

Manchester Art Gallery



Athenaeum Basement [Ref: 141639/JO/2024]
Discharge of Condition 10 (Floorboards)
June 2025



Version history

Project name: Manchester Art Gallery
Project number: 9604
Client: Manchester City Council | Manchester Art Gallery

Rev:	Date:	Status	Name	Description
P01	June 25	For discharge of conditions	Hannah Bellerby Senior Architect	First Issue

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Buttress being obtained. Buttress accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person using or relying on the document for such other purpose agrees and will by such use or reliance be taken to confirm his agreement to indemnify Buttress for all loss or damage resulting therefore. Buttress accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned.

Manchester Studio + Registered Office

Buttress Architects Ltd.
41 Bengal St.
Manchester
M4 6AF

T: 0161 236 3303
www.buttress.net

Leeds Studio

Buttress Architects Ltd.
Clockwise, Yorkshire House, Greek St.
Leeds
LS1 5SH

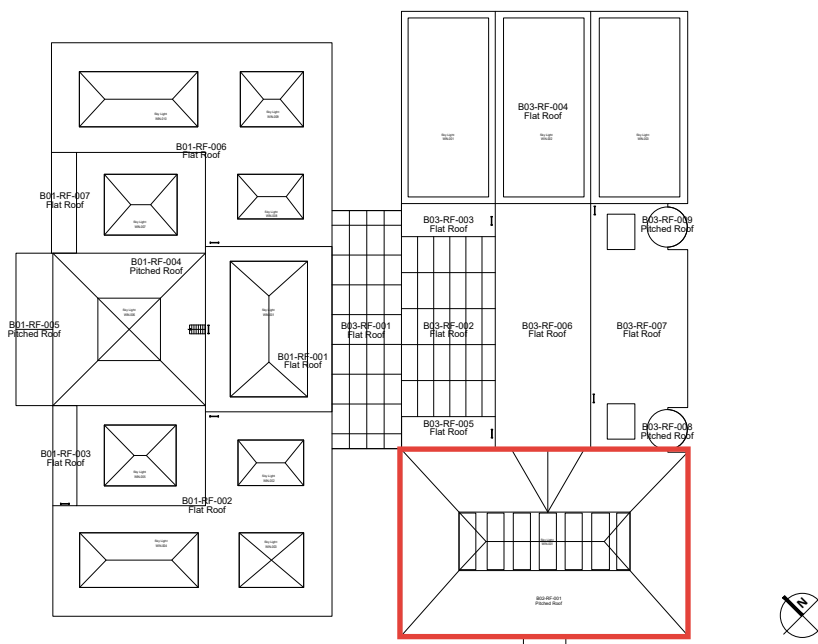
T: 0113 539 7965
www.buttress.net

Buttress

Contents

- 1.0 Condition 10a: Confirmation of historic floorboards retained and repaired, and associated repair methodology
- 2.0 Condition 10b: Plan confirming final design for the floorboards (with photographic record of works)
- 3.0 Condition 10c: Material samples
- 4.0 Condition 10d: Methodology for installation of final floor finish design

Location Plan



1.0 Condition 10a: Confirmation of historic floorboards retained and repaired, and associated repair methodology

Relevant part of condition:

The basement floorboards as shown drawing nos. MAG-BUT-08-B2-DR-A-23-0001- C01 and MAG-BUT-08-B2-DR-A-23-0003-C02 shall be removed in accordance with the submitted floorboard removal strategy (Received 06/02/2025 and 19/02/2025). Upon the completion of the works, details regarding the following shall be submitted to and approved in writing by the City Council as Local Planning Authority:

a) A report that confirms the proportion of historic floorboards that were able to be retained and a repair methodology that shall make good any damage caused to them during removal.

1.1 Lifting Boards

B02-B2-001

All existing boards in the ceramic store to be lifted as submitted MAG-BUT-XX-XX-SP-A-00-0001 Phase 1 Restoration spec. section RS16.3 to facilitate subfloor cleaning and excavation, and to allow for installation of new insulation between joists.

