

10 Minshull Street and 11 Bloom Street

TANKING DETAILS PROPOSALS

PLANNING CONDITIONS RELEASE 11(e)

Planning Permission 119374/FO/2018 – BOTH BUILDINGS

- Prepared by Manchester Design & Build

November 2021



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1. Introduction

Manchester Design and Build has prepared the following Detail Breakdown report to facilitate the release of the planning condition 11(e) for Planning Permission 119374/FO/2018 – BOTH BUILDINGS, as per the following:

“11) Notwithstanding the details as set out in condition 2 above no development shall commence in relation to the following items in respect of Mindel House (10 Minshull Street) And 11 Bloom Street and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:

(d) Details of any basement tanking”

1.1 Scope and Purpose of Report

This report has been prepared to facilitate the release of the above condition and is intended to provide a high-level breakdown of the floor build-up in specific relation to the tanking details proposed for both the listed buildings in the scheme. The report serves to inform the reader of the existing arrangement and its unsuitability, as well as the subsequent further options, summarising a preferred, heritage led solution. This report should be read in conjunction with **TANKING - CON. RE. 11E – WALL.**

1.2 Reasoning & Reader Notes

It should be noted that MDB has had experience in delivering buildings that enjoy the same status as this project and where possible it is to the benefit of the company to re-use existing materials, structure and arrangements on site. The introduction of new materials, structural support and new arrangements usually results in grater time, costs and difficulties, however this is at times unavoidable when bringing existing buildings to an acceptable regulatory and living standard.

It is understood that the main objective of the heritage led approach here is to retain as much of the existing historic fabric from the buildings as possible. This is to be done whilst still conforming to Building Regulations requirements in an appropriate thought-out method of application, prioritising the safety of occupants. Along with this approach it is still of the utmost importance that the environment proposed for the occupants is fit for purpose and attains the level of comfort experienced in newer builds.

Following a soft strip of the site in line with condition 11(a) existing timber boards in the basement area were found under more recent floor coverings which was outlined to MCC via an intention to release condition 11(e). Following which questions were asked and resistance highlighted by the Conservation Officer regarding the proposal for wholesale removal of the existing basement floor as well as full floor to ceiling level tanking treatment in line with an experienced Tanking Sub-Contractor design.

On Tuesday 26th October a meeting with Manchester City Council’s Case and Conservation Officers were held on site. During this meeting it was suggested that the existing timber floorboards at basement floor level were to be retained with tanking below or potentially re-purposed as a floor finish. The full height tanking system was also queried. **(Appendix A).** For this reason, it was confirmed that an evidence based report outlining reasoning

for proposals for tanking treatment to the existing basement floor and walls would be produced and offered to MCC to facilitate conditions release.

Localised investigation works have now been carried out in line with proposals from the Structural Engineer (**Appendix B**). Upon review of these areas, the SE provided a technical note (**Appendix C**) which outlines their professional opinion on the investigations and what the subsequent proposal will be. A high-level summary of this is that the existing basement floor in the Bloom building is not fit for purpose as it varies in construction materials and depth throughout the floor area, the dwarf walls supporting the floor structure are significantly decayed and the soils on which dwarf walls are founded are not suitable unlike the soils at deeper level to the existing columns. In Mindel House the floor was found to be more recent in construction and capable of withstanding residential loadings. This assessment from the SE forms the basis on which this report is produced, and options presented.

It is also assumed that the Conservation Officer will have no objection to proposed structural solutions that do not negatively impact the building and will be hidden from sight. For this reason, it has been agreed internally by MDB that where a new structural floor is required, a composite concrete metal deck in the Bloom Building and a beam & block deck to areas in Mindel House will be proposed for ease of construction.

A timber report for both buildings has shown the existing timber floorboards to be heavily infested and rotten, most of which are unsalvageable and some of which will require exorbitant refurbishment works at which point they will be largely unrecognisable as a historic element for retention. The report from the specialist suggests this and forms the basis for proposals outlined in this report for removal of these elements.

1.3 Executive Summary

1.3BB - Executive Summary

The number of options presented in the report have been limited by fact that the SE has effectively condemned the existing basement floor and the supporting dwarf walls because of decay and the soils on which the walls are founded (**Appendix C**). This leaves little in the way of reinstating the existing construction.

Along with this, a report from the Timber specialist has confirmed infestation and rot in the existing floorboards, requiring onerous and extensive works in refurbishment for the retention of these boards, ending in an elementary change in its configuration. This would result in a complete departure from the original board and the other existing boards retained on site, for this reason it is proposed that the boards are removed from site (**Appendix E**).

For the above reasons MDB have presented options below in which floorboards matching the existing width of the original boards are used as a finish along with a new future proofed, fully tanked insulated composite concrete metal deck slab. These options have been discounted as they present numerous maintenance and levelling issues.

A traditional floor construction has been investigated in a localised area where existing boards were found with a tanked composite deck below. However, when presented with the disadvantages along with there being no

obvious signs of the construction being on view, this approach would not add any value to the occupancy experience or the heritage of the building.

For these reasons Solution A1 – a New Composite Concrete deck with insulation and screed above, has been proposed. A high-quality timber type vinyl has been proposed for the floor finish as per the intention of the original approval.

1.3MH - Executive Summary

Following investigation of the existing floor construction, the structural deck has been deemed acceptable from the SE to cope with the residential loads (**Appendix C**). Little in the way of proposals are necessary other than how to deal with the existing floorboards. It should also be noted that a tanking drainage system is incorporated into the insulation layer in order to remove any water ingress from perimeter walls (**Appendix G**).

Along with this, a report from the Timber specialist has argued that the few boards in Mindel House are of a later addition and do not match that found on the other floors of the building. Confirmation of infestation and rot in the existing floorboards, requiring wholesale removal as they have been deemed unsalvageable in some areas is also identified (**Appendix E**), a technical note from a heritage specialist supports this position also. For the above reasons MDB have presented options below in which floorboards matching the existing width of the original boards are used as a finish along with a new future proofed, fully tanked insulated screed above the existing beam & block floor. These options have been discounted as they present numerous maintenance and levelling issues.

Following on from the above it is proposed that the boards are removed for a high-quality timber type vinyl proposed for the floor finish as per the intention of the original approval. The current structural void will be infilled with a beam and block structure matching the existing construction.

2. Existing Basement Floor Arrangements

2.1 Existing Floor Plan – Bloom Building

Fig. 1 shows the original basement level floor plan of the Bloom buildings with allocated letters referring to differing floor build-ups. These build-ups are shown in details A, B & C.

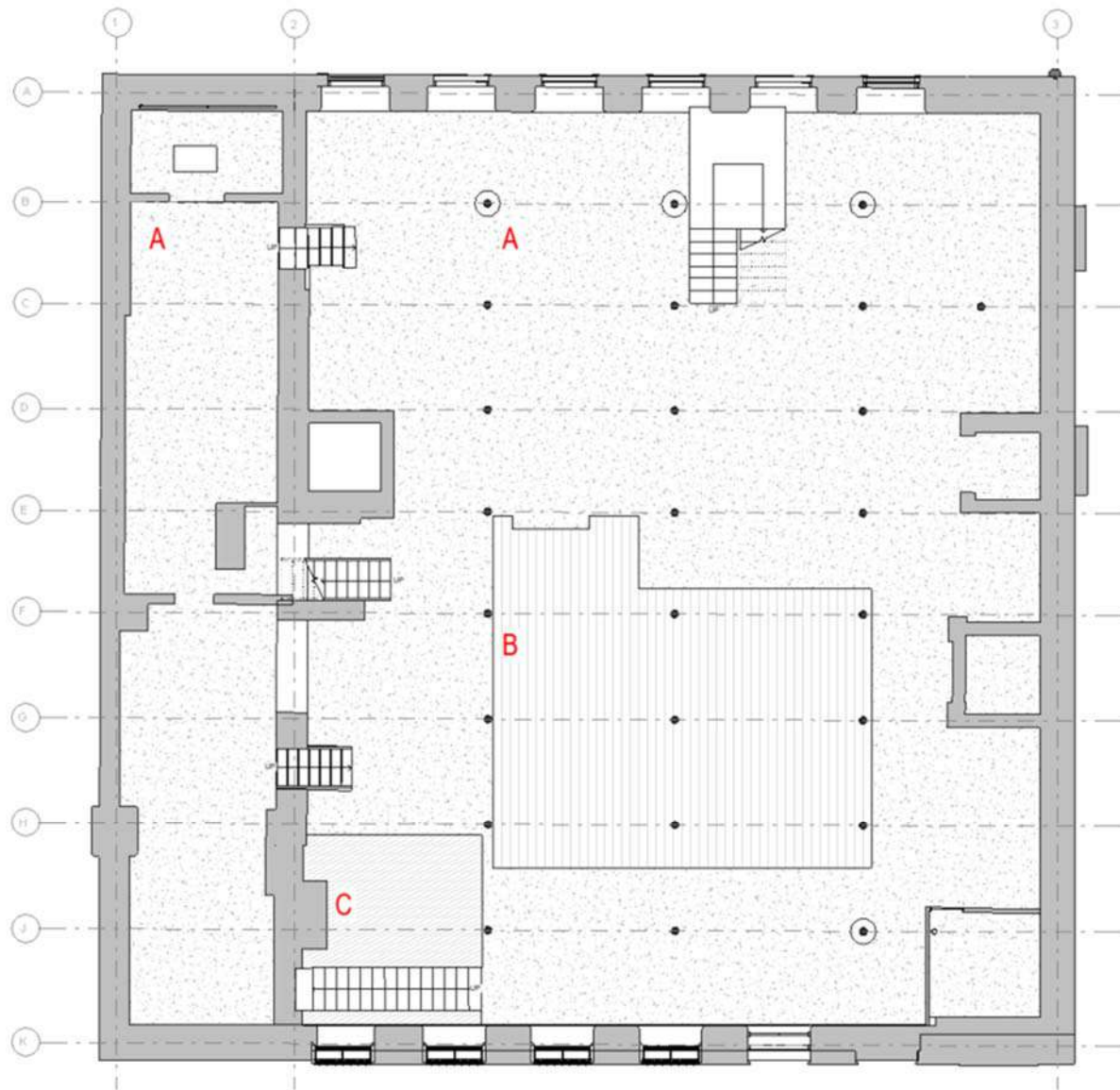


Fig.1: BLOOM STREET - EXISTING BASEMENT & SUB-BASEMENT FLOOR PLAN

- A** Concrete Slab and Screed Finish
- B** Timber Floorboards
- C** Chipboard on Timber Joists
- D** Beam & Block Floor
- E** Timber Floorboards
- F** Concrete Slab

2.2 Existing Floor Plan – Mindel House

Fig. 2 shows the original basement level floor plan of Mindel House with allocated letters referring to differing floor build-ups. These build-ups are shown in details D, E & F.

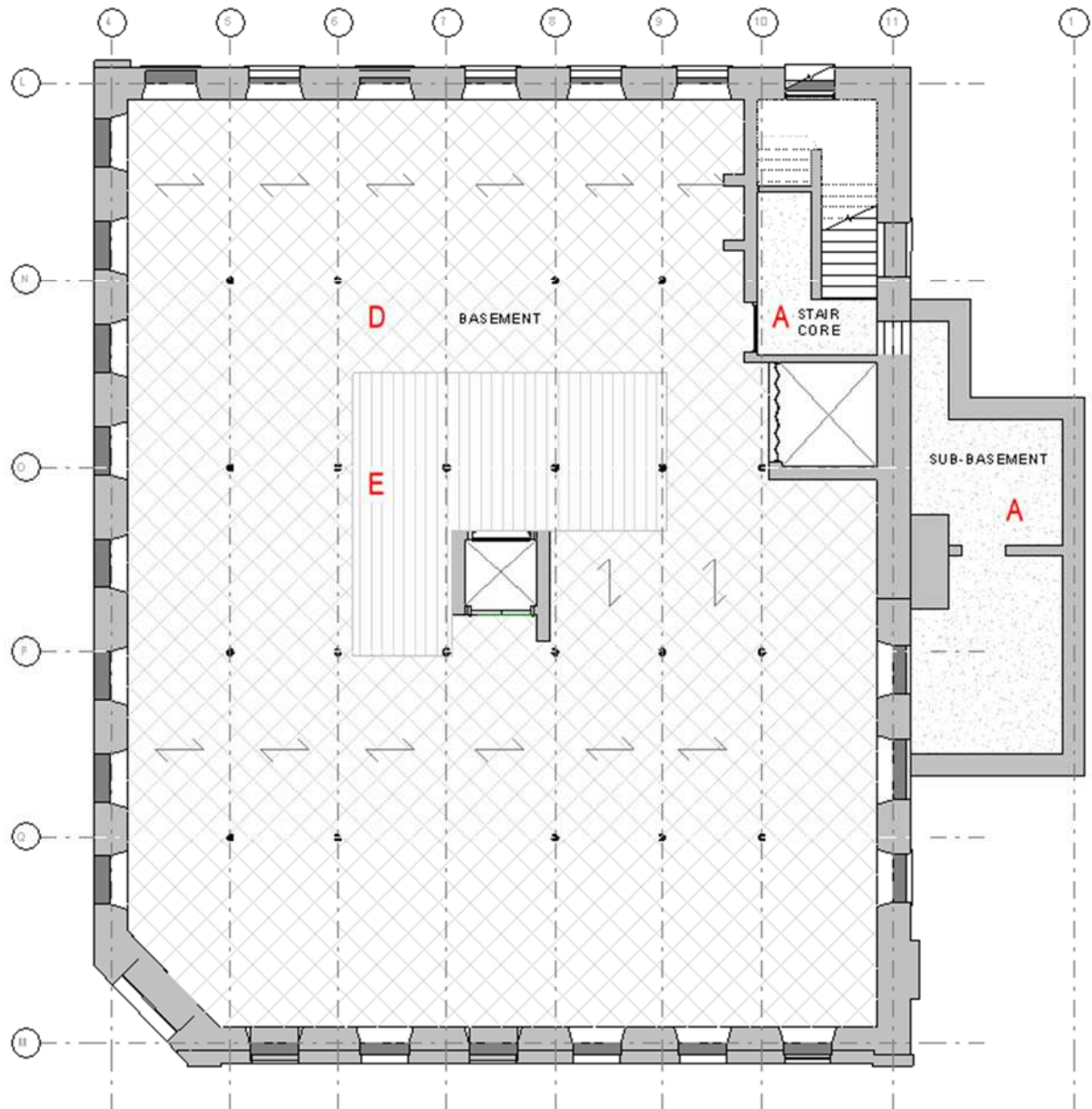
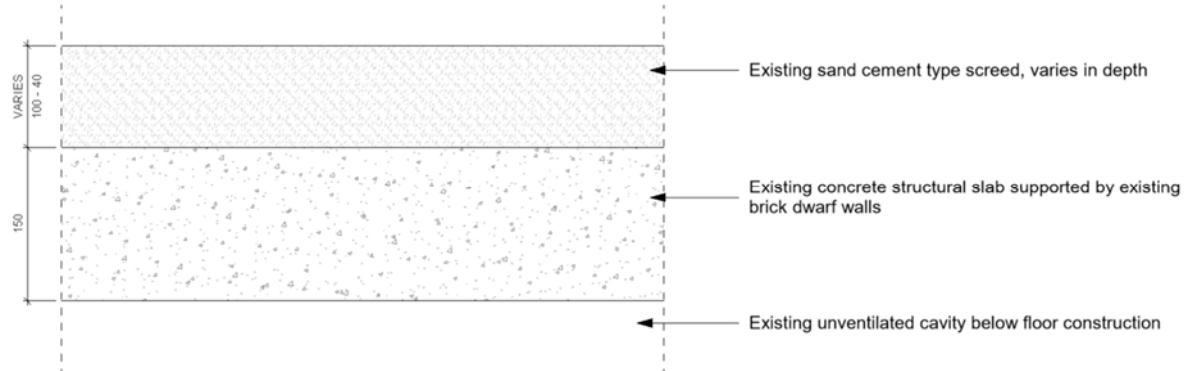


