

Rochdale Town Hall HLF Stage 2

Specification - M20
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M20

Plastered/ rendered/ roughcast coatings **REVISED**

Clauses

12 To be read with preliminaries/ general conditions

To be read with preliminaries/ general conditions.

2A Philosophy of repair

1. Assume for all works to historic fabric to be executed as follows unless modern alternatives are specifically specified elsewhere.
2. 1. To use compatible traditional methods and materials.
3. 2. To ensure finished work matches existing.
4. 3. To cut out and replace previous repairs of recent date, poor quality and inappropriate materials.
5. 4. To reuse, if available, originals of every type of plaster, be it cast or modeled in situ as a reference.
6. 5. To renew missing plasterwork.
7. 6. To use the best original of each type, stripped of paint and repaired as necessary to establish the new template, mould etc.

Types of coating

100 External Lime Render **ADDED**

1. Manufacturer: [Lime Green Products Ltd](#)
2. Surface:: Newton Waterproofing CDM 508 Mesh Membrane
3. Base Coat:
 - 3.1. Product reference: Forte Render Base Coat
 - 3.2. Information: Apply initial 10mm coat of Forte Render Base Coat and key before applying top coat.
4. Top Coat:
 - 4.1. Product reference: Duro Lime Render Base Coat
 - 4.2. Information: Apply top coat of 10-15mm Duro Lime Render, with sponged finish.
5. Contact details
 - 5.1. Address: Coates Kilns
Stretton Road
Much Wenlock
Shropshire
TF13 6DG
 - 5.2. Telephone: [+44 \(0\)1952 728611](tel:+44(0)1952728611)
 - 5.3. Web: www.lime-green.co.uk

5.4. Email: enquire@lime-green.co.uk

110A Cement:lime:sand

1. Description: Repairs to rendered skirtings
2. Substrate: solid wall.
 - 2.1. Preparation: thoroughly clean area where skirting is to be installed.
3. Mix (casting plaster: lime: sand): 1:2:5.
 - 3.1. Cement type: Sulfate resisting - clause 439.
 - 3.2. Lime type: Hydraulic Lime NHL 5
 - 3.3. Casting Plaster: Fine
 - 3.4. Sand type: Plastering sand as clause 441. Type to be agreed on site following trials.
 - 3.5. Sample Section: 5no sample sections of the above to be undertaken using variations in mix and allowed to cure prior to completion of the rest. Cured sample to be approved by architect or mix adjusted on site to suit.

200A Eco Mortar Premixed Repair Mortar R100

1. Manufacturer: St Astier
2. Product: EcoMortar R100
3. Description: Re-coating wall surface where different materials are present
 - 3.1. Preparation: Ensure that the backing coat is straight, dry and sufficiently hard to accept the finishing coat. Existing painted surfaces should be sound, well bonded and sanded to provide a good key. (Note existing paints may contain traces of lead - refer to Pre-Construction Information). Remove any loose or friable material, dust or any other surface contamination. All surfaces should be dry and not exposed to excessive humidity or moisture.
4. Mixing : In ordinary drum mixers or with a mortar wisk. Do NOT over saturate the mortar. The mortar is workable for up to 4 hours, depending on weather conditions
5. Application: *Strictly in accordance with manufacturers recommendations.*

Dampen the surface with a mist spray enough to reduce excessive suction. Apply in two passes of approximate equal thickness up to 3mm, creating a level surface to a total depth of 6mm.

On composite backgrounds of different materials, repairs and cracks, or on boards, reinforcing fibre mesh is required between passes. Reinforced fibre mesh should be trowelled into first pass immediately while plaster is still tacky. Overlap any joints in the mesh by 100mm. The second pass should be applied over tacky first pass to completely embed the mesh in the plaster. Leave to stiffen before sponge floating and closing in with a Nela Plastic Flex Trowel to produce a smooth finish.

6. Precautions: Do not apply in temperatures below 8°C or above 30°C. Protect work from adverse weather conditions until the finishing coat is applied and fully cured. In hot weather, cure with light water mist for the first 48 hours.
7. Decoration: The plaster should be completely dry before decorating. Allow 4 days minimum for a 3mm finish. Decorate with breathable paint.

280A Gypsum plaster skim coat on plasterboard

1. New work
2. Plasterboard: 12.5mm and 15mm thick - ceiling and wall locations
 - 2.1. Preparation: As recommended by board manufacturer
3. Plaster type: [As recommended by board manufacturer].
 - 3.1. Manufacturer: British Gypsum or similar approved
 - 3.1.1. Product reference: Submit proposals
 - 3.2. Thickness: As recommended by board manufacturer
 - 3.3. Finish: Woodfloat to match existing traditional finishes. Tight, matt surface with no hollows, abrupt changes of level or trowel marks.
4. Accessories: As clause 631

285 Skim coat plaster finish

1. Patch repairs
2. Plasterboard: see clause 607.
 - 2.1. Preparation: As recommended by board manufacturer.
3. Plaster type: Thistle One Coat Plaster in accordance with manufacturers recommendations or similar approved
 - 3.1. Thickness: Thistle Finishing Plaster - 2-3 mm.
4. Joints: Fill and tape except where coincident with metal beads.
5. Finish: Woodfloat to match existing traditional finishes. Tight, matt surface with no hollows, abrupt changes of level or trowel marks.

