As recommended by manufacturer

5.1. **Number of coats:** As required to provide uniform even coverage.

6. **Finishing coats:** As recommended by manufacturer

6.1. **Number of coats:** As required to provide uniform even coverage.

Generally

215 Handling and storage

1. **Coating materials:** Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.

2. **Materials from more than one batch:** Store separately. Allocate to distinct parts or areas of the work.

220 Compatibility

1. **Coating materials selected by contractor**

1.1. Recommended by their manufacturers for the particular surface and conditions of exposure.

- 1.2. Compatible with each other.
- 1.3. Compatible with and not inhibiting performance of preservative/fire-retardant pretreatments.

280 Protection

1. **'Wet paint' signs and barriers:** Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

300 Control samples

1. **Sample areas of finished work:** Carry out, including preparation, as follows:
2. Types of coating Location
3. M60/170. Location and extent to be agreed. .
4. M60/195. Location and extent to be agreed. .
5. **Approval of appearance:** Obtain before commencement of general coating work.

Preparation

400 Preparation generally

1. **Standard:** In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File.
3. Refer to CDM Construction Phase Plan where applicable.
4. **Suspected existing hazardous materials:** Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
5. **Preparation materials:** Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
6. **Substrates:** Sufficiently dry in depth to suit coating.
7. **Efflorescence salts:** Remove.
8. **Dirt, grease and oil:** Remove. Give notice if contamination of surfaces/ substrates has occurred.
9. **Surface irregularities:** Remove.
10. **Joints, cracks, holes and other depressions:** Fill flush with surface, to provide smooth finish.
11. **Dust, particles and residues from preparation:** Remove and dispose of safely.
12. **Water based stoppers and fillers**
 - 12.1. Apply before priming unless recommended otherwise by manufacturer.
 - 12.2. If applied after priming: Patch prime.
13. **Oil based stoppers and fillers:** Apply after priming.
14. **Doors, opening windows and other moving parts**
 - 14.1. Ease, if necessary, before coating.
 - 14.2. Prime resulting bare areas.

420 Fixtures and fittings

1. **Removal:** Before commencing work remove: Coverplates, grilles, wall clocks, and other surface mounted fixtures.
2. **Replacement:** Refurbish as necessary, refit when coating is dry.

425 Ironmongery

1. **Removal:** Before commencing work: Remove ironmongery from surfaces to be coated.
2. **Hinges:** Remove
3. **Replacement:** Refurbishment as necessary; refit when coating is dry.

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M60
Painting/clear finishing

430 Existing ironmongery

1. **Refurbishment:** Remove old coating marks. Clean and polish.

440 Previously coated surfaces generally

1. **Preparation:** In accordance with BS 6150, clause 11.5.
2. **Contaminated or hazardous surfaces:** Give notice of:
 - 2.1. Coatings suspected of containing lead.
 - 2.2. Substrates suspected of containing asbestos or other hazardous materials.
 - 2.3. Significant rot, corrosion or other degradation of substrates.
3. **Suspected existing hazardous materials:** Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. **Removing coatings:** Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
5. **Loose, flaking or otherwise defective areas:** Carefully remove to a firm edge.
6. **Alkali affected coatings:** Completely remove.
7. **Retained coatings**
 - 7.1. Thoroughly clean to remove dirt, grease and contaminants.
 - 7.2. **Gloss-coated surfaces:** Provide key.
8. **Partly removed coatings**
 - 8.1. **Additional preparatory coats:** Apply to restore original coating thicknesses.
 - 8.2. **Junctions:** Provide flush surface.
9. **Completely stripped surfaces:** Prepare as for uncoated surfaces.

461 Previously coated wood

1. **Degraded or weathered surface wood:** Take back to provide suitable substrate.
2. **Degraded substrate wood:** Repair with sound material of same species.
3. **Exposed resinous areas and knots:** Apply two coats of knotting.

471 Preprimed wood

1. **Areas of defective primer:** Take back to bare wood and reprime.

481 Uncoated wood

1. **General:** Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
2. **Heads of fasteners:** Countersink sufficient to hold stoppers/fillers.
3. **Resinous areas and knots:** Apply two coats of knotting.

