DESIGN AND ACCESS STATEMENT
APPENDIX O : CEILING REPAIR SPECIFICATION
JUNE 2014

THE UNIVERSITY OF MANCHESTER - COUPLAND 3
MANCHESTER



PURCELL

JAMES SANDERSON
Amazon House, 3 Brazil Street, Manchester M1 3PJ
james.sanderson@purcelluk.com
www.purcelluk.com

All rights in this work are reserved. No part of this work may be reproduced, stored or transmitted in any form or by any means (including without limitation by photocopying or placing on a website) without the prior permission in writing of Purcell except in accordance with the provisions of the Copyright, Designs and Patents Act 1988. Applications for permission to reproduce any part of this work should be addressed to Purcell at info@purcelluk.com.

Undertaking any unauthorised act in relation to this work may result in a civil claim for damages and/or criminal prosecution. Any materials used in this work which are subject to third party copyright have been reproduced under licence from the copyright owner except in the case of works of unknown authorship as defined by the Copyright, Designs and Patents Act 1988. Any person wishing to assert rights in relation to works which have been reproduced as works of unknown authorship should contact Purcell at info@purcelluk.com.

Purcell asserts its moral rights to be identified as the author of this work under the Copyright, Designs and Patents Act 1988.

Purcell® is the trading name of Purcell Miller Tritton LLP.

© Purcell 2013

APPENDIX O : CEILING REPAIR SPECIFICATION

THE UNIVERSITY OF MANCHESTER - COUPLAND 3

02 June 2014

This document includes:

Code	Section	Revision	Dated
K10	Plasterboard dry linings/ partitions/ ceilings	0	2 Jun 2014
M23*	Repairing/Renovating: Plaster/Render (Historic Buildings)	0	2 Jun 2014

Table of Contents

Title		Page
K	Linings/Sheathing/Dry partitioning	3
K10	Plasterboard dry linings/ partitions/ ceilings	5
M	Surface finishes	7
M23*	Repairing/Renovating: Plaster/Render (Historic Buildings)	9

K
Linings/Sheathing/Dry partitioning

K10
Plasterboard dry linings/ partitions/ ceilings

Section Revision History

No.	Purpose	
0	ISSUED FOR INFORMATION	2nd Jun 2014

Clauses amended in Revision 0

This is the first revision stamp for this section. For all future revision stamps, details of all clauses amended at that revision will be included here.

K10 Plasterboard dry linings/ partitions/ ceilings

To be read with Preliminaries/ General conditions.

TYPES OF DRY LINING

245 CEILING LINING ON TIMBER TO EXISTING CEILINGS

- Background: Timber lath as section M23* over timber joists at 330mm nominal centres.
- Metal resilient (acoustic) bars: Not required.
- Linings: 12.5mm nominal plasterboard to match existing lime:hair plaster thickness.
  - Fixings: Screws.
- Finishing: Skim coat plaster.
  - Primer/ Sealer: Not required.
  - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements: Repairs to existing timber lath and run cornice as section M23*. Joint between new plasterboard and skim ceiling and existing decorative cornice to be filled, taped and jointing compound applied to provide a smooth seemless surface suitable for redecoration.

GENERAL/ PREPARATION

COMPONENTS

401 GYPSUM PLASTERBOARD

- Type: To BS EN 520, type A .
- Core density (minimum): 650 kg/m³.
- Recycled content: Contractors choice.
- Exposed surface and edge profiles: Clean and undamaged.

INSTALLATION

435 DRY LININGS GENERALLY

- General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
- Cutting plasterboards: Neatly and accurately without damaging core or tearing paper facing.
  - Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
- Fixings boards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
- Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

445 CEILINGS

- Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
- Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
- Two layer boarding: Stagger joints between layers.

560 JOINTS BETWEEN BOARDS

- Tapered edged plasterboards:
  - Bound edges: Lightly butted.
  - Cut/ unbound edges: 3 mm gap.
- Square edged plasterboards: 3 mm gap.
- Square edged fibre reinforced gypsum boards: 5 mm gap.

