
JULIAN HARRAP

—ARCHITECTS LLP—

THE MONUMENT TO THE GREAT FIRE OF LONDON

VOLUME III: MANAGEMENT & MAINTENANCE PLAN



MARCH 2025

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ISSUE 01 PRELIMINARY DRAFT 03 October 2024

ISSUE OF DRAFT 1 10 October 2024

ISSUE 02 PRELIMINARY DRAFT 12 December 2024

ISSUE 03 PRELIMINARY DRAFT 09 January 2025

ISSUE OF DRAFT 2 15 January 2025


FINAL 27 March 2025



USING THE DOCUMENT

When using this document in an electronic format, click on the section names or page numbers in the contents or the section contents to navigate the report.

I.0	INTRODUCTION	8
1.1	Purpose	8
1.2	Methodology and Structure	8

 Clicking on this button on the top right corner will return to the contents page.

CONTENTS

VOL I: CONSERVATION PLAN

VOL II: QUINQUENNIAL INSPECTION SURVEY

VOL III: MANAGEMENT & MAINTENANCE PLAN

1.0	INTRODUCTION	5
2.0	THE CURRENT SITUATION	6
2.1	Building Condition	6
2.2	Management and Use	6
3.0	RISKS	7
3.1	Natural Factors	7
3.2	Human Factors	7
3.3	Resource Issues	7
4.0	MANAGEMENT	8
4.1	Management Aims and Objectives	8
4.2	What Every Member of Staff Should Know	8
4.3	Maintenance Aims and Objectives	8
5.0	MAINTENANCE AND MANAGEMENT PLAN	9
5.1	Repairs	9
5.2	Management and Maintenance Tables	9
5.3	Essential Management and Maintenance	10
5.4	Routine Management Schedule	12
5.5	Routine Maintenance Schedule	14
	SOURCES OF INFORMATION	17

APPENDIX A:	2007- 2009 CONTRACT: THE WORKS	18
APPENDIX B :	2007- 2009 CONTRACT: SPECIFICATIONS	26
APPENDIX C:	2007- 2009 CONTRACT: SUPPLIERS	33
VOL IV:	APPENDICES	



City Corporation	City of London Corporation
CMP	Conservation Management Plan
CS	City Surveyors
FM	Facilities Management
HE	Historic England
HES	Heritage Estate Section
JHA	Julian Harrap Architects LLP
LVMF	London View Management Framework
MMP	Management and Maintenance Plan
NE	Natural Environment
OPS	Operations Division
PD	Planning Department
TB	Tower Bridge



This Management and Maintenance Plan (MMP) has been prepared for the City of London Corporation (CoL) in association with the preparation of a Conservation Plan (CMP) for The Monument to the Great Fire of London, Fish St Hill, London EC3R 8AH, together with the adjacent Pavilion in Monument Yard.

The scope of the MMP is to provide a framework for the ongoing management and maintenance on a day-to-day basis for The Monument & Pavilion. This is to ensure that all the planned activities are safe for the users of the site and its facilities, in addition to ensuring the condition and integrity of the listed building’s fabric is secured for the future.

The primary purpose of the MMP is the protection and conservation of the Grade I listed, Scheduled Monument and its immediate setting & the Pavilion.

- This document will identify:
- what management and maintenance is required;
 - recommended timelines;
 - responsibilities;
 - anticipated cost;
 - how to monitor and oversee the work

The plan is designed to help the site owners care for their heritage asset, to determine the required resources and avoid recurring issues; a secondary aim is to ensure the safe use of the spaces by staff and visitors

The last Condition survey for The Monument was undertaken in 2024 and established that the building remained in good condition, following the Major Repair contract 2007-2009.

This MMP, accompanying Condition Survey and Conservation Plan are to continue the upkeep of the building as well as describe any ongoing issues.

In order to understand the specific future management and maintenance requirements, the following works have been developed in consultation with The Monument Management and the design team consisting of:

- Conservation Architect: Julian Harrap Architects LLP (JHA)
- Structural Engineer: Hockley & Dawson (H&D)
- Quantity Surveyor: DR Nolans & co.

This document should be read in conjunction with:

- The Condition Survey (JHA)
- The Conservation Plan (JHA)
- Structural Engineers Report (H&D)

2.1 BUILDING CONDITION

The structural condition survey is focussed on three areas and recommends regular inspections and monitoring at specific time intervals. The flaming orb area has minor corrosion to iron structural straps inside the Drum dome and a hole in the copperwork. The viewing platform (observation deck) has cracking at the base of the railings; inspection of the slabs is recommended, and a repair and stabilisation scheme developed once the causes are better understood. The steps have cracks evident in stonework around the base of some balusters and regular crack monitoring is recommended. A thin metal strap has been fixed to the stair balusters, which currently appears to be stable. Balustrade strengthening details were proposed by Hockley & Dawson in 2016, which are still recommended by the structural engineers.

The architectural condition survey considers the exterior stonework to be in good condition except for a weathering roll-moulding at the top of the column plinth which is cracking and friable; immediate action was recommended and CoL officers carried out an inspection in November 2024 that did not reveal any major/serious defects with the stonework.. The hardwood doors and bronze casements are generally in good condition, with minor damage to ironmongery.

Internally, the previous condensation problems within the stairwell appear to be greatly reduced, likely with the installation of casement windows, trace heating and absorbent stone finishes. A concern is the extent of damp in the basement and the current blocking of ventilation routes, accelerating decay to the masonry.

Within the stairwell, local repairs are needed to the oak handrail. Interior decoration is in poorer condition in the most inaccessible places, such as the timber enclosure at the top of the stairs, but at lower levels is in reasonably good condition.

The condition of fixtures in the entrance foyer has deteriorated and the number of fittings increased, to the detriment of the historic interior.

Electrical services have been added or altered since the 2016 condition inspection, which are individually reviewed and are not all considered to be improvements to those they replaced.

Statutory inspections are regularly undertaken although the latest lightning protection inspection notes repair work is required.

Externally, the railings have local paint damage and the paving drainage routes appear blocked.

The Pavilion in Monument Yard is in poor condition and a detailed scope of repairs and alterations to provide adequate facilities, is recommended.

2.2 MANAGEMENT & USE

The operation of The Monument as a visitor attraction, open to the public, is currently managed by Natural Environment Division.

Tower Bridge (City Bridge Foundation) currently open the attraction to the public on behalf of the Natural Environment Division.

City Surveyor's Department is responsible for the maintenance and upkeep of The Monument.

Larger projects are carried out by external professionals.

Maintenance and project files are kept within the City Surveyor's Department.

The Monument is a visitor attraction open 7 days a week.

The pavilion in Monument Yard is for the use of Monument staff only.

3.1 NATURAL RISK FACTORS

There are several risks associated with naturally occurring influences on the site outlined below.

Lightning

Risk mitigation: the building currently has a lightning protection system

Drainage

The Viewing Platform drainage system seems to provide sufficient capacity.