570 Uncoated masonry/ Rendering

1. **Loose and flaking material:** remove.

580 Uncoated plaster

1. **Nibs, trowel marks and plaster splashes:** Scrape off.
2. **Overtrowelled 'polished' areas:** Key lightly.

622 Organic growths

1. **Dead and loose growths and infected coatings:** Scrape off and remove from site.
2. **Treatment biocide:** Apply appropriate solution to growth areas and surrounding surfaces.

3. **Residual effect biocide:** Apply appropriate solution to inhibit re-establishment of growths.

Application

711 Coating generally

1. **Application standard:** In accordance with BS 6150, clause 9.
2. **Conditions:** Maintain suitable temperature, humidity and air quality during application and drying.
3. **Surfaces:** Clean and dry at time of application.
4. **Thinning and intermixing of coatings:** Not permitted unless recommended by manufacturer.
5. **Overpainting:** Do not paint over intumescent strips or silicone mastics.
6. **Priming coats**
 - 6.1. **Thickness:** To suit surface porosity.
 - 6.2. **Application:** As soon as possible on same day as preparation is completed.
7. **Finish**
 - 7.1. Even, smooth and of uniform colour.
 - 7.2. Free from brush marks, sags, runs and other defects.
 - 7.3. Cut in neatly.
8. **Doors, opening windows and other moving parts:** Ease before coating and between coats.

720 Priming joinery

1. **Preservative treated timber:** Retreat cut surfaces with two flood coats of a suitable preservative before priming.
2. **End grain:** Coat liberally allow to soak in, and recoat.

Ω End of Section

N11

Domestic kitchen fittings, furnishings and equipment

Products

310 Fitted base units

1. **Description:** First floor kitchenette facility as detailed on the tender drawing.
2. **Standard:** To [BS EN 14749](#).
3. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 3.1. **Product reference:** Greenwich Matt
4. **Structural performance:** To BS 6222-2, test level G.
5. **Dimensions:**
 - 1no. Sink Base Unit (1000mm)
 - 1no Cupboard Base Unit (600mm)
 - 1no. Draw-Line Base Unit (600mm)
6. **Surface finishes:** To [BS 6222-3](#).
7. **Doors and drawer fronts**
 - 7.1. **Material:** Plastics laminate
 - 7.2. **Finish and colour:** Matt; colour to be confirmed from manufacturers standard range.
 - 7.3. **Edges:** 0.5mm ABS four-sided edging plastics strip.
8. **Side panels, plinths and shelves**
 - 8.1. **Material:** Plastics laminate
 - 8.2. **Finish and colour:** Matt; colour to be confirmed from manufacturers standard range.
 - 8.3. **Edges:** 0.5mm ABS four-sided edging plastics strip.
9. **Accessories:** All necessary to complete the installation in accordance with the manufacturers recommendation; including:
 - Soft close hinges and drawer runners.
 - Adjustable legs.
 - Satin Stainless Steel Pull Handle Single.

320 Fitted wall units

1. **Description:** First floor kitchenette facility as detailed on the tender drawing.
2. **Standard:** To [BS EN 14749](#).
3. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 3.1. **Product reference:** Greenwich Matt
4. **Structural performance:** To BS 6222-2, test level G.
5. **Dimensions:**
 - 3no. Wall Units (600mm)
6. **Surface finishes:** To [BS 6222-3](#).
7. **Doors and drawer fronts**
 - 7.1. **Material:** Plastics laminate
 - 7.2. **Finish and colour:** Matt; colour to be confirmed from manufacturers standard range.
 - 7.3. **Edges:** 0.5mm ABS four-sided edging plastics strip.
8. **Side panels and shelves**
 - 8.1. **Material:** Plastics laminate
 - 8.2. **Finish and colour:** Matt; colour to be confirmed from manufacturers standard range.

8.3. **Edges:** 0.5mm ABS four-sided edging plastics strip.

9. **Accessories:** All necessary to complete the installation in accordance with the manufacturers recommendation; including:

- Soft close hinges.
- Satin Stainless Steel Pull Handle Single.

