

DOFF STEAM CLEANING, PAINT REMOVAL AND SURFACE PREPARATION METHOD STATEMENT

CONDITION 5

Partial demolition of the existing dwelling with associated internal/external alterations to create a garage and the conversion of the existing outbuilding to living accommodation with associated works at - Barrow House, Beaumont Close, Barrow-on-trent, Derby, DE73 7HQ

Planning Reference - DMPA/2025/0568

Prepared by - Hawkstone Developments
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Contents

1.0 Introduction.

2.0 Existing Condition

3.0 Conservation Approach

4.0 Proposed Methodology

5.0 Protection Measures

6.0 Technical Data

7.0 Suitability for Heritage Buildings

8.0 Conclusion

1.0 Introduction

Purpose of Works

This Method Statement has been prepared in support of the discharge of Listed Building Consent conditions relating to external masonry repairs.

The proposed DOFF cleaning works are not intended to achieve a "like-new" appearance, but instead form a necessary preparatory stage to facilitate:

- Careful inspection of the historic masonry.
- Identification of defective mortar joints.
- Removal of dirt, biological growth and loose surface contaminants.
- Preparation of masonry surfaces for repointing works using appropriate lime mortars.
- Preparation of masonry surfaces for the application of a traditional breathable limewash finish.
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The cleaning process is therefore considered an enabling conservation measure that will assist in the repair, preservation and long-term maintenance of the historic fabric.

2.0 Existing Condition

The external masonry exhibits a build-up of surface contaminants including:

- Atmospheric dirt and staining.
- Algae, moss and biological growth.
- Localised paint residues and non-historic surface coatings.
- Surface debris and loose material.
- Areas of deteriorated and eroded mortar.

These deposits currently obscure the condition of the underlying masonry and mortar joints, making it difficult to accurately assess the extent of repairs required.

The accumulation of contaminants may also adversely affect the adhesion and performance of subsequent lime mortar repairs and limewash applications.

3.0 Conservation Approach

The proposed cleaning methodology has been developed in accordance with recognised conservation principles, including:

- Minimum intervention.
- Retention of historic fabric.
- Use of breathable traditional materials.
- Avoidance of abrasive cleaning methods.
- Avoidance of unnecessary chemical treatments.
- Preservation of the character and patina of the building.

The objective is to remove only those contaminants that inhibit repair works, whilst retaining the historic character of the masonry.

No attempt will be made to create a uniform or artificially cleaned appearance.

4.0 Proposed Methodology

Stage 1 – Initial Inspection

Prior to commencement, all elevations will be inspected to identify:

- Areas requiring repointing.
- Areas requiring limewash application.
- Fragile or deteriorated masonry.
- Historic features requiring special protection.
- Areas of biological growth.
- Areas containing paint residues or modern coatings.
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Photographic records will be taken before works commence.

Stage 2 – Trial Cleaning Panels

Prior to full implementation, representative trial panels shall be undertaken.

The trial areas will establish:

- Appropriate nozzle selection.
- Suitable working temperature.
- Suitable operating pressure.
- Required cleaning duration.
- Acceptable level of contaminant removal.

The objective of the trial is to identify the minimum level of intervention necessary to adequately prepare the surface for subsequent conservation works. Cleaning shall cease once contaminants have been sufficiently removed to permit repointing and limewashing.

Stage 3 – DOFF Steam Cleaning

Cleaning shall be undertaken using the DOFF Superheated Water Cleaning System or approved equivalent. The system uses superheated water delivered at low pressure to gently remove contaminants without causing abrasion to the historic surface. Cleaning shall proceed systematically across the elevations.

The operative shall:

- Maintain a suitable stand-off distance from the masonry.
- Use controlled sweeping movements.
- Avoid concentrating heat on a single location.
- Continuously monitor the condition of the substrate.
- Adjust operating settings where necessary to protect fragile areas.

Particular care shall be exercised around:

- Historic brick faces.
- Lime mortar joints.
- Decorative features.
- Open joints awaiting repair.
- Timber elements.
- Existing limewashed surfaces to be retained.

The cleaning process shall remove:

- Biological growth.
- Surface dirt.
- Loose paint residues.
- Loose friable materials.
- Deposits that would impair mortar adhesion.
- Deposits that would impair limewash performance.

The cleaning process shall not seek to remove historic surface patina or cause unnecessary alteration to the appearance of the building.

Stage 4 – Inspection Following Cleaning

Following cleaning, all elevations shall be inspected to identify:

- Defective mortar joints.
- Areas requiring masonry repair.
- Cracked or missing mortar.
- Areas requiring consolidation.
- Areas suitable for limewashing.
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Further photographs shall be taken to record the condition of the masonry.

Stage 5 – Repointing Works

Once cleaning is complete, defective mortar joints shall be carefully raked out by hand using methods agreed under the relevant conservation specifications.

Repointing shall be undertaken using an appropriate lime mortar mix to be agreed with the Local Planning Authority. The cleaned masonry surface will provide:

- Improved visibility of defective joints.
- Enhanced bond between existing masonry and new mortar.
- Removal of contaminants that may affect mortar curing.

Stage 6 – Limewash Application

Following completion and curing of the repointing works, a breathable traditional limewash finish shall be applied. The cleaned masonry surface will provide:

- Improved adhesion of limewash.
- Removal of contaminants that could cause failure or discolouration.
- A suitable substrate for the even absorption of limewash.

Limewash shall be applied strictly in accordance with the manufacturer's recommendations and recognised conservation best practice.

5.0 Protection Measures

Prior to cleaning, the following shall be protected as necessary:

- Windows and glazing.
- Timber joinery.
- Doors.
- Rainwater goods.
- Landscaping.
- Adjacent surfaces not requiring treatment.

Particular care shall be exercised around historic architectural features and areas of fragile masonry.

6.0 Technical Data

Cleaning System

System:

DOFF Superheated Water Cleaning System

Manufacturer:

Stonehealth Ltd

Cleaning Medium:

Clean potable water

Operating Temperature:

Up to 150°C at nozzle

Operating Pressure:

Typically between 5–50 bar depending upon substrate requirements

Water Usage:

Approximately 2–5 litres per minute

Cleaning Action:

Superheated low-pressure water and steam

7.0 Suitability for Heritage Buildings

The DOFF system is widely recognised within the conservation sector and is routinely specified for:

- Listed Buildings.
- Scheduled Monuments.
- Historic churches.
- Conservation Area properties.
- Traditional masonry structures.

Its use is particularly appropriate where cleaning is required as a preparatory stage for:

- Lime mortar repointing.
- Lime render repairs.
- Limewash applications.
- General conservation maintenance.

The system allows contaminants to be removed whilst minimising the risk of damage to historic masonry and maintaining the breathability of the building fabric.

8.0 Conclusion

The proposed DOFF cleaning works are intended solely as a preparatory conservation measure to facilitate the repair and long-term preservation of the historic masonry.

The cleaning will enable accurate assessment of the building fabric, provide suitable conditions for lime mortar repointing, and prepare the masonry for the application of a traditional breathable limewash finish.

The methodology adopts a minimum intervention approach and is considered appropriate for the conservation and repair of the Listed Building.

Signed



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on behalf of Hawkstone Developments