610 FIXING PLASTERBOARD TO TIMBER

- Fixing to timber: Securely at the following centres (maximum):
  - Nails: 150 mm.
  - Screws to partitions/ wall linings: 300 mm. Reduce to 200 mm at external angles.
  - Screws to ceilings: 230 mm.
- Position of nails/ screws from edges of boards (minimum):
  - Bound edges: 10 mm.
  - Cut/ unbound edges: 13 mm.
- Position of nails/ screws from edges of timber supports (minimum): 6 mm.

FINISHING

680 SKIM COAT PLASTER FINISH

- Plaster type As recommended by board manufacturer..
  - Thickness: 2-3 mm.
- Joints: Fill and tape except where coincident with metal beads.
- Finish: Tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

M
Surface finishes

M23*
Repairing/Renovating: Plaster/Render (Historic Buildings)

Section Revision History

No.	Purpose	
0	ISSUED FOR INFORMATION	2nd Jun 2014

Clauses amended in Revision 0

This is the first revision stamp for this section. For all future revision stamps, details of all clauses amended at that revision will be included here.

M23* Repairing/Renovating: Plaster/Render (Historic Buildings)

TO BE READ IN CONJUNCTION WITH SCHEDULES AND PRELIMINARIES

SCOPE OF WORK

- Cut neat and straight joints between existing delaminated lime and hair plaster finishes and decorative cornices taking care not to damage timber lath substrate.
- Remove existing delaminated lime and hair plaster taking care not to damage existing decorative cornice or timber lath substrate.
- Repair/ refix existing timber lath as detailed below.
- Repair cornice as detailed below.
- Overboard existing timber lath with new plasterboard lining with skim finish as section K10.
- Joint between new plasterboard and skim ceiling and existing decorative cornice to be filled, taped and jointing compound applied to provide a smooth seemless surface suitable for redecoration.

MATERIALS

CONSTITUENT MATERIALS

200* LIME PUTTY FOR PLASTERING

- Best mature lime putty ready prepared by slaking high calcium quicklime (CL90) to BS890. Lime putty shall have been sieved through a fine BS sieve to remove all unslaked material and shall be at least three months old at time of delivery. Wet and sloppy batches of lime putty failing to come out cleanly when tipped from the container are to be rejected. Do not use lime putty prepared from magnesian (Dolomitic) lime.
- Maturation period before use: (minimum) 90 days.
  1. H J Chard & Sons, Feeder Road, Bristol, BS2 0TJ (Tel: 01272-777681)
  2. Hirst Conservation Materials Limited, Laughton, Sleaford, Lincs, NG34 0HE (Tel: 01529-497449)
  3. Potmolen Paint, 27 Woodcock Industrial Estate, Warminster, Wilts BA12 9DX (Tel: 01985-213960)

  or other source to be agreed prior to submitting the tender.

- Obtain and store in air tight containers until ready for use. Protect from frost.
  Handle containers with care to avoid mixing water seals with lime putty.
  Drain off water seals before using lime putty.

210* SAND FOR PLASTERING

- Clean washed sand complying with BS1199 type A, substantially dried before use.

(See GUIDANCE NOTES for list of Names, Addresses etc)

220* HAIR

- Clean long animal hair, undamaged and free from grease and dirt. Minimum length of hair 75mm. Thoroughly separate hair before use.
- Obtain hair from:
  1. Lawrence Long Ltd, Vaughton Street South, Birmingham B12 0YN (Tel: 0121-6223114, Fax: 0121-6281994)
  2. Hairco Ltd, 23 Dollis Hill Estate, 105 Brook Rd, London, NW2 7BZ (Tel: 020-8830-7344, Fax: 0180-8307355)
  3. IJP Building Products, Hampstead Farm, Binfield Heath, Henley-on-Thames, Oxfordshire, RG9 4LG (Tel: 01189-696949, Fax: 01189-697771)

  or other approved by the Architect.

225* WATER

- Mains supply kept free from impurities. Do not add water to plasters/mortars prepared with lime putty.

235* PLASTER OF PARIS

- Gypsum plaster to BS1191: Part 1, Class A (Plaster of Paris); British Gypsum Fine Casting Plaster or similar approved. Plaster of Paris is to be used within 3 months of manufacture. It is essential that Plaster of Paris is stored in dry conditions. Bags must not be placed in contact with cold or damp surfaces (i.e. solid floors and externals walls).