286 Skim coat plaster finish

1. Re-skimming to existing plasterboard
2. Plaster type: Thistle Bond It Coat followed by one of the following (dependant on smoothness and level finish of substrate, within each ceiling bay):
 - 2.1. Either:
 - 2.1.1. Thistle Universal One Coat Plaster in accordance with manufacturers recommendations or similar approved.
 - 2.1.2. Thickness: Thistle Finishing Plaster - 2-3 mm.
 - 2.2. Or:
 - 2.2.1. Thistle MultiFinish in accordance with manufacturers recommendations or similar approved.
 - 2.2.2. Thickness: 8mm to ceiling soffits.
3. Joints: Fill and tape except where coincident with metal beads.
4. Finish: Woodfloat to match existing traditional finishes. Tight, matt surface with no hollows, abrupt changes of level or trowel marks.
5. Other Requirements: Make good damage to substrate following removal of fixtures, fittings, services.

310A Lime:sand

1. Description: For lath and plaster walls and ceilings

2. **Substrate:** Existing/New Laths - clauses 625/626
 - 2.1. **Repair Methodology:** - Localised repair of depressions, gouges, and the like - clause 555- Localised repair - piecing in to areas of missing damaged plaster - clause 567 - Repair to failed plaster nibs - clause 590- Repair to decayed laths - clause 591- Repair to failed fixings - clause 592- Repair to failed laths and nibs - clause 593- Filling of fine cracks in plasterwork - clause 597 - Repairing large cracks in plasterwork - clause 598
3. **Lime manufacturer:** St Astier or similar approved
 - 3.1. **Product reference/ Type:** Hydraulic NHL2 (undercoats) and lime putty final coat
4. **Undercoats:** Two
 - 4.1. **Mix:** 2 parts lime: 5 parts sand: 1/2 part loosley teased out hair. If specification conflicts with manufacturer's advice seek advice from architect
 - 4.1.1. **Sand:** To BS EN 13139 and as clause 441
 - 4.2. **Thickness (excluding dubbing out and keys):** First undercoat 8-12mm. Second undercoat 8-10mm OR to match existing plaster if undertaking repair work
5. **Final coat:** One
 - 5.1. **Mix:** 1 part mature lime putty: 1 part sand
 - 5.1.1. **Sand:** To BS EN 13139 and as clause 441
 - 5.2. **Thickness:** 2–5 mm OR to match existing plaster if undertaking repair work
 - 5.3. **Finish:** Plain wood float OR to match existing if undertaking repair work
6. **Accessories:** Stops and beads where required as clause 631 and 641. Where applicable profiles to match existing
7. **Other requirements:** Care is to be taken to avoid excessive water in the mix. If trials indicate excessive shrinkage the proportion of sand may need to be increased

311 Lime:sand

1. **Description:** Plaster for masonry walls
2. **Substrate:** Existing brickwork/stonework
 - 2.1. **Repair Methodology:** - Localised repair of depressions, gouges, and the like - clause 555- Localised repair - piecing in to areas of missing damaged plaster - clause 567 - Reinstatement of lost areas of plaster to masonry walls - clause 595- Filling of fine cracks in plasterwork - clause 597 - Repairing large cracks in plasterwork - clause 598
3. **Lime manufacturer:** St Astier or similar approved
 - 3.1. **Product reference/ Type:** Hydraulic NHL2 (undercoats) and lime putty final coat
4. **Undercoats:** Two
 - 4.1. **Mix:** 2 parts lime: 5 parts sand: 1/4 part loosley teased out hair. If specification conflicts with manufacturer's advice seek advice from architect
 - 4.2. **Sand:** To BS EN 13139 and as clause 441

- 4.3. **Thickness (excluding dubbing out and keys):** First undercoat 8–12 mm. Second undercoat 8–10 mm OR to match existing plaster if undertaking repair work
- 5. **Final coat:** One
 - 5.1. **Mix:** 1 part mature lime putty: 1 part sand
 - 5.2. **Sand:** To BS EN 13139 and as clause 441
 - 5.3. **Thickness:** 2–5 mm OR to match existing plaster if undertaking repair work
 - 5.4. **Finish:** Plain wood float OR to match existing if undertaking repair work
- 6. **Accessories:** Stops and beads where required as clause 631 and 641. Where applicable profiles to match existing
- 7. **Other requirements:** Care is to be taken to avoid excessive water in the mix. If trials indicate excessive shrinkage the proportion of sand may need to be increased.