B02-B2-003 - Lower Structure

The floorboards to the lower structure are to be lifted to facilitate joist assessment and to allow subfloor cleaning and excavation.

Boards to be lifted as submitted MAG-BUT-XX-XX-SP-A-00-0001 Restoration specification section RS16.3.

These boards are tongue and groove; where lifting causes excessive damage to the boards, the 'tongue' may be cut along the joint line to allow for the remaining boards to be lifted. See Repair Type 1 notes below.

1.2 Board Repair Type 1: Boards to lower floor in B02-B2-003

Existing boards to the lower floor structure in B02-B2-003 are to be relocated to the upper level and laid in the opposite direction to the current span (east-west). Boards are to be supplemented with new (see repair type 2 for new board requirements) to account for the increased floor area (~40m² area increase) and where boards are damaged beyond repair.

1.3 Board Repair Type 2: New boards

Missing floorboards / decayed floorboards to be replaced with new.

Please see **Section 2.0** for record of boards retained and relaid and **Section 4.0** for laying methodology.

Note: All boards assessed once lifted to determine if decay is present to underside of boards.

1.4 Board Repair Type 3: Splice repairs

Where boards have broken edges but are otherwise in sound condition, a splice repair should be undertaken as follows:

1. Cut out around the broken edge of the board.
2. Sand off any loose fibres and remove dust and dirt from the edge of the board.
3. Piece in new board section to fit the old (see '1.6 new timber for repairs').
4. Inserts should be fixed to the host material using a thin coat of D4 wood glue to the end grains of the board, following application remove excess product to leave a smooth surface. Clamp in position until set (ensure block of wood is placed between the board and clamp).
5. The new timber should be worked to the line of the existing timber.

1.5 Board Repair Type 4: Holes from previous fixings

Where boards have been removed, and the existing ferrous fixing has rusted and caused a hole in the existing board this may be repaired with resin as follows:

1. Remove all decayed and soft timber and create a 'shoulder' of at least 5 mm
2. Ensure the moisture content is no higher than 18%.
3. Sand off any loose fibres and remove dust and dirt
4. Prime all bare timber with Repair Care DRY FIX to ensure permanent bond between timber and resin for Dry Flex product
5. For small repairs (5-10mm) use Repair Care DRY FLEX 1 (1 hour cure time)
6. For medium repairs (5-20mm) use Repair Care DRY FLEX 4 (4 hour cure time)

1.6 New timber for repairs

- New boards are to match the timber species of the existing adjacent boards, refer to typical floor sections on drawing 23-0002 for details.
- New boards are to be machined to match the existing.
- New boards are to match the existing in depth and width.
- New timber to be preservative treated as Phase 1 Restoration spec. section RS16 (16.1.10)
- New timber for boards should not have a moisture content higher than 10% w/w.



Figure 1 Example spliced boards in-situ

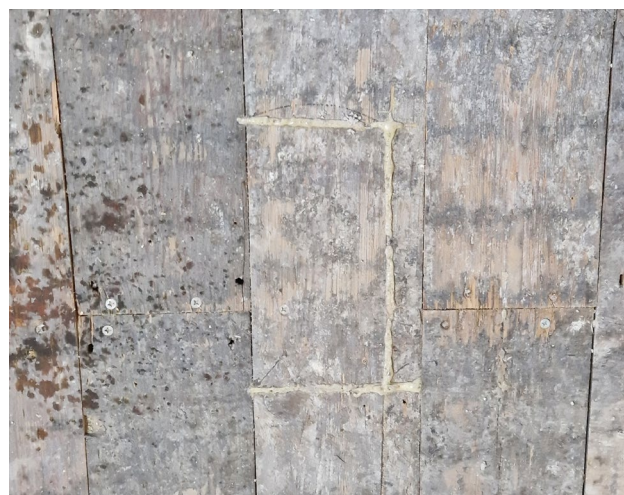


Figure 2 Example board repair (prior to removal of adhesive from surface)