Fig.2: MINDEL HOUSE - EXISTING BASEMENT & SUB-BASEMENT FLOOR PLAN

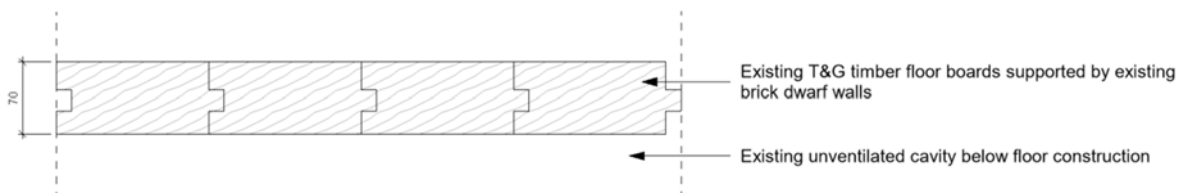
- A Concrete Slab and Screed Finish
- B Timber Floorboards
- C Chipboard on Timber Joists
- D Beam & Block Floor
- E Timber Floorboards
- F Concrete Slab

2.3 Existing Build-Up Details – Bloom Building:

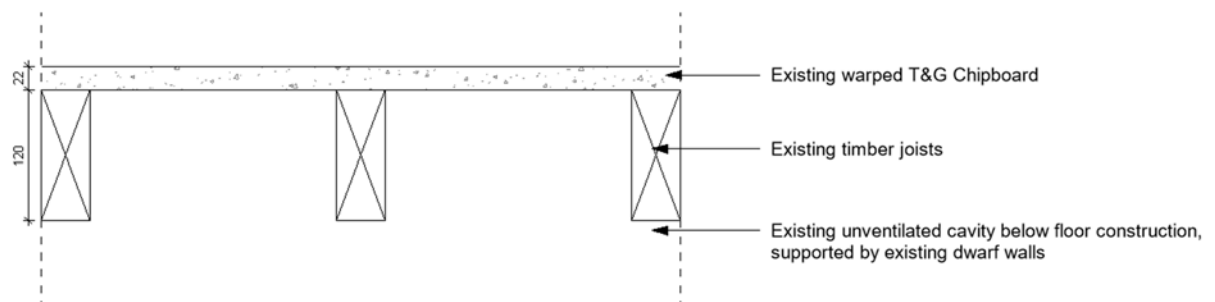
A. Detail of Existing Bloom Building Concrete Slab and Screed Finish:



B. Detail of Existing Bloom Building timber boards:

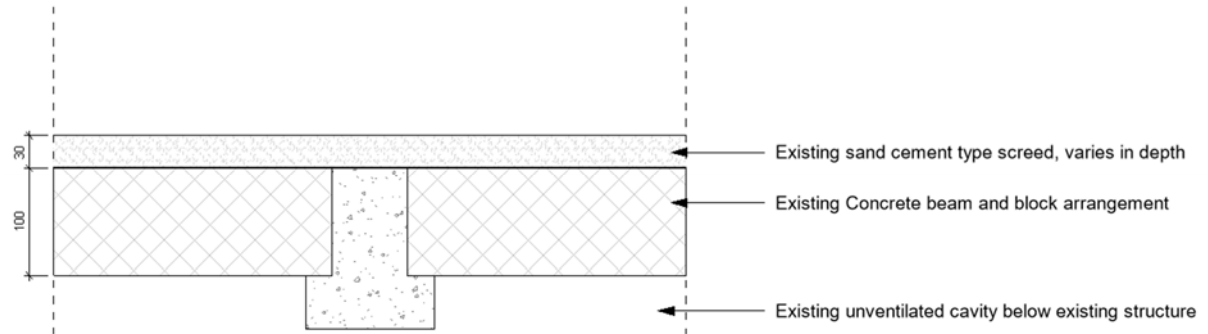


C. Detail of Existing Bloom Building chipboard:

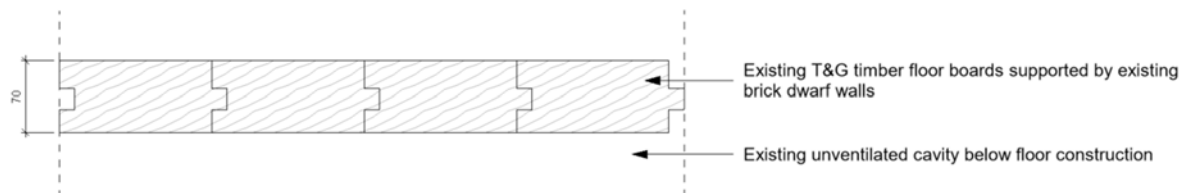


2.4 Existing Build-Up Details – Mindel House:

D. Detail of Existing Mindel House Beam & Block floor:



E. Detail of Existing Mindel House timber boards:



2.5 Existing Arrangement Summary: Bloom Building

As outlined above the existing slab make-up of the Bloom Building basement floor consists of timber mill boards, varying screed materials which are poured to a range of depths, as well as concrete in other places. This slab arrangement is supported and spanning between historic brick dwarf walls which are decaying, evident from the blown mortar joints, blown brickwork and extensive cracking (**Appendix C**). After further investigation around existing columns and dwarf walls it has also been highlighted that the depths the dwarf walls reach is limited in comparison to the existing column foundations. The SE is not satisfied with the soils the dwarf wall strip footings are founded on.

The SE cannot prove that the make-up of the existing floor construction can cope with the new loads imposed on this level. The above concludes that the existing basement floor construction is not currently fit for purpose and its wholesale removal is required to facilitate a working scheme.

The existing timber mill boards have been surveyed (**Appendix E**) with the outcome showing there is infestation of the board by wood boring weevils, along with wet rot. The boards are of a high moisture content and require a specialist drying treatment along with extensive re-milling of the boards. The result of this would be a board that is of non-original size to the existing and a departure from the other existing timber millboards in the building. For this reason and with the recommendation of the conservation lead timber surveyor it is viewed as impractical to use the existing boards in the new floor build up.

2.5 Existing Arrangement Summary: Mindel House

Mindel House experiences a different floor build-up, upon investigation it has been found that the majority of the floor consists of an uninsulated sand cement type screed above a suspended beam & block floor spanning and between supporting brick dwarf walls. There is a small section of timber floor to the centre of the plan around the historic lift core.

Upon visual inspection after excavation works of the existing slab (**Appendix B**), it has been established by the Structural Engineer that the existing recently installed structural slab is suitable and capable of the additional loads required by a residential scheme (**Appendix C**).

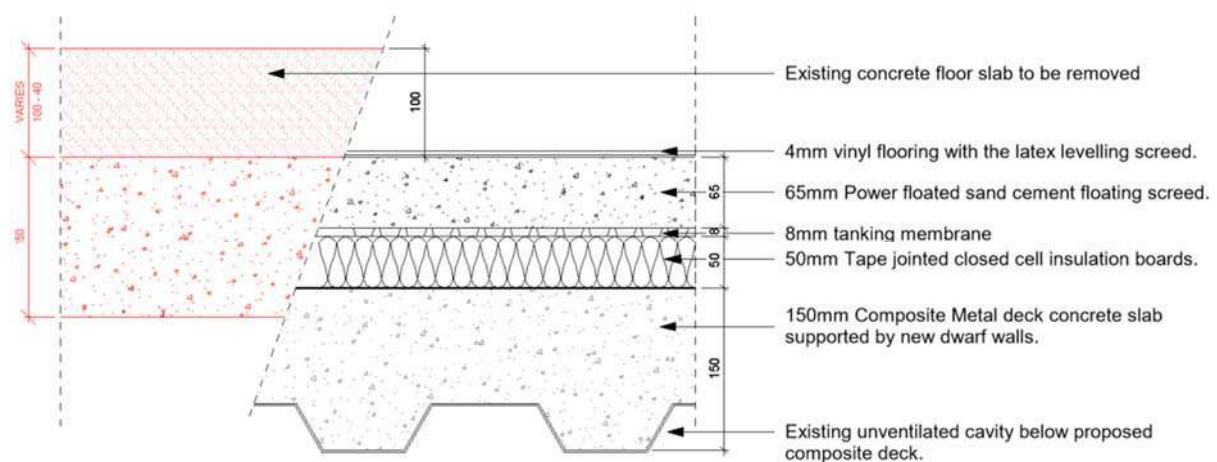
Along with this, a report from the Timber specialist has argued that the few boards in Mindel House are of a later addition and do not match that found on the other floors of the building. Confirmation of infestation and rot in the existing floorboards, requiring wholesale removal as they have been deemed unsalvageable in some areas is also identified (**Appendix E**), a technical note from a heritage specialist supports this position also (**Appendix H**).

3. Proposed Solution A1 – Bloom Building location A

3.1 Detail Breakdown

This solution is proposed in existing location A. Solution A1 consists of a composite concrete metal deck with insulation above and a tanking membrane with a floated sand cement screed above, covered by a suitable floor finish. In line with the SE assessment new dwarf walls supporting the new slab will be required, these will require new strip footings on suitable soils, which is to be confirmed by the SE on site when works start.

In line with the removal of the existing floor, an opportunity will be taken to set a new lower datum level for the new floor, this will enable further floor to ceiling heights in order to help with M&E services layouts.



Solution A1: Composite Concrete Metal Deck replacing Existing Detail A.

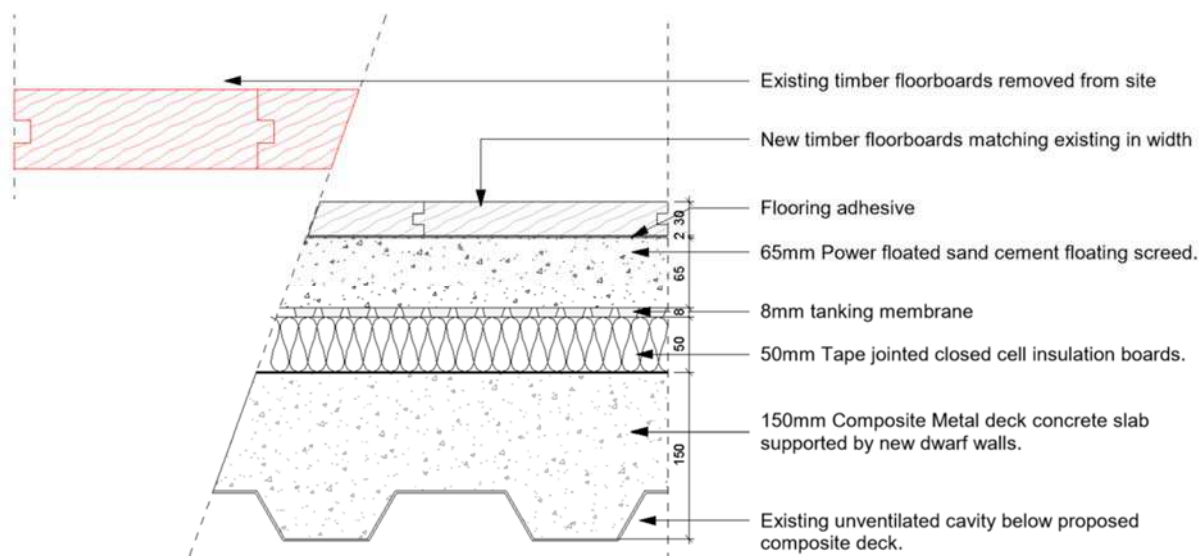
3.2 Summary

As outlined in the reader notes there would be more benefit in using the existing arrangements on site in floor build-up and structure however given the SE conclusion, this is not an option in these circumstances. This solution fulfils the requirements for structural loads of a residential unit in an efficient manner which will go hand in hand with new foundations being installed for structural elements supporting the new roof extension. Elements of later structure have been incorporated into the building already so this proposal is justified in its approach. Rather than a beam and block approach the pouring of foundations will be required so it stands to reason to also cast in place the new slab from a buildability point of view. **(Appendix D).**

4. Proposed Solution B1 – Bloom Building location B

4.1 Detail Breakdown

This detail replaces existing detail B, installed in conjunction with depth amendments to detail A1 above. The existing timber floorboards are removed and replaced with a new board that matches the existing in width and then placed above a new composite concrete metal deck with insulation above and a tanking membrane with a floated sand cement screed above. In line with the SE assessment new dwarf walls supporting the new slab will be required, these will require new strip footings on suitable soil, which is to be confirmed by the SE on site when works start.



