

Design and Access Statement Victoria Mill

Ground Floor and Basement Works



AP
AllisonPike
Architects and Designers
www.allisonpike.com

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1. Introduction

This design and access statement is to be read in conjunction with the drawings submitted as part of this listed building application submission for works to the ground floor and basement of Victoria Mill.

The submission concerns the works to fire protect the existing cast iron and steel beams and columns in the ground floor and basement of the grade II* listed Victoria Mill and new walls required in the basement to provide a second fire escape route.

2. Context

Victoria Mill is a large double mill located in a residential area to the northeast of Ancoats, Manchester. The ground floor of the eastern mill has been in use by the NHS for at least thirty years and includes a well-established GP surgery and supporting office space.

The scheme for converting the office space on the upper floors into apartments was originally proposed in 2018. After the scheme achieved planning approval, the applicant, Signature Victoria Mill, ceased trading before the project was completed. Once Signature Victoria Mill folded the site was sold to a new developer who appointed Medlock FRB as the principal contractor on a design and build contract. Medlock FRB appointed Allison Pike Partnership (APP) as architects.

Current Occupancy

Medlock FRB have now nearly completed the apartments on the upper floors. The ground floor is divided into four separate tenancies, the NHS GP Surgery and three office units. Figure 1 shows the layout of the tenancy sub divisions. Unit 1 is a vacant office unit and units 2 and 3 are offices currently leased to the NHS. The basement is currently vacant apart from some plant equipment.

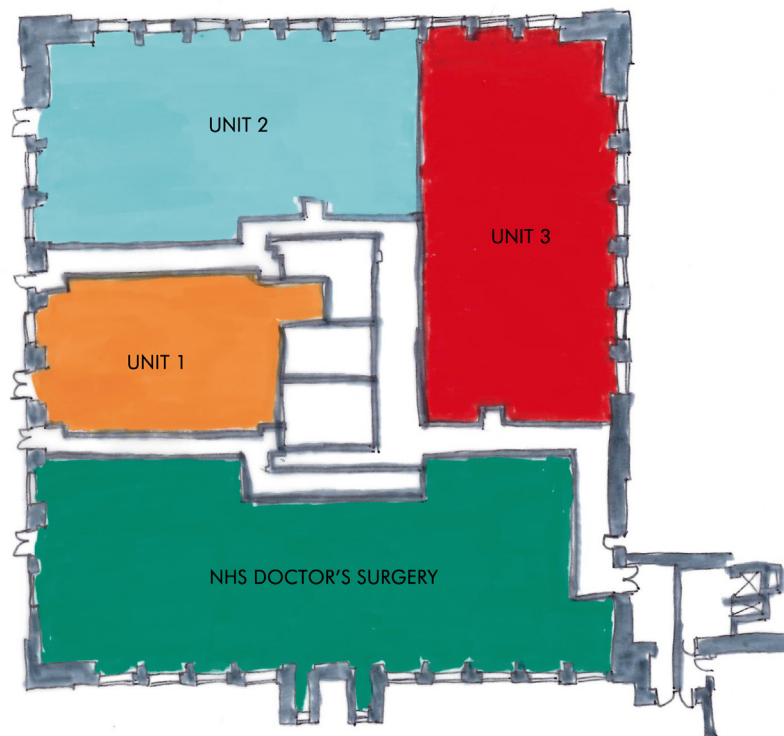


Figure 1: Ground Floor Tenancy Subdivisions

3. Existing Condition

When the original contractor and their approved inspector folded, the building control application reverted to the building control department at Manchester City Council (MCC). As part of this reversion building control application a section specified that the floor construction between the upper floors and the ground floor needed to achieve 90 minutes fire protection.

The first unknown concerned the fire protection that the original brick arch construction provides. On the upper floors the brick arch construction was assumed to provide 60 minutes protection with the addition of a sprinkler system.

