Grosvenor Building – Manchester Metropolitan University.
Lime Plaster Remedial Repair Where Required.

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Section: M20
Plastering (Lime-Based Repairs – Heritage)

M20/110 - Description of work

- Repair work to the existing cracked and debonding lime plaster, to consolidate and renew where required.
- Works relate to Grade II listed Manchester School of Art building – Grosvenor and Holden Gallery only.
- The works must follow conservation best practice.

M20/120 Extent
Includes: (where required only)

- Localised patch repairs
- Partial re-plastering
- Full re-plastering where agreed to areas of debonding noted.

M20/210 Standards

- BS 7913: Guide to conservation of historic buildings
- BS EN 13914-2: Internal plastering

M20/220 Guidance
Follow recommendations of:

- Historic England
- Society for the Protection of Ancient Buildings

M20/230 Principles

- Minimum intervention only.
- Like-for-like repair
- Retention of historic fabric
- Reversibility where practicable

M20/310 Plastering Contractors Competence

- Specialist contractor with minimum 5 years' experience in lime plaster conservation works.
- Proven experience in traditional lime plastering

M20/400 Existing Fabric Survey

Carry out detailed condition survey and locate:

- Hollow/loose plaster
- Cracks
- Damp/salts
- Record via photographs and marked up drawings.

M20/420 Retention

- Always retain sound plaster.
- Stabilise where feasible e.g. reattachment of debonding plaster by specialist using injection adhesive is preferred.

M20/430 Protection

Provide protection to adjacent:

- Existing joinery features
- Existing / original Flooring
- Existing decorative features

M20/510 Extent of removal of existing lime plaster

Remove only where:

- Debonded
  Note: This must only occur if it is deemed that the existing plaster cannot be reattached using specialist injection adhesive as noted in Clause 420 above.
- Friable
- Salt contaminated
- Beyond repair

M20/520 Methods

- Hand tools only
- No power tools unless approved
- Avoid damage to substrate

M20/600 Substrate Preparation

Masonry backgrounds:

- Rake out loose joints
- Remove dust and debris
- Pre-wet substrate to control suction

Timber laths (if encountered):

- Retain existing where sound
- Replace damaged laths with riven oak or chestnut laths using stainless steel or non-ferrous fixings.

M20/630 Background conditioning

- Ensure even suction
- Apply dubbing out coat where required.

M20/710 Lime binder

Type:

- Lime putty (CL90) to BS EN 459-1
  NHL 2 or NHL 3.5 where required by exposure

M20/720 Aggregates

- Well-graded sharp sand
- Free from salts and contaminants

M20/730 Fibres

- Hair reinforcement: Goat hair evenly distributed and certified for use.
- Polypropylene fibres may also be used.

M20/740 Water

- Clean, potable

M20/810 Application (Min 3 coat system) for areas requiring patch repair.

1. <u>First coat: Base (scratch) coat</u>

- Mix: 1:2.5 (lime:sand)
- Include hair reinforcement as M20/730
- Firmly pressed onto background
- Scored to provide key
- Coat to be between 15 to 20mm thick, generally to match existing

2. <u>Second coat: Float coat</u>

- Mix: 1:2.5–3
- Level and true surface
- Allow to stiffen before finishing
- Coat to be between 15 to 20mm thick, generally to match existing

3. <u>Finish coat</u>

- Mix: 1:1–1.5 (fine aggregate)
- Apply thinly
- Finish to match existing historic texture i.e. smooth, textured or float as appropriate.
- Match existing historic tolerances (not modern drywall standards)

4. <u>Curing and protection of each layer during build up:</u>

- Maintain moisture of each layer for 5–7 days minimum and provide light misting as required.

- Minimum temperature: 5°C
- Protect each layer from rapid drying
- Protect from direct sunlight
- Protect from strong draughts

M20/830 Crack repairs.

- Rake out and fill with lime mortar Mix: 1:1–1.5 (fine aggregate)
- Use stainless steel or alkali-resistant mesh at junctions of cracks if required.
- Blend new plaster seamlessly into existing.

M20/850 Prohibited materials

Do not use:

- Gypsum plasters
- Cement-based materials
- Impermeable coatings

M20/860 Decoration

Apply breathable finishes only: i.e. Keim breathable paint or similar.

M20/870 Records on completion

Provide documentation to client:

- Materials used
- Mix ratios
- Marked up elevation drawings showing areas treated / repaired.

M20/890 General Notes

- The Contractor should make an allowance for slow programme durations due to lime curing times