Materials and making of mortar

439 Cements for mortars

- 1. Rendered skirtings
- 2. **Cement:** To BS EN 197-1.
 - 2.1. **Types:** Portland cement, CEM I.
 - 2.1.1. Portland slag cement, CEM II.
 - 2.1.2. Portland fly ash cement, CEM II.
 - 2.2. **Strength class:** 32.5, 42.5 or 52.5.
- 3. **White cement:** To BS EN 197-1.
 - 3.1. **Type:** Portland cement, CEM 1.
 - 3.2. **Strength class:** 52.5.
- 4. **Sulfate resisting Portland cement:** To BS EN 197-1.
 - 4.1. **Strength class:** 42.5.
- 5. **Masonry cement:** To BS EN 998-1 and Kitemarked.

441 Sand for lime based plasters

- 1. For backing coats the sand shall be a medium fine plastering sand, well washed, free of salts and other deleterious matter.
- 2. For lime plaster finish coat the sand shall be a fine plastering sand, well washed, free of salts and other deleterious matter.
- 3. To BS EN 13139:2002 unless specified otherwise.
- 4. For facework, to be from the same source(s) throughout the contract.
- 5. Ensure consistency of colour and texture, mix different loads if necessary.
- 6. To be sharp, angular and well graded from 2.36mm to 0.15mm unless specified otherwise.
- 7. Store different sands in different piles on clean hard bases allowing free drainage.
- 8. Avoid intermixing and contamination.

445 Pigment for coloured mortars

1. Standard: To BS EN 12878.

458 Contamination

1. Do not allow contamination of one type of material by another, or by any set material.

461 Initial set

1. Do not use mixes after initial set has taken place. Do not retemper or reconstitute mixes, unless permitted by the manufacturer of proprietary mixes.

469 Cleanliness

1. Protect thoroughly all existing work and approaches using suitable boards, sheets, etc. Clean off all droppings onto finished work immediately.

478 Hydraulic lime

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

481 Ready prepared lime putty

1. Type: Slaked directly from CL 90 quicklime to BS EN 459-1, using an excess of water.
1.1. Maturation: In pits/ containers that allow excess water to drain away.
1.2. Density of matured lime putty: 1.3-1.4 kg/L.
2. Maturation period before use (minimum): 90 days.
3. Storage: Prevent drying out or wetting. Protect from frost.

485 Site prepared nonhydraulic lime:sand mortar

1. Lime putty: As clause 481.
2. Thoroughly mix lime putty with sand (or knock up previously prepared mortar) either mechanically or manually. Add only sufficient water to produce a workable mix.

493 Hair reinforcement

1. Manufacturer/ Supplier: Submit proposals
1.1. Product: Fully sterilised animal hair
2. Proportions (approximate): 5 kg hair to 1 m³ of coarse stuff.
3. Condition: Clean, free from grease and other impurities. Well teased before adding to the mix.
4. Distribution: Evenly throughout with no balling into lumps.
5. Storage period for haired mortar (maximum): Four weeks.

495 Mixing

1. Render mortars (site-made): -
1.1. Batching: By volume. Use clean and accurate gauge boxes or buckets.

- 1.2. **Mix proportions:** Based on damp sand. Adjust for dry sand.
 - 1.3. **Lime:sand:** Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
2. **Mixes:** Of uniform consistence and free from lumps. Do not retemper or reconstitute mixes.
3. **Contamination:** Prevent intermixing with other materials.

496 Work to historic plaster / renders generally

1. Materials, and methods of working for the repair and replacement of plasterwork (decorative and plain) must match that of the original work as closely as possible, unless specified otherwise, refer to the Philosophy of Repair at the beginning of this section.
2. Protection is to be in accordance with clause 498.
3. Before commencing work, agree mixes, preparation and application methods with the CA.
4. Use plasterers who are skilled and experienced in the repair and replacement of historic plasterwork including.

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 damage when air temperature is below 3°C.

498 Protection of historic plasterwork

1. **Prevent damage and disfigurement to plain and decorative plasterwork during the course of the works: -**
2. Provide or ensure provision of protection and/or temporary support to all vulnerable areas of plasterwork using methods agreed with the CA.
3. Adopt careful working methods when working alongside or above plasterwork to prevent disturbance from vibration and impact.
4. Do not make temporary fixings into decorative plasterwork or apply adhesive tape to plaster surfaces.
5. Do not allow rigid boards, battens, etc. to touch plasterwork directly. Sandwich an isolating layer of mineral wool or other approved soft material between the boards and plaster face. Ensure that the isolating layer is firmly pressed against the plaster face.

General - Not Used

Materials and marking of mortar - Not Used

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.

512 Preparation for repair of plaster on solid background

1. Prior to commencing repair, clean out cracks and voids with vacuum cleaner, and wash away any remaining dust.
2. Repoint and flush up areas where pointing missing where appropriate.
3. Wet and re-wet surfaces as required to equalise suction before applying first coat of plaster or render. If required wet masonry to be replastered the night before work. Spray with clean water prior to plaster application to prevent suction.
4. Dub out hollows in max. 9mm thick coats in same mix as first coat. Insert small stone pieces into wide joints by pressing into dubbing.