2.0 Condition 10b: Plan confirming final design for the floorboards

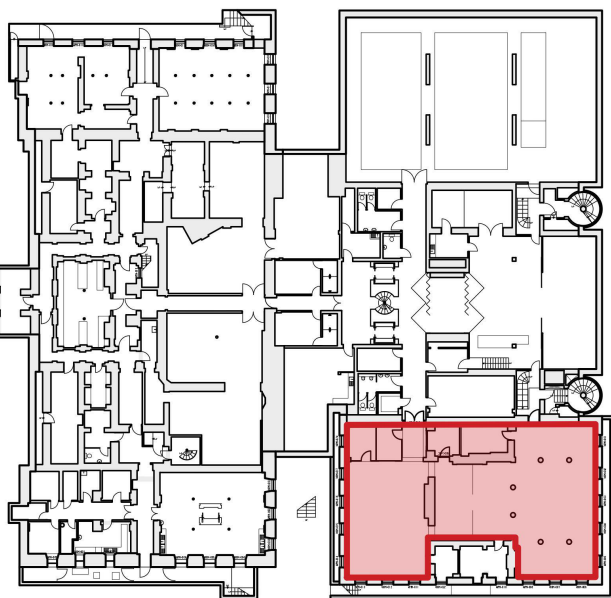
Wording of condition:

The basement floorboards as shown drawing nos. MAG-BUT-08-B2-DR-A-23-0001- C01 and MAG-BUT-08-B2-DR-A-23-0003-C02 shall be removed in accordance with the submitted floorboard removal strategy (Received 06/02/2025 and 19/02/2025). Upon the completion of the works, details regarding the following shall be submitted to and approved in writing by the City Council as Local Planning Authority:

b) A plan that confirms the final design for the floor finishes of the area subject to this condition. This shall denote where historic and new floorboards, if required, shall be laid.

Please see plan overleaf

KEY PLAN



FLOORBOARDS - RECORD OF INSTALLATION

Existing solid concrete floor - no works

B02-B2-008

New floor structure and plywood flooring to replace existing modern structure

B02-B2-003

Historic Floorboards (approx. 50% of total floor area)

Tongue and groove floorboards to the lower structure lifted to allow subfloor cleaning and excavation. 'Tongue' of boards cut along the joint line to reduce damage during lifting of adjacent boards. Boards relocated to the upper level and laid in the opposite direction to the current span (east-west).

New Floorboards

New spruce boards (to match existing in size) to account for the increased floor area and where boards are damaged beyond repair.

B02-B2-001

Historic Floorboards (approx. 50% of total floor area)

Existing historic floorboards retained and repaired.

New Floorboards

New scot's pine boards (to match existing in size) laid to areas of missing floorboards / decayed floorboards.

Previous plywood inserts removed and adjacent floorboards cut back to the next joist & ends of new and old board fixed to joist with new s.s. fixings.

P01 20/05/25 HB For Discharge of Planning Condition

Rev Date Intls Details

© The moral rights of the author are hereby asserted.
This drawing and design is the sole property of Buttress Ltd and must not be reproduced without permission.
Buttress Ltd is Registered in England and Wales. 5802973.



Buttress

Manchester

41 Bengal Street
Manchester
M4 6AF
0161 236 3303
www.buttress.net

Leeds

Clockwise, Yorkshire House
Greek Street, Leeds
LS1 5SH
0113 539 7965

Certified



Project Title Manchester Art Gallery
Client Manchester City Council
Location Mosley St, Manchester M2 3JL