Solution B1: Composite Concrete Metal Deck with Timber Floorboard Finish replacing Existing Detail B.

4.2 Summary

In order to retain a sense of the original material of the former timber floorboards and their historic interest/value highlighted by the Conservation Officer, this solution proposes that new floorboards to match the existing in width are used as a floor finish in particular areas of the new layout. In order that a level floor can be achieved in line with Building Regulations. The depth of insulation and screed to Detail A1 would require increasing in the new floor build-up to account for the new floorboard finish.

This detail serves as a nod to the requirements of the Conservation Officer, in that it keeps on show a floorboard matching the existing in width as a finish to certain areas of the basement floor. This is done whilst still incorporating a new floor build-up that serves the SE requirements for the new residential loads the floor will experience from its change of use. The detail can enable acoustic separation at party wall locations through a breakage in the finish material as well as the acoustic barrier matting. The tanking is effectively introduced, however the level differences in areas where the board would potentially be proposed would be specific as opposed to a wholesale standardisation thought the footprint.

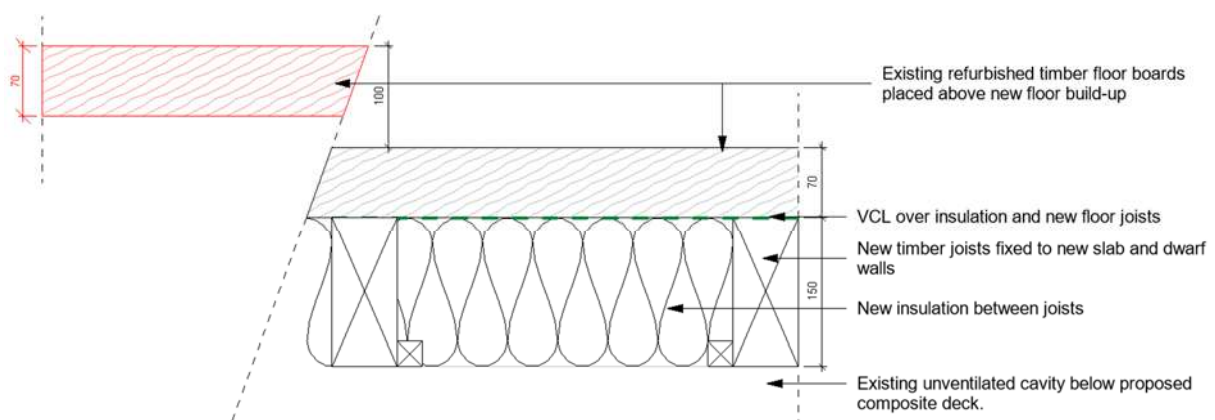
This solution presents an issue in wet and high traffic areas such as Bathrooms, kitchens, laundry rooms, bike stores, corridors, and living spaces. The timber would diminish and require ongoing maintenance if installed in these areas and exposed to these uses.

This solution does not in anyway, honestly or reasonably reflect the previous materials of the building in a way that is advantageous to the buildings, their heritage or the occupants within. Level differences in finishing materials would mean a reduction in proposed floor to ceiling heights, onerous quantities of screed and labour-intensive installation, as well as increased insulation depths to account for small areas of floor finishing are all disadvantages of the approach. Ongoing maintenance would be a continual issue in specifying a product that is not considered suitable for the potential locations of a residential unit of this type. Considering the limited gain and the plethora of disadvantages it seems obvious that this solution is discounted as an acceptable solution.

5. Proposed Solution B2 – Bloom Building location B

5.1 Detail Breakdown

This detail replaces existing detail B and is an alternative to B1. The existing timber floorboards are removed and replaced with new to match existing in order to be placed above a new structural joist layout supporting them. A VCL to avoid air leakage has been applied above the joists with insulation fitted between the new timber joists which are supported by the proposed dwarf walls on newly poured strip footings.



Solution B2: Sacrificial Composite Concrete Metal Deck with suspended Timber Floor Construction above replacing Existing Detail B.

5.2 Summary

In order to retain a sense of the original material of the existing timber floorboards and their historic interest/value highlighted by the Conservation Officer, it is proposed that new floorboards to match the existing are used as a floor finish in the new apartments. An effort to retain the floorboards and the floor construction in a traditional manner has been outlined here. In place of a composite deck, a more traditional timber floor build-up has been shown.

Although this solution has been explored there are many disadvantages in applying this on site with little to no benefit.

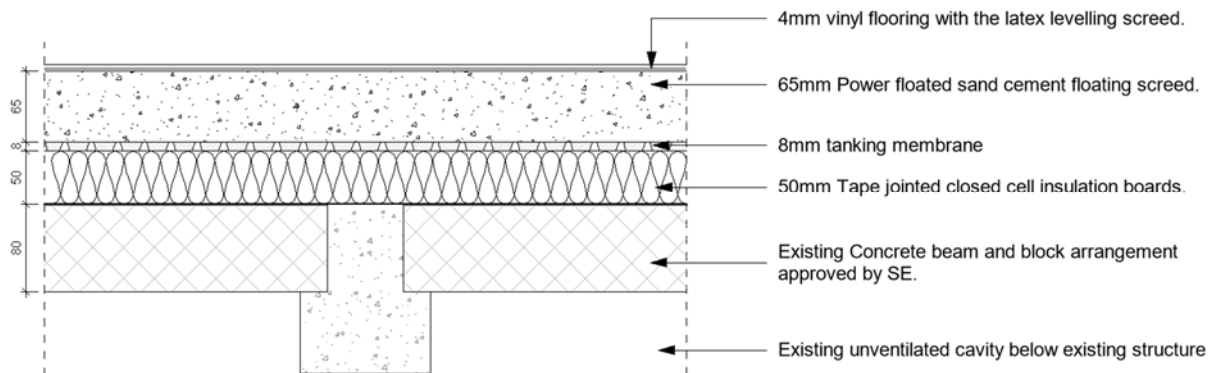
The detail at party wall locations where materials should be structurally separated to ensure acoustic transference is mitigated will be difficult to achieve. The floorboards will require a separated structural support system rather than one that bridges from one side of the party wall line to the other, which is more difficult to achieve with this traditional approach. Thermal values are also reduced and more difficult to achieve in this solution as the insulation requires fitting between joists instead of forming a warm roof. This requires insulation thicknesses to be increased and therefore joists sizes also.

Further more this solution would require a sacrificial composite deck below the timber floor in order that tanking could be achieved. If the timber floor was to be included in the scheme the locations of this would be in areas that are not appropriate for the environment. As with solution B1, in wet and high traffic areas such as Bathrooms, kitchens, laundry rooms, bike stores, corridors, and living spaces. The timber would diminish and require ongoing maintenance if installed in these areas and exposed to these uses.

When presented with the disadvantages along with there being no obvious signs of the construction being on view, this approach would not add any value to the occupancy experience or the heritage of the building.

6. Proposed Solution D1 – Mindel House location D

The detail below is proposed in place of detail D. This detail consists of the retention of the existing beam & block floor upon review and approval from the SE (**Appendix C**). The existing uninsulated screed is removed in place of closed cell insulation, a specialist tanking system and a new screed formed, covered with a proposed floor finish.

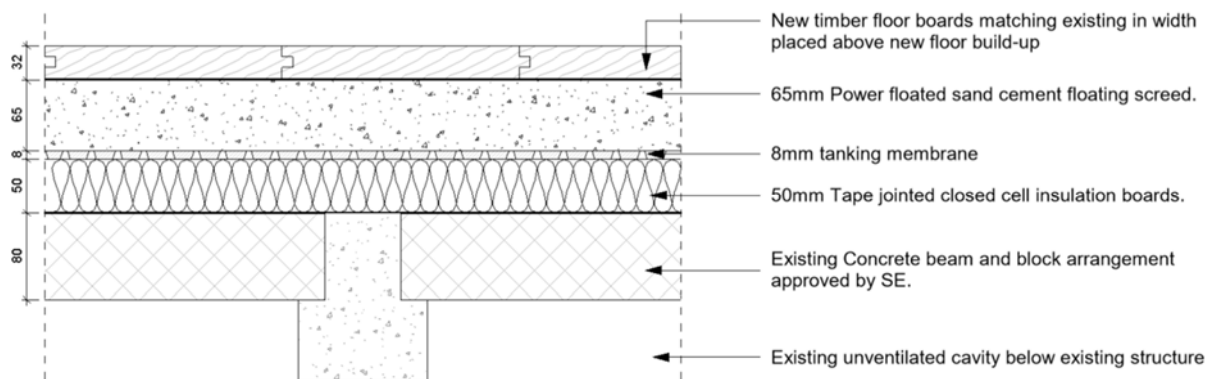


Solution D1: Existing Beam & Block Floor with new insulated screed replacing Existing Detail D.

This is a positive result for the building as it enables retention of existing elements of structure, with addition of materials to improve thermal values. This is a typical ground floor solution seen often in residential buildings and deals with a range of aspects effectively including acoustics, thermal and air tightness.

7. Proposed Solution E1 – Mindel House location E

The detail below is proposed in place of detail E. This detail consists of the retention of the existing beam & block floor upon review and approval from the SE (**Appendix C**). The existing uninsulated screed is removed in place of closed cell insulation, a specialist tanking system and a new screed formed above. The finish proposal in this detail is timber boarding matching the existing in width.



Solution E1: Existing Beam & Block Floor with Timber Floorboard Finish replacing Existing Detail E.

In order to retain a sense of the original material of the former timber floorboards and their historic interest/value highlighted by the Conservation Officer, this solution proposes that new floorboards to match the existing in width are used as a floor finish in particular areas of the new layout. In order that a level floor can be achieved in line with Building Regulations. The depth of insulation and screed to Detail D1 would require increasing in the new floor build-up to account for the new floorboard finish.

This detail serves as a nod to the requirements of the Conservation Officer, in that it keeps on show a floorboard matching the existing in width as a finish to certain areas of the basement floor. The detail can enable acoustic separation at party wall locations through a breakage in the finish material as well as the acoustic barrier matting. The tanking is effectively introduced, however the level differences in areas where the board would potentially be proposed would be specific as opposed to a wholesale standardisation thought the footprint.

This solution presents an issue in wet and high traffic areas such as Bathrooms, kitchens, laundry rooms, bike stores, corridors, and living spaces. The timber would diminish and require ongoing maintenance if installed in these areas and exposed to these uses.

This solution does not in anyway, honestly, or reasonably reflect the previous materials of the building in a way that is advantageous to the buildings, their heritage or the occupants within. Level differences in finishing materials would mean a reduction in proposed floor to ceiling heights beyond what is necessary, onerous quantities of screed and labour-intensive installation, as well as increased insulation depths to account for small areas of floor finishing are all disadvantages of the approach. Ongoing maintenance would be a continual issue in specifying a product that is not considered suitable for the potential locations of a residential unit of this type. Considering the limited gain and the plethora of disadvantages it seems obvious that this solution is discounted as an acceptable solution.

7. Proposed Basement Floor Arrangements

7.1 Proposed Floor Plans

Fig 3 & 4. show proposed floor plans that outline the location of the new floor details A1 and D1.