513 Non original work

1. Where plaster is found not to be historic carry out repairs in matching materials.

514 Areas of historic modelled or moulded plasterwork at risk

1. Have due regard to the fragility of this type of finish and when working on or close to such areas take all necessary steps to record and protect the items at risk.
2. Progressively fix back all loose edges to substrate either directly or with softwood noggings. The maximum permitted unsecured length of finish of background plaster edge is to be 120mm.
3. Stop work immediately if the finish or background plaster shows signs of movement, and introduce temporary supports until loose area can be secured.

515 Keying/bonding

1. Prepare backgrounds as specified for the type of coating to be applied. Methods other than those specified may be submitted for approval.

532 Extent of removal of historic plaster

1. Repair works to existing historic plaster to be carried out in accordance with clause 496.
2. Remove only those areas of failed plaster as agreed with CA.

3. Remove plaster that is loose, soft, friable, badly cracked or affected by efflorescence, using a sharp knife to give a square cut edge and the minimum impact necessary.
4. Gently tap all remaining intact surfaces and remove hollow sounding areas of plaster, unless otherwise agreed with the CA.
5. Remove stained plaster to 300 mm beyond last point of visible staining, unless otherwise agreed with the CA.
6. Advise CA if any built-in timbers, structural deficiencies or sources of damp which are revealed.
7. Thoroughly dry brush the background and edges to remove dust, loose material and efflorescence.

541 Bonding agent application

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

548 Junction of new work with old

1. Treat edges of surrounding plaster with progressively higher concentrations of Primal WS 24. Last application to be a 100% solution to avoid undue suction at edges. Apply plaster when Primal solution is still tacky.
2. Feather in new plaster to existing plaster, ensuring a seamless finish.

555 Localised repair of depressions, gouges and the like

1. Remove any paint by lightly rubbing down.
2. Where partitions have been removed and plaster is sound, rub down paint/plaster where proud of the retained wall/ceiling/cornice surface.
3. Fill holes and depressions with plaster to match existing (or clause 311 if not known and dependant on location) and ensure smooth finish for decoration that is seamless with adjoining surfaces.

567 Localised repair - where redundant fixings, fittings, boxings and services have been removed

1. Typically where redundant boxing in and services have been removed.
2. Advise CA if substrate has been damaged through removal of elements/fixtures/fittings.
3. Extent of removal of plaster to be in accordance with clause 532.
4. Mix top coat to match existing plaster type (or clause 310/311 if not known and dependent on location).
5. Pre-wet plaster to prevent suction.
6. Apply top coat thickness to match the existing (or clause 310/311 if not known and dependent on location).
7. If more than top coat missing/damaged - float in 3 coat lime plaster to match existing (or clause 310/311 if not known and dependent on location).

569 Repairing existing water damaged plaster

1. Remove plaster on walls affected by damp.

2. Rake out perished and salt contaminated mortar joints and cut out and renew any heavily salt contaminated bricks or blocks in the background.
3. Advise CA if any built-in timbers, structural deficiencies or additional sources of damp are revealed.
4. Provide the maximum ventilation possible and leave walls to dry for as long as possible before applying new plaster.
5. Thoroughly dry brush background to remove dust, loose material and efflorescence.
6. Re-plaster as clause 595.

573 Treatment of organic growths

1. Biocides must be approved and registered by the Health and Safety Executive (HSE) and listed in the current 'Reference Book 500', as surface biocides.

581 Establishing original plaster face

1. Before carrying out repairs to plasterwork ensure that decorative finishes and fillers have been removed from: -
 - 1.1. Repair area(s) at junctions with new plasterwork.
 - 1.2. Decorative plasterwork before making any castings.
 - 1.3. Where paint coatings are suspected of containing lead, obtain instructions before proceeding

586 Repairs to existing plasterboard ceilings

1. **Background:** Timber joists. Centres of joists may be variable from room to room. Refer to Room Data Sheets
2. **Plasterboard Backing:** see clause 607.
3. **Fixing:** see clause 610.
4. **Finishing:** Skim coat plaster - to suit location:
 - 4.1. Patch repair only required and to be matched and levelled in seamlessly with adjacent existing plaster finish: See Clause 285.
 - 4.2. Full re-skim to existing plaster boarded element: See Clause 286.
 - 4.3. **Accessories:** none
 - 4.4. **Joints:** all joints to be taped with Gyproc joint tape or similar approved.

590 Repairing lath and plaster ceilings: damaged nibs

1. Where there are damaged and broken plaster nibs, laths are sound and plaster in situ: -
2. a) Trim surplus nib flush with lath top. Remove loose plaster using a soft brush and vacuum.
3. b) Fix 2 no. strands of 3mm gauge stainless steel grade 316 wire over the area of damaged nibs. Screw fix the wires into the adjoining rafters/timber work and use washers to hold the wires. The wires should be fixed approx. 5mm above the plaster.
4. c) Carefully fix screws 25-30mm in length into shallow drill holes in plaster and set in resin between the wires. The screws should extend slightly above the height of the wires and be fixed at 100mm centres or a minimum of 4 no. per run.
5. d) Dedust with 50/50 alcohol/water solution and vacuum out.
6. e) Prime plaster with thin coat of Epoxy Products Tack Primer VG as tack coat.