Risk mitigation: regular cleaning of the drainage channel and gulley

Ventilation

In 2009 the ground floor grilled opening was reinstated which ventilates the basement, and high-level grilles were reinstated allowing better ventilation of the upper staircase and flaming orb area. These grilled openings are now blocked-up with plywood boards.

Risk mitigation: keep the three ventilation grilles unobstructed

Damp Basement

The basement stonework appears damper than at the previous survey in 2016 causing decay of historic stonework

Risk mitigation: Unblock the ventilation grilled opening at the centre of the vaulted ceiling, introduce air into the basement via the disused chimney.

Storms / Strong winds

A Monument wind analysis in 2007 described high speed air flows being channelled around the Monument, from the surrounding streets. The form of some surrounding buildings has since changed.

Risk: to anyone at high level outside the cage or for anything fixed to the Monument at high level

3.2 HUMAN RISK FACTORS

Fire

Fire is a risk to any historic public building and to visitors & staff.

Risk mitigation: Follow recommendations of the regularly updated Fire Risk Assessments, requiring regular fire tests, drills and procedures to be reviewed to ensure their effectiveness; all electrical items, services and fire detection systems to be regularly checked to help mitigate against the risk of fire breaking out, and fire risks associated with electrical equipment checked through regular PAT testing.

Vandalism

CCTV is installed and reported incidents of vandalism & graffiti appear to have decreased since 2016.

Risk mitigation: the current system appears to be working well.

3.3 RESOURCE RISK ISSUES

The principal resource risk is if the Monument management team, does not facilitate or resource or manage the building adequately as outlined in this MMP.

4.1 MANAGEMENT AIMS AND OBJECTIVES

The following tasks need to be carried out.

The existing management structure for The Monument should ensure that these tasks are delegated to the appropriate member of staff as necessary.

TASK	FREQUENCY	SUGGESTED NO. OF STAFF
Day to day responsibility for running the building.	Daily / When in Use	1 (+1 reserve)
Arrange group visits.	As required	1 (+1 reserve)
Ensure safe & appropriate operation of the facility.	As required	1 (+1 reserve)
Manage bookings for visiting groups and consultants & contractors.	As required	1 (+1 reserve)
Undertake marketing and website maintenance and updating.	As required	1
Assist with security, locking and unlocking for operational requirements.	As required	1
Take day-to-day responsibility for the routine checks identified in this MMP.	Weekly	1 (+1 reserve)
Make regular inspections of the building, identifying, and logging defects.	As planned	1 (+1 reserve)
Arrange for maintenance work and repairs, liaising with Historic England and involve the local authority's conservation officer when needed.	As required	1 (+1 reserve)
Instruct an appropriate external consultant to design repair & alteration works and manage the statutory process for the listed building and Scheduled Monument, liaising with Historic England and the local authority's conservation officer.	As required	1

4.2 WHAT EVERY MEMBER OF STAFF SHOULD KNOW

As a basic checklist each member of staff should be familiar with the following.

- Details on the procedure for opening and closing the building down.
- The risk assessment with regards to fire which stipulates the limit on numbers for visitors to the Monument
- Any constraints identified by regulators should be freely available for reference in the Pavilion office.

Familiarisation with this information should be made part of any staff induction.

Hard copies to be kept available in the Pavilion/main TBE office, in the event of an emergency.

This should all be covered in The Monument's emergency plan.

A checklist of emergency phone numbers to include as a minimum:

- Emergency number for the security alarm system monitors and the code number to cancel a false alarm.
- Emergency number for the fire alarm system and the procedure for cancelling a false alarm.
- Emergency contact number for the local police.
- Call out number for an electrician familiar with the building, via City Surveyors' Department.
- Call out number for a heating engineer familiar with the Pavilion building via City Surveyor's Department.
- Call out number for a plumber with knowledge of the Pavilion building via City Surveyor's Department.

4.3 MAINTENANCE AIMS AND OBJECTIVES

There are numerous reasons to carry out regular maintenance across the site, particularly given the Grade I & Scheduled Monument status of the building and curtilage.

Thorough and well-planned preventative maintenance can:

- Extend the life of the building and its materials
- Prevent/reduce the loss of, or damage to original fabric.
- Help to prevent the need for large-scale repair works and therefore large repair bills
- Upkeep a building's appearance

A regular routine of maintenance inspection should be carried out annually and, where appropriate, more often, particularly after storms or periods of bad weather, when built fabric can be negatively affected.

Conservation contractors should be sought for specialist work, or where necessary, engage an external conservation consultant to determine the extent of repairs and maintenance. The local conservation officer and Historic England will need to be consulted prior to any works that alter the appearance or character of the building.



5.1 REPAIRS

Specialist Repairs

The Monument is Grade I listed and a Scheduled Monument, therefore all areas of the building and curtilage, whether original or later additions, are covered by the listing. Consultation with Historic England will be needed for SMC before any work is instructed. Inform the Conservation Officer as good practice.

The following list is not exhaustive and should be used as a guide only.

The Monument management should contact a conservation officer or consult an external heritage consultant or Architect in any event when work is needed to these areas:

- Flaming orb copperwork and gilding
- Flaming orb area iron armature
- Viewing Platform stonework
- Viewing Platform alterations to cage & balustrade
- Portland stonework, externally & internally
- Black limestone steps and landings
- Bronze & iron windows, and specialist ironmongery
- Iron balustrade with lead caulking and oak handrail
- Joinery - doors & frames, historic partitions & cupboards
- Floor finishes of stonework and limecrete
- Surfaces/treatments
- Replacement of architectural lighting with new design

Routine Repairs

The following could be considered as routine repairs / low impact that may be able to be carried out without consent. However, Historic England should be consulted to confirm this. Note that visual inspections do not require consent.

Examples of Routine Repairs:

- Viewing Platform cage mesh – checking and making good mesh fixings and taught-ness
- Repairs to light fittings, like-for-like
- Clearing of gully
- Repair broken window panes with matching glass

Fire Risk

There should be a fire strategy in place that should be reviewed every 12 months. This review and audit should continue and include all detector devices, signage, evacuation procedure, and extinguishers by a suitably qualified fire engineer.

Cleaning Products

Certain modern cleaning products can be harmful to old buildings, particularly if the product has not been designed to be used on them. It is recommended that cleaning product providers be identified and reviewed with a heritage advisor for their suitability.

Planned Preventative Maintenance Plan

The maintenance actions shown on the attached sheets should be taken as the basis of a routine to maintain the fabric of the Monument and Pavilion. In addition, a five yearly inspection and survey of the building(s) should be carried out to assist with the five yearly review of the MMP. It may identify new areas of risk and inform the strategy for the maintenance and management of the site for the following five years.