7.2 Proposed Bloom Building Floor Plan

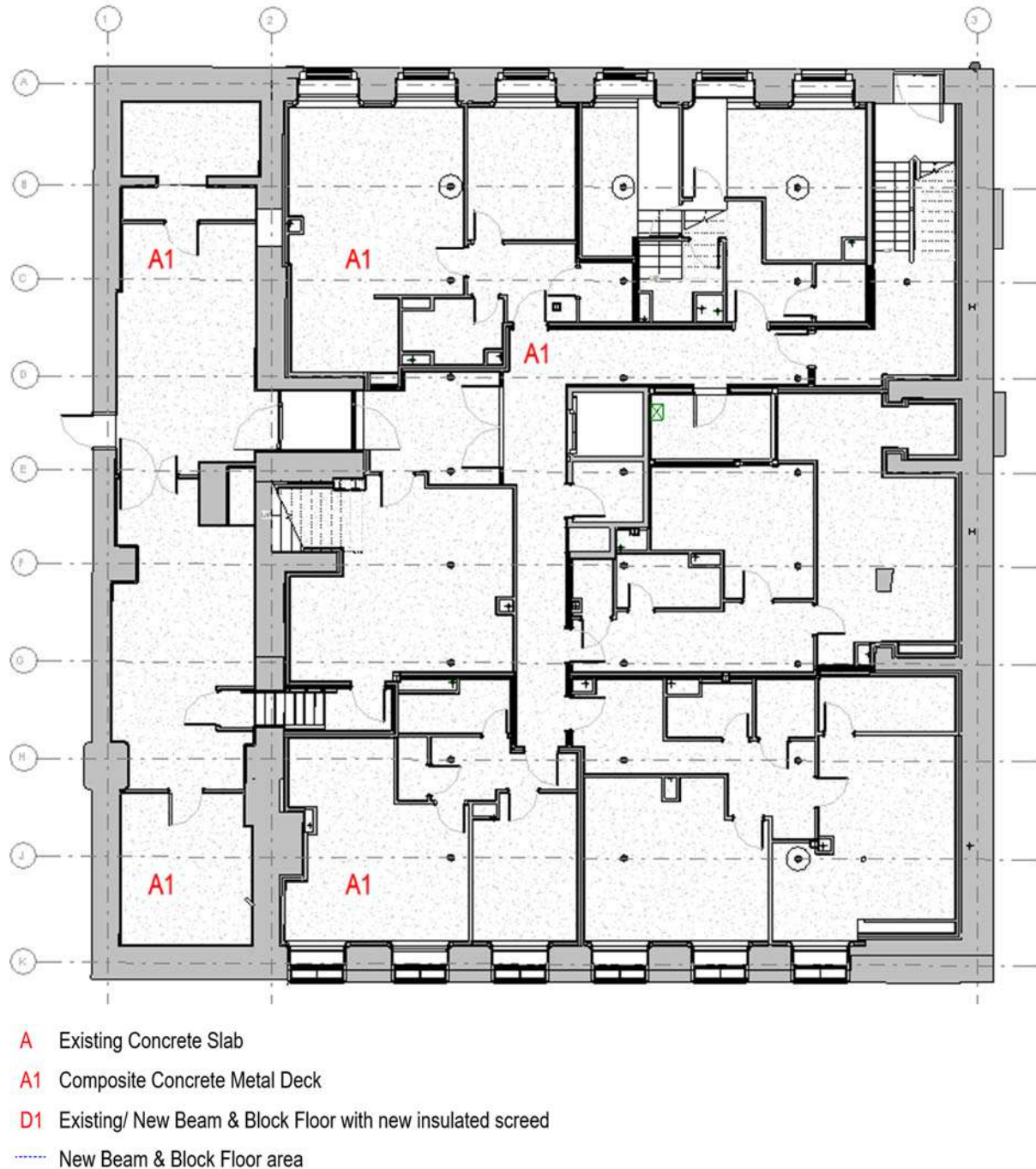


Fig.3: BLOOM STREET - PROPOSED BASEMENT & SUB-BASEMENT FLOOR PLAN

7.3 Proposed Mindel House Floor Plan

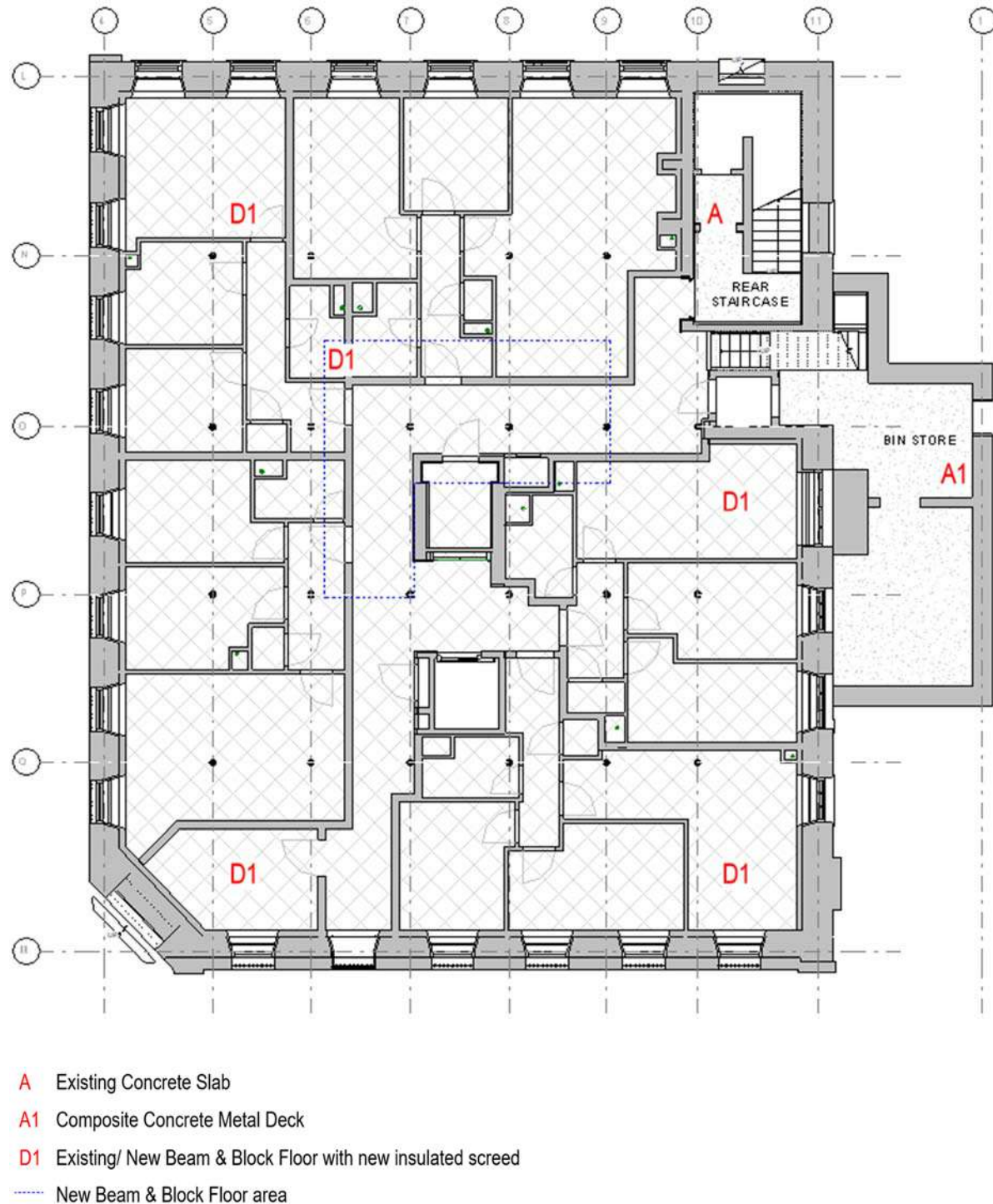


Fig.4: MINDEL HOUSE - PROPOSED BASEMENT & SUB-BASEMENT FLOOR PLAN

8. Appendix

This document is to be read in conjunction with all other reports, schedules and drawings.

A - Note of Meeting (26.10.2021)



Job Number:	14.936	
Project:	Mindel House and 11 Bloom Street, Manchester	
Client:	Beech	
Purpose of Meeting:	To discuss conservation and planning matters	
Date:	26 th October 2021	
Time:	2pm	
Venue:	On site	
Present:	Jennifer Connor (JC) John Whyard (JW) Paul Davidson (PD) Alexandra Radu (AR) Nickesh Patel (NP) Ralph Taylor (RT)	Manchester City Council (MCC) Manchester City Council (MCC) Manchester Design & Build (MDB) Manchester Design & Build (MDB) Manchester Design & Build (MDB) Paul Butler Associates (PBA)

	Note	Action
1.	Following introductions general discussion took place on the status of the project and it was noted that there were multiple condition discharge applications, a S73/S19 application, and queries relating to investigation/cleaning works pending. There was a degree of frustration on both sides regarding how the process was taking place, with MCC requiring further detailed information which explained how a conservation-led approach was being taken, and MDB concerned around impact on timescales and delivery of the project. The project team suggested that a more productive and efficient process for both sides moving forward would be to have prior discussion with MCC prior to submission of further information which would help to ensure MCC's expectations would be met. Resource pressures were noted by MCC and it was confirmed that correspondence should pass through the planning Case Officer.	
2.	<u>11 Bloom Street Stair investigation</u> MDB confirmed that the staircase had clear structural movement and further investigation was required. An endoscopic survey had been undertaken to the underside of the staircase but was inconclusive.	MDB/PBA to issue Whitechapel

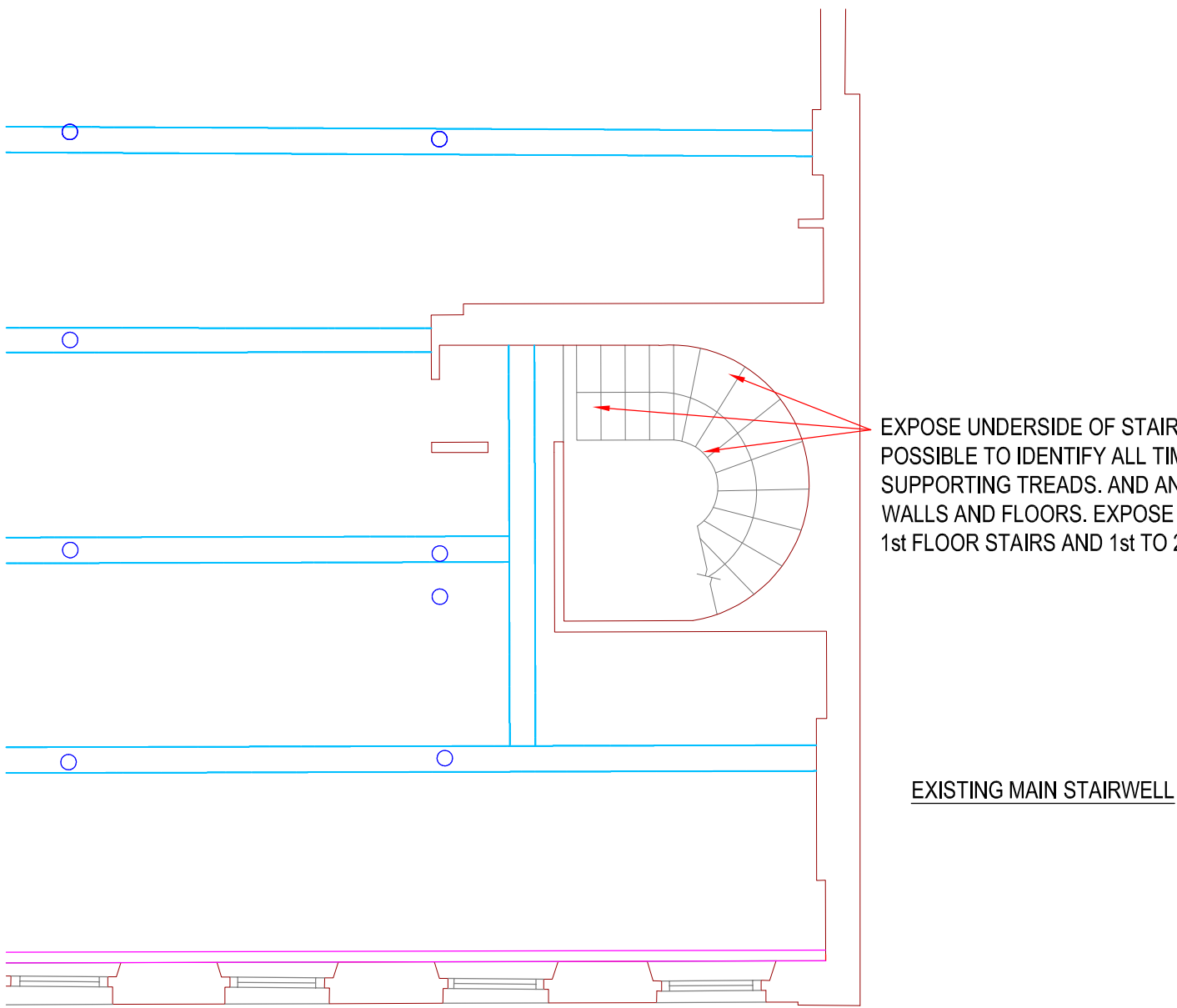
	Removal of a limited area of the lath and plaster to the underside of the staircase was therefore required. It was confirmed that this would be done to limit removal of fabric as far as possible and would be undertaken in a staged approach to retain as much historic fabric as possible (such details are confirmed within 'Response to Email Queries 26.06.2021' that was submitted to MCC on 16.07.2021). The Whitechapel plaster report which advises on reinstatement would be submitted. MCC verbally confirmed they were ok with the approach. Once sufficient areas of the underside of the staircase were exposed investigation by a Conservation accredited engineer would be undertaken and solutions shared with MCC. A conservation-led approach would be adopted explaining the options considered and how the impact on heritage significance would be minimised. No repair works would be undertaken until a solution was agreed with MCC.	report to MCC and highlight previously issued response. MDB
3.	<u>Ceiling Treatment (Fire and Acoustics)</u> MDB explained that increased emphasis on fire safety regulations meant that retaining ceilings (ie. the underside of floorboards from above) exposed would be difficult to achieve with specialist advice being sought from Hydrock as the fire engineers. JW confirmed that retaining the exposed underside of floorboards was a key aim of warehouse conversion schemes. An approach should avoid loss of historic fabric or concealing it. MCC confirmed that a conservation-led approach to the ceiling treatments must be taken with consideration given to all options including a sprinkler/misting system. PD suggested one option could be to install additional structure. JW confirmed that this could be one of the number of options to be considered and noted that when installing new fabric the approach should be to ensure it is distinguished from historic fabric. MDB to submit conservation-led approach to treatment of ceilings based on the above to MCC for review.	MDB to prepare conservation-led methodology/ specification with specialist input.