To determine the fire resistance of the existing ceiling the Building Research Establishment (BRE) were commissioned to provide an assessment. Their assessment confirmed that the existing brick would provide 90 minutes protection. However the original cast iron beams and columns will require an application of intumescent paint to bring their fire resistance up to the same standard.

Building control sign off for the apartments cannot be achieved without the fire protection measures to the ground floor and basement being rectified.

4. Works to be undertaken

To complete the scheme and enable the apartments to be let there are two key areas of work that need to be completed:

- Fire protect existing cast iron beams and columns
- Create alternative means of escape from the basement for access to mechanical kit for the apartments

The existing ground floor has plasterboard or lay-in-grid ceilings in almost all the rooms. To access the cast iron structural elements and apply intumescent paint, the existing ceilings will need to be taken down and existing plasterboard walls will need to be stripped back around the columns. Demolition plans included with this application show how much of the existing ceiling and walls will need to be removed.

An inspection of the existing ceilings also brought other issues to the fore. This included:

- Much of the existing mechanical and electrical kit is not fit for purpose and needs to be replaced
- The fire stopping between the ground and first floor and between the ground floor and basement is either incorrect or non-existent
- The walls to the shared fire escape corridors are not complete and do not extend up to the underside of the brick arches.

Once the services, fire stopping and works to compartment walls is complete the solution for what is to be left as the final ceiling finish on the ground floor has been subject to much deliberation and discussion with our client and the NHS tenants.

Note: The existing brickwork arches are all exposed in the basement so no opening up works are required to fire protect the structure. The brick arches will remain exposed upon completion of the works.

Reasons for the reinstatement of ceiling in a Grade II* Listed Building

Early on in discussions with the NHS tenants it was highlighted to the design team the importance of being able to keep the treatment rooms in the doctor's surgery hygienic and easy to clean. Therefore, in these spaces the reinstatement of a ceiling is essential to avoid exposed services which would be difficult to keep clean to a standard acceptable for the NHS especially considering that funding for public services is very stretched. Cleanliness is even more important post COVID 19.

When the ceiling discussions commenced with the NHS tenants regarding the office spaces they had a number of concerns. The major ones are listed below.

- No ceiling would increase the volumes of the spaces which would require more power to heat.
- A lack of ceilings may not achieve acceptable acoustics for privacy between offices.
- The brick arches have a much lower light reflectance value so more electric lights may be required with exposed brick arch ceilings. The existing white ceilings can reflect 90% of the light back into the space which will improve the lighting in these rooms, whilst also reducing eye strain, headaches and fatigue in workers.

5. Pre Planning Application Consultation and Design Development

5.1. Ceiling Scheme Option A- Full Reinstatement of Ceilings

The first scheme that was proposed and issued to MCC to initiate the pre application process included reinstating ceilings throughout the whole of the ground floor plan. The ceiling finish specified was lay-in-grid ceiling tiles. This was presented to the conservation officer. The feedback received from the conservation officer stated that as much of the historic fabric should be exposed as possible.