5.2 MANAGEMENT AND MAINTENANCE TABLES

The tables on the following pages indicate the management and maintenance tasks that are required for The Monument & Pavilion. They are divided into ‘Essential’ tasks in section 5.3, which are required by law or for health & safety reasons, and ‘Routine’ tasks in sections 5.4 and 5.5.

Responsibility

Within the City of London Corporation, the responsibility for the tasks identified in the MMP will mainly lie with:

- Tower Bridge Exhibition (TBE)
- Integrated Facilities Management Team (IFM)
- Operations Team (Ops)
- Heritage Estates Team (HES)
- Asset Management (AM)

External contractors are to be appointed by the appropriate teams within the City of London Corporation depending on the nature of the works.

Action

If a defect to the Monument or the Pavilion is identified, note location of defect in maintenance log.

For a defect to the Monument, consult heritage advisor regarding extent of repairs. Liaise with Historic England to determine if proposals are acceptable. Arrange for repairs as agreed with Historic England. Long term issues to be identified for consideration as part of annual / five yearly review.

Urgent Works should be notified to Historic England immediately for Class 5 Consent, and instances of damage should also be notified to Historic England.



5.3 ESSENTIAL MANAGEMENT & MAINTENANCE

These tasks are essential management and maintenance tasks to ensure the safety and upkeep of the Monument and Pavilion.

ESSENTIAL MANAGEMENT & MAINTENANCE					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
FIRE					
1	Fire Alarm Test	Monthly	Conduct fire alarm test to check it is in working order.	TB Attraction Management	inc. staff budget
2	Emergency Lighting	Monthly, or as required by regulations	Test of the emergency lighting system to ensure that this is working effectively when the power fails.	Site Team	inc. staff budget
3	Firefighting Equipment	Every 6 months	Arrange for routine checks of all firefighting equipment and replacement as necessary. Cost estimate based on assumption of every six months.	TB Attraction Management	inc. staff budget
4	Evacuation Procedures	Every 6 months	Carry out test fire evacuation drill with all staff and where possible a selection of volunteers present. This should involve the complete evacuation of the building and assembly at the designated point and a check of the list of expected numbers in the building.	TB Attraction Management	inc. staff budget
5	Evacuation Procedures	Annually	Carry out a trial evacuation of the building when occupied to check actual effectiveness of the evacuation procedure and how long it takes to clear the space.	TB Attraction Management	inc. staff budget
6	Review Fire risk assessment	Annually	Carry out a review of the previous ‘Fire Risk Assessment’ and ensure that this is up to date and still relevant.	TB Attraction Management	inc. staff budget
7	Update Fire risk assessment	As specified in risk assessment or through need/change	Update Fire Risk Assessment and check fire escape strategy in place for the building according to specified time frame in Fire Risk Assessment or when changes are made to the building.	TB Attraction Management	inc. staff budget
STRUCTURAL					
8	Structural Inspections	Annually	Commission Structure Engineer for annual structure inspections: check for any signs of structural cracking to the black limestone platform, landings, balustrade & steps or loose masonry to the underside of the steps. Inspect and monitor the hole in the side or the flaming orb.	CSD-Ops	£4,700
9	Verticality monitoring & recording	Five yearly	Instruct measured surveyors, Downland Partnership, to plumb and record the verticality of the Monument and compare to previous recordings.	CSD-Ops	£1,050
ELECTRICAL					
10	Electrical Inspection	Annually	Arrange for routine visit by electrician to check over the safety of the systems and to ensure all distribution boards and breakers are in good working order.	CSD-FM	inc. in FM budget



ESSENTIAL MANAGEMENT & MAINTENANCE:					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
ELECTRICAL					
11	Electrical PTA Test	Annually	Arrange for annual PAT test of portable equipment and full discharge of emergency lighting system and test of its effectiveness.	CSD-FM	inc. in FM budget
12	Electrical Test	Five yearly	Arrange for a complete electrical test of the whole of the installation in the buildings. This should note the condition of the systems and make recommendations for any necessary repair or replacement work. This should provide a list of works categorised as urgent, or to be completed within one, two or five years. This should form the basis for planned work over the next five-year period.	CSD-FM	inc. in FM budget
MECHANICAL					
13	Mechanical Inspection	Annually	Pavilion: arrange for routine visit by heating specialist responsible for the heating for routine service.	CSD-FM	inc. in FM budget
14	Mechanical Ductwork	Annually	Pavilion: arrange for cleaning of extraction ductwork in kitchen and WCs.	CSD-FM	inc. in FM budget
15	Mechanical Inspection	Five yearly/Varies	Arrange for a full inspection of the mechanical heating, hot and cold water services. This should note the condition of the systems and make recommendations for any necessary repair or replacement work. This should provide a list of works categorised as urgent, or to be completed within one, two or five years. This should form the basis for planned work over the next five year period.	CSD-FM	inc. in FM budget
TB SECURITY					
16	CCTV and Alarm systems	Annually	Arrange for a comprehensive maintenance visit every year to test CCTV and alarm system.	CSD-FM	inc. in FM budget
TB ATTRACTION MANAGEMENT					
17	Health & Safety	Annually	Check that necessary first aid qualifications of staff are up to date and that necessary first aid equipment is on hand, in date and in good working order.	TB Attraction Management	inc. in FM budget
SERVICE CONTRACTS					
18	Service contracts	Five yearly/varies	Complete a review of all the service contracts (Alarms, pumps, boilers, electrics, fire extinguishers etc) to ensure that these still represent value for money. Carry out a re-tendering exercise if necessary.	CSD-FM (contracts team)	inc. in FM budget



5.4 ROUTINE MANAGEMENT SCHEDULE FOR THE MONUMENT & PAVILION

Management refers to the tasks that are to be undertaken in order to run the buildings efficiently and safely on a day-to-day basis.

ROUTINE MANAGEMENT					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
GENERAL DAILY ROUTINE					
19	General daily routine	Daily on opening up	<ul style="list-style-type: none">Unset alarms and unlock doors onto viewing platformCheck the high-level ceiling circular opening is not blocked-up with a temporary boardCheck entrance doors for any signs of forced entry or tampering.Check status of alarm systems (fire and security) for indication of faults.Check diary to see what visits are proposed and/or what workmen are expected and prepare as necessary.Check that first aid and firefighting equipment is in its correct locations	Site Team	inc. staff budget
20	General daily routine	Daily on opening up	Maximum capacities to be adhered to regarding number of people.	Site Team	inc. staff budget
21	General daily routine	Daily on shutting down	<ul style="list-style-type: none">Check that all personnel have left the buildingCheck that all lights are turned off.Set alarms and lock final exit door and front gate	Site Team	inc. staff budget
FIRE					
22	Fire	Weekly	Carry out routine test of the fire alarm installation.	TB Attraction Management	inc. staff budget
23	Fire	Quarterly	General check in flaming orb area, attendants' recess and basement to ensure that they are clean and tidy and are not adding unnecessarily to the fire load of the building.	Site Team	inc. staff budget
LIGHTING					
24	Lighting	Monthly	Walk around the building to ensure that all lights are in good working order and organise replacements / repair where necessary.	Site Team / CSD-FM	inc. staff budget
TB SECURITY					
25	Security	Monthly	Carry out random test of movement detectors and CCTV cameras to ensure security system is effective.	TB Security	inc. staff budget
26	Security	Monthly	Walk around the exterior of the Monument including viewing platform to check for any signs of damage or vandalism, report.	Site Team	inc. staff budget



