

Method Statement for Concrete Removal and Stone Plinth Repair at Transact House

Project Title: Concrete Removal and Stone Plinth Repair

Location: Transact House, Manchester

Prepared By: Mohamed Muse, Managing Director, Muse Architects

Date: 24.09.24

Reference: Condition 4 - Stone Masonry Repairs

1. Introduction

This method statement outlines the procedures for the careful removal of concrete from the stone plinth and subsequent repairs to the historic fabric of Transact House, a listed building. The proposed works are in strict accordance with UK heritage conservation guidelines, including those from Historic England and the Society for the Protection of Ancient Buildings (SPAB). The primary objective is to mitigate any further decay while ensuring the preservation and stabilization of the original stone masonry through traditional repair methods.

2. Preliminary Assessment

Before the commencement of works, the following preliminary actions will be undertaken:

- **Condition Survey:** A detailed survey of the stone plinth to document the extent of concrete coverage and any damage. All findings will be recorded with photographs and detailed notes.
 - **Stone Identification:** Identification of the stone type, its properties, vulnerabilities, and historical significance. This will ensure that all repair materials and techniques are compatible with the existing fabric.
 - **Risk Assessment:** A full risk assessment will be conducted to identify hazards during the removal and repair process. The safety of workers and the integrity of the building will be prioritized at all stages.
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3. Materials and Tools

Tools:

- Low-impact hand tools (wooden/plastic mallets, chisels, scrapers)
- Fine-tipped masonry hammers
- Soft-bristle brushes
- Handheld pneumatic chisels (used sparingly)
- Steam cleaning equipment (for final surface cleaning)

Materials:

- **Lime-Based Mortar:** A breathable and flexible NHL 3.5 mortar mix (1:3 ratio with sharp sand) will be used for repointing and repair. This mortar is compatible with the original stone and allows moisture to pass through, avoiding any trapped moisture which could accelerate decay.
- **Clean, Potable Water:** Used for cleaning and preparing the surfaces.

4. Methodology

4.1 Concrete Removal

- **Initial Cleaning:** Clean the stone surface with soft-bristle brushes and water to remove loose debris. No pressure washing or chemical cleaning agents will be used to avoid damage.
- **Test Patches:** Conduct test patches on inconspicuous areas to assess the most appropriate method for concrete removal without damaging the stone.
- **Manual Removal:**
 - Begin by gently tapping the edges of the concrete using a wooden mallet and chisel to break it into smaller sections.
 - Work gradually, applying minimal force to avoid stone damage.
 - Use hand tools to lift and remove the concrete, taking care not to pry against the stone surface.
- **Mechanical Removal (if required):**
 - In more stubborn areas, a handheld pneumatic chisel may be employed on the lowest effective setting, ensuring no damage to the stone. Continuous assessment will be conducted to stop mechanical work if any damage occurs.
- **Surface Cleaning:** Once concrete is removed, clean the stone surface with a steam cleaner if necessary, ensuring no residual concrete dust remains. If staining persists, a conservation-grade poultice will be applied per manufacturer instructions.

4.2 Stone Repair

- **Assessment Post-Concrete Removal:** Reassess the stone condition to determine the extent of any further stabilization or repair needed.
- **Repointing and Repair:**
 - Repoint joints using NHL 3.5 lime mortar (1:3 ratio with sharp sand) that is compatible with the original stone. Colour and texture matching will be achieved by selecting appropriate local aggregates or pigments.
 - Small areas of loss will be repaired using a stone repair mortar, colour-matched to the original stone.
- **Final Finish:** Upon completion, the stone will be lightly brushed to blend repaired sections with the surrounding fabric, ensuring a seamless finish. No impervious sealants will be used, maintaining the stone's breathability.

5. Protection and Monitoring

- **Temporary Protection:** Following the repair, the stone will be covered with a breathable membrane to protect it from weathering during the curing process. Plastic sheeting or other non-breathable materials will not be used.
- **Ongoing Monitoring:** A monitoring programme will be implemented to periodically inspect the repaired areas for signs of deterioration. Regular reports will be submitted, and any concerns will be addressed promptly.

6. Product Specification

The following products, supported by Historic England, will be used for the repair of the stone plinths at Transact House. These products have been selected for their compatibility with historic stonework and adherence to conservation best practices:

1. **Lime-Based Mortar:**
 - **Product:** Limeworks NHL 3.5 Mortar
 - **Supplier:** Limeworks UK
 - **Address:** Unit 6, Steeple Morden Business Park, Steeple Morden, Royston, Hertfordshire SG8 0QA, UK
 - **Phone:** +44 (0)1763 852 722
 - **Website:** limeworks.co.uk
2. **Stone Cleaning Poulitice:**
 - **Product:** Heritage Clean Stone Poulitice
 - **Supplier:** Heritage Stone Care
 - **Address:** Unit 2, Apex Business Centre, 43-45 Newington Causeway, London SE1 6DD, UK
 - **Phone:** +44 (0)20 7407 0947
 - **Website:** heritagestonecare.co.uk
3. **Stone Repair Mortar:**
 - **Product:** Restoration Stone Repair Mortar
 - **Supplier:** Building Conservation Products Ltd
 - **Address:** Unit 8, The Barn, West End Farm, Lower Stondon, Henlow, Bedfordshire SG16 6JU, UK
 - **Phone:** +44 (0)1462 850 002
 - **Website:** buildingconservationproducts.co.uk
4. **Stone Repointing Mortar:**
 - **Product:** Limepoint Mortar
 - **Supplier:** The Lime Centre
 - **Address:** The Lime Centre, 42 Frobisher Road, Basingstoke, Hampshire RG24 9NW, UK
 - **Phone:** +44 (0)1256 472 771
 - **Website:** thelimecentre.co.uk

7. Compliance with Heritage Guidelines

All works will be carried out in strict accordance with the following heritage and conservation guidelines:

- Historic England's "Practical Building Conservation" series (Volumes on "Stone" and "Mortars, Renders & Plasters").
- BS 7913:2013 "Guide to the Conservation of Historic Buildings."
- SPAB (Society for the Protection of Ancient Buildings) principles and technical advice notes.

8. Conclusion

This method statement ensures that the concrete removal and subsequent repairs to the stone plinth of Transact House will be conducted with care and precision, adhering to both heritage guidelines and best practices in stone masonry repair. All proposed methods and materials prioritize the preservation of the historic fabric while addressing the council's requirements. Any deviations from this method statement will be communicated to the Manchester City Council for approval.

Yours sincerely,

Mohamed Muse, RIBA, ARB, M.Arch, BA, BSc
Managing Director, Muse Architects