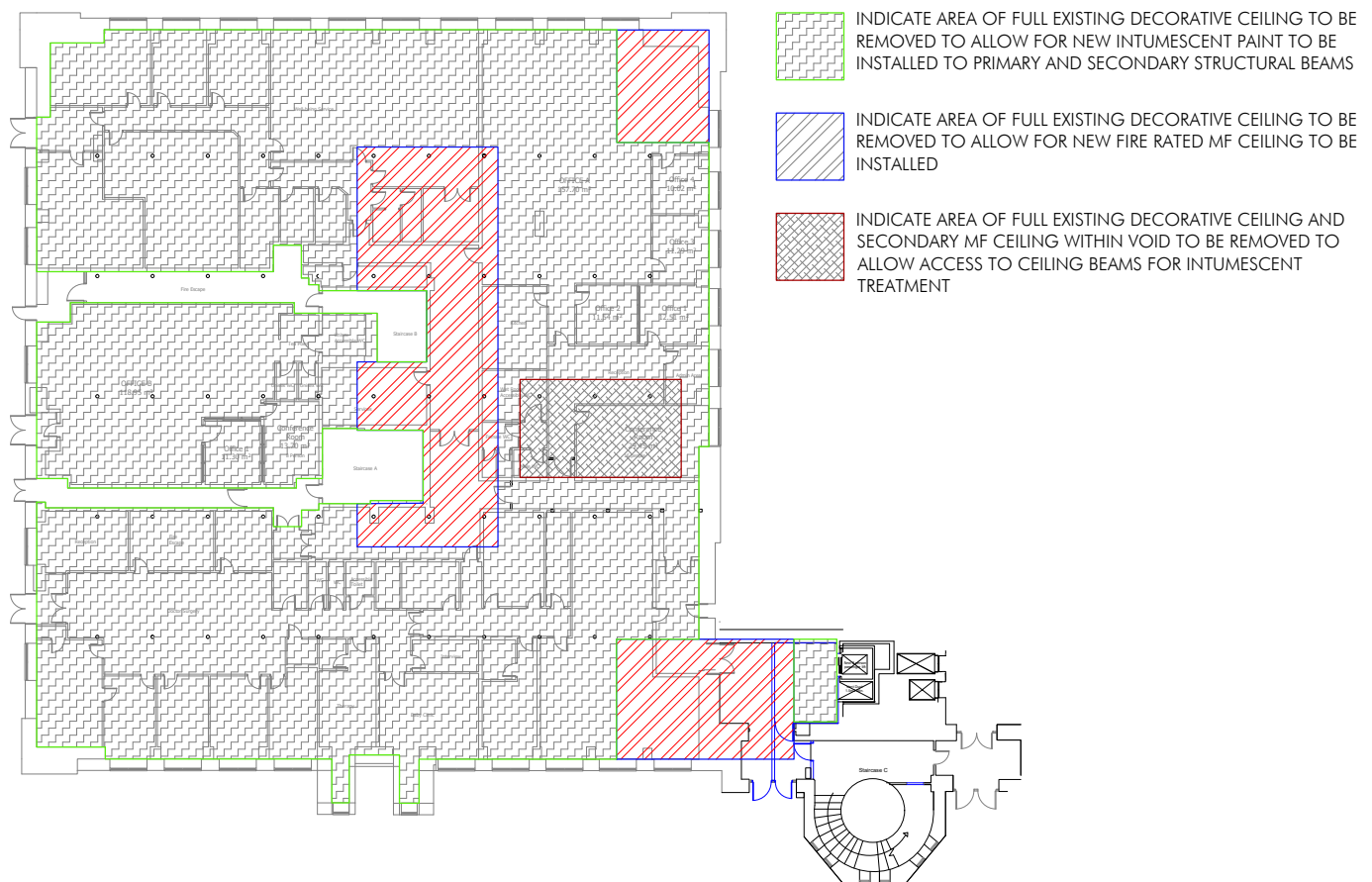


Figure 2: Ground Floor Ceiling Scheme Option A

5.2. Ceiling Scheme Option B- Amended Pre Application Scheme in Response to MCC Comments of 12.09.22

Following the rejection of the full reinstatement ceiling option by MCC the design team and client reconsidered which areas where the original brick arches could be exposed. Figure 3 shows the revised ceiling scheme that was included in the pre-application submission. The approach taken with this scheme was that the treatment rooms in the doctor's surgery and the office spaces would have new lay-in-grid ceilings but the more public areas of each tenancy would feature exposed brick arch ceilings. Figure 3 shows the new lay-in-grid ceiling as a grid hatch, exposed brick arches in the orange hatch and existing modern concrete soffit (where no brick arches exist) in a red hatch.

The intention with this approach was to ensure that everyone who entered the building would see the original character of the ceilings. The exception to this method was the vacant unit where it was felt that more of the brick arches could be exposed as this did not need to comply with NHS infection control measures.