4.	<u>Trial Cleaning Samples</u> MCC confirmed that in principle, cleaning of masonry and other fabric was acceptable, and feedback had previously been provided. The need for water-based cleaning was queried by JW. (A response to these queries had been previously provided within the 'Response to Email Queries 26.06.2021' that was submitted to MCC on 16.07.2021). MCC verbally confirmed that cleaning was ok to proceed following which a site visit would take place to allow for further inspection. The approach to the making good of masonry was also discussed (Refer to details within the 'Response to Email Queries 26.06.2021' that was submitted to MCC on 16.07.2021). JW indicated that a sample area could be undertaken following which a site visit would take place to allow for further inspection.	MDB to undertake sample cleaning and sample making good of masonry in accordance with previously submitted details. Following the works to sample areas, a site visit with MCC is to be arranged to allow for inspection.
5.	<u>Basement Flooring and Tanking (11 Bloom Street)</u> MDB noted that tanking was required to the basement level of 11 Bloom Street. Part of the basement floor comprised concrete/screed with a timber beam section located more centrally. This was felt to be an unusual feature and its heritage significance should be duly considered within any approach to the tanking of the basement, including whether timber flooring would have originally existed throughout. JW queried if the existing flooring could be lifted to allow tanking and then reinstated afterwards. A less preferred option could be to utilise lifted boards as the new floor treatment within apartments. A conservation-led approach was required to inform the approach. With regards to the basement walls the need for tanking the full height was queried by JW. MDB confirmed that they would also like to see historic walls retained where possible although advice from the basement treatment specialist was required and would be submitted. It was noted that elements of timber flooring also existed in Mindel House and consideration of similar issues noted above will be required.	MDB/PBA to provide heritage assessment of existing flooring and conservation-led specification/methodology to be submitted to MCC to confirm approach in discharge of relevant condition (details condition part e).
6.	<u>Alleyway wall / Scaffolding</u> MDB noted that soft strip work had identified that the alleyway elevation of Mindel House and adjacent internal floors were sagging	MDB to respond to

	and required temporary structural support to allow further investigation of the cause. In principle the need for scaffolding and temporary support was accepted and detailed comments had previously been provided by MCC on 13.09.2021. JW noted that there were particular comments regarding taking down fabric and impact on windows.	MCC comments on scaffolding dated 13.09.2021
7.	<u>Uncovered elements of Historic Fabric</u> Areas of timber panelling had been exposed during the soft-strip and in places conflicted with approved apartment layouts. JW advised that it would be necessary to establish the heritage significance of such fabric and if historic the preference would be to retain in situ. MDB noted that structural fabric repair works may necessitate the temporary removal of fabric. In principle this was confirmed as ok by JW with reinstatement then required following completion of the works. The approach to individual elements of exposed historic fabric would be agreed with MCC, adopting a conservation-led approach.	MDB/PBA to establish heritage significance of exposed fabric. MDB/PBA to provide conservation-led specification/methodology to be submitted to MCC in discharge of relevant condition to confirm approach (details condition part a).
8.	<u>Plaster repair / removal</u> A plaster report by Whitechapel has advised on the approach to plaster repair / removal and would be shared with MCC. JW noted that the approach to plaster had previously been confirmed and it would be expected that work would align with this.	MDB/PBA to share Whitechapel plaster report and associated drawings with MCC in discharge of relevant condition (details condition part f).

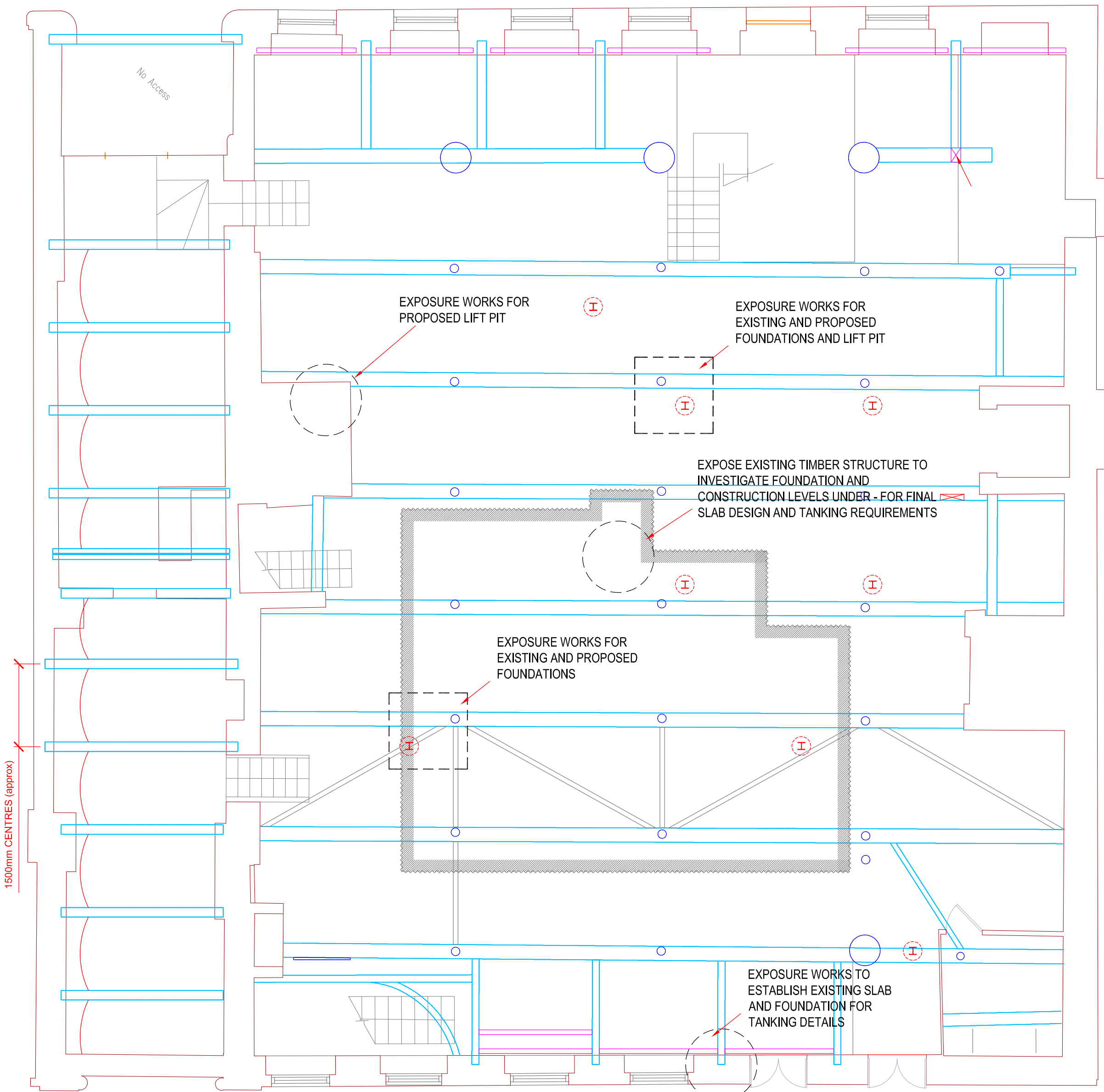
9.	<u>Mindel House 4th Floor Ceiling</u> MDB outlined the need for investigation of the ceiling's structure with five areas for limited removal of lath and plaster ceiling required which align with the locations where investigation is required. MCC confirmed that the approach should be to limit the number and size of openings and seek to coordinate with any future opening that may be required. MCC comments have previously been provided and responded to in relation to this matter. (Refer to 'Response to Email Queries 26.06.2021' that was submitted to MCC on 16.07.2021).	MCC to respond to 'Response to Email Queries 26.06.2021' that was submitted to MCC on 16.07.2021 and confirm investigation can proceed.
10.	<u>Mindel House Basement Blockwork Partitions etc</u> Soft-strip works had identified blockwork partitions in the area beneath the main corner entrance of the building. Such fabric was established to be later additions and removal could be undertaken. Such removal should be undertaken with care in case any historic or structural fabric was identified, in particular the area directly beneath the main entrance staircase and adjacent brick areas. On this basis JW confirmed works could proceed.	MDB to undertake removal works as noted.

B - Structural Engineer – Investigation works - APP. B - A3516 - SK.01001.RevA -
Exposure Works



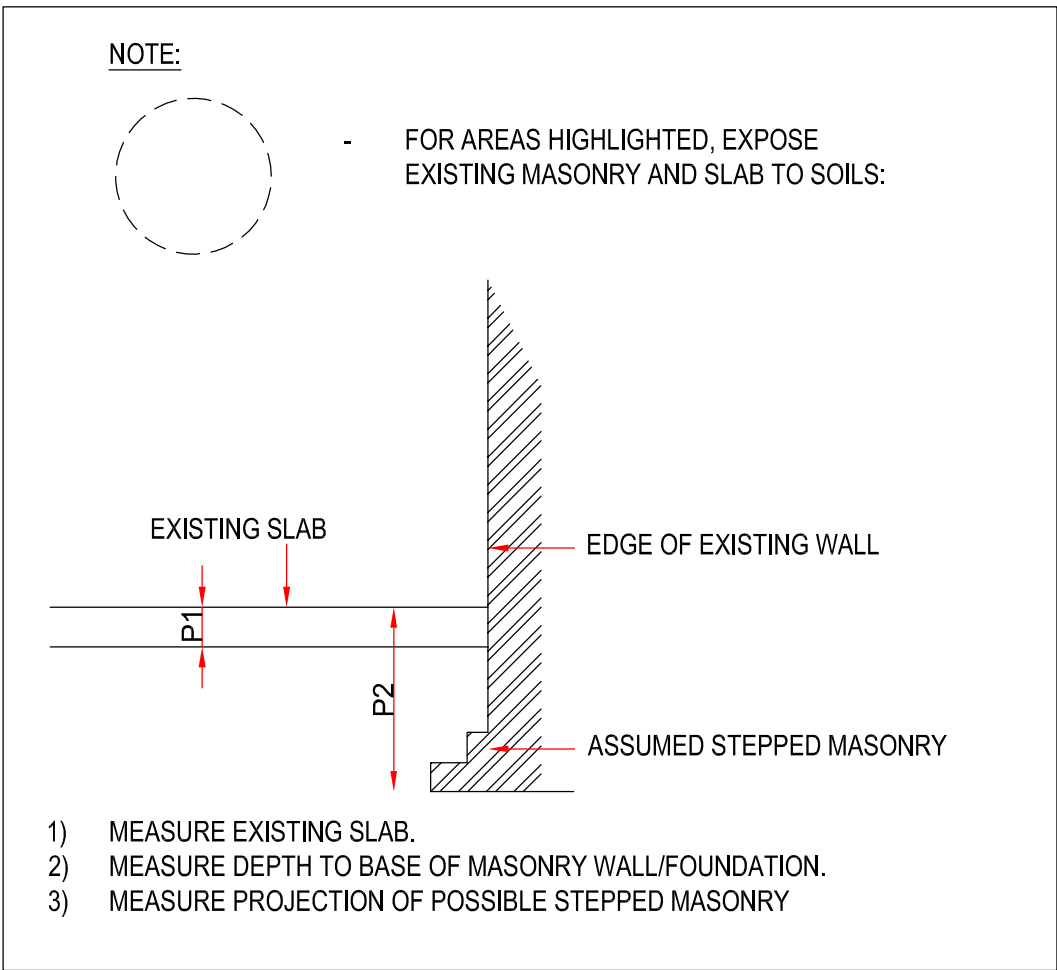
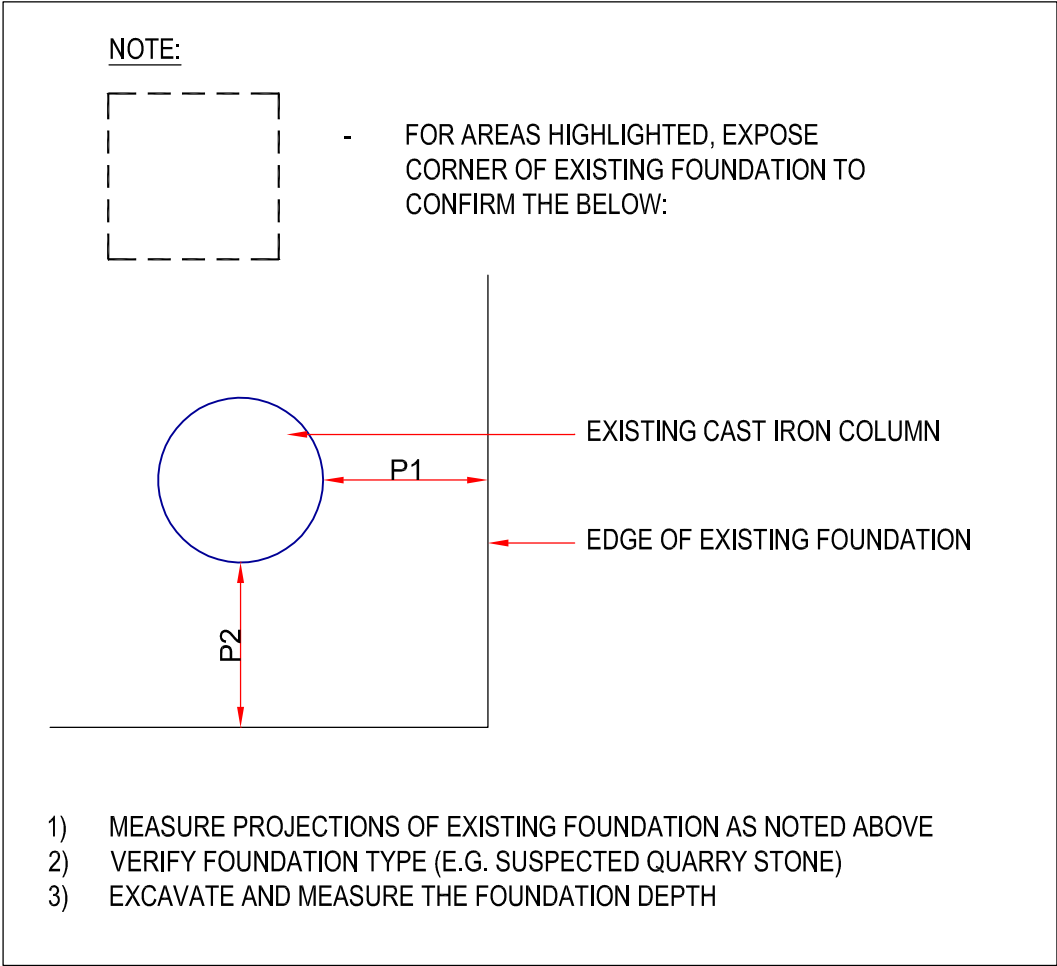
EXPOSE UNDERSIDE OF STAIRS AS MUCH AS POSSIBLE TO IDENTIFY ALL TIMBER MEMBERS SUPPORTING TREADS, AND ANY BEARINGS TO WALLS AND FLOORS. EXPOSE AT BOTH GROUND TO 1st FLOOR STAIRS AND 1st TO 2nd FLOOR.