7. f) When the tack coat is touch dry apply the lightweight Epoxy Mortar and model to form the repair. The mortar should cover the wires and screws by at least 5mm.

591 Repairing lath and plaster ceilings: decayed laths

1. Where there are decayed or damaged laths, plaster is in situ and individual repairs are required: -
2. a) Cut out lath flush to joist sides. Avoid damage to nibs if possible.
3. b) Fix 2 no. strands of 3mm gauge stainless steel grade 316 wire over the area of the removed laths. Screw fix the wires into the adjoining rafters/timber work and use washers to hold the wires. The wires should be fixed approx. 5mm above the plaster.
4. c) Dedust with 50/50 alcohol/water solution. Vacuum out.
5. d) Prime the exposed plaster with a thin coat of Epoxy Products Tack Primer VG as a tack coat.
6. e) When the tack coat is touch dry apply the lightweight Epoxy mortar and model to form a repair. The mortar should cover the wires by at least 5mm.
7. f) Prevent lightweight Epoxy mortar leaking or spilling with barriers formed of modelling clay and remove clay once Epoxy mortar has set.

592 Repairing lath and plaster ceilings: fixings failed

1. Where laths are sound but fixings loose and plaster intact: -
2. Method 1: -
3. a) Drill hole from plaster surface through lath into joists. Size to suit screw shank.
4. b) Enlarge hole in plaster to take screw head.
5. c) Screw lath to background timber with non-ferrous screws.
6. d) Make good hole in surface with mix to suit surrounding setting coat.
7. Method 2: -
8. a) Screw from above into back of lath adjacent to joist. Screw or hook approximately 25mm long left approx. 10-15mm proud of lath. Take care not to dislocate plaster when screwing.
9. b) Tie non-ferrous wire to screw head or hook, tension and staple, or otherwise fix to side of joist.

593 Repairing lath and plaster ceilings: lath and nibs failed

1. Where large scale failure of laths and nibs has occurred and plaster in situ repair as Damaged Nibs. Allow to form repairs to replace 1 in 3 missing laths.

594 Securing decorative plasterwork / cornices

1. Loose areas of cornice to be secured FROM ABOVE as follows: -
2. 1. Drill through back of plaster, ensuring plaster face in not pierced.
3. 2. Hole diameter to exceed dowel size by 25%.
4. 3. Dowels to be threaded rod (spiralux spiral flat), stainless steel 3mm-10mm diameter as appropriate.
5. 4. Run dowel in polyester resin. If working with gravity use low viscosity, if against, high viscosity.

6. 5. Leave dowel head at least one diameter under the surface. Where drilling from above grouting of hole is not required. Where drilling from below make good setting coat with appropriate plaster type.
7. Where access from behind not available. loose areas of moulded plaster to be secured FROM FRONT after obtaining architects prior consent as follows: -
8. 1. Drill through surface of plaster from front, diameter 6mm.
9. 2. Enlarge top 10mm of hole to accommodate 38mm penny washer.
10. 3. Cut mesh stainless steel washer, say 1mm aperture size, to fit hole.
11. 4. Secure plaster to joist or Masonry background with screw 'mesh' washer and 'penny washer'.
12. 5. Make good to hole with mix suitable for surrounding setting using mesh washer as key.

595 Reinstatement of lost areas of plaster to masonry walls

1. Plaster repair method as follows: -
2. 1. If required, agree with CA extent of plaster to be removed (as clause M20/532).
3. 2. Prior to commencing repair, prepare substrate in accordance with clauses M20/510 and M20/512.
4. 3. Keying/Bonding as clause as clause M20/515.
5. 4. Treat edges of surrounding plaster with progressively higher concentrations of Primal WS24. Last application to be a 100% solution (to avoid undue suction at edges).
6. Plaster to be applied when Primal solution is still tacky. Feather in new plaster to existing plaster, ensuring a seamless finish.
7. 5. Mix base coat to match existing plaster type (or clause 311 if not known). Apply plaster working plaster up well across joints. Rule to even surface and cross scratch to provide a key. Allow to dry out slowly, tending frequently. Take up shrinkage at edges. Do not overwork.
8. 6. Mix float coat to match existing plaster type and apply to thickness to match existing (or clause 311 if not known). Allow to dry out slowly tending frequently. Take up shrinkage at edges. Do not overwork. When plaster is on the point of 'turning', wet the plaster, scour and provide a key. Ensure key does not penetrate the top coat.
9. 7. Mix top coat to match existing plaster type (or clause M20/311 if not known).
10. 8. Pre-wet plaster to prevent suction (or clause M20/311 if not known).
11. 9. Apply top coat thickness to match the existing (or clause M20/311 if not known) and ensure a seamless finish.

596 Reinstatement of lost areas of plaster on timber lath

1. Plaster repair method as follows: -
2. 1. Where lath gaps are inadequate, trim sides with Stanley knife to provide a key for nibs.
3. 2. Where laths require replacement, see clause 625
4. 3. Treat edges of surrounding plaster with progressively higher concentrations of Primal WS 24. Last application to be a 100% solution to avoid undue suction at edges. Apply plaster when Primal solution is still tacky.

5. 4. Mix base coat to match existing plaster type (or clause 311 if not known). Apply plaster working plaster up well between laths to provide a key to thickness to match existing. Rule to even surface and cross scratch to provide a key. Allow to dry out slowly, tending frequently. Take up shrinkage at edges. Do not overwork.
6. 5. Mix float coat to match existing plaster type (or clause 311 if not known) and apply to thickness to match existing. Allow to dry out slowly tending frequently. Take up shrinkage at edges. Do not overwork. When plaster is on the point of 'turning', wet and scour up to provide a key. Ensure key does not penetrate the top coat.
7. 6. Mix top coat to match existing plaster type (or clause 311 if not known).
8. 7. Pre-wet plaster to prevent suction.
9. 8. Apply top coat thickness to match the existing.

597 Filling of fine cracks in plasterwork

1. Enlarge crack carefully to minimum 2mm width with appropriate sharp tool. Undercut crack.
2. Blow out and dust, flush with 50/50 water/alcohol solution.
3. Partially seal sides of crack with Primal WS24. Remove excess immediately with water.
4. Fill crack with Alabastine filler slightly proud of plaster surface
5. Sand back surface with fine grit wet and dry paper.

598 Repairing large cracks in plasterwork

1. Carefully cut out crack with appropriate sharp tool. Undercut crack.
2. Blow out and dust, flush with 50/50 water/alcohol solution.
3. Seal edges with Primal WS 24 acrylic emulsion.
4. Float in 3 coat lime plaster flush with and to match existing (or clause 310/311 if not known and dependent on location).

599 Repairing damaged top coat of plaster on sound undercoat

1. De-dust with 50/50 alcohol/water solution.
2. Adequately pre-wet and prime the float coat with Primal WS24 to prevent suction.
3. Apply coat in mix and thickness to match existing (or clause 311 if not known) and ensure a seamless finish.

Backings/ beads/ joints

607A Proprietary gypsum plasterboard backings

1. Manufacturer: British Gypsum
 - 1.1. **Product reference:** British Gypsum WallBoard or similar approved. To match adjacent existing plasterboard where patch repair required. Assume 12.5mm thickness
2. **Exposed surface and edge profiles:** Suitable to receive specified plaster finish.
3. **Fixing:** as clause 610.

610A Fixing plasterboard backings to timber backgrounds

1. Fixings, accessories and installation methods: As recommended by board manufacturer.
2. Fixing: At the following centres (maximum):
 - 2.1. Nails: 150 mm.
 - 2.2. Screws to partitions/ walls: 300 mm. Reduce to 200 mm at external angles.
 - 2.3. Screws to ceilings: 230 mm.
3. Position of nails/ screws from edges of boards (minimum): -
 - 3.1. Bound edges: 10 mm.
 - 3.2. Cut/ unbound edges: 13 mm.
4. Position of nails/ screws from edges of supports (minimum): 6 mm.
5. Nail/ screw heads: Set below surface. Do not break paper or gypsum core.
6. Nail fixings acceptable in areas where impact vibration will not affect highly significant historic finishes. Screw fixings to all highly significant areas to avoid damage from impact vibration.

612 Joints in plasterboard backings

1. Ceilings: -
 - 1.1. Bound edges: At right angles to supports and with ends staggered in adjacent rows.
 - 1.2. Two layer boarding: Stagger joints between layers.
2. Partitions/ walls: -
 - 2.1. Vertical joints: Centre on studs. Stagger joints on opposite sides of studs.
 - 2.1.1. Two layer boarding: Stagger joints between layers.
 - 2.2. Horizontal joints: -
 - 2.2.1. Two layer boarding: Stagger joints between layers by at least 600 mm. Support edges of outer layer.
3. Joint widths (maximum): 3 mm.

625 Repair laths locally

1. Method for replacement as follows: -
2. 1. Cut back damaged lath to nearest joist, stud or beam where exposed due to plaster loss.
3. 2. Detach by cutting one side of nail securing lath to joist/stud/beam.
4. 3. Snap off lath.
5. 4. Cut new lath to size and drill before nailing to avoid splitting ends.
6. 5. Secure cut back lath if necessary by drilling and nailing.
7. 6. New laths to match existing in timber type (assume oak riven laths), thickness and width. Moisture content 16%. Free from decay, insect attack, etc.
8. 7. Pre-drill and fix new lath. Where adjacent to existing plaster screw fix.
9. Timber lath is to be fixed in such a way that the gaps between the laths maintain approx. 6mm continuous gaps.
10. Severe undulations between adjacent laths are to be avoided.

11. Laths to be butt-jointed over the centre of point of support and nailed to every supporting timber.
12. Butt joints are to be staggered every 400mm.

626 Timber laths

1. New laths to match existing in timber type (assume oak riven laths), thickness and width.
2. Free from decay, insect attack, splits, shakes and with no knots wider than half the width of the section.
3. Preservative treatment as section Z12 and BWPDA Commodity Specification C8.
4. Moisture content at time of installation not exceeding 16%.
5. Space laths apart in straight lines with 3 mm wide butt joints centred accurately over supports. Timber lath is to be fixed in such a way that the gaps between the laths maintain approx. 6mm continuous gaps.
6. Stagger butt joints at not more than every eighth lath. Laths to be butt-jointed over the centre of point of support and nailed to every supporting timber.
7. **Fixing:** Nail fixings acceptable in areas where impact vibration will not affect highly significant historic finishes. Screw fixings to all highly significant areas to avoid damage from impact vibration.
8. **Nails:** 25 mm long galvanised clout nails at every support.
9. Severe undulations between adjacent laths are to be avoided.

631 Beads / stops for internal use

1. **Material:** Where hidden, galvanized steel to BS 13658-1 unless otherwise specified by architect.
2. **Material:** Where exposed to view, profiled timber to match existing. Sample to be provided for approval.
3. Profile to suit location - to be agreed on site with architect.
4. Fixing - see clause 641.

641 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.
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 substrates 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:** Internally: Galvanized steel plain expanded metal with spacers

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:** 150 mm.
 - 4.2. **Lathing:** 300 mm.
5. **Width of installation across face of dissimilar substrates material (column, beam, etc. with face width not greater than 450 mm):** -
 - 5.1. **Isolating layer:** 25 mm (minimum) beyond junctions with adjacent substrates.
 - 5.2. **Lathing:** 100 mm (minimum) beyond edges of isolating layer.

647 Joints between boards and solid substrates

1. **Fill and tape (scrim)** unless specified otherwise.

659 Plasterboard joints

1. **Joints and angles (except where coincident with metal beads):** Reinforce with continuous lengths of jointing tape.

Mouldings/ decorative plasterwork

677 Fibrous plaster mouldings

1. **Description:** New - To Welcome Gallery - replacement of missing upper profiled section.
2. **Type:** Reproduction of existing
 - 2.1. **Manufacturer:** Hayes and Howle
 - 2.2. **Name:** Upper profiled section to surviving coved cornice
 - 2.3. **Reference:** To Be Confirmed
3. **Size:** To match existing similar profile such as found in Rooms G3c and G2h - Main Corridor
4. **Installation:** True to line and level.
 - 4.1. **Substrate:** On existing plasterboard ceiling (later replacement) and lath and plaster cornice coving.
 - 4.2. **Fixing:** Bed and fix in accordance with manufacturers recommendations.
5. **Finishing:** Smooth, to correct profile and with flush joints.

678 Fibrous plaster mouldings

1. **Description:** New - To Secondary Areas - Corridor and Lobby
2. **Type:**
 - 2.1. **Manufacturer:** Hayes and Howle
 - 2.2. **Name:** Simple Coving
 - 2.3. **Reference:** HH16
3. **Size:**
 - 3.1. **Wall Profile (Depth):** 120mm
 - 3.2. **Ceiling Profile (Projection):** 105mm

4. **Installation:** True to line and level.
 - 4.1. **Substrate:** On new plasterboard ceilings (clause K10/245) and masonry/partition walls.
 - 4.2. **Fixing:** Bed and fix in accordance with manufacturers recommendations.
5. **Finishing:** Smooth, to correct profile and with flush joints.

679 Fibrous plaster mouldings

1. **Description:** New - To WC cubicle suspended ceilings
2. **Type:**
 - 2.1. **Manufacturer:** UK Plaster
 - 2.2. **Name:** Plaster Cornice Plain Cove
 - 2.3. **Reference:** CN154
3. **Size:**
 - 3.1. **Wall Profile (Depth):** 85mm
 - 3.2. **Ceiling Profile (Projection):** 85mm
 - 3.3. **Length:** 3000mm
4. **Installation:** True to line and level.
 - 4.1. **Substrate:** On new suspended ceilings (clause K10/220) and masonry/partition walls.
 - 4.2. **Fixing:** Bed and fix in accordance with manufacturers recommendations; bed solid in gypsum based adhesive.
5. **Finishing:** Smooth, to correct profile and with flush joints.

680 Cast fibrous plaster moulding repairs

1. **Description:** Repair
2. Historic/existing cornices - extent of removal - clause 532
3. Establishing original plaster face - clause 581
4. **Repair Methodology**
 - 4.1. Filling of fine cracks in plasterwork - clause 597
 - 4.2. Localised repair of depressions, gouges, and the like - clause 555
 - 4.3. Localised repair - making good to damaged plaster moulding / cornice profile - clause 692
 - 4.4. Localised repair - piecing in to gaps of missing plaster moulding / cornice sections - clause 690
 - 4.5. Localised repair - new sections to missing plaster moulding / cornice profile - clauses 514 and 690
 - 4.6. Localised repair - re-securing existing in accordance with clause 594
5. **Installation:**
 - 5.1. Fix securely and accurately.
 - 5.2. True to line and level.
 - 5.3. **Fixing:** Bed solid in gypsum based adhesive.
6. **Finishing:** Smooth, to correct profile and with flush joints.

685A Run in-situ plaster

1. Description: Repair
2. Historic/existing cornices - extent of removal - clause 532
3. Establishing original plaster face - clause 581
4. Repair Methodology
 - 4.1. Filling of fine cracks in plasterwork - clause 597
 - 4.2. Localised repair of depressions, gouges, and the like - clause 555
 - 4.3. Localised repair - making good to damaged plaster moulding / cornice profile - clause 692
 - 4.4. Localised repair - piecing in to gaps of missing plaster moulding / cornice sections - clause 691
 - 4.5. Localised repair - new sections to missing plaster moulding / cornice profile - clauses 514, 693 and 699
 - 4.6. Localised repair - re-securing existing in accordance with clause 594
5. Installation: -
 - 5.1. Fix securely and accurately.
 - 5.2. True to line and level.
 - 5.3. **Noggings, bearers, etc. to support mouldings:** Accurately position and securely fix.
 - 5.4. **Framing, fixing points and joints:** Reinforce.
6. Finishing: Smooth, to correct profile and with flush joints.

690 Reproduction of existing plaster mouldings

1. New work
2. Agree section(s) of mouldings to be reproduced and casting methods with the CA before commencing work.
3. Allow for preparing record castings where new work required - clause 694.
4. Ensure that any paint is removed from the original moulding (model) as clause 581.
5. Form reverse mould using methods and materials which allow the profile and detail of the original to be reproduced accurately and without damaging original moulding.
6. Make sufficient moulds to complete the required number of casts and maintain a consistent appearance.
7. Cast reproductions using plaster of Paris and include all necessary inserts to give strength and rigidity to the moulding section and allow secure fixing to the background.
8. Junction of new work with old - clause 548.

691 Run in-situ work: repairing without horsing

1. Generally rules to be used to bridge gaps between existing
2. Cut feather edge rules to fit in gap between existing plasterwork with approx. 30mm to spare.
3. Float in base and subsequent coats using rule, correct and true to profile of existing coats.

4. Use feather edge rule longer than gap, float in setting coat. Use existing setting coat as datum and reference for rule.
5. Remove surplus plaster at join, and blend in to 'deceive the eye'.
6. Use pre-prepared small pieces of wood, specially shaped to follow contours, to scour up the work, if required.

692 Cast in-situ work

1. Score surface of damage and undercut.
2. Seal surfaces with Primal WS24 and whilst still tacky
3. Remodel area in direct plaster technique in mix to match existing.
4. Finish to match cast work.

693 Run in-situ work: repair with horsing

1. Prepare horsed mould for running.
2. Run in base and subsequent coats using horse, correct and true to profile of existing coats.
3. Remove surplus plaster at join, and blend in to 'deceive the eye'.
4. Use pre-prepared small pieces of wood, specially shaped to follow contours, to scour up the work, if required.
5. Where no datum exists at one end ie. at internal or external angles, cut profile of zinc, aluminium or stiff card to match existing.
6. Junction of new work with old - clause 548.

694 Record castingsrecord castings

1. **Timing:** Make castings for moulding etc. before commencing repair work, to enable accurate reproductions to be made.
2. **Identification:** Mark clearly to identify original location.
3. Store record casting(s) safely until required for use or as otherwise instructed by the CA.

Internal plastering

699 Repairing hand modelled plasterwork

1. Agree the form and pattern of the in situ modelling with the CA before commencing repair work.
2. **Armatures:** Stainless steel to suit the relief and profile of the modelling.

706 Control samples

1. Carry out representative control samples for each of the repair methodology types noted in the following: -
 - 1.1. Clause 310
 - 1.2. Clause 311
 - 1.3. Clause 599
 - 1.4. Clause 680
 - 1.5. Clause 685A

1.6. Clause 690 and 694

1.7. Clause 200A

2. All above control samples are to include for approved finishing for final sign off.

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 localised 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.

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.

726 Plaster on metal mesh lathing

1. Work undercoat well into interstices to obtain maximum key.

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.

791 Drying of lime plaster

1. Work in the shade and out of conditions that may cause plaster to dry out too quickly.
2. Keep each undercoat and final coat damp by spraying with water until coating is sufficiently firm.
3. Thoroughly consolidate/scour second and final coats one or more times as necessary to control shrinkage

792 Final coat

1. Plain floated finish
2. Finish with wood or other suitably faced float to give an even, open texture. Do not apply water while working up. Do not draw excessive laitance to surface (either by overworking or by use of steel trowel).

External rendering - Not Used

Ω End of Section