ROUTINE MANAGEMENT					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
STRUCTURE					
27	Structure	Monthly	Report any loose or damaged stonework; damage to cage stainless-steel mesh or structure.	Site team	inc. staff budget
TB ATTRACTION MANAGEMENT					
28	Health & Safety	Annually	Check over attendants' recess & pavilion equipment to ensure it is safe and serviceable including the cleaning of keyboards and telephones, checking of seating positions, adequacy of task lighting etc.	Site team	inc. staff budget
29	Hazard Risk Assessment	Annually	Identify the following; trips, slips, head injuries, working at height, confined spaces, hazardous areas, emergency preparation.	Site team	inc. staff budget
MANAGEMENT					
30	Cleaning Procedures	Annually	Review of cleaning procedures, cleaning rotas, cleaning equipment and possible need for replacement.	Site team	inc. staff budget
31	MMP Reviews	Annually	Review the Management and Maintenance Plan. Does this remain relevant or should it be adjusted?	All	inc. staff budget.
32	CMP Reviews	Five yearly	The Conservation Management Plan (CMP) should be reviewed and updated as necessary every five years.	CSD-HES	£13,500
SURVEYOR					
33	Surveyor's Inspection	Annually	Commission surveyr/architect to review the physical condition of the building. Adding any areas that need maintenance work, replacement of fittings and fixtures or redecoration to the works list for the coming year.	CSD-Ops	£4,000
34	Surveyor's Inspection	Five yearly	Commission surveyor/architect with appropriate skills to set out the physical condition of the buildings and fixtures and fittings. Check for any loose and friable stonework to the plinth drip moulding. This should provide a list of building works internal and external categorised as urgent, or to be completed within one, two or five years. This should form the basis for planned work over the next five-year period.	CSD-Ops	£26,000



5.5 ROUTINE MAINTENANCE SCHEDULE FOR THE MONUMENT & PAVILION

Maintenance excludes exterior areas of the building which are not anticipated to require maintenance within the next 20 years. This includes:

- Gilding of the Flaming Orb
- Belzona dome finish
- High-level Portland stonework

ROUTINE MAINTENANCE					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
EXTERIOR					
35	Rainwater disposal system	Weekly	Ensure viewing platform outlet is free from debris /blockages	Site team	inc. staff budget
36	Portland stone plinth roll moulding	Every 3 years	Check worn/damaged stonework of roll moulding, remove friable stone by hand, MEWP access, SMC required.	CSD-Ops	£5,200
37	Exterior Doors & Windows	Every 3 years	Overhaul doors and ironmongery, oil doors, all as required.	CSD-Ops	£2,100
38	Entrance steps & external paving	Annually	Steam clean.	CSD-Ops	£1,400
39	Lightning Protection	Annually	Comply with recommendations from Omega Red Ltd		Client to provide quote
40	Cage & Balustrade netting	Every 2 years	Repairs arising from visual inspection of the rope in the net and sleeves around the perimeter of the net	CSD-Ops	£2,000
41	External railings	Every 2 years	Locally redecorate chips in paintwork, overhaul gate	CSD-Ops	£500
42	Portland stonework, algae on plinth	Every 3 years	Reduce algae from base and plinth by Doff (steam) cleaning from MEWP	CSD-Ops	£600
43	External railings	Five yearly	Redecorate (Refer to Specification in Appendix B, page 27)	CSD-Ops	£4,000
44	Pavilion Repairs and Alterations	Five yearly	Repairs and alterations		Client to provide quote
45	Flaming Orb	10 years	Circular board replacement	CSD-Ops	£800
46	Viewing platform lighting	20 years	New lighting Scheme	CSD-Ops	£26,000



ROUTINE MAINTENANCE					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
INTERIOR METALWORK					
47	Iron stair balusters	Annually	Undertake remedial works to lead caulking of balustrade as required.	CSD-Ops	£4,100
48	Bronze & iron windows	Annually	Repair damaged ironmongery as required.	CSD-Ops	£3,600
49	Iron gate and ceiling bars	Every 3 years	Locally rust treat & locally redecorate	CSD-Ops	£6,000
50	Iron grilles	Every 5 years	Redecorate	CSD-Ops	£400
51	Iron stair balusters	Every 5 years	Redecorate	CSD-Ops	£14,000
52	Iron Armature	Every 5-7 years	Locally rust treat & locally redecorate as identified in 5 yearly inspections	CSD-Ops	£2,200
53	Iron gate and ceiling bars	Every 10 years	Redecorate	CSD-Ops	Inc. above
54	Turnstiles	Once	Reinstate turnstiles	CSD-Ops	£3,200
INTERIOR STONework					
55	Potentially damp stonework	After heavy rain	Inspect interior stonework beneath spitter for any signs of damp after wet conditions as the spitter pipe is quite short, record	Site team	inc. staff budget
56	Painted stone walls	Annually / 10 yearly	Locally redecorate/fully redecorate	CSD-Ops	£48,000
57	Black limestone steps	10 yearly	Structural repairs according to structural engineer's specification	CSD-Ops	£7,600
58	Basement stairway	Once	Reinstate ventilation by unblocking presumed flue in basement staircase. Allow for rod inspection to confirm unblocked route and exit point.		£3,500
JOINERY					
59	Oak staircase handrail	Annually	Oak handrail, locally repair as required.	CSD-Ops	£2,000
60	Softwood floor to the attendant's recess	Annually	Clean & treating with Deks Olje No.1	CSD-Ops	£590
61	High-level timber partitions, ceiling boarding, high level door	Every 3 years	Locally redecorate chipped paintwork	CSD-Ops	£1,500
62	Joinery at ground floor	Every 3 years	Locally redecorate chipped paintwork (Refer to Specification in Appendix B, page 29)	CSD-Ops	£750
63	All painted joinery	10 yearly	Redecorate (Refer to Specification in Appendix B, page 29)	CSD-Ops	£1,500



ROUTINE MAINTENANCE					
ITEM NO.	ITEM	FREQUENCY	DESCRIPTION AND ASSUMPTIONS	RESPONSIBILITY OR DELIVERY	APPROXIMATE COST
LIGHTING, MISCELLANEOUS					
64	High level circular grille	Weekly/when needed	Check temporary timber board is not blocking the public view up into the flaming orb area. Grille to be left unblocked after access to the flaming orb. Site team to report to CSD if grille is blocked	CSD-FM	inc. staff budget
65	Cleaning equipment	Weekly	Check no cleaning equipment is stored in public view	Site team	inc. staff budget
66	Baluster lights	Monthly	Check baluster lights, fixings & they are fixed in the correct positions	CSD-FM	inc. staff budget
67	Basement circular chamber	Once	Removal of redundant cables and equipment.		£2,000
68	Removing redundant strip lighters + m/g decs	Once	Remove redundant strip lighters + make good decs		£800
69	Stainless steel conduits and junction boxes	Once	Provisional sum to replace plastic conduits and junction boxes in stainless steel.		£900



SOURCES OF INFORMATION

Conservation Management Plan 2016 by Julian Harrap Architects

The Monument Major Repair Contract 2007-2009 information from Julian Harrap Architects

Cost information from City of London Corporation

Cost information from DR Nolans & co. quantity surveyors

Monument Verticality Report 07 July 2024 by The Downland Partnership

The Monument Major Repair Contract 2007-2009 O&M Manual



APPENDIX A
2007-2009 CONTRACT: THE WORKS

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
WROUGHT IRON ARMATURE				
Wrought iron structural armature	Inside the stone dome and copper orb at the top of the Monument	The wrought-iron armature fastens the copper orb down onto the stone mass of the dome and drum below. Within the flaming orb the form of the armature is a circular ladder with four iron vertical legs and circular iron rungs. Iron flanges are bolted to the legs of the circular ladder at intervals and are riveted to the copperwork, thereby securing the copper to the wrought- iron armature. The four legs of the ladder continue down to the stone dome below, where they each curve outwards following the profile of the inside of the stone dome. The legs are fixed to the inner walls of the stone dome, again with iron flanges bolted to the legs and let into the stone walls of the dome, thereby fixing the armature down to the stonework.	2009 structural work: Strengthening measures were designed and installed to stabilize the deformed orb and its supporting structure. The bottom portion of the armature was fixed to the masonry with four circular iron bands each bolted at equal intervals to the interior of the stone dome and welded to the seventeenth- century wrought-iron armature legs. A welded connection is used to fix the new pure iron bands to the seventeenth-century wrought iron, in order to avoid drilling into the historic ironwork and to produce a good-looking, clean connection.	Strengthening measures fabricated and installed by : Eura Conservation Ltd Decoration undertaken by: Hare & Humphreys Ltd
CAGE & BALUSTRADE				
Cage & Balustrade	Exterior Viewing Platform	A mesh screen and balustrade to the four sides of the viewing balcony. Balustrade fabricated from grade 316 stainless steel supported off of 32mm solid steel square posts set into drilled holes in the floor stones and grouted into position with an epoxy grout. The top of the balustrade is finished with a 200mm wide 20mm thick laser profiled handrail welded to the 32mm square support posts. A woven mesh covers the inside face of the vertical support bars and is secured in place by specially crimping to the 5mm support bars welded to the 32mm square rods. The upper 42mm diameter support is ring set proud of the face of the stone secured to the monument by means of radial M10 anchor bolts screwed into anchor sleeves resin anchored into drilled holes in the stone of the monument. The ends of the radial supports are screwed to top the handrail using M12 countersunk screws into tapped holes into the ends of the supports. The grade 316 stainless steel woven mesh enclosing the balcony is secured to a radial arrangement of stainless steel tubes 42.4mm and 24mm diameter solid rods supported between the upper ring and the handrail. The enclosing mesh is crimped to the radial supports.	Detailed design, fabrication & installation	Littlehampton Welding Limited Stainless steel cable Jakob mesh supplied and installed by: MMA Architectural Systems Ltd Lead caulking to feet of balusters undertaken by: Full Metal Jacket Ltd

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
BLACK LIMESTONE STEPS AND PAVING				
Viewing Platform paving flags and the solid steps of the spiral staircase	Internal and external at high level	<p>A petrographical examination was made of a sample of the black limestone which identified it as ‘a fine grained, dark grey and irregularly laminated limestone, a Bituminous Stromstolitic Pelmicrite. The general appearance, lithology and preservation are typical of many limestones from lower carboniferous strata of Britain, and north-western Europe’.</p> <p>The paving to the viewing platform is very large black limestone flags. The spiral steps were originally solid black limestone interlocking steps, with a moulded nosings and returns, cantilevered from the solid Portland stone walls of the stairwell. The treads were repaired in 2008 using stainless steel reinforcement, resin and black limestone indents.</p>	<p>The black limestone was repaired with stone to match the colour, texture and quality of the existing stonework. The black limestone from the Pool Vaaish quarry is similar in bearing strength, porosity, permeability and appearance to the original.</p> <p>Major structural repairs and strengthening to all steps up to the viewing platform using 12mm stainless steel dowels and Fischer Resin mortar & hardener in the 2007-2009 repair contract, together with the landing giving access to the viewing platform. It is not anticipated that these repairs will need to be repeated.</p>	<p>Black limestone supplied by: Black limestone from Pool Vaaish Limited.</p> <p>Fabricated and installed by : Cathedral Works Organisation (C.W.O) Ltd</p>
PORTLAND STONEWORK				
Portland stone	Exterior stonework	<p>The column is constructed in Portland stone; the walls are solid stone and the carved decoration and sculptures are in Portland Stone</p>	<p>Reinstatement of carved stone paterae, extensive repairs to dragons sculptures, repointing, indent and mortar repairs to stonework, cleaning of Portland stonework</p> <p>Stone repairs: product description</p> <p>Natural stone indents: Jordans Whitbed, Metal dowels and fixings shall be of phosphor bronze or stainless steel to BS 3894. Pointing mix for Portland stone</p> <p>Hydrated lime : white Portland cement : Portland stone dust 1:2:9 Hydrated lime : white Portland cement : Portland stone dust : silver sand 2:4:9:9.</p> <p>“Structural” mortar Hydraulic lime (NHL 5): Portland stone dust 1:3</p>	<p>2008 stone cleaning and repairs by: Cathedral Works Organisation Ltd</p>

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
BRONZE SLIT WINDOWS				
Bronze framed slit windows	In the walls of the shaft of the stone column.	<p>Directly above the door leading out onto the viewing platform is a narrow slit window similar to those on the column shaft. This iron hinged casement window is possible original or a very early replacement window. Each face of the column shaft has 8 no. narrow slit window openings, most are fitted with bronze casement windows, the very narrow openings are fitted with fixed lights in bronze frames</p> <p>Routine Cleaning procedure Bronze is a copper alloy (combination of copper and tin) and when exposed to air and moisture, it will develop a greenish patina on its surface. This darkened finish is considered to add character to the bronze; it is not intended that the bronze is cleaned to look shiny. Glass should be cleaned with a glass cleaning product and a soft cloth.</p>	Bespoke bronze casements were fabricated and installed in the stairwell in 2009. Glass is 3mm thick and very slightly imperfect in order to provide slightly distorted reflections, ironmongery is hand forged.	Bespoke bronze casements fabricated and installed by : Gospel Studios
OVAL WINDOW				
Oval iron framed window	Immediately above the entrance on the east side of the Monument	<p>Oval, iron framed, centre-hung pivot window.</p> <p>Glazing safety film The oval window has a glazing film applied to the glass to act a safety barrier against shattering.</p> <p>This was applied in 2009 and was obtained from :- Suppliers: Madico UK, Madico House, 98 Bolton Road, , Atherton, Manchester M29-9LD Phone: 011-44-1-942-891-790 Type of Film: CL-400-XSR</p>	Repair the window pivot mechanism, add a restraining device to prevent to restrict the opening of the window for safety reasons, apply glazing film, redecorate the window.	Oval window repaired and decorated by : Eura Conservation

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
BELZONA DOME FINISH				
Belzona Roof Finish	External at Base of Shaft	Application of waterproofing product to stonework	Application of a one-component, flexible liquid polymer, membrane-reinforced, roof covering system, applied to existing rendered stonework which is not all finished to falls. Colour to match Portland stone.	Supplied and installed by: Blunt Construction
ENTRANCE STEPS & EXTERNAL PAVING				
Entrance steps & external paving	Paving outside east entrance, steps up to east entrance door.	New steps in honed Yorkstone with “anti-slip”stainless steel studs resin-fixed into drilled holes into the edges of the treads. Re-laid riven Yorkstone paving slabs.	Supply & installation	Stone type & supplier for entrance steps: Eland Egde Yorkstone - Rand & Asquith (Aceblade Ltd)
GROUND LEVEL EXTERNAL RAILINGS				
Painted cast iron external railings	Around the east entrance to the Monument	Cast iron external painted railings and central gate	Repairs & redecoration	Repairs undertaken by: Eura Conservation Ltd. Decoration undertaken by: Hare & Humphreys Ltd

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
IRON STAIR BALUSTERS				
Staircase balustrade	Stairwell	Balustrade of spiral staircase	The feet of the staircase balusters are set into holes drilled into the tops of the stone treads and lead caulked into position.	Balusters refixed by: Eura Conservation
			During the extensive repairs to the stone steps, 80no. of the balusters were removed to allow the ends of the treads to be repaired and refixed by lead caulking their feet into holes drilled into the new stone treads and fixing the head of the baluster to the underside of the wrought iron handrail using small iron angles and drilled and tapped fixings.	Lead caulking by: Full Metal Jacket
				Decoration by: Hare & Humphreys Ltd,
STAIRCASE HANDRAIL				
Curved Oak Handrail	Balustrade of spiral staircase	The handrail is in jointed sections of oak, originally steamed and twisted to form the spiral balustrade. Raised bronze studs are fixed into the top of the handrail at regular intervals to deter people sliding down the spiral handrail.	In the late twentieth century, the handrail was removed and sections were replaced in oak, which does not appear to have been steam twisted and has shown signs of movement at the joints. Some joints were slightly opened which were repaired during the 2007-2009 contract using oak butterfly patches. Replica studs were made to match the existing, with spares handed to the operator. The oak handrail was polished.	Fullers Builders Limited



ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
ENTRANCE DOOR				
Pair of hardwood doors and frame	Entrance, East elevation	<p>The 2009 doors are a pair of solid oak 5 panelled, outward opening doors, The large upper panels of each door are glazed with beveled and polished 3x15mm laminated glass panels rebated into the frame and secured with a timber bead on the internal side of the door. The doors and frame are of English Oak, finished internally and externally with Deks Olje D.1 . The oak frame is plugged and screwed to stone reveals, pivot hinges are resin fixed to stone floor.</p> <p>Ironmongery</p> <p>Hafele floor bearing stainless steel pivot. Wrought iron garage door drop bolt and door holder. Heavy duty 5 lever mortice latch operational from both sides. 2no. heavy duty 5 lever mortice locks, external operation only, hand cut keyholes (no escutcheon). 2no. pairs octagonal hand forged iron knobs. 2no. door stay with fixing plates.</p>	Fabrication and installation of doors & frame	N.E.J. Stevenson
GROUND FLOOR FINISHES				
Stone paving	Ground floor	400mm square Purbeck stone paving slabs laid in a diamond pattern on a lime screed	Supply & installation	<p>Stone type: Purbeck Cap</p> <p>Supplier: Haysoms</p>

ELEMENTS OF CONSTRUCTION				
ELEMENT	LOCATION	DESCRIPTION	2009 WORKS	CONTACT DETAILS
IRON GRILLES				
Iron Grilles	1. Circular iron grille in the centre of the spiral staircase at the top black limestone landing. 2. Circular iron grille in the centre of the spiral staircase at the ground floor of the Monument. 3. Iron bars across the opening in the thickness of the stone walls, beneath the oval window	Iron bars & grilles	Grilles 1 & 2: constructed from the remains of original square section wrought iron bars that had been set into the stone. The existing bars were cut and welded inside new iron rings, sitting in stone rebates of the landing/floor. Grille 3: thin flat iron bars are fixed over an opening in the stonewall	Fabricated, installed and decorated by Eura Conservation Ltd.
TURNSTILE				
Victorian turnstile	Immediately inside the entrance doors	The cast-iron turnstile, made by Le Grand & Sutcliff was installed in 1891. It comprises a central barrier of 7 no. circular iron balusters, 25mm diameter with two end newels 32mm diameter, with a flat iron top rail. The painted iron gates, one each side of the barrier have brass digital counters and are semicircular on plan with 11 no. square section balusters and flat iron top rail. The wrought-iron hoop gates are pegged in position and operated by a floor mounted ratchet mechanism. The mechanism is still in good working order.	A low-level conservation repair to ensure the mechanism runs smoothly. The turnstiles were dismantled and all elements thoroughly cleaned. After re-assembly, the external surfaces were coated in micro-crystalline wax. A removable foot-lever override wedge was designed and installed. All historic paint was retained. In 2010 the pair of iron gates was temporarily removed from the turnstile as the width of the entry and exit was considered to be restrictive. The gates are stored at Tower Bridge by the management operators of The Monument, Tower Bridge Exhibition.	Removal, conservation and reinstallation in 2009 by: Eura Conservation



APPENDIX B

2007-2009 CONTRACT: SPECIFICATIONS



SPECIFICATIONS			
LOCATION	SPECIFICATION	COLOUR	SUPPLIER
DECORATION OF CAST IRON RAILINGS			
Externally, against the east elevation of the Monument	<p>Remove any corrosion that may have occurred before repainting takes place.</p> <p>Remove only loose and flaking material</p> <p>Rub down smooth with P120.</p> <p>Thoroughly clean and de-grease with Leigh’s Enviroguard W500 to remove all surface contamination.</p> <p>Rinse off with clean fresh water, when dry treat as follows: -</p> <p>To areas of breakdown / damage back to substrate, re-prepare by mechanical means to ST3 and feather back to a firm edge</p> <p>Spot prime exposed surfaces: Leigh’s Epigrip M902 epoxy aluminium primer.</p> <p>Apply 1 full base coat of: Leigh’s Epigrip M905 Epoxy intermediate coat @ 125 microns</p> <p>Apply 1 no. top coat: Leigh’s Epigrip M262 Epoxy Finish @ 50 microns</p>	Railing top coat: RAL 085 80 10	Leighs Paints
GILDING SPECIFICATION			
Flaming Orb	<p>Gilded Copper surfaces</p> <p>Ensure that great care is taken to prevent scratching the copper substrate</p> <p>Preparation: On verdigris affected flames and ornamentation: Use dremel drills with fine wire brush attachments to remove crust back to copper surface. On gilded surfaces: Rub down with fine paper lubriseal paper to gain key. Exposed copper: Before leaving workface ensure that all exposed copper is primed with E 795. Cracks or indentations: Fill with 2 pack epoxy resin body filler.</p> <p>Painting entire surface: Once primer is set (min 8 hours) and on all other previously gilded surface apply 1 coat of Epigrip winterfast Hi-build TM 905 white undercoat. Once dry (min 12 hours) apply 1 coat of Resistex 237 undercoat/sheen in colour ref 08C35</p> <p>Sizing: Ensure surface is dry and dust free. Apply 1 thin coat of LeFranc Bourgeois 12 hour oil based gold size.</p> <p>Gilding: Apply 2 No. layers of 23.5-carat leaf (min13 g/oz) onto surface, polishing overlaps for lustre.</p>		<p>Specialist Paints Leighs Paints</p> <p>Gold size (tools, accessories and adhesive) Stuart Stevenson</p> <p>Gold Leaf Ditta Guisto Manetti Battiloro</p> <p>General decoration materials Simpson’s Paints</p>
REDECORATION OF INTERNAL STONE WALLS			
Internal stone walls	<p>Dust off and wipe with soft water moistened cloth.</p> <p>Apply 2 no. coats of Earthborne Silicate Masonry paint in “Monument grey”</p>	Monument Grey	Supplier: EarthBorn Paints



SPECIFICATIONS			
LOCATION	SPECIFICATION	COLOUR	SUPPLIER
DECORATION OF IRON GRILLES AND OVAL WINDOW			
Oval window within the stairwell Iron grilles within the floors at high level at the base of the wrought iron armature, beneath the oval window and at ground floor level giving views down into the basement	Primer: Epigrip L425 to a minimum dft (dry film thickness) of 50m Mid Coat: Epigrip L653 to a dft of 125 microns Top coat: Resistex C237 to a dft of 50 microns	Oval Window top coat colour is RAL 8019	Leighs Paints
REDECORATION OF PAINTED COPPER SURFACES			
Interior of the Flaming Orb	Ensure that great care is taken to prevent scratching the copper substrate Preparation: On verdigris affected flames and ornamentation use Dremel drills with fine wire brush attachments to remove crust back to copper surface. Rub down with fine paper lubriseal paper to gain key. Exposed copper: before leaving workface ensure that all exposed copper is primed with E 795. Cracks or indentations: Fill with 2 pack epoxy resin body filler. Painting entire surface: Once primer is set (min 8 hours) apply 1 coat of Epigrip winterfast Hi-build TM 905 white undercoat. Once dry (min 12 hours) apply 1 coat of Resistex 237 undercoat/sheen in colour ref 08C35	Colour ref 08C35	Leighs Paints
DECORATION OF PURE STEEL			
At high level, steel straps inside the stone dome at the base of the wrought iron armature, reinforcing the structure of the armature	Dry abrade with medium grade wire wool De-grease with IMS spirit / alcohol solution. Prime with Leigh’s Metaguard K570. Apply 2 no. coats of Leigh’s Resistex C237	Ref: RAL 085 8010	Leighs Paints



SPECIFICATIONS			
LOCATION	SPECIFICATION	COLOUR	SUPPLIER
DECORATION OF WROUGHT IRON: ARMATURE, BALUSTERS, IRON GATE			
Wrought iron armature at the top of the monument Iron gate and bars at viewing platform level, Balusters to the spiral staircase	Remove only loose and flaking material Rub down smooth with P120. Thoroughly clean and de-grease with Leigh’s Enviroguard W500 to remove all surface contamination. Rinse off with clean fresh water, when dry treat as follows: - To areas of breakdown / damage back to substrate, re-prepare by mechanical means to ST3 and feather back to a firm edge Spot prime exposed surfaces: Leigh’s Epigrip M902 epoxy aluminium primer. Apply 1 full base coat of: Leigh’s Epigrip M905 Epoxy intermediate coat @ 125 microns Apply 1 no. top coat: Leigh’s Epigrip M262 Epoxy Finish @ 50 microns	Wrought iron armature: RAL 085 7010) Wrought iron balustrade: RAL 260 40 05	Leighs Paints
DECORATION OF PAINTED JOINERY			
Softwood door& frame and boarded ceiling at viewing platform level and above. Ground floor cupboards & attendants recess door	For repainting existing joinery: Retain existing paint build up, sand chipped paintwork to a feather edge, lightly sand paintwork generally, ensure surface is free of dust. Apply 1 no. undercoat of Interior Oil Primer & Undercoat then 2 no. topcoats of Oil Eggshell. For painting new joinery: Prepare surface as Farrow & Ball product advice for Interior Oil Primer & Undercoat applied to new softwood surfaces which includes the application of a diluted coat of Farrow & Ball Interior Oil Primer & Undercoat. Apply 1 no. undercoat of Interior Oil Primer & Undercoat then 2 no. topcoats of Oil Eggshell.	Colour: Stony Ground	Farrow & Ball
FINISHES TO OAK DOORS			
Oak front doors and doors to viewing platform	To maintain a matt finish to the oak doors, clean the surface frequently, on difficult dirt use alkaline cleaning agent: TSP (trisodium phosphate), as suppliers instructions, allow surface to dry. Apply one coat of DEKS OLJE D1 only to the areas which appear weathered, use mineral spirits to clean tools and drips that are still wet, do not allow Deks Olje to dry on metal.		DEKS OLJE D1 is saturating wood oil for tropical woods, with a transparent matte finish, by Owatrol marine, available at several suppliers, see online.



SPECIFICATIONS			
LOCATION	SPECIFICATION	COLOUR	SUPPLIER
CLEANING OF STAINLESS STEEL			
Viewing platform cage & balustrade, electrical services conduits throughout the entire interior of the Monument	<p>Stainless steel is easy to clean. Washing with soap or a mild detergent and warm water followed by clear water rinse is usually quite adequate for domestic and architectural equipment. An enhanced aesthetic appearance will be achieved if the cleaned surface is finally wiped dry.</p> <p>Where stainless steel has become extremely dirty with signs of surface discolouration (perhaps periods of neglect or periods of mis-use) the methods of cleaning are detailed below:</p> <p>Routine Cleaning, all finishes: Soap or mild detergent (fairy liquid) and water. Sponge, rinse with clean water, wipe dry if required.</p> <p>Finger prints, all finishes: Soap or warm water or organic solvent (eg Usher- Walker thinners no PF 8017, acetone, alcohol, Genklene. Rinse with clean water wipe dry if required.</p> <p>Stubborn stains and discolouration, all finishes: Mild cleaning solutions ie Ciff, Goddards Stainless Steel Care. Rinse well with clean water and wipe dry.</p> <p>Oil, grease marks, all finishes. Organic solvents (eg acetone, alcohol, Genklene Trichloroethylene, Usher Walker thinners no PF 8017. Clean after with soap and water, rinse with clean water and dry.</p> <p>Rust and other corrosion products, all finishes: Oxalic acid. The cleaning solution should be applied with a swab and allowed to stand for 15-20 minutes before being washed away with clean water. May continue using Ciff to give a final clean. Rinse well with clean water and wipe dry. (precautions for acid cleaners should be observed).</p> <p>Scratches on brush (satin) finish: Impregnated nylon pads. Polishing with scurfs dressed with iron free abrasives. Apply in direction of polishing. Clean with soap or detergent as per routine cleaning. Do not use ordinary steel wool-iron particles can become embedded in stainless steel and cause surface problems.</p> <p>Precautions: Acids should only be used for on-site cleaning when all other methods have been proved unsatisfactory. Rubber gloves should be used and care taken to see that acid cleaners are not spilt over adjacent areas. Special precautions are necessary with oxalic acid.</p> <p>In conclusion: If all the suggestions and actions in the table have been attempted, stainless steel has the facility to be mechanically or electro-polished on site as the material is complete and not a surface plating. In this instance Littlehampton Welding Ltd should be contacted.</p>		



SPECIFICATIONS			
LOCATION	SPECIFICATION	COLOUR	SUPPLIER

CLEANING PAINTED METALWORK

Wrought iron armature, plain steel reinforcement bands to the armature, viewing platform level gate, balusters, floor grilles, turnstiles, external railings	Carefully wash with soft brushes with diluted “Teepol” (Ceasar Janitorial 020 7253 4655)” detergent. Rinse off residue with clean water twice on completion and wipe dry with cotton cloth and chamois leather		Ceasar Janitorial
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PAINT COLOUR SCHEDULE					
ITEM NO.	DESCRIPTION	REF	TYPE	COLOUR	SUPPLIER
1.	Internal walls	Monument Grey	Silicate masonry	Portland stone	Earthborn
2.	Wrought iron balustrade	RAL 260 40 05	tba	Dark grey	
3.	Baluster light fittings	RAL 260 40 05	Powder coat	Dark grey	
4.	Wall mounted light fittings	RAL 085 80 10	Powder coat	Portland stone	
5.	Painted copper of Flaming Orb	RAL 085 80 10	Resistex	Portland stone	Leigh's
6.	Wrought iron armature	RAL 085 70 10	Epigrip epoxy	Dark Portland	Leigh's
7.	New pure iron bands in drum	RAL 260 40 05	Resistex	Portland stone	
8.	Panoramic Camera case & weather station	RAL 220 90 05	To suit substrates	Very light blue/grey	
9.	External cast iron railings & plinths	RAL 085 80 10		Portland stone	Leigh's
10.	Oval window	RAL 8019		Grey Brown	Leigh's
11.	Softwood Joinery	Stony Ground	Oil Eggshell	Portland stone	Farrow & Ball



APPENDIX C

2007-2009 CONTRACT: SUPPLIERS



NAME	ADDRESS	PHONE NUMBER	WEBSITE
B			
Blunt Construction	Ceased Trading		
C			
Cathedral Works Organisation (C.W.O) Ltd	Ceased Trading		
C.E.S.A.R Janitorial Supplies	Unit 8 Harlow Business Park, Parkend Harlow Essex CM19 5QF	01279 454007	https://www.cesar.co.uk/
E			
Earthborn Paints	Earthborn, Frodsham Business Centre, Bridge Lane, Frodsham WA6 7FZ	01928 734 171	https://earthbornpaints.co.uk/
Eura Conservation Ltd	Unit H2, Central House, Halesfield 19, Telford TF7 4QT	01952 680218	https://eira.co.uk/
F			
Farrow & Ball	Uddens Estate, Wimborne Dorset BH21 7NL	01202 876141	https://www.farrow-ball.com/
Full Metal Jacket Ltd	Arnolds Farm Cottages, Business Center, 221 Ongar Rd, Stapleford Tawney, Brentwood, Romford RM4 1RH	01708 688272	https://www.fmjlimited.co.uk/
Fullers Builders Limited	68 Beulah Road London E1 7 9LH	020 8520 2275	https://fullersbuilders.co.uk/
G			
Gospel Stained Glass	Ceased Trading		
Guisto Manetti Battiloro	Via Tosca Fiesoli, 89/M, 50013 Campi Bisenzio FI Italy	+39 055 436261	https://www.manetti.com/
H			
Hare & Humphreys	27 Kelso Pl, London W8 5QG	020 7833 8806	https://www.hare-humphreys.co.uk/
Haysom Purbeck Stone	Kingston Road, Langton Matravers Dorset BH19 3JP	01929 439205	https://purbeckstone.co.uk/

NAME	ADDRESS	PHONE NUMBER	WEBSITE
L			
Leighs Paints	Ceased Trading (now trade as Sherwin-Williams Protective & Marine Coatings)		
Littlehampton Welding Limited	Riverside Industrial Estate, Unit S, Littlehampton BN17 5DF	01903 721555	https://littlehamptonwelding.co.uk/
M			
Madico UK	Madico House, 98 Bolton Road, Atherton, Manchester, M46 9LD	May have ceased trading	
MMA Architectural Systems Ltd	Unit 35C, Fourth Avenue, Westfield Industrial Estate, Midsomer Norton, Radstock BA3 4XE	01761 419427	https://www.mma-architectural.co.uk/
N			
N E J Stevenson Ltd	Unit 6a Church Lawford Business Centre, Limestone Hall Ln, Church Lawford, Rugby CV23 9HD	024 7654 4662	https://nejstevenson.co.uk/
O			
Owatrol UK	23 Scott Road, Luton LU3 3BF	01582 592707	https://www.owatroldirect.co.uk/
R			
Rand & Asquith (Aceblade Ltd)	Tuck Royd Quarry, Halifax Road, Brighouse West Yorkshire HD6 2PE	01484 719263	https://www.randandasquith.co.uk/
S			
Simpson's Paints	Ceased Trading		
Stuart R. Stevenson	68 Clerkenwell Rd, London EC1M 5QA	020 7253 1693	https://shop.stuartstevenson.co.uk/



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