EXISTING MAIN STAIRWELL



EXISTING LOWER GROUND FLOOR

ALL COLUMNS AT LOWER GROUND FLOOR LEVEL ARE ALL 180mm Ø CAST IRON COLUMNS U.N.O.



A	Updated for further exposure works	SB	MP	GLJ	16.02.21
Rev	Description	By	Chk	App	Date

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Project:

BLOOM STREET
MANCHESTER

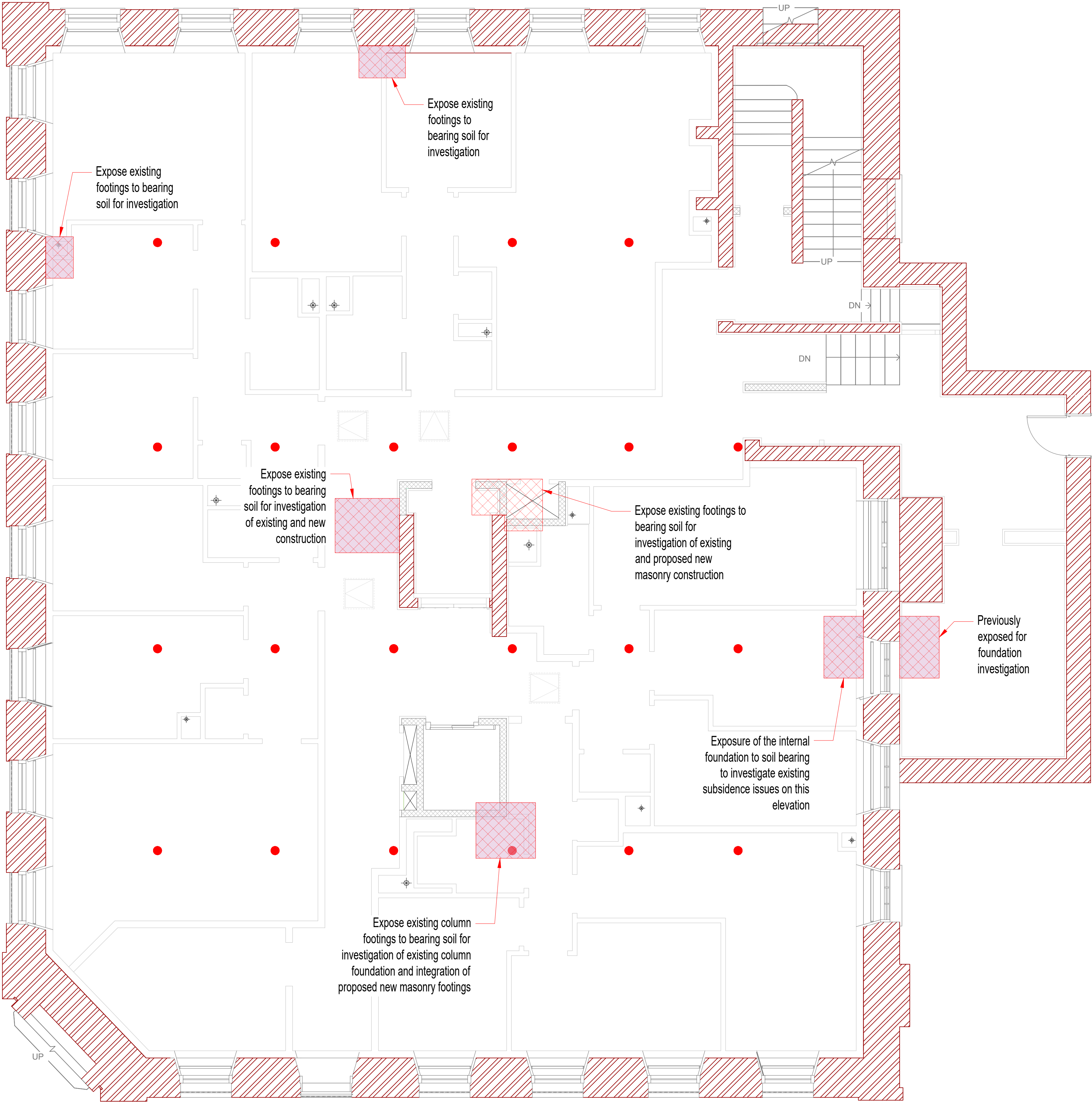
Drawing Title:

EXISTING STRUCTURE EXPOSURE WORKS

Scales at A1 NTS	Drawn By SB	Date 10/02/21	Checked By MP	Date 10/02/21	Approved By GJ	Date 10/02/21
Project No. A3516	Drawing No. SK.01001	Revision A				
APPROVAL ☐	INFORMATION ☒	TENDER ☐	CONTRACT ☐	CONSTRUCTION ☐		

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Rev	Description	By	Chk	App	Date

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Client:

Beech Design & Build Ltd

Project:

Piccadilly Warehouse

-

Drawing Title:

Mindel House
Basement Plan (Sketch)
Foundation Exposure Works

Scale at A1 1:50	Drawn By WP	Date 11/08/21	Checked By MP	Date 11/08/21	Approved By GLJ	Date 11/08/21
Project No. A3516	Drawing No. SK-04001	Revision -				

APPROVAL ☐ INFORMATION ☒ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

C - Structural Engineer – A3516 - PW - Structural Note - Basement Floor



TITLE: **STRUCTURAL NOTE: Basement Floor Structure**

PROJECT: A3516 – Piccadilly Warehouse, Manchester

CLIENT: Manchester Design and Build

February 2022

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QUALITY MANAGEMENT

Document Ref. No.	A3516 – GMS – SN – 00002
Prepared by:	Matt Pimbley
Authorised by:	Graham Jones
Date:	February 2022
Project Number:	A3516
Revision:	B01

Revision	Suitability	Date	Description	By	Review

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3.2	Mindel House	6

1.0 Introduction

The following structural note is for a review of the existing basement floor structure to both the Bloom St building and Mindel House building of the Piccadilly Warehouse project.

2.0 Survey

2.1 Bloom Street Building

The basement floor to Mindel house currently comprises of both a timber floor structure and concrete/screed finish, to different areas of the floor level.

The existing timber floor planks were found to be rotten and to have dropped in level in a number of places.

Exposure of the floor structure to specific areas was carried to allow for intrusive inspection. The investigations concluded the main structural cast iron columns are sat on to large, quarried stones, with timber floor planks spanning between dwarf masonry walls constructed under. Appendix A contains photos taken of the floor structure and exploratory investigations.

The dwarf walls supporting the timber floors were founded at a higher level than the column stone foundations. The soils at this higher level were found to be a poor mixture of back fill and loose soils.

Investigations in to the existing concrete/screed finished areas, found that a minimal concrete fill has previously been cast on to poor back fill.

2.2 Mindel House

The basement floor to Mindel House has largely been replaced at some point in the past, possibly when the basement was used as a nightclub. Some areas of timber planks were found to be in place, suggesting this was the basement floor construction throughout originally, similar to that found in Bloom St.

Intrusive inspection found the replaced floor areas have been constructed with a block and beam flooring structural system spanning between dwarf masonry walls. The areas of floor where this appears to have taken place show no signs of structural distress since they were constructed.

The dwarf walls inspected appeared to be in much better condition than those seen within Bloom St and were found to be bearing on reasonably firm clay soils that should be capable of supporting the existing dead loads and proposed domestic use imposed loadings.

3.0 Conclusions and Recommendations

3.1 Bloom Street Building

Given the results of our investigations it is recommended the existing floors, both timber and concrete, are removed, along with the existing dwarf walls and replaced with new. Appendix B contains proposals of the remedial floor structure. Given the area is to be used for living space the floors and walls will have to be suitably tanked and protected from damp, it is important any structural timber is removed to prevent future rot.

3.2 Mindel House

It is recommended all areas of timber floor construction are removed and replaced with new structure, given their condition, and to again allow for suitable tanking and damp protection. It is recommended the new structure follows the same form as the previous replaced, and is constructed in precast concrete beam and block, spanning between load bearing masonry dwarf walls.

The existing block and beam flooring will be suitable for the proposed imposed and the additional finish dead loads considering its previous higher loaded use.