340 Worktops

1. **Description:** First floor kitchenette facility as detailed on the tender drawing.
2. **Standard:** To [BS 6222-3](#)
3. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 3.1. **Product reference:** 3m x 38mm Square Edge Staved Oak Effect Laminate Worktop
4. **Material:** Laminate-covered chipboard, Type 2
5. **Dimensions:** 3m x 38mm ; length and depth as per the tender drawings.
6. **Exposed edges:** Laminate, Type 2
7. **Support:** Base Units
8. **Other requirements:** All necessary accessories and fixings to complete the installation in accordance with the manufacturers recommendation.

350 Sinks, taps, traps and wastes

1. **Description:** First floor kitchenette facility as detailed on the tender drawing.
2. **Sinks**
 - 2.1. **Standard:** To [BS EN 13310](#).
 - 2.2. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 2.2.1. **Product reference:** Franke Bell Single Bowl Inset Stainless Steel Kitchen Sink
 - 2.3. **Configuration:** Sink and single drainer.
 - 2.4. **Overall size:**
 - Depth - 201mm
 - Length - 860mm
 - Width - 480mm
 - Material Thickness - 0.8mm
 - 2.5. **Material:** Stainless steel
 - 2.5.1. **Colour and finish:** Brushed steel
3. **Tap/ chainstay/ overflow holes:**
 - One tap hole.
 - Overflow hole.
4. **Taps:** Single Lever Mixer.
 - 4.1. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 4.1.1. **Product reference:** Radstone Brushed Stainless Steel Swan Neck Single Lever Mixer Kitchen Tap.
 - 4.2. **Operation:** Single Lever
 - 4.3. **Material:** Stainless Steel.
5. **Wastes:** Pop-up
 - 5.1. **Standard:** To [BS EN 274-1](#), [BS EN 274-2](#) and [BS EN 274-3](#).
 - 5.2. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 5.2.1. **Product reference:** 90mm Polished Stainless Steel Strainer Waste Kit With Round Overflow
 - 5.3. **Size:** To fit sink

- 5.4. **Material:** Polished Stainless Steel
- 5.5. **Tail:** Slotted
- 6. **Traps:** Tubular, P-type
 - 6.1. **Standard:** To [BS EN 274-1](#), [BS EN 274-2](#) and [BS EN 274-3](#).
 - 6.2. **Manufacturer:** Howden Joinery Ltd or equivalent approved.
 - 6.2.1. **Product reference:** Single Bowl Kitchen Sink Plumbing Kit
 - 6.3. **Size:** To fit waste
 - 6.4. **Material:** Plastics
 - 6.5. **Depth of seal (minimum):** 75 mm.
- 7. **Accessories:** All necessary accessories and fixings to complete the installation in accordance with the manufacturers recommendation.

360 Appliances

- 1. **Item:** Under counter washing machine and free standing electric oven / hob.
- 2. **Manufacturer:** Submit proposals
- 3. **Colour and finish:** White
- 4. **Service connections:**
 - Cold water
 - Mains electricity

390 Sealant

- 1. **Type:** One-part silicone
- 2. **Colour:** White

Execution

620 Installation generally

- 1. **Fixings and adhesives:** As [section Z22](#).

630 Installing units and worktops

- 1. **General:** Well-fitting, stable and secure in accordance with the manufacturers requirements.

640 Installing appliances

- 1. **Connections:** Final connection between appliances and the fixed services to water and electrical outlets to be carried out according to the manufacturer instructions including testing, commissioning and certification.

650 Installing sinks, taps and wastes

- 1. **Water supply:** To [BS EN 806-2](#) and [BS EN 806-4](#).
- 2. **Taps**
 - 2.1. **Fixing:** Secure, watertight seal with the appliance.
 - 2.2. **Positioning:** Hot tap to left of cold tap as viewed by the user of the appliance.
- 3. **Wastes**
 - 3.1. **Bedding:** Waterproof jointing compound.
 - 3.2. **Fixing:** With resilient washer between appliance and backnut.

660 Sealant bedding and pointing

- 1. **Application:** As [section Z22](#).
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2. **Bedding:** Sink to top of worktop
3. **Pointing:** Between units and splashbacks.

Completion

910 General

1. **Doors and drawers:** Accurately aligned, not binding. Adjusted to ensure smooth operation.
2. **Ironmongery:** Checked and adjusted to ensure correct functioning.

920 Appliance commissioning

1. **Appliance operation, functions and controls:** Verify.
2. **Documentation:** Submit guarantees, instruction manuals, etc.

Ω End of Section

P10

Sundry insulation/ proofing work

Types of insulation

110 Eaves roof ventilators for existing roofs

1. Eaves free air space (minimum): As recommended in BRE Report 262.

135 Mineral wool slab insulation Type A

1. Manufacturer: [ROCKWOOL Ltd](#)

- 1.1. Contact details

- 1.1.1. Address: ROCKWOOL Ltd

Wern Tarw
Pencoed
Bridgend
United Kingdom
CF35 6NY

- 1.1.2. Telephone: [+44 \(0\)1656 862621](tel:+44(0)1656862621)

- 1.1.3. Web: <https://www.rockwool.com/uk/>

- 1.1.4. Email: customersupportcentre@rockwool.com

- 1.2. Product reference: [Roll / Twin Roll / Rollbatt \(ROCKWOOL Roll\)](#)

2. General requirements: Insulation products generally.
3. Standard: To BS EN 13162, ISO 14001.
4. Thickness: 150 mm.
5. Edges: Square.
6. Thermal conductivity (maximum): 0.044 W/mK.
7. Fire performance: To 13501-1, Euroclass A1.
8. Vapour resistivity: 5.9 MN·s/gm.
9. U-value: 0.14 W/m²K.
10. Dimensions: 1200 x 3650 x 150 mm.
11. Installation requirements
 - 11.1. Insulation widths: Widest practical.
 - 11.2. Laid direction: At right angles to ties/ joists.
 - 11.3. Joints: Butted, no gaps.
 - 11.4. Service holes: Sealed, and debris removed before laying insulation.
 - 11.5. Eaves ventilation: Unobstructed. Maintain minimum 50mm gap between top of the insulation and underside of roof / membrane at all eaves. Rafter trays or eaves baffles are to be installed to hold back insulation where required in order to maintain air gap.

Ω End of Section

P20

Unframed isolated trims/ skirtings/ sundry items

To be read with preliminaries/ general conditions

370 Hardboard underlay

1. **Description:** To areas identified to receive new vinyl flooring and associated self levelling screed.
2. **Standard:** To [BS EN 622-2](#).
 - 2.1. **Type:** Standard hardboard, HB.
3. **Thickness:** 2.5 mm.
4. **Sheet size:** 1200 x 2400 mm.
5. **Substrate:** Existing floor boards securely fixed and acceptably level with no gross irregularities or protruding fasteners.
6. **Conditioning sheets:** Prior to fixing.
 - 6.1. **Requirement:** To restrict in situ expansion and prevent consequential disfigurement to floor coverings.
7. **Laying sheets:** Smooth face uppermost.
 - 7.1. **Cross joints:** Staggered, and not coincident with joints in base.
 - 7.1.1. **Joint width:** 1–2 mm. Joints taped ahead of receiving self levelling screed.
8. **Fasteners:** 25 mm ringed shank or twisted shank nails or divergent staples.
 - 8.1. **Location:** Commence at centre of one side of each sheet, at 150 mm grid centres over area of each sheet and at 100 mm centres along perimeter, set in 12 mm from edge.
 - 8.2. **Placement:** Not to project above sheet surface or through underside of base. Not deformed.
9. **Underlay conditioned by wetting:** Do not lay coverings until underlay is dry.

Execution

510 Installation generally

1. **Joinery workmanship:** As section Z10.
2. **Metal workmanship:** As section Z11.
3. **Methods of fixing and fasteners:** As section Z20 where not specified.
4. **Straight runs:** To be in one piece, or in long lengths with as few joints as possible.
5. **Running joints:** Location and method of forming to be agreed where not detailed.
6. **Joints at angles:** Butt joints, unless shown otherwise
7. **Position and level:** To be agreed where not detailed.

Ω End of Section

P31

Holes, chases, covers and supports for services

Products - Not Used

Execution

670 Notches and holes in structural timber

1. **General:** Avoid if possible.
2. **Sizes:** Minimum needed to accommodate services.
3. **Position:** Do not locate near knots or other defects.
4. **Notches and holes in same joist:** Minimum hole spacing equal to three times the maximum hole diameter calculated according to [BS 7671](#)
5. **Notches in joists**
 - 5.1. **Position:** Locate at top. Form by sawing down to a drilled hole.
 - 5.2. **Depth (maximum):** $0.125 \times$ joist depth.
 - 5.3. **Distance from supports:** Between $0.07 \times$ span and $0.25 \times$ span.
6. **Holes in joists**
 - 6.1. **Position:** Locate on neutral axis.
 - 6.2. **Diameter (maximum):** $0.25 \times$ joist depth.
 - 6.3. **Centres (minimum):** $3 \times$ diameter of largest hole.
 - 6.4. **Distance from supports:** Between $0.25 \times$ span and $0.4 \times$ span.

Ω End of Section

R10

Rainwater drainage systems

General - Not Used

System performance

221 Collection and distribution of rainwater

1. **General:** Complete, and without leakage or noise nuisance.

Products

380 Cast iron rainwater pipes and fittings Type A

1. **Manufacturer:** [Alumasc Water Management Solutions](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** Station Road
Burton Latimer
Kettering
Northamptonshire
NN15 5JP
 - 1.1.2. **Telephone:** [+44 \(0\)1536 383810](tel:+44(0)1536383810)
 - 1.1.3. **Web:** <https://www.alumascwms.co.uk/>
 - 1.1.4. **Email:** marketing@alumascwms.co.uk
 - 1.2. **Product reference:** [Alumasc Rainwater Apex Heritage Cast Iron Circular Downpipe \(Circular P40 - 100 mm\)](#)
2. **Standard:** To BS 460:2002, BS 8530:2010, BS EN 13501:2018.
3. **Section:** Round.
4. **Size (nominal):** 100 mm.
5. **Finish and colour**
 - 5.1. **Finish:** Polyester powder coated.
 - 5.2. **Colour:** RAL 9005m Black.
6. **Integral accessories:** Bends. Branches. Hopper Heads. Offsets. Pipe clips. Shoes. Sockets as required to complete the installation to match existing provisions.
7. **Film thickness (minimum):** 60-80 Microns.
8. **Third-party certification:** BBA Approval, BS 8530:2010.
9. **Fire rating (to BS EN 13501):** A2.

Custom made products - Not Used

Execution

600 Preparation

1. **Work to be completed before commencing work specified in this section**
 - 1.1. **Painting:** Painting of surfaces which will be concealed or inaccessible.

605 Installation generally

1. **Electrolytic corrosion:** Avoid contact between dissimilar metals where corrosion may occur.
2. **Allowance for thermal and building movement:** Provide and maintain clearance as fixing and jointing proceeds.
3. **Protection**

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- 3.1. Fit purpose-made temporary caps to prevent ingress of debris.
- 3.2. Fit access covers, cleaning eyes and blanking plates as the work proceeds.

635 Fixing pipework

1. **Pipework:** Fix securely, plumb and/ or true to line.
2. **Branches and low-gradient sections:** Fix with uniform and adequate falls to drain efficiently.
3. **Externally socketed pipes and fittings:** Fix with sockets facing upstream.
4. **Additional supports:** Provide as necessary to support junctions and changes in direction.
5. **Vertical pipes**
 - 5.1. Provide a loadbearing support at least at every storey level.
 - 5.2. Tighten fixings as work proceeds so that every storey is self-supporting.
 - 5.3. Wedge joints in unsealed metal pipes to prevent rattling.
6. **Expansion joint pipe sockets:** Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.

640 Fixing vertical pipework

1. **Bracket fixings:** Plugged and screwed into masonry.
2. **Distance between bracket fixing centres (maximum):** 1800 mm.

Completion

900 Testing generally

1. **Dates for testing:** Give notice.
 - 1.1. **Period of notice (minimum):** 1 week
2. **Preparation**
 - 2.1. **Pipework:** Complete, securely fixed, free from defects, obstruction and debris before testing.
3. **Testing**
 - 3.1. Supply clean water, assistance and apparatus.
 - 3.2. Do not use smoke to trace leaks.
4. **Records:** Submit a record of tests.

910 Gutter test

1. **Preparation:** Temporarily block all outlets.
2. **Testing:** Fill gutters to overflow level and after 5 minutes closely inspect for leakage.

920 Immediately before handover

1. **Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system:** Remove. Do not sweep or flush into the rainwater system.
2. **Access covers, rodding eyes, outlet gratings and the like:** Secure complete with fixings.

Ω End of Section

Z20

Fixings and adhesives

To be read with preliminaries/ general conditions.

200 General requirements for fixings

1. Materials need to have:
 - 1.1. Bimetallic corrosion resistance appropriate to items being fixed.
 - 1.2. Atmospheric corrosion resistance appropriate to fixing location.
 - 1.3. Fire resistance appropriate to fixing location and application.
 - 1.4. Material safety and data sheets (MSDS).
2. **Appearance:** Submit samples on request.

210 General requirements for adhesives

1. Adhesives need to have:
 - 1.1. Fire resistance appropriate to location and application.
 - 1.2. Material safety and data sheets (MSDS).

Products - Not Used

Execution - Not Used

Ω End of Section

Z21 Mortars

Cement gauged mortars - Not Used

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.

360 Making lime:sand mortars generally

1. **Batching:** By volume. Use clean and accurate gauge boxes or buckets.
2. **Mixing:** Mix materials thoroughly to uniform consistency, free from lumps.
3. **Contamination:** Prevent intermixing with other materials, including cement.

370 Site prepared nonhydraulic lime:sand mortars

1. **Mixing:** Mix materials thoroughly by compressing, beating and chopping. Do not add water.
 - 1.1. **Equipment:** Roller pan mixer or submit proposals.
2. **Maturation period before use (maximum):** As per manufacturers instructions.

390 Knocking up nonhydraulic lime:sand mortars

1. **Knocking up before and during use:** Achieve and maintain a workable consistency by compressing, beating and chopping. Do not add water.
 - 1.1. **Equipment:** Roller pan mixer or submit proposals.

400 Making hydraulic lime:sand mortars

1. **Mixing hydrated hydraulic lime:sand:** Follow the lime manufacturer's recommendations for each stage of the mix.
 - 1.1. **Water quantity:** Only sufficient to produce a workable mix.

2. **Working time:** Within limits recommended by the hydraulic lime manufacturer.

Ω End of Section

Z22 Sealants

Products - Not Used

Execution

610 Suitability of joints

1. **Presealing checks**
 - 1.1. **Joint dimensions:** Within limits specified for the sealant.
 - 1.2. **Substrate quality:** Surfaces regular, undamaged and stable.
2. **Joints not fit to receive sealant:** Submit proposals for rectification

620 Preparing joints

1. **Surfaces to which sealant must adhere**
 - 1.1. Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
 - 1.2. Clean using materials and methods recommended by sealant manufacturer.
2. **Vulnerable surfaces adjacent to joints:** Mask to prevent staining or smearing with primer or sealant.
3. **Backing strip and/ or bond breaker installation:** Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
4. **Protection:** Keep joints clean and protect from damage until sealant is applied.

630 Applying sealants

1. **Substrate:** Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
2. **Environmental conditions:** Do not dry or raise temperature of joints by heating.
3. **Sealant application:** Fill joints completely and neatly, ensuring firm adhesion to substrates.
4. **Sealant profiles**
 - 4.1. **Butt and lap joints:** Slightly concave.
 - 4.2. **Fillet joints:** Flat or slightly convex.
5. **Protection:** Protect finished joints from contamination or damage until sealant has cured.

Ω End of Section

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