TIMBER LATHING

TYPES OF LATHING

250* RIVEN/SPLIT LATH

- Produced from oak / chestnut / softwood (Pinus Silvestris - European Scots Pine) / or an approved equal, free from knots and defect.
- Obtained from:
  1. Carpenter, Oak and Woodland Limited, Wilts. (Tel: 01225-743089)
  2. I.J.P. Building Products (Tel: 01189-696949, Fax: 01189-697771)
  3. G&N Marsham (Tel: 01798 342427) (For chestnut lath)
  4. Hendry's of Foulsham (Tel: 01362-683249)

  or other source to be agreed prior to submitting the tender.

260* TIMBER FIRRINGS

- Where specified in the Schedule of Works, firrings to correct line and level to be of treated softwood, 25mm wide, tacked in position before fixing timber lathing. Where fixing timber lathing to thin firrings on ceilings increase length of lath fixings by thickness of firring, unless firrings are more than 16mm in thickness and securely fixed to supporting timber with st nails at 300mm c/c.

265* TIMBER LATHING FOR CEILINGS AND CORNICES

- Supports (not included in this section): Timber joists/firrings at 330mm nominal centres.
- Lathing: Riven/split laths nominal ¼ (6-7mm) thick, 32mm wide and in length enough to cover 3 or 4 supports. Laths must be straight and evenly spaced 6-10mm apart, fixed at every support with 35mm stainless steel ring shank nails.

TYPES OF COATING

300* LIME AND HAIR PLASTER FOR CORNICE

- Background: Timber joists at 450mm (assumed) centres.
- Pricking-up coat: 1:2.5-3 lime : sand with 5-10kg/ M3 hair
  Lime: Best mature lime putty (M23/200).
  Sand: Washed plastering sand graded up to 1mm (M23/210).
  Hair: Clean long coarse ox, horse or goat hair (M23/220).
  Thickness: 8-10mm from face of lath.
- Floating coat:As pricking-up coat.
  Thickness: 8-10mm excluding dubbing-out.
  Setting (final) coat: As required lime : Sand (Fine Stuff) with 5-10kg/M3 Hair.
  Lime: Best mature lime putty (M23/200).
  Sand: Washed plastering sand graded up to ½mm (M23/210).
  Hair: Clean long fine white goat hair (M23/220).
  Thickness: 3mm.

WORKMANSHIP GENERALLY

GENERAL REQUIREMENTS FOR PLASTERING

400* PROTECT AREAS

- In addition to general protection adequately protect any areas adjacent to the working area against water during cleaning, plaster droppings during plastering, or, any other damage which might reasonably result from the carrying out of the works described in this section. In particular carefully protect any decorative plaster, polished or varnished joinery, and marble hearths.

WORKMANSHIP : PREPARATION

PREPARING BACKGROUNDS

425* REPAIRING/RENOVATING EXISTING LATH AND PLASTER

- Advise CA if any built-in timbers, structural deficiencies or sources of damp are revealed during the repair/renovation works.

430* TREATMENT OF ORGANIC GROWTHS

- Use only biocides recommended for the purpose and cleared under the Pesticides Safety Precautions Scheme.

- Any partially decayed timbers to be retained should be brush treated with a paste preservative. Remtox K9 (Remtox (Chemicals) Ltd, Tel: 0121-5252299) where rapid and deep penetration is required, or Permatreat Paste (Permaguard Products Ltd, Tel: 01179-381596) where there is a risk that adjacent plaster may be stained. (All pastes may carry dirt through to the surface of plaster if they come into contact with it and must be used with caution).

SAMPLES

435* SAMPLES

- Submit for approval representative samples of Lath repair , plasterboard with skim finish abutting existing cornice , Cornice repair

455* MIXING HAIR AND LIME PLASTER FOR CORNICE

- Proportions of specified mixes are by volume and for damp sand.
  Adjust proportions if dry sand is used. Dry out wet sand before use.
  Use mortar-mill or paddle type mixers for mixing lime plasters. Do not use a barrel mixer.
  Keep plant and banker boards clean at all times.
  Accurately measure constituents using a clean gauge box, ideally an empty lime putty container.
  Mix ingredients thoroughly together and add the hair only at the last minute to avoid breaking or tearing into short pieces.
  Check that sufficient hair has been added to the pricking-up coat for ceilings by taking up an amount on a trowel. The plaster should hang down from the edges without dropping off.