APPENDIX A – PHOTOS

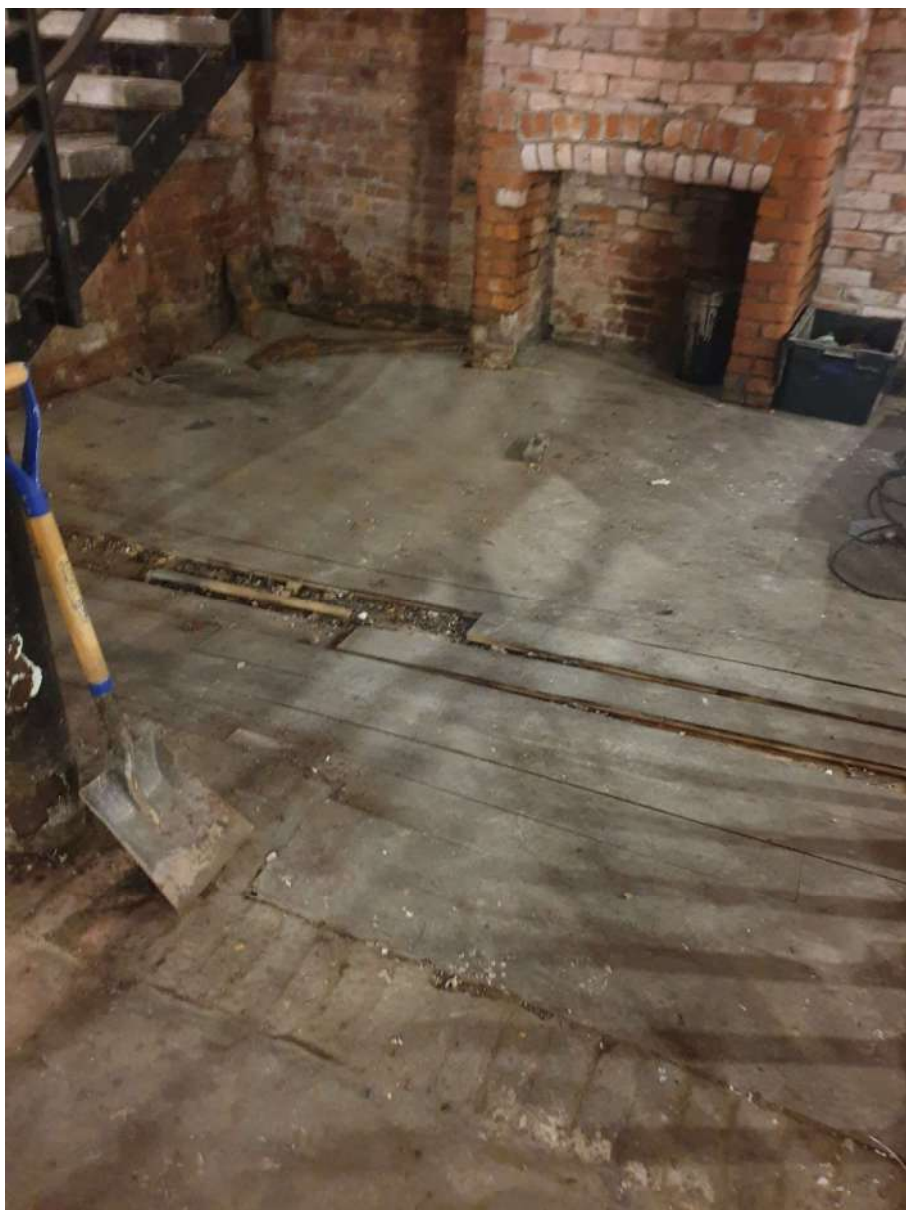


Photo BS1



Photo BS2



Photo BS3



Photo BS4



Photo MH1



Photo MH2



Photo MH3



Photo MH4



Photo MH5

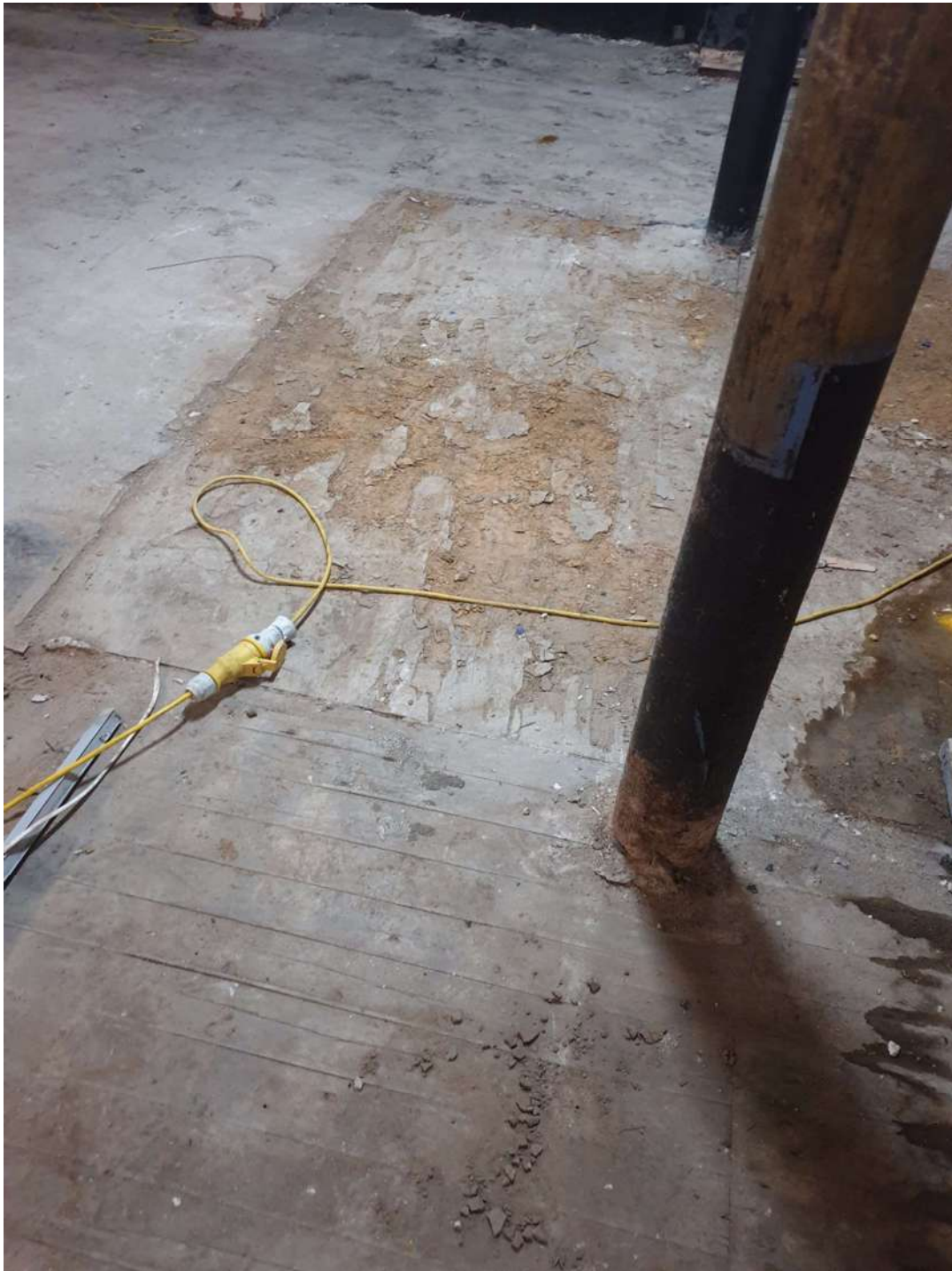
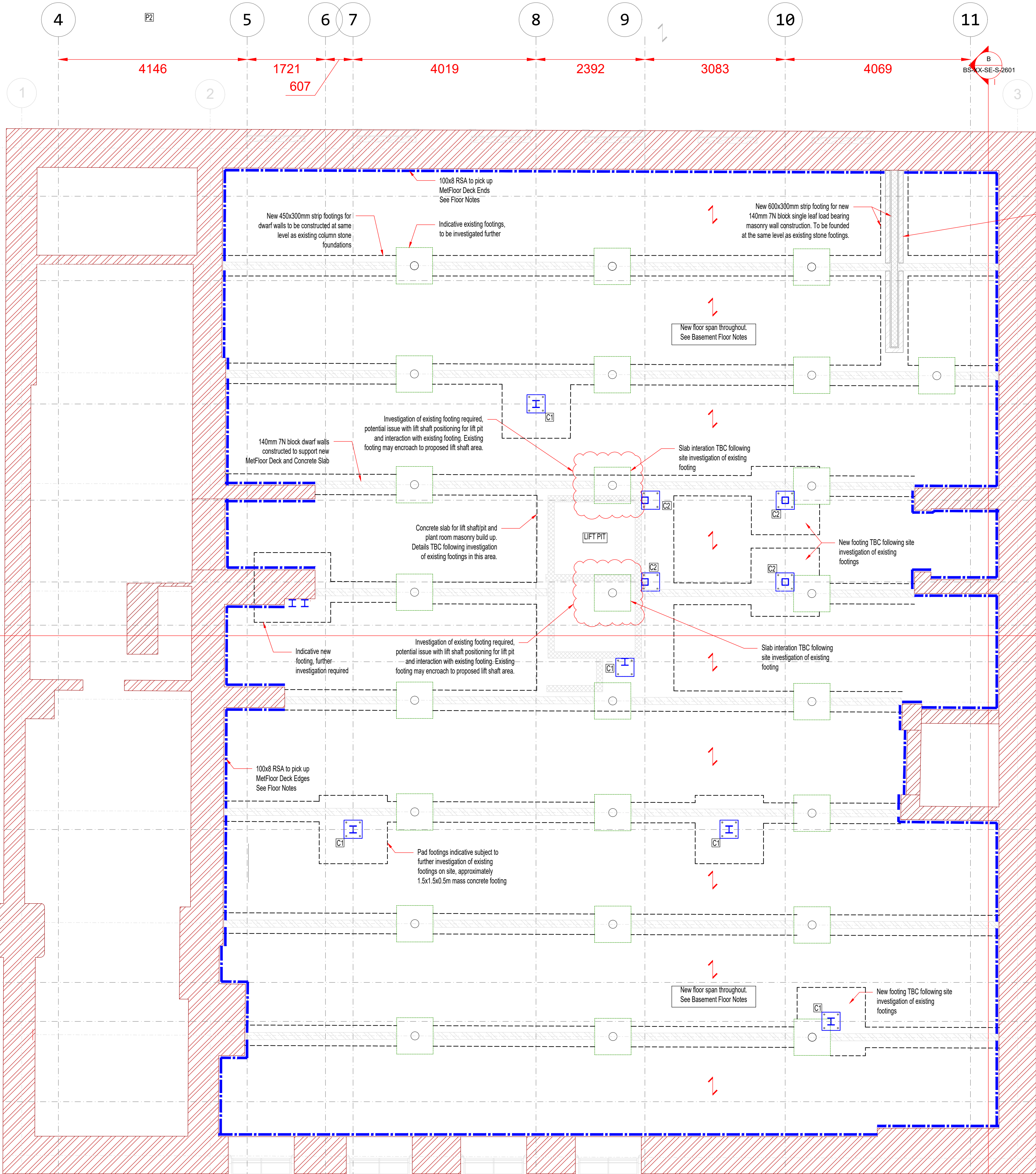


Photo MH6

APPENDIX B – PROPOSED DRAWINGS

D - Structural Engineer – Bloom Building Proposed Floor Structure - A3516-GMS-
BS-FL-PL-S-2600-A3

Note:
Drawing to be read in conjunction with GMS Remedial Elevations, Detail Drawings, Sections, Beech detailed specification and drawings, Hutton + Rostron Timber Specialist report.



Key:

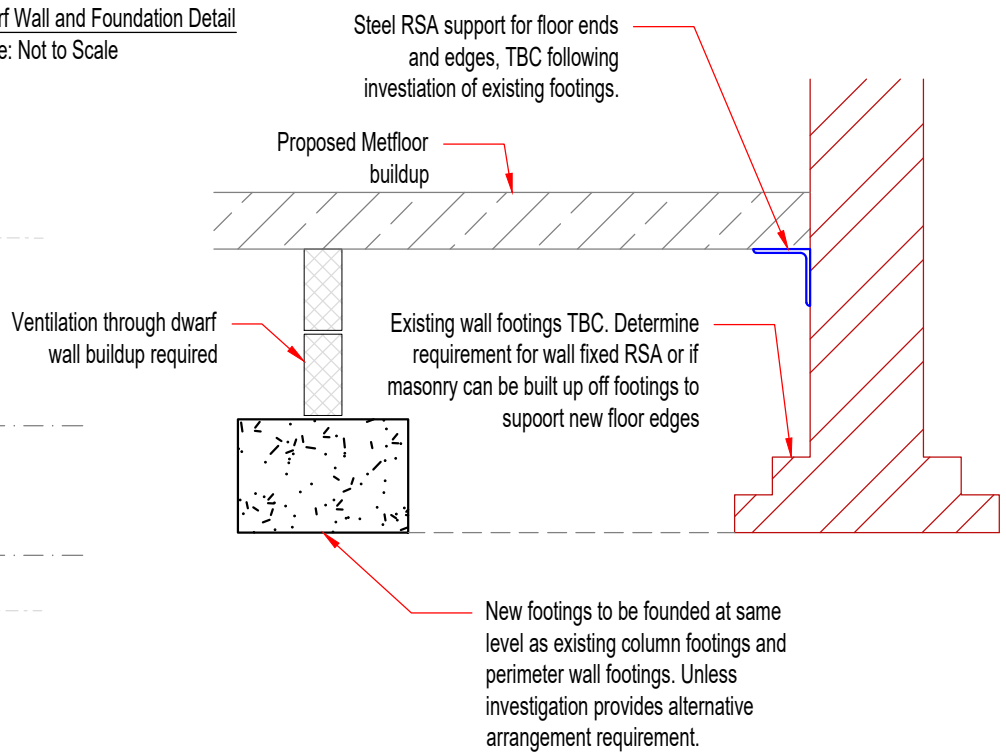
B1	203x133x25 UB S355
B2	203x133x30 UB S355
B3	203x203x46 UB S355
B4	254x146x31 UB S355
B5	254x146x37 UB S355
B6	254x146x43 UB S355
B7	254x254x73 UC S355
B8	254x254x89 UC S355
B9	152x152x37 UC S355
C1	152x152x30 UC S355
C2	150x150x10 SHS S355
CHS1	88.9x5.0mm CHS Bracing
ER2	Naylor Lintels ER2 Precast Lintel (or similar)
P1	Concrete Padstone - Size TBC
P2	440x140x215 Concrete Padstone
P3	440x215x215 Concrete Padstone
P4	800x215x140 Concrete Padstone
P5	Concrete Padstone to suit wall, min. 215mm dp
P6	600x140x215 Concrete Padstone
T1	100x250mm C16 Timber Beam
T2	200x50mm C16 Timber Joists @ 400mm c/c
T3	New floor infill - replicate existing floor construction.

Basement Floor Notes
0.9mm MeFloor 55 Deck with 150mm RC Concrete Slab with A193 Mesh @ max. 30mm cover from top of slab. Providing 60min fire period.
Deck to span between newly constructed dwarf walls with min. 70mm bearing at ends. Deck to be double spanning over 2 bays. End and edge deck support provided by 100x8 RSA fixed to wall by M16 resin anchor fixings @ 450mm c/c to centres of bricks avoiding mortar joints. Possible alternative solution for ends and edges by building up masonry off existing stepped footings - to be investigated further following exposure works.

Existing foundation and substructure exposure required throughout. All existing timber and concrete flooring to be removed to allow investigation of all existing column and wall foundations. To allow for final design and layout of proposed new levels.

Existing dwarf walls exposed to date appear to be of poor quality and founded at varying levels. Demolition of all dwarf walls and rebuilding on new strip footings recommended

Dwarf Wall and Foundation Detail
Scale: Not to Scale



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- DO NOT SCALE DRAWINGS. IF IN DOUBT ASK.
- DIMENSIONS ARE APPROXIMATE (SHOWN IN MILLIMETRES) AND TAKEN FROM SITE PHOTOS AND/OR ARCHITECTURAL DRAWINGS FOR STRUCTURAL DESIGN PURPOSES ONLY AND MUST BE CONFIRMED ON SITE BY CONTRACTOR BEFORE CONSTRUCTION BEGINS, OR ANY TIMBER OR STEEL MEMBERS ARE ORDERED OR FABRICATED.
- THIS DRAWING SHOULD NOT BE USED FOR ARCHITECTURAL DETAILS SUCH AS FINISHES OR INSULATION DETAILS, ETC.
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ANY RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- ALL TIMBER TO BE C16 U.N.O.
- ALL STEEL TO BE S275 U.N.O.
- BOLTS TO BE STEEL GRADE 8.8.
- ALL WELDS TO BE MIN 6mm FILLET WELD U.N.O.
- ALL MASS CONCRETE TO BE C30 U.N.O.
- FOUNDATION DESIGN BASED ON EXISTING FOUNDING SOILS TO BE CAPABLE OF A BEARING CAPACITY OF 125 kN/m² NETT INCREASE.
- ALL PROPRIETARY PRODUCTS AND SYSTEMS SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURERS/SUPPLIERS INSTRUCTIONS U.N.O.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND SHALL PROVIDE ALL TEMPORARY BRACING AND BACK PROPPING NECESSARY TO MAINTAIN STRUCTURAL STABILITY DURING CONSTRUCTION.

Steelwork Notes

- ALL PRIMARY HOT ROLLED BEAMS AND COLUMNS TO BE GRADE S275 TO BS EN 10025 UNO. HOLLOW SECTIONS ARE TO BE DESIGN GRADE S355 UNO. SECONDARY STEEL AND SIMILAR MINOR MEMBERS TO BE IN GRADE S275 UNO.
- BOLTS TO BE GRADE 8.8 MINIMUM CONNECTION 2NO. M16 BOLTS UNO TO BS 3692 UNO.
- HOLDING DOWN BOLTS TO BE GRADE 8.8 MINIMUM CONNECTION 4NO. M16 BOLTS UNO TO BS 7418.
- ALL HOLES IN STRUCTURAL HOLLOW SECTIONS FOR SERVICE FIXINGS ETC. TO BE SEALED WITH WATERTIGHT SEALING WASHERS.
- REFER TO SPECIFICATION FOR REQUIRED PAINT SYSTEM FOR INTERNAL AND EXTERNAL MEMBERS.
- AFTER ERECTION ON SITE ALL AREAS OF DAMAGED PRIMER AND ALL BOLTS SHALL BE ADEQUATELY CLEANED AND THE FULL SPECIFIED PAINT SYSTEM APPLIED.
- ALL STEEL MEMBERS EXPOSED TO EXTERNAL ENVIRONMENT OR WITHIN ADJOINING CAVITY SHOULD BE GALVANISED OR SUITABLY PROTECTED WITH PAINT PROTECTION SYSTEM TO FABRICATORS SPEC AND WITH GJA APPROVAL.
- NO CUTTING OR WELDING OF STEELWORK MEMBERS ON SITE WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
- REFER TO ARCHITECTS DRAWINGS FOR REQUIRED FIRE PROTECTION TO STEELWORK.
- ALL CONTACT BETWEEN DISSIMILAR METALS TO BE SEPARATED BY EITHER A NEOPRENE GASKET, OR WHOLE CONNECTION TO BE COATED IN A BITUMINOUS PAINT.
- ALL GALVANISED PURLINS, RAILS, ETC. TO BE FIXED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS INCLUDING THE NECESSARY SAG-RODS, ETC.
- WELDS TO BE 6MM FILLET WELDS UNO. ALL WELDING TO BE IN ACCORDANCE WITH BS EN 1011-1.
- ALL STEELWORK TO HAVE MINIMUM END BEARING OF 100MM.
- ALL STEELWORK BELOW GROUND TO BE ENCASED IN 100MM MIN CONCRETE.
- ALL CONNECTION DESIGN TO FABRICATORS DETAILS

A3	Updated foundation layout and flooring details	WP	MP	GJ	03/12/21
A2	Updated following new information and site visits	WP	MP	GJ	10/09/21
A1	Updated following Site Visit	WP	MP	GJ	28/05/21
A	Issued for Tender	WP	MP	GJ	28/04/21
Rev	Description	By	Chk	App	Date

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Client:

Beech Design & Build Ltd

Project:

Piccadilly Warehouse

Drawing Title:

Bloom Street
Foundation Floor Plan
Structural Arrangements

Scale at A1 1:50	Drawn By WP	Date 02/03/21	Checked By MP	Date 02/03/21	Approved By GLJ	Date 02/03/21
Project No. A3516	Drawing No. GMS-BS-FL-PL-S-2600	Revision A3				

APPROVAL ☐ INFORMATION ☐ TENDER ☒ CONTRACT ☐ CONSTRUCTION ☐

E – H + R Timber Lower Ground Floor Reports

Hutton + Rostron Environmental Investigations Limited

11 Bloom Street, Manchester: Lower ground floor timber condition survey

Site note 6 for 18 January 2022, job no. 212.57

CONTENTS

- 1 Introduction
- 2 Staff on site and contacts
- 3 Observations
- 4 Recommendations
- 5 H+R work on site
- 6 Proposed action by H+R
- 7 Information required by H+R
- 8 Administrative requirements

Attachments

- A Photographs
- B Drawings

Distribution:

Nickesh Patel – np@beechdesignandbuild.co.uk

Prepared by:	Technical review by:	Administration by:
Chris Whitfield	D P Bannister	Tracy Bannister

1 INTRODUCTION

1.1 AUTHORITY AND REFERENCES

Hutton + Rostron Environmental Investigations Limited carried out a site visit to 11 Bloom Street, Manchester on 18 January 2022 in accordance with instructions from Manchester Design and Building Ltd by purchase order, dated 10 January 2022 reference 1263. Drawings provided by Beech Design & Build Ltd. Ref 061 were used for the identification of structures. For the purpose of orientation in this report, the elevation facing Bloom Street was taken as facing north-west

1.2 AIM

The aim of this survey was to assess the condition of the existing floorboards at lower ground floor level and to provide recommendations on salvageability

1.3 LIMITATIONS

This survey was confined to the accessible structures. Only demolition or exposure work can enable the condition of timber to be determined with certainty, and this destroys what it is intended to preserve. Specialist investigative techniques are therefore employed as aids to the surveyor. No such technique can be 100 per cent reliable, but their use allows deductions to be made about the most probable condition of materials at the time of examination. Structures were not examined in detail except as described in this report, and no liability can be accepted for defects that may exist in other parts of the building. We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect or, in the event that such part of the property is not free from defect, it will not contaminate and/or affect any other part of the property. The contents of this report do not imply the adoption of the role of Principal Designer by H+R for the purposes of the Construction Design and Management (CDM) Regulations 2015

2 STAFF ON SITE AND CONTACTS

2.1 H+R STAFF ON SITE

Chris Whitfield

2.2 PERSONNEL CONTACTED

Nickesh Patel

3 OBSERVATIONS

Report should be read in conjunction with the Schedule of Photographs at Attachment A and Drawings at Attachment B

3.1 LOWER GROUND FLOOR

See Figures 1-34 in the Schedule of Photographs

3.1.1 Suspended timber floor 1 (central area)

- 1 Construction: The floor was of suspended timber construction and all timbers were of softwood timber species. The floor comprised abutting square edge floorboards that measured 65mm (deep) x 220mm (wide). Lengths of floorboard varied but were typically ~2-4m in length. The floorboards were fixed into an underlying timber wall plate 155mm (deep) x 225mm (wide) with 2 no. oval wire nails located within 100mm of either end of each floorboard. The timber wall plates were supported on a bed of lime mortar atop sleeper walls of brick construction. An area of removed floorboards revealed the void beneath the floorboards varied between 500mm to over 1m in depth. The floorboards appear to be undecorated with general patina acquired through historic wear, staining and dirt
- 2 Timber species: Two small specimens of floorboard were extracted for microscopic timber species identification. The anatomical features of sample no. 1 accorded well with Norway spruce (*Picea abies*) and sample no.2 accorded well with silver fir (*Abies alba*). Shipments of European whitewood are made of Norway spruce and silver fir as both species closely resemble one another visually and also have similar strength properties <https://www.trada.co.uk/wood-species/whitewood-european/>
- 3 Timber condition: Original natural ventilation of the sub floor has been removed due to historical alterations and this has increased moisture contents in the timbers and provided the suitable conditions for fungal decay and active wood-boring weevil infestation. Wood-boring weevil is always coincident with and dependent upon fungal growth infection in the timbers. Surface moisture readings in the underside of the floorboards were typically over 35 per cent w/w and over 10 per cent w/w at depth. Deep moisture contents of the wall plates were typically over 20 per cent which is sufficient to sustain an active wood-boring weevil infestation. Corrosion in the oval fixing nails is also believed to be widespread. The increased moisture content in the floorboards has encouraged them to swell and become tightly abutting, further reducing natural ventilation of the sub-floor and exacerbating the rate of decay
- 4 Timber decay in floorboards: Where visible, the weevil tunnelling was concentrated around the perimeter of each floorboard particularly to the ends and sides. Decay in the ends typically extended 50-100mm into the floorboards and decay to either side typically extended 30mm into the floorboard. Decay in the floorboards was concentrated in the outer sapwood bands of the tree which are less durable than the inner heartwood. An increment borer was used to extract 10 no. core samples of floorboards so that the extent of decay in the base of in situ 65mm floorboards could be measured. Sampling determined the depth of 'sound' material was between 50-65mm (see Figures 25-34). There were also some localised areas of weevil tunnelling on the upper surface of the floorboards but this was limited to a depth of ~3mm

3.1.2 Suspended timber floor 2 (south-west corner)

See Figures 35-46 in the Schedule of Photographs

- 1 Construction: The floor was of suspended timber construction and all timbers were of softwood timber species. The floor comprised milled smooth planed tongue and

groove floorboards that measured 22mm (deep) x 155mm (wide) and included a central machined groove to the underside. Floorboards were typically 2.4m in length. The floorboards were laid over sheets of ~12mm oriented strand board (OSB). The floorboards were generally loose laid but there was some use of polymer adhesive to glue/bond the floorboards to the OSB. A hole made through a sheet of OSB revealed a void of approximately 500mm below the finished floor level and earth oversite beneath. Softwood floor joists and floorboards were also visible below the OSB. The t&g floorboards had been decorated with a dark wood stain. It is worth noting that as OSB dates from the 1960's these floorboards are probably of late 20th Century origin

- 2 Timber species: A small specimen of floorboard was extracted for microscopic timber species identification. The anatomical features of sample no. 3 accorded well with Canadian red pine (*Pinus resinosa*). Canadian red pine closely resembles and has similar strength properties to Scots pine/ European redwood (*Pinus sylvestris*) <https://www.trada.co.uk/wood-species/pine-canadian-red/>
- 3 Timber condition: Original natural ventilation of the sub floor has been removed due to historical alterations and this has increased moisture contents in the timbers and provided the suitable conditions for fungal decay and active wood-boring weevil infestation. The floor joists and floorboards beneath the OSB were heavily decayed and the floor had collapsed at its centre. The sheets of OSB were also partially decayed
- 4 Timber decay in floorboards: A small number of the t&g floorboards were raised from over the OSB for detailed inspection. This revealed that decay by wood-boring weevil was relatively minor when compared to the square edge floorboards to the central area of suspended timber floor. The wood-boring weevil tunnelling was concentrated in the length of the tongues and in the ends of the floorboards to ~50-100mm. However, as a result of decay and collapse in the supporting timber structures, notable bowing and twisting had occurred in a proportion of the floorboards

4 RECOMMENDATIONS

4.1 LOWER GROUND FLOOR

4.1.1 Suspended timber floor 1 (central area)

- 1 Discussion: In their current form none of the millboards are salvageable for reinstatement as a floor covering. However, if desired, approximately 90% of the floorboards could be re-milled by removing the outer sections of decay to form a new standard dimension. These repurposed floorboards could then be reinstated as the new floor covering over the proposed solid floor
- 2 Salvageability: The floorboards could be carefully raised and transported to a timber yard for re-milling. Based on our survey we would estimate that floorboards could be re-milled to a depth of 45mm (by removing the lower 20mm) and to a width of 160mm (by removing 30mm from either side). The outer 100mm should also be removed from both ends of each floorboard to remove decayed material as well as the corroded fixing nails. This new standard dimension would need to be confirmed following assessment of each floorboard once lifted. The re-milled, floorboards could be either square butt jointed, tongue and groove jointed or loose tongue (or spline) jointed, as desired. The upper surface of the floorboards should be cleaned and although it could also be planed or sanded, this process would remove historic patina
- 3 Moisture content: The moisture contents of all floorboards would need to be reduced to below 12 per cent w/w prior to reinstatement. This could be achieved by forced or natural drying under controlled conditions at the timber yard to ensure no warping occurs. Upon reinstatement, the floorboards would also need to acclimatise so that their moisture content reaches equilibrium so some minor warping should be allowed for

4.1.2 Suspended timber floor 2 (south-west corner)

- 1 Discussion: If desired, these floorboards could also be salvaged after re-milling to a new desired dimension following the strategy discussed above. However, as these floorboards are not original and likely late 20th Century, they are of less historic value

5 H+R WORK ON SITE

- 5.1** H+R inspected timber floor structures to the lower ground floor so as to determine their decay state and deep moisture content

6 PROPOSED ACTION BY H+R

- 6.1** H+R will advise on repair and conservation of timber elements, so as to minimise the risk of decay after refurbishment if instructed
- 6.2** H+R will advise on remedial detailing, so as to minimise the risk of damp and decay problems after refurbishment if instructed
- 6.3** H+R will advise on conservation of original fabric with regard to damp, decay and salt damage, as necessary and if instructed
- 6.4** H+R will review proposed remedial details as these become available if instructed
- 6.5** H+R will return to site to inspect sample remedial details if instructed
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7 INFORMATION REQUIRED BY H+R

- 7.1** H+R require up-to-date copies of project programmes, as these become available
- 7.2** H+R require copies of up-to-date lists of project personnel and contact lists as these become available
- 7.3** H+R require copies of proposed remedial details for comment as these become available
- 7.4** H+R should be informed as a matter of urgency if further significant water penetration occurs onto site; so that advice can be given on cost-effective remedial measures, to minimise the risk of cost or programme overruns and so as to minimise the risk of damp or decay problems

8 ADMINISTRATION REQUIREