

Design and Access Statement

Science and Industry Museum

Station Building

Client: The Board of Trustees of the Science Museum
Date: April 2023
Revision: B



Atelier MB
Urban Architects





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A collage of eight diamond-shaped images arranged in a grid-like pattern on a dark blue background. The images depict various urban and architectural scenes: 1. Top left: A modern glass and steel building next to a historic red brick building. 2. Top right: A solid white diamond. 3. Second row left: A solid orange diamond. 4. Second row right: A red brick building with a curved facade and large windows. 5. Third row left: An interior view of a modern staircase and seating area. 6. Third row right: A courtyard area with a patterned orange and white wall. 7. Fourth row left: A street view of a modern building with a glass facade. 8. Fourth row right: A long, empty corridor with a wooden floor and black pillars. 9. Bottom left: A street view of a historic building with a red roof. 10. Bottom right: A street view of a row of historic buildings with red roofs and white facades.

1.0 INTRODUCTION

This Design and Access Statement accompanies a formal application for Listed Building consent for a range of urgent fire protection remediation works throughout the Grade I listed Station Building. This building forms part of the Science and Industry Museum estate in central Manchester.

Although currently not in use as a publicly accessible museum, this is anticipated to be a short term situation due to ongoing repair works. Ordinarily this is a publicly accessible building and exhibition space which is integral to the museum experience.

This document has been prepared by Atelier MB Ltd for our Client, The Trustees of the Science Museum, and must be read in conjunction with the full supporting information package, including the Heritage Report prepared by Atelier Heritage.



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Context and Site Analysis



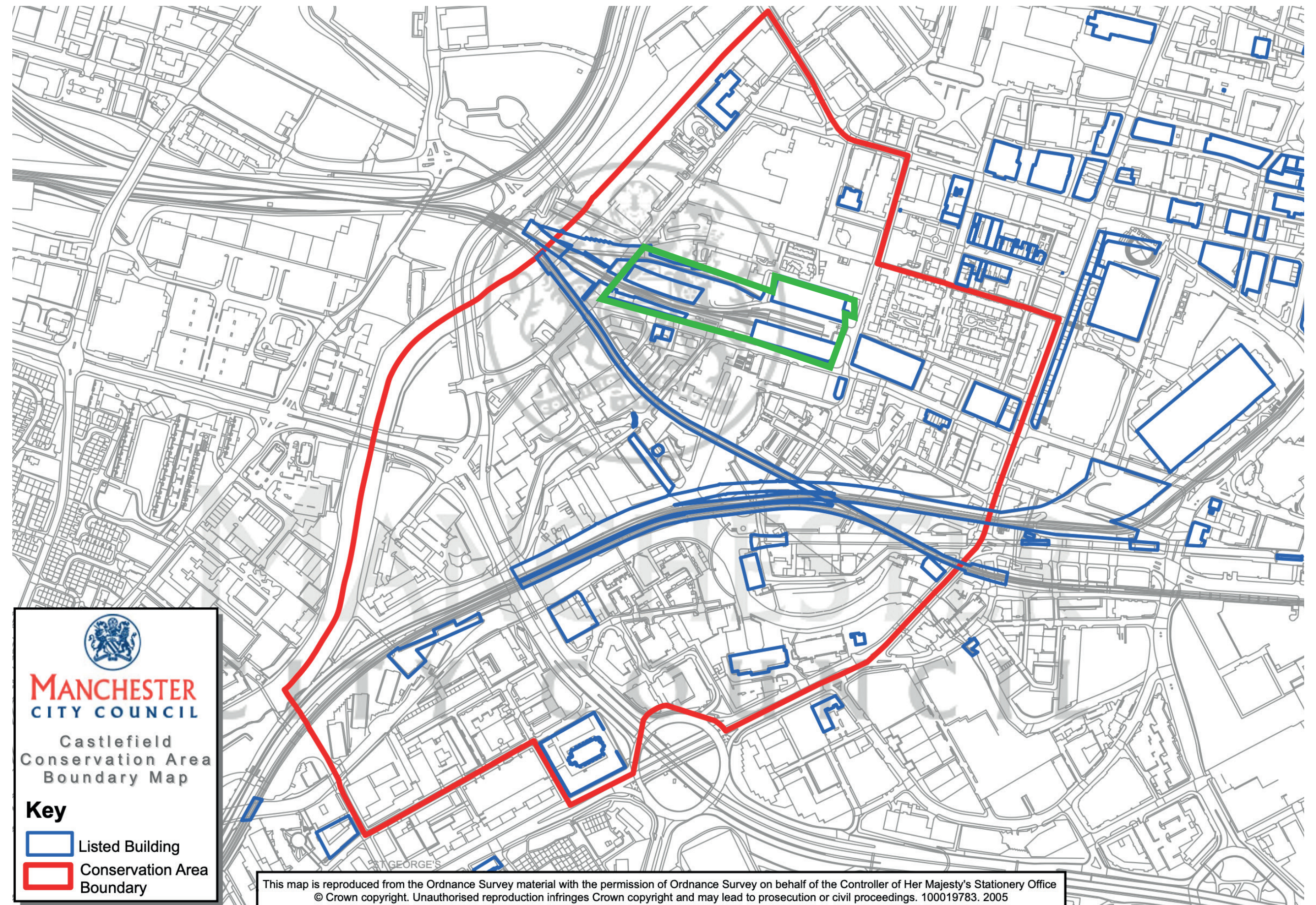
2.1 LOCATION

The Science Museum site is in the Castlefield Conservation Area of Manchester City Centre. This is one of the largest Conservation Areas in Manchester and was designated in 1979 and holds great importance in terms of international industrial heritage. The area is also designated for its Roman history. The listed buildings in the estate take up a sizeable area, and therefore are of considerable importance to the character.

The complex of buildings is bounded by Liverpool Road to the South, Lower Byrom St to the East, and the River Irwell to the West.

Within the complex there are several Listed Buildings. This Listed Building Consent application relates only to the following buildings:

1830s Warehouse (Grade I)
The Station Buildings (Grade I)



Castlefield Conservation Area Boundary - with the SIM site bounded in green.

2.2 THE BUILDING

This report is to accompany the application for works to the Station Buildings only. Please refer to accompanying applications for reports covering works to the other buildings.

The Station Buildings

This building is grade I listed, and forms part of the site boundary with Liverpool Road. It was the terminus for the Liverpool to Manchester Railway, and is the oldest surviving passenger railway station in the world. It therefore holds extremely high historical heritage significance.

Architecturally and aesthetically, whilst the station appeared to be in a traditionally classical style, it was the first of its kind and the engineering and form displayed at Liverpool Road went on to influence railway development around the globe. The group of buildings form a world-class example of their kind and their communal value, both at the time of their development and today, as an educational and historical resource, is of the highest order. Evidentially there have been numerous adaptations and alterations to facilitate museum use, but the rebuilding and remodelling retain high significance, particularly where original or historic form has been recreated.

2.3 HISTORICAL CONTEXT

This report is to be read in conjunction with the separate Heritage Statement prepared by the Atelier Heritage. An extract is included below:

Significance

The Station Building is the earliest surviving passenger station in the world and was the first inter-city passenger railway terminus to be built. Its significance is exceptional.

Historically, the whole site, including the Station Building is of the highest value, for its broader associations with railway pioneers and for its wider global influence on the development of railway transport.

3.1 BUILDING CONDITION AND USE

The building is in a habitable condition. The lower ground floor/cellar area is currently unoccupied following a long period of time as an active part of the museum exhibition space. Similarly, the upper floors are currently unoccupied for most of the time, although are used occasionally in conjunction with the 1830s warehouse for the hosting of private events.

A collage of eight diamond-shaped images arranged in a grid-like pattern. The images show various urban and architectural scenes: a modern building with a glass facade and a red brick building; a red brick building with a large window; a staircase leading up to a modern building; a courtyard with a red brick wall and a staircase; a street view with a red brick building and a modern building; a row of shops and a modern building; a modern building with a glass facade; and a modern building with a glass facade. The images are set against a dark blue background with a white grid pattern.

4.0 THE BRIEF

Atelier MB Ltd have been appointed by The Trustees of the Science Museum to prepare applications for Listed Building Consent in relation to a series of fire related remediation works. These urgent works have been identified by a Fire Door and Compartmentation Surveys carried out by Neo.



Museum of Science & Industry
Fire Compartmentation Survey Report

Building Name	Station Building
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Neo Property Solutions
Neo Court, Knowsthorpe Lane, Cross Green Ind Estate, Leeds, LS9 0PF
T: 0843 455 4455
E: info@neo-ps.com
E: recruitment@neo-ps.com



0015:38 - History 2 of 2 (ates Zone(s) - Ground Floor

Date Added: 15/02/2022 - 11:23

Location: Science Museum Group 355 / Museum of Science and Industry Manchester / Station Building / Station Building

Status: Action required

	LL977
	Groundfloor
	1830 warehouse
	WC02
	Communal

ap where the metal conduit penetrates the blockwork. Use RWA-45 to pack out the gap and mastic.

	Work about 1m
	Joint
	30 minutes (not suitable if basement or > 5m to top floor above ground)
	Concrete / Brick / Block
	RWSD-AIS-0001

istic seal is needed to close the gap. Push up rwa45 as high as can so mastic seal is not on show as much.

	1
	2500
	30
	Red
	No
	Yes



A collage of eight diamond-shaped images arranged in a grid-like pattern on a dark blue background. The images depict various urban and architectural scenes: 1. Top-left: A modern glass-fronted building next to a traditional red brick building. 2. Top-right: A solid white diamond. 3. Second row, left: A solid orange diamond. 4. Second row, right: A red brick building with a curved facade and large windows. 5. Third row, left: An interior view of a modern staircase and seating area. 6. Third row, right: A courtyard area with a red sofa and a small table. 7. Fourth row, left: A street view of a multi-story building with a glass storefront. 8. Fourth row, right: A long, empty corridor with a wooden floor and black pillars. 9. Bottom-left: A street view of a row of historic buildings. 10. Bottom-right: A street view of a row of historic buildings with a modern storefront.

5.0 THE WORKS

Please find below a summary of the works proposed:

5.1 FIRE COMPARTMENTATION REMEDIATION

Works not affecting historic fabric:
Standard fire stopping details to heads of non-historic walls, and around existing cable trays, trunking, cables and ducts.
These comprise either fire rated batts or just sealant.

Works affecting or abutting historic fabric:
Standard fire stopping details to heads of non-historic walls, and around existing cable trays, trunking, cables and ducts.
These comprise either fire rated batts or just sealant.

Depending on the location, these standard works are preceded by one or more of the following:

Localised repointing where the pointing is missing or has eroded to more than twice the width of the joint.
Localised cleaning of brickwork to remove either mastic sealant and/or cement based mortar. This is to be done by hand tools only, and if this is unsuccessful then the CA will review on site and consider leaving the deposits rather than risk damaging the underlying brickwork.

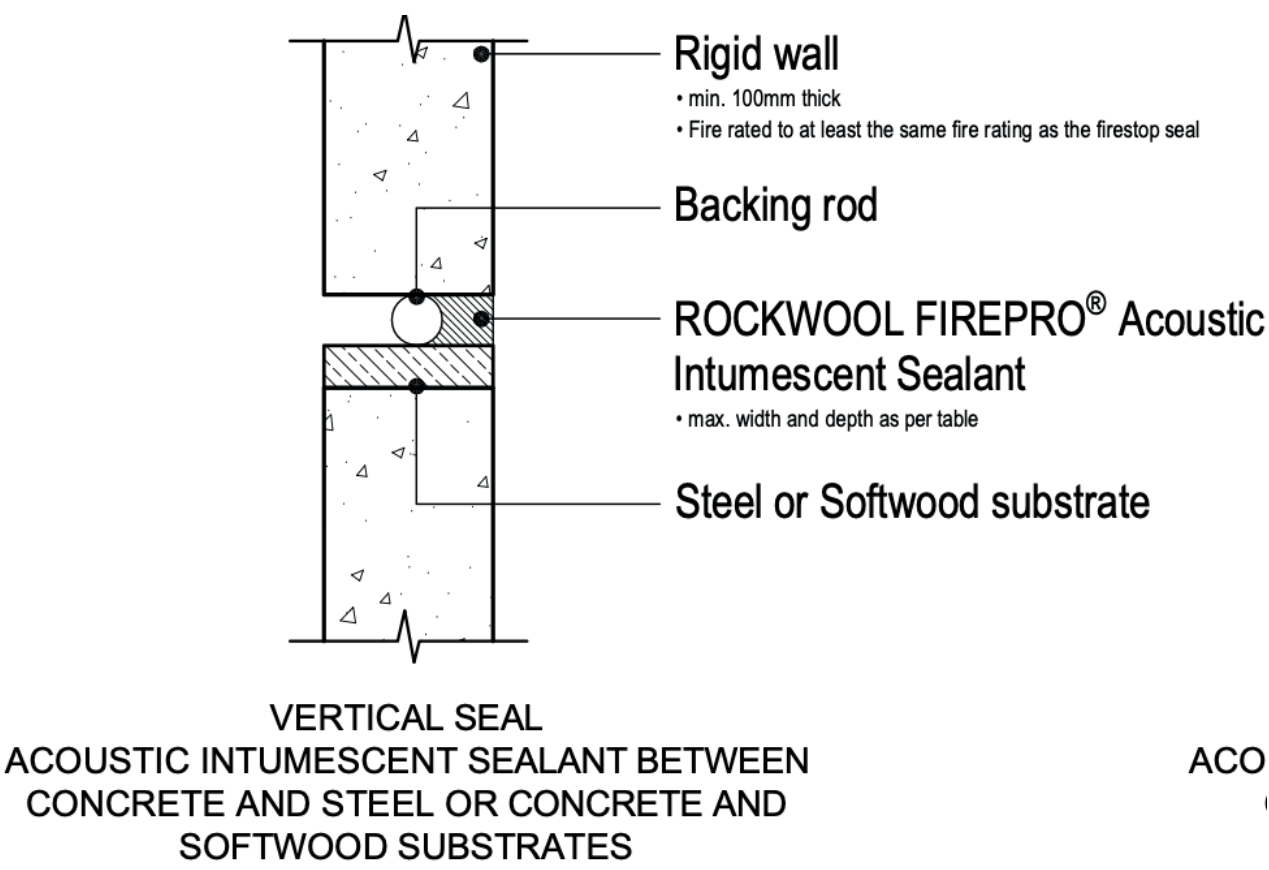
Lining of existing wall recessed cupboard with fire rated board. This ensures the wall within which the cupboard sits is fully fire rated.



Example photo of localised cleaning of brickwork to remove mastic



Example photo of existing wall recessed cupboard to be lined



Example standard Rockwool detail.

5.2 FIRE DOOR REMEDIATION

Note that none of the existing doors affected by these works are historic.

Door works range from replacement hinges, signage, and lipping of door leaves; to replacement of wholly non-compliant doors and the insertion of new doors where they are missing

Any new doors will be designed to match existing or where none existed, similar doors elsewhere within the vicinity.

2 no. doors are being replaced with compliant fire doors that will visually match the existing doors (vertical timber boarded and painted black).

In one instance the door is missing. This separates SB_LG04 and the adjacent space. The Fire Surgery report has determined that this whole wall needs to have 30mins fire resistance. Therefore, a new fire door needs to be inserted in this location. The new door will be vertical timber boarded and painted black to match the nearest existing doors. The new doorset will be screw fixed into existing mortar joints in the brickwork. Hand tools only.

Where LG07 meets the 1830s building, a former opening has been infilled with a metal stud partition. However, this has not been completed and is therefore not fire rated. In this location, we propose to complete the fire rating of the partition. This will not cause any further intervention to the historic fabric

as the partition is already in place.

Replacement of the partition with a glass and metal doors was considered fully by the design team and the SIM Technical Committee.

However, this option has been discounted, for the following reasons:

The future use of the building is in abeyance, and these fire remediation works are required urgently as part of a site wide improvement strategy.

Funding for these works is limited, and therefore needs to be carefully allocated. The Science Museum Group have an obligation to make the best use of these limited funds, many coming from public purse. Therefore, the significant additional cost to insert a door in these locations, when it is not required operationally and may never be, is not considered the best use of these funds; particularly given the extent of fire protection works required sitewide.

Should the future use of the space benefit from doors in these locations, the Science Museum Group will seek consent to install glass and steel doors as already installed within the building



Typical existing vertical boarded timber door



6.0 RESPONSE TO HERITAGE SIGNIFICANCE

The existing historic fabric will be retained wherever possible. In accordance with the NBS, cleaning and repair works to historic fabric will only take place when absolutely necessary, to aid the reinstatement of fire separation standards as required by the building Fire Strategy and Neo survey recommendations.

6.01 - CONSULTATION

As part of the design process, we consulted with the Conservation Officer. We met with Paul Mason on site on the 8th March 2023. We showed typical examples of the fire remediation required, and the impact on the historical fabric. We were able to show and explain the difficulty of rectifying some of these fire issues within the constraints of a working public building with a plethora of plant equipment.



Location of localised cleaning of brickwork to enable standard fire stopping detail to be installed.

*Clean paint from brickwork, repoint, standard fire stopping detail.
Locally clean off loose and friable non breathable paint finish to brickwork surface using a poultice.
Carry out trials to determine shortest period of time in which the poultice needs to remain in place.
Take mortar samples and agree matching mortar mix via samples with the CA.
Localised repointing as required with matching mortar.*

ROCKWOOL FIREPRO® Acoustic Intumescent Sealant around services penetrations with Rockwool RWA insulation backing, both sides

Methodology for brickwork cleaning - extract from Methodologies document.



7.0 ACCESS STATEMENT

None of the proposed works will affect access to and circulation of the building.

Note however, that where a door is to be replaced, the new itself door will be designed fully in compliance with AD:M guidelines.



-  [ateliermb](#)
-  0161 236 0051
-  [ateliermbarchitects](#)
-  [atelier mb architects](#)
-  info@ateliermb.co.uk
-  Atelier MB Ltd. Suite 2A, Amazon House, Brazil Street, Manchester, M1 3PJ