Drawing ref Record of Installed Floorboards

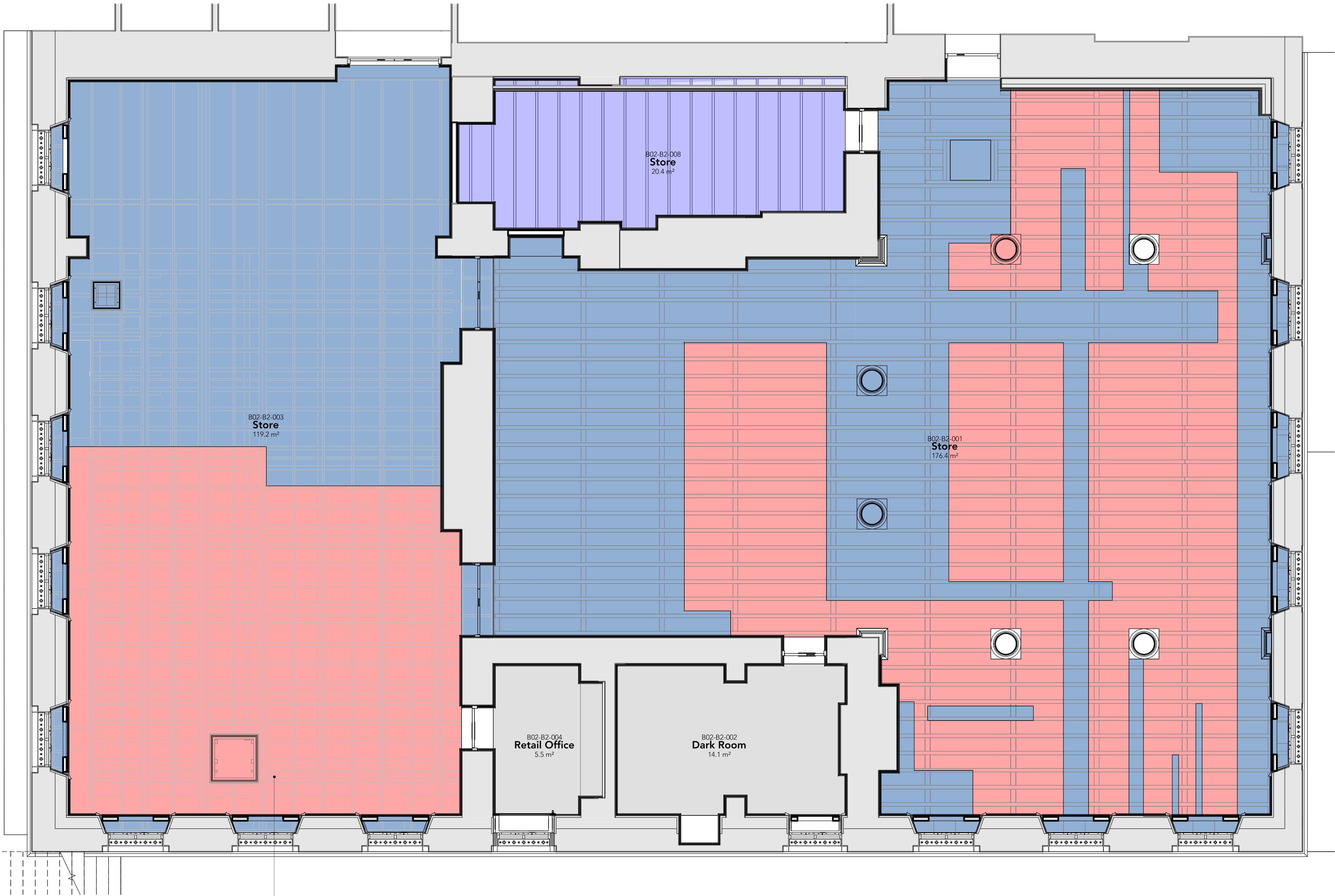
Date 20/05/2025 13:30:33 Scale As indicated

Checker Checker Size A1

Job No: 9604 Status S2 Suitable for Information

Project Origin Volume Level Type Role Number Rev

MAG-BUT-08-B2-DR-A-23-0006-P01



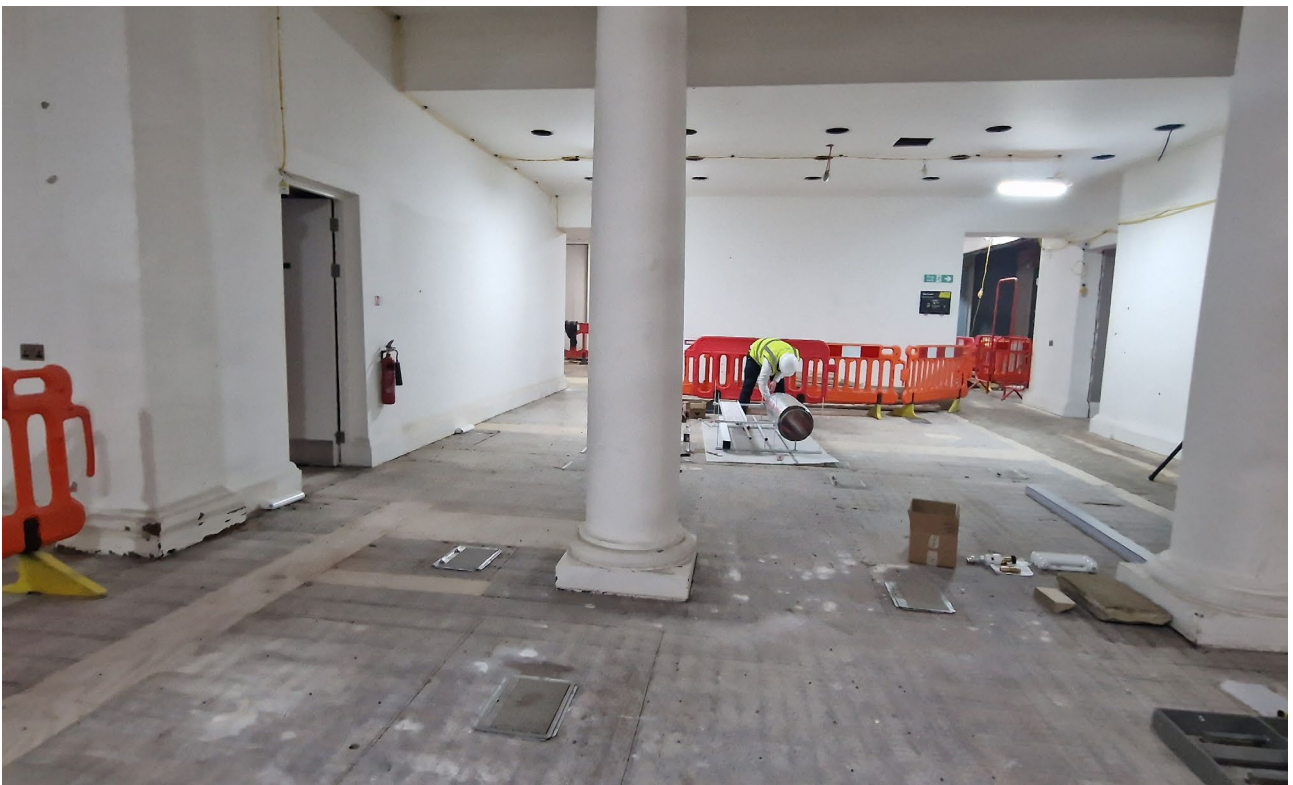
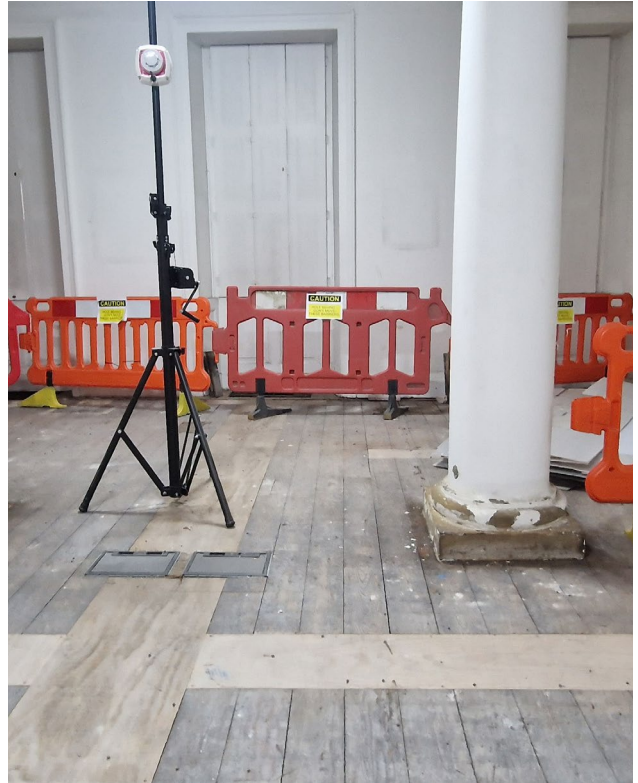
NOTE: Joists to lower floor retained as Structural Engineer's details. Floorboards to the lower floor in B02-02-003 are removed and reinstated at the upper floor level.

1 Floorboards as laid

1 : 50

Photographic record of works

B02-B2-001 Before Lifting



B02-B2-001 Boards Lifted



B02-B2-001 Joist Repairs



B02-B2-001 Installation of insulation and VCL



B02-B2-001 Relaying floorboards and installing floor finish



B02-B2-003 Before Lifting



B02-B2-003 Boards Lifted



B02-B2-003 Installation of new upper floor structure



B02-B2-003 Boards relaid



3.0 Condition 10c: Material samples

Wording of condition:

The basement floorboards as shown drawing nos. MAG-BUT-08-B2-DR-A-23-0001- C01 and MAG-BUT-08-B2-DR-A-23-0003-C02 shall be removed in accordance with the submitted floorboard removal strategy (Received 06/02/2025 and 19/02/2025). Upon the completion of the works, details regarding the following shall be submitted to and approved in writing by the City Council as Local Planning Authority:

c) Material samples of repaired flooring and any new floorboards.

No.	Item	Material and Finish	Photograph	Submitted to	Relevant dates	Comments / Feedback
1	Sample board showing new floorboards, fixings and repair types	New floorboards: Scots Pine (25-35mm thick) Fixings: Stainless Steel		Michael Pearson [Planning Officer] & Paul Mason [Conservation Officer] Manchester City Council	Sample provided to LPA in March 2025 and verbally agreed	Samples accepted.

4.0 Condition 10d: Methodology for installation of final floor finish design

Wording of condition:

The basement floorboards as shown drawing nos. MAG-BUT-08-B2-DR-A-23-0001- C01 and MAG-BUT-08-B2-DR-A-23-0003-C02 shall be removed in accordance with the submitted floorboard removal strategy (Received 06/02/2025 and 19/02/2025). Upon the completion of the works, details regarding the following shall be submitted to and approved in writing by the City Council as Local Planning Authority:

d) A methodology for the installation of the approved final floor finish design, approved under part b of this condition.

4.1 Fixing boards

Existing ferrous nails to be removed and boards and to be re-fixed with stainless steel countersunk partially threaded screws to BS 1210:1963, length to be at least 2.5x the thickness of the floorboards, in existing fixing positions where possible. Each board should have two fixings across the width of the board at each end and at joist locations.

4.2 New boards

For plywood inserts:

Remove plywood and cut the adjacent floorboard back to the next joist. Fix ends of new and old board to joist as '4.1 fixing boards' above.

For decayed or damaged boards:

Carefully cut away damaged or decayed timber, and cut board back to the next joist. Fix ends of new and old board to joists.

New timber to be as follows:

- New boards are to match the timber species of the existing adjacent boards.
- New boards are to be machined to match the existing.
- New boards are to match the existing in depth and width.
- New timber to be preservative treated as submitted MAG-BUT-XX-XX-SP-A-00-0001 Phase 1 Restoration spec. section RS16 (16.1.10)
- New timber for boards should not have a moisture content higher than 10% w/w.

4.3 Floor coverings

B02-B2-003

New 6mm WBP hardwood plywood floor covering fixed over existing repaired / new floorboards as NBS K11/315, with 6mm floor grade plywood to be installed over in the opposite direction as K11/320.

Linoleum Forbo Marmoleum Concrete 'Meteorite' [3705] to full extent of B02-B2-003 with the exception of voids behind window infills.

B02-B2-001

New 6mm WBP hardwood plywood floor covering fixed over existing repaired / new floorboards as NBS K11/315, with 6mm floor grade plywood to be installed over in the opposite direction as K11/320.

Linoleum Forbo Marmoleum Concrete 'Meteorite' [3705] to full extent of B02-B2-001 with the exception of voids behind window infills.

Specification references mentioned above can be found on the following pages

K11

Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/

315 Plywood flooring

1. **Description:** to retained timber floor in the Athenaeum basement as part of work package 8
2. **Substrate:** existing timber joists at 350 - 375mm centres
3. **Flooring:** Plywood manufactured to the relevant standards and quality control procedures specified in BS EN 636, and so marked.
 - 3.1. **Type:** WBP hardwood plywood
 - 3.2. **Finish:** manufacturer standard
 - 3.3. **Use class:** Class 2
 - 3.4. **Grade:** Grade B
 - 3.5. **Nominal thickness:**
 - 3.5.1. To B02-B2-001: 6mm
 - 3.5.2. To B02-B2-003 & 008: 25mm
 - 3.6. **Fire performance**
 - 3.6.1. **Reaction to fire:** Manufacturer's standard
 - 3.6.2. **Resistance to fire:** Manufacturer's standard
 - 3.7. **Edges:** Square edged
4. **Setting out:** Long edges running across joists. End joints central over joists and staggered
5. **Fixing to joists**
 - 5.1. **Fasteners:** 50 mm x 8 gauge wood screws into pilot holes
 - 5.2. **Fixing centres (maximum):** Around floor perimeter and along edges of each board: 150 mm (maximum)
Along intermediate supports: 300 mm (maximum)
6. **Joint treatment:** Bonded with PVA adhesive to BS EN 204, Class D3.
 - 6.1. **Expansion provision:**
 - 6.2. **Clear expansion gap around perimeter of floor area and upstands:** 2 mm per metre run of floor, with a minimum gap of 10 mm
 - 6.3. **Intermediate expansion/ movement joints:** As recommended by flooring manufacturer.

320 Plywood flooring

1. **Description:** to receive new linoleum floor finish in the Athenaeum basement as part of work package 8
2. **Substrate:** Plywood (see clause 315)
3. **Flooring:** Plywood manufactured to the relevant standards and quality control procedures specified in BS EN 636, and so marked.
Compliant with BS 8203:2017
 - 3.1. **Type:** SP101 flooring grade plywood
 - 3.2. **Finish:** manufacturer standard
 - 3.3. **Use class:** Class 2
 - 3.4. **Grade:** Grade B
 - 3.5. **Nominal thickness:** 6mm
 - 3.6. **Fire performance**
 - 3.6.1. **Reaction to fire:** Manufacturer's standard
 - 3.6.2. **Resistance to fire:** Manufacturer's standard
 - 3.7. **Edges:** Square edged
4. **Setting out:** to be installed in the opposite direction to the installed plywood below
5. **Fixing to joists**
 - 5.1. **Fasteners:** 50 mm x 8 gauge wood screws into pilot holes

- 5.2. Fixing centres (maximum): Around floor perimeter and along edges of each board: 150 mm (maximum)
Along intermediate supports: 300 mm (maximum)
6. Joint treatment: Apply flexible latex to the joints as per BS 8203
 - 6.1. Expansion provision:
 - 6.2. Clear expansion gap around perimeter of floor area and upstands: 2 mm per metre run of floor, with a minimum gap of 10 mm
 - 6.3. Intermediate expansion/ movement joints: As recommended by flooring manufacturer.

M50

Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

110 Linoleum sheets

1. Description: Linoleum flooring to the Athenaeum basement store as indicated on drawing MAG-BUT-08-B2-DR-A-40-0001 and staff room as MAG-BUT-02-B2-DR-A-47-0001
2. Tiles
 - 2.1. Manufacturer: [Forbo Flooring Systems](#)
 - 2.1.1. Contact details
 - 2.1.1.1. Address: PO Box 1
High Holborn Road
Ripley
Derbyshire
DE5 3NT
 - 2.1.1.2. Telephone: [+44 \(0\)800 093 5258](tel:+44(0)8000935258)
 - 2.1.1.3. Web: www.forbo-flooring.co.uk
 - 2.1.1.4. Email: info.flooring.uk@forbo.com
 - 2.1.2. Product reference: Marmoleum Solid Concrete
 - 2.2. Standard: To EN ISO 24011.
 - 2.3. Use class: Class 23 / 34 / 43.
 - 2.4. Slip potential
 - 2.4.1. Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130 = R9., PVT Dry: ≥50, EN 13898: $\mu \geq 0.30$.
 - 2.5. Recycled content: 43%.
 - 2.6. Width: 2000 mm.
 - 2.7. Thickness: 2.5 mm.
 - 2.8. Colour and pattern: 3705 Meteorite
 - 2.9. Residual indentation (to EN-ISO 24343-1): ≤0.08 mm.
 - 2.10. Castor chair continuous use (to ISO 4918/EN 425): Suitable for office chairs with castors.
 - 2.11. Light fastness to EN-ISO 105-B02: Method 3, blue scale minimum 6.
 - 2.12. Flexibility (to BS EN ISO 24344): 40 mm.
 - 2.13. Acoustical impact sound reduction (to EN-ISO 717-2): ≤5 dB.
 - 2.14. Reaction to fire (to EN 13501-1): Cfl-s1.
 - 2.15. Body voltage (to EN 1815): ≤2 kV.
 - 2.16. Thermal conductivity (to EN 12524): 0.17 W/m·K.
 - 2.17. Indoor Air Emissions (to EN ISO 16000-9): TVOC at 28 days: <0.050 mg/m³.
 - 2.18. Total weight:: 2900 g/m².
 - 2.19. Adhesive: as clause 640

2.20. **Edging:** floor finish to be sealed at perimeter edges with suitable flexible sealant, colour to match floor finish

2.21. **Skirtings:** Existing / new softwood skirting

3. **Finishing:** Seal and polish as clause 820A

4. **Other requirements:** The subfloor should be prepared the standard BS8203:2017. Install in accordance with manufacturer's installation guidance

640 Adhesive fixing generally

1. **Adhesive type:** as recommended by covering/ underlay manufacturer
2. **Primer:** Type and usage as recommended by adhesive manufacturer.
3. **Application:** As necessary to achieve good bond.
4. **Finished surface:** Free from trowel ridges, high spots caused by particles on the substrate, and other irregularities.

820 Finishing A

1. **Description:** LINOLEUM FLOORING
2. **Cleaning operations**
 - 2.1. Wash floor with water containing neutral (pH 6-9) detergent. If necessary, lightly scrub heavily soiled areas.
 - 2.1.1.**Note:** Do not wash for 48 hours after installation
 - 2.2. Rinse with clean water, removing surplus to prevent damage to adhesive. Allow to dry.
3. **Emulsion polish:** Finish with topshield pro in accordance with manufacturer recommendations.

Buttress

Architects | Masterplanners | Heritage Consultants