In addition to each leasehold featuring a section of exposed brick arch ceiling the communal corridors (including the corridors linked to the staircases from the upper floors) also featured exposed brick arch ceilings.

Where ceilings were shown to be reinstated a lay-in-grid ceiling system was chosen primarily because it is a lightweight system and the hangers could be fixed into the mortar joints of the brick arches. Lay-in-grid ceilings also allow access to all of the area above the ceiling in the event of a problem in the ceiling void. A current issue at this building is that when there is a problem in the ceiling void a new access hatch is required to be formed almost every time, resulting in the ceiling becoming peppered with access hatches.

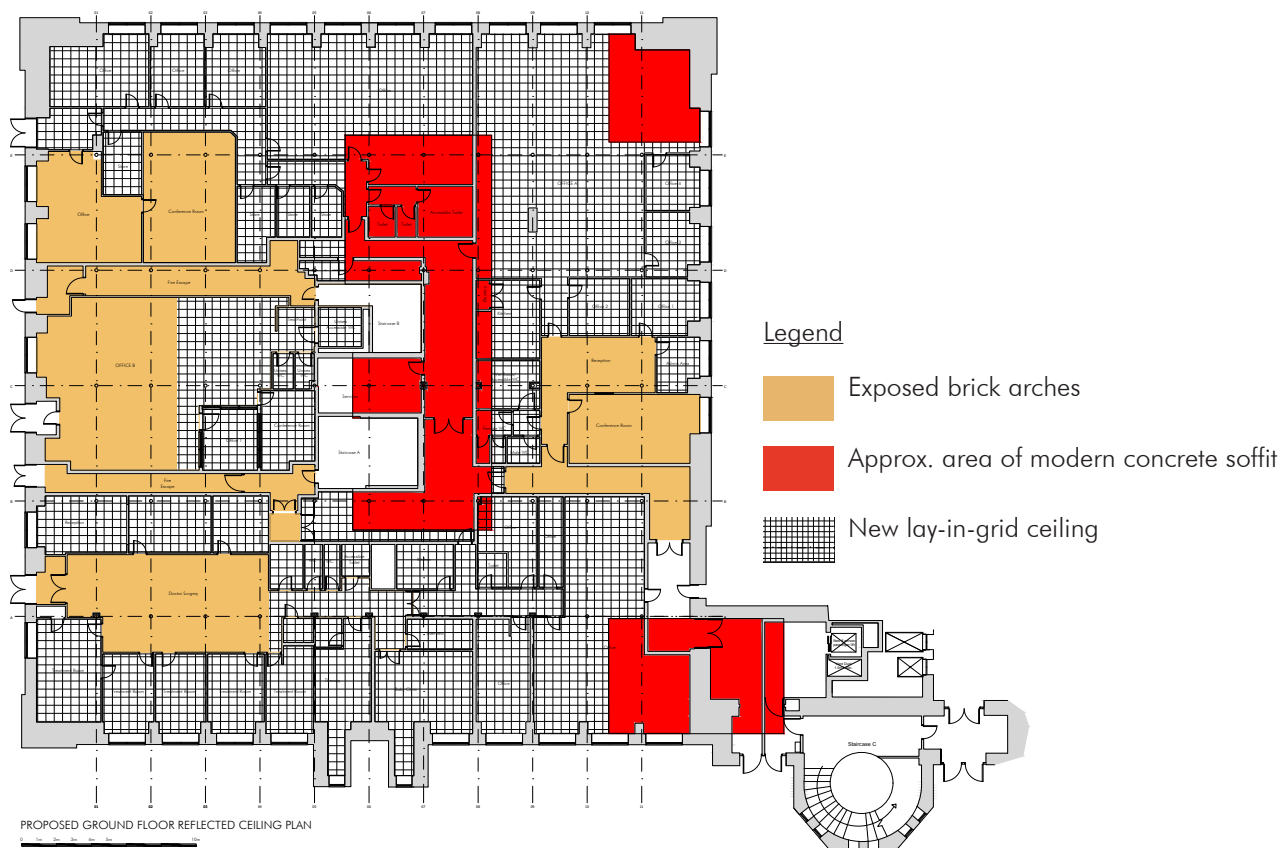


Figure 3: Ground Floor Proposed Ceiling Plan Issued for Pre Application Option B

This lay-in-grid ceiling option was presented to the conservation officer at MCC. Their detailed response is below;

