

Job Ref 223
Job Title 41 Bedford Square
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Cleaning Strategy Overview

The general intention in cleaning the masonry is to remove any damaging or disfiguring, organic growth, salts or weathering patterns or stains.

In order to confirm the final method of cleaning, a series of discreet cleaning trials will be conducted and approved by the local planning authority before any works proceed.

The chosen areas of cleaning will be representative of the general cleaning requirements necessary for the facades and the result recorded for future reference.

Initial trials will be completed using the TORC/JOS or DOFF cleaning methods outlined overleaf, and supplemented by a "TFR" de-greaser where necessary.

Cleaning Methods

Brushing & Scraping

Before commencing any methods of cleaning, remove loosely adhered deposits and growths using suitable corrosion resistant brushes with copper bristles, and scrapers/ spatulas that do not abrade or gouge the surface.

Wet Abrasion Cleaning System: TORC/ JOS

Use wet air-abrasion system such as TORC system by Stonehealth. This system has proven effective on projects of national importance such as Canterbury Cathedral and Westminster Abbey.

Using different nozzles and pressures. trials are to be carried out as instructed by the Architect and in agreement with local planning authority. Test abrasives as provided by Stonehealth from softest to hardest are as follows:

Preference should be given to lower hardness granulates. However, cleaning of heavily soiled areas may be better achieved using harder granulates rather than performing prolonged use of a softer one.

Steam Cleaning System: DOFF

Steam cleaning systems involve specialist equipment available from various suppliers such as Stonehealth Limited, 73 London Road, Marlborough, Wiltshire, SN8 2AN; Tensid UK, Restorative Techniques and others. Inform the Architect in advance of the system being proposed and allow for all trials to the approval of the Architect.

Test clean areas to establish suitable temperature, pressure, distance from surface and nozzle type with a preference for lower pressure and temperature.

All vulnerable areas, openings, are not to be cleaned and potential openings for water and slurry ingress must be protected prior to carrying out any works.

After cleaning, wash off residual dust, soiling etc. Work from the top, down. Remove resulting slurry as works progress.

On completion of cleaning ensure entire surface and all cavities are rinsed down and left free of mobilised soiling and debris prior to stone work repairs.

Subsequent Related Works

Any necessary repairs (such as repointing) will be carried out while the scaffold is in place.

Repaint where appropriate (sills and basement level walls).

Proposed Schedule of External Façade Cleaning & Repairs

Ref	Topic	Quantity
	41 Bedford Square – Front Elevation Brickwork – from ground to parapet level	
1.0	Provide temporary protection to windows and any other openings	
1.1	Carefully rake out all facing pointing to a minimum depth of 20mm	
1.2	Carefully rake out with very fine blades joints to gauge flat arches and main entrance voussoirs to a minimum depth of 10mm	
1.3	Remove previously applied coating to the face of the brickwork using a combination of steam and wet abrasive cleaning	
1.4	Please note the above method is not to cause any damage to the face of the brickwork and any stubborn deposits are to left for further review	
1.5	Carry out an inspection of the cleaned brickwork trails and agree extent of repairs Provisional quantities have been allowed below, which are to be re-measured following above survey	
1.6	Cut out replace individual bricks to match existing bedded in lime mortar	20no.
1.7	Cut out large areas of defective mismatching outer single skin of facing brickwork below the ground floor windows and rebuild using matching bricks with a combination of snapped headers and stainless steel ties, all bedded in lime mortar	2m2
1.8	Cut back minor defective areas of individual brick and repair with lime mortar	50no.
1.9	To areas of movement under the 3rd floor windows cut out joints to a depth of 40mm and insert stainless steel helibar bonded with manufactures resin, every 3rd to 4th course	32m
1.10	Colour brickwork to an agreed 'black' colour, point the joints with 'black' stopping mortar to a flush finish, set out joint and perpends lines, scribe small rebates and finish with a neat lime putty tuck	
1.11	Point gauged arched with a fine lime putty joint flush with the face of bricks	
2.0	41 Bedford Square – Front Elevation Stucco & Masonry	
2.1	Carry out an inspection of the stucco, stonework and agree extent of repairs Provisional quantities have been allowed below, which are to be re-measured following above survey	
2.2	Cut out joints to parapet copings and repoint in lime mortar	
2.3	Cut back top moulding and sky surface to parapet level cornice (leaving bed mould and dentils intact). Provide stainless steel reinforcement as required and re-run top moulding and sky surface to original line and profile using lime mortar	
2.4	Cut back and repair damaged corner to window cill	1no.
2.5	Stitch fracture to 1st floor balcony using 3no. 16mm stainless steel dowels 600mm long in resin and repairing with lime mortar	
2.6	Cut out fractures to rendered window reveals/soffits and make good with lime mortar	5no.
3.0	41 Bedford Square – Front Elevation Main Entrance	
3.1	Clean Coade stone curved head, reveals and bases including removal of isolated areas of paint by a combination of suitable chemical cleaning agents, steam cleaning and wet abrasive systems	
3.2	Rake out and all joints to stonework and repoint in lime mortar	
3.3	Apply lime render to the underside of gauged panel to match others	1no.

3.4	Cut back and repair defective areas of plain stonework ne. 0.02m2	6no.
3.5	Cut back and repair defective areas of moulded stone work ne. 0.02m2	6no.
3.6	Repair damaged section of vermiculated quoin stone at base of RH reveal with lime mortar	
4.0	41 Bedford Square – Entrance steps and railing plinth	
4.1	Steam clean all stonework and rendered railing plinth	
4.2	Rake out and all joints to stonework and repoint in lime mortar	
4.3	Stitch and repair fractures to stone treads with stainless steel dowels and resin	3no.
4.4	Cut back and repair previous repairs to outside of sloping railing plinth including bases to 6no. railings	
4.5	Cut back and repair damaged render to railing plinth approx. 400mm long	1no.
5.0	41 Bedford Square – Yorkstone Basement Steps	
5.1	Steam clean 7no. Yorkstone treads	
5.2	Descale any loose sections and re-point open and defective joints	
6.0	41 Bedford Square – Basement render and cills	
6.1	Repairs excluded at this stage as scope needs to be agreed	
7.0	11 Bedford Avenue – Front Elevation	
7.1	Provide temporary protection to windows and any other openings	
7.2	Carefully cut back hard carbon deposits by hand using a skilled stone mason	
7.3	Carefully clean red facing brickwork and Portland stone dressing using a combination of nebulous water sprays, steam cleaning and TORC/JOS or DOFF low pressure wet abrasive system	
7.4	Following cleaning carry out an inspection of the brick and stonework and agree extent of repairs/repointing	
	Provisional quantities have been allowed below, which are to be re-measured following above survey	
7.5	Cut back minor defective areas of individual brick and repair with lime mortar	20no.
7.6	Cut out replace individual red facing bricks to match existing bedded in lime mortar	20no.
7.7	Cut out defective mortar to brick joints and repoint in lime mortar to match existing-isolated lengths ne. 500mm long	10no.
7.8	Cut out defective mortar to brick joints and repoint in lime mortar to match existing-isolated perp end joints	10no.