500* PREPARE OLD PLASTER

- Carefully cut back loose and friable plaster to sound square edges either perpendicular to or parallel with lathing. Align perpendicular edges just behind supporting timber to expose lath fixings. Slightly under-cut plaster edges to key in new work. Remove dust by dry brushing.

510* PREPARE OLD PLASTER (PRICKING-UP COAT INTACT)

- Carefully cut back loose and friable plaster to sound edge. Slightly under-cut plaster edges to key in new work.

515* REFIXING EXPOSED OLD LATH

- Where directed by the CA, carefully clean out old plaster from between existing lath which is to be reused.
  Retain sound lath and trim damaged lath to nearest support.
  Refix every second exposed lath along perpendicular edges of adjoining plaster, replacing existing nails with brass screws and washers.
  Treat remaining iron lath nails with rust inhibitor, allow to dry and further treat with stopping.

520* TREAT EXPOSED LATH NAILS

- Treat iron lath nails with rust inhibitor, allow to dry and further treat with stopping.

525* REPAIR LATHING

- Retain sound lath and repair broken lengths with splints cut from new timber lath. Fit splint behind damaged section, overlapping each end by at least 50mm. Bind the two laths together tightly with copper wire

530* REFIX CUT ENDS

- Trim remaining ground to nearest support, preservative treat cut ends and refix by skew nailing.

WORKMANSHIP: APPLICATION

PLASTERING GENERALLY

DECORATIVE PLASTER : SPECIFIC APPLICATION

570* RUNNING A CORNICE Run floating coat(s)

- Gradually bring forward the required profile in thin layers of plaster (coarse stuff and hair) roughly applied by hand profile to be shaped with a purpose-made timber profile (horsed mould) drawn across the work and kept true to line and level with timber guide rails top and bottom.
- Score all over each layer to provide a key for the next and allow each to develop an adequate set before continuing.
- Ensure that guide rails are accurately set out and firmly secured, packing and scribing locally where necessary, to produce a true and even line exactly matching the original.
- Ensure that each timber profile is kept vertically plumb and perpendicular to the work by fixing a brace to one side.
- Include the timber profile slightly forward to produce a swell in the plaster firmly pressing each new layer into the scoring/scratching of the previous layer.
- Allow for adjusting the brace to suit the radii of cylindrical work.
- Finish junctions and angles free-hand.
- Gently roughen the surface of the last base coat with a stiff bristle brush once the initial set has taken place to provide a key for the setting coat.

575* RUN SETTING (FINAL) COAT

- Form the finishing profile (horsed mould) from Tin or Zinc sheet supported by a timber profile and brace generally as described above.
- Apply the setting coat in one smooth operation leaving the work clean and true to line and level with no ripples, ridges, plaster splashes, or indentations.
- Finish junctions and angles free-hand. Allow for purpose made profiling knife cut from Tin or Zinc sheet and run along a hand-held rule or guide rail.

580* MODEL IN MISSING SECTION(S)

- Dampen existing plaster to control suction and neatly finish with setting coat plaster 'run' to original line and profile.
- Allow for purpose made profiling knife cut from Tin or Zinc sheet and run along a hand-held rule or guide rail.

585* MODEL IN MISSING FEATURE(S)

- Dampen existing plaster to control suction and model in missing feature(s) free-hand with setting coat plaster (two or more coats) to match original detail.
- Allow for purpose made profiling knife cut from Tin or Zinc sheet and run along a hand-held rule or guide rail.

590* FIX COPPER WIRE ARMATURE

- Where the background repair is deeper than 12mm bring forward in 1 or more floating coats and incorporate a copper wire armature to support the repair.
- Fix the armature at 100mm c/c to existing plaster with fibrous plug and brass screw.
  Allow for 2 coat work incorporating copper wire support.