'It is considered that whilst the scheme will remove some plasterboard ceilings to expose brickwork in a few locations, the majority will be reinstated with a suspended ceiling which would be a lay in grid and which would have a harmful appearance in that existing brickwork will be covered up.'

'A lay in grid ceiling is not an accepted solution in a listed building where there are opportunities to reveal features of significance - in this case the brick arches and column heads.'

'Whilst it is accepted that in some cases a more clinical environment is needed and these are accepted in very high-risk areas, the preference would be for plasterboard rather than lay in grid in these spaces, as this gives a cleaner and more unified appearance.'

'In many of the other office spaces, there should be more of an attempt to reveal the brick arches and it is not considered that there would any reason why the Council would consider this any different from many of the other listed buildings that we deal with that have been converted to offices, and where brickwork has been exposed. Exposed brick is compatible with many office environments and often a unique selling point as it creates a high quality and sought-after heritage aesthetic.'

'As such, it is believed that it is necessary to reveal as much as possible in this grade II listed building that has suffered over the years through inappropriate alterations.'*

5.3. Ceiling Scheme Option C- Amended Scheme In Response to MCC Comments of 22.11.22 and Consultation with NHS

Following the pre app response from MCC the design team re-evaluated the ceiling scheme considering each tenancy and their existing uses separately. Figure 4 is a copy of the revised scheme prepared following the pre application and the paragraphs below describe all of the considerations for each unit in this scheme.



Figure 4: Post Pre-Application Initial Scheme Option C

NHS Doctor's Surgery

In this area the treatment rooms require ceilings in order to comply with Infection Control Regulations. It was considered however, that the waiting area and corridors could have an exposed brick arch ceiling and that the column heads and brick arches next to external windows in the two rear offices could be exposed to reveal the full height of the windows.

Unit 1

This unit is currently vacant therefore there is flexibility here to expose a large proportion of the brick arches. All of the brick arched ceiling in the main open plan office was exposed in this revised scheme. Ceilings were retained in the toilets and small kitchen area (hygiene reasons) and separate office and conference room (privacy reasons).

Unit 2

This unit is currently fitted out as office space and is occupied by the NHS in an admin capacity. It is important to note that there is a large area of modern concrete floor construction in this unit but where possible column heads were exposed in this scheme and the new ceilings would be pulled away from the

external walls to reveal the full height of the external windows. In addition to the conference room and front open plan office the brick arched ceiling in the corridor would also be exposed.

Unit 3

This unit, like unit 2, is also fitted out as office space and is occupied by the NHS. Again there is a section of modern concrete beam and block construction in this unit however where possible column heads were proposed to be exposed and the brick arches next to external windows were exposed to allow the full height of the window to be visible. The reception and waiting area featured an exposed brick arch ceiling as did the conference room.

Shared escape corridor

In order to boost the amount of brick arches exposed the decision was taken to expose as much of the brick arches in the shared fire escape corridor as possible, there are some further areas of concrete soffit here.

This scheme exposed much more of the brick arches and column head details. It is important to note that in order to construct this scheme more walls would need to extend up to the brick arches to separate the rooms. This means more work building up the walls and more top of wall fixings into the brick arches themselves. Fixing into the mortar joints will not provide sufficient head restraint.

This scheme was then presented to the NHS tenants.

5.4. Ceiling Scheme Option D Submitted Proposal Further to NHS Consultation

The NHS response to the revised scheme highlighted a requirement that the reception and waiting area in the doctor's surgery would be subject to the same restrictions for infection control as the treatment rooms. Therefore not providing a ceiling in this area would be a '*potential showstopper*' for the NHS meaning that they would pull out of their tenancy agreement were this ceiling not reinstated.

Following this update APP again reconsidered the ceiling design. It is the opinion of APP that the best way to ensure that this building is preserved and maintained for future generations is to keep the building in occupation therefore, we need to retain the NHS tenant. In order to achieve this the ceiling design submitted as part of this application now includes a new ceiling in the NHS doctors surgery.

In compensation for the ceiling reinstatement in this area two other large areas of ceiling were exposed in two open plan offices in units 2 and 3, which Figure 5 shows. This scheme also introduced two areas where the rooms would be constructed as boxes within the larger open plan spaces, these are the areas highlighted in blue in Figure 5. The brick arches would be exposed above these areas.



Figure 5: Post Pre-Application Further Scheme Option D

The ratio of modern concrete floor construction, existing brick arch to be exposed and new lay-in-grid ceiling is outlined in table 1.

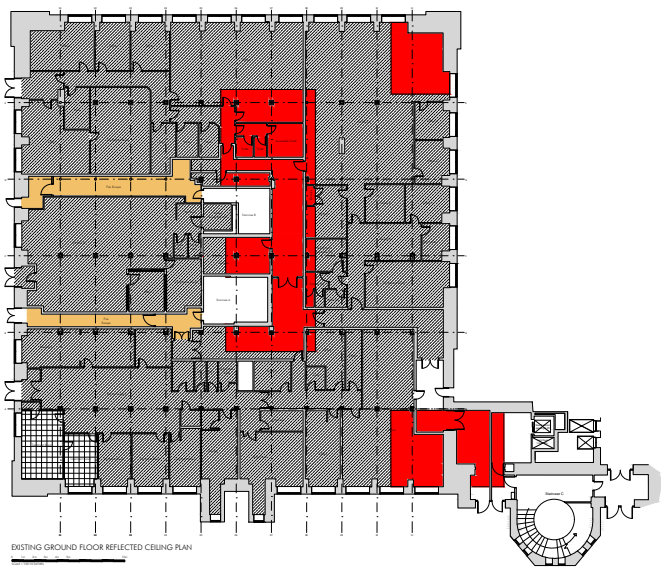
Table 1

Ceiling Schemes	Ceiling below Modern Concrete*		Exposed Brick Arch	Lay-in-Grid (Below brick arch)	Plaster-board (below Brick Arch)	NHS GP Surgery	
	Lay-in-Grid	Plaster-board				Lay-in-Grid	Plaster-board
Existing Ceiling Materials	0%	16%	4%	0%	51%	2%	27%
Proposed Ceiling Materials	16%	0%	40%	15%	0%	29%	0%

*These figures are assumed as the full extent of the concrete cannot be fully assessed whilst the existing ceiling is in place.

What is shown in this table is that the amount of exposed brick arch has increased from 4% to 40% of the total ceiling area.

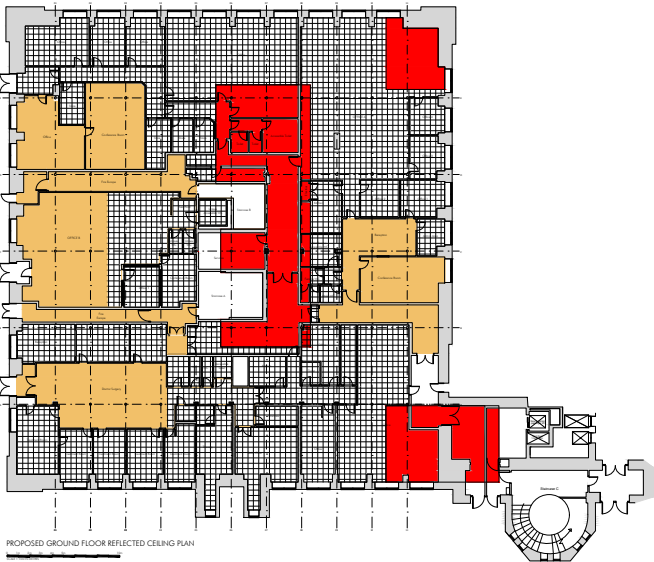
Figure 6: Existing Ceiling Scheme, Pre App Ceiling Scheme
and Application Ceiling Scheme Comparison



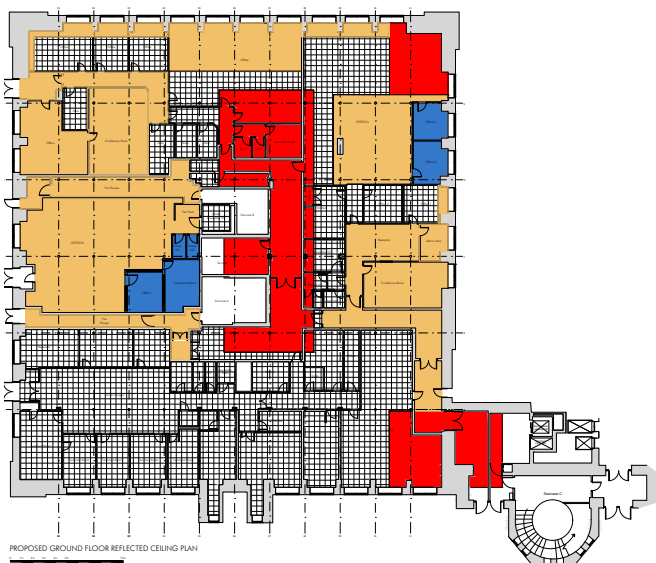
Legend

- Exposed brick arches
- Approx. area of modern concrete soffit
- Rooms in boxes, brick arches exposed above
- New lay-in-grid ceiling
- Existing plasterboard ceiling

Existing Ceiling Scheme



Pre Application Ceiling Scheme (Option B)



Application Ceiling Scheme (Option D)

Figure 6 shows the floor plans hatched with ceiling finishes for the existing ceiling scheme, the pre-application ceiling scheme (Option B) and the application ceiling scheme (Option D). This visually shows the significant increase in exposed brick arches from 4% to 40%. The current exposed brick arch ceilings are located in fire escape corridors that are rarely used and not seen by the vast majority of people that use this building. In the application scheme the brick arches would be visible to all of the visitors to the office units.

Table 2 considers the just the amount of brick arch that exists on the ground floor. Currently only 5% of the brick arches are exposed. The proposed scheme would expose 47% of the brick arches. Whilst this is not 100% (in part due to trying to accommodate the doctor's surgery hygiene requirements) this is a huge improvement on the existing condition of the building.

Table 2

Area of brick arch existing that still exists*	% of existing exposed brick arches	% of proposed exposed brick arches
1192.6sqm	5%	47%

*This figure is assumed as the full extent of the concrete cannot be fully assessed whilst the existing ceiling is in place.

It is also important to note that the concealed section of brick arch would be repaired (if necessary) and then preserved behind the new lay-in-grid ceiling. These areas of brick arch could be exposed in the future if the use of the building changes.

Finally the application scheme reinstates walls where walls currently exist. Only the fire escape door from unit 3 has been amended to meet modern building regulations for fire escape.

6. Basement Works

The works proposed in the basement are as follows.

- Fire stop services between ground floor and basement
- Apply intumescent paint to all cast iron structure beams and columns
- Build a new fire escape corridor to provide an alternative means of escape from the mechanical equipment area

As previously mentioned the basement is not currently occupied. Space within the basement is required for a UPS (Uninterruptable Power Supply) and water tanks are required to be located in here. Both the water tanks and the UPS unit serve the apartment scheme.

Figure 7 shows the existing and proposed basement plans with the new fire escape corridor and UPS room highlighted in green on the proposed plan on the right. There is very little demolition required here and no decorative ceilings or fire rated ceilings are proposed to be installed. To form the UPS room and the second fire escape corridor five walls and two internal doorways are required to be formed. The final exit from the basement is through an existing door, so no external alterations are required.

These works will have very little impact on the historic fabric and are necessary for the apartment scheme to operate.

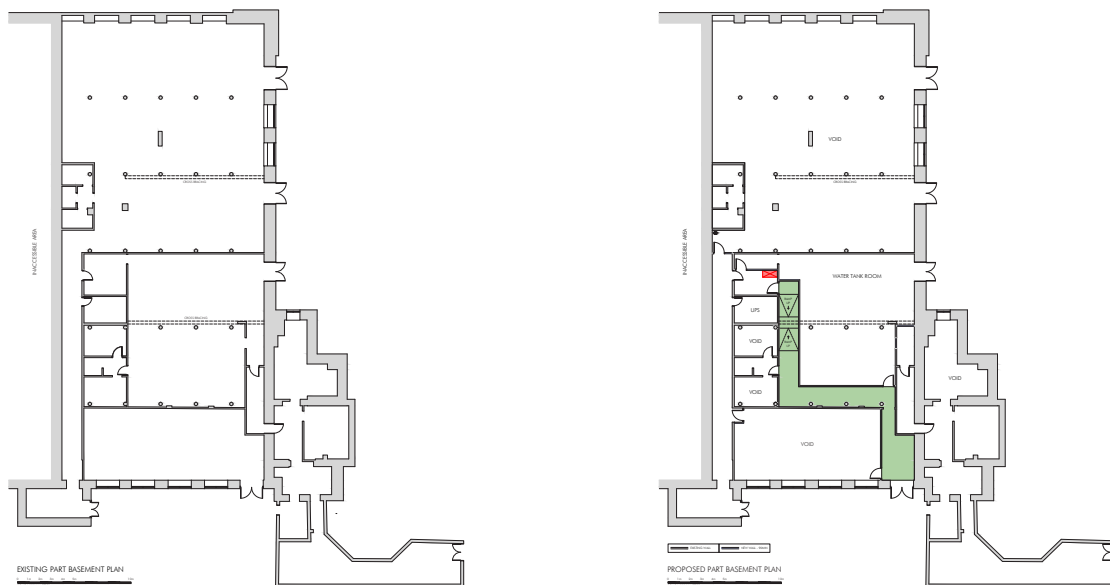


Figure 7: Existing and Proposed Basement Plans

7. Access

The existing principles of level access to all of the ground floor areas will not be affected by this application. The existing provision of disabled facilities will remain unchanged.

The new access to the basement is for fire escape from the service areas only.

8. Conclusion

It is intended that this statement outlines the key reasons behind the works proposed for the ground floor and basement at Victoria Mill.

An important point to note is that the whole of the building will be (in the very near future) fully in use. This is a very large building which is surrounded by residential housing so to achieve full occupation in this area is a significant achievement.

The key element of this scheme is to undertake the essential fire protection works but on completion the proposals need to return ground floor spaces to the NHS that meet their requirements. It is clear in this instance that a balance needs to be struck.

Exposing or concealing the brick arches will each result in harm to the listed fabric. With exposed brick arch ceilings all of the partition walls would need to extend full height and all of the services would need to be supported on either cable trays or separate fixings from the brick arches. Decorative ceilings would need to be supported from the brick arches but the lay-in-grid ceiling proposed is lightweight and could be supported from the mortar joints.

The application scheme will not expose all the heritage brick arched ceiling, however, the proposed scheme increases by 10 fold the amount of exposed brick arch from the existing condition.

On a final note, keeping the building in full occupation is imperative to ensuring its long-term future. All of the works proposed in this submission are reversible so the brick arches could be exposed at a later date if the use of the building changed and it was compatible with fully exposed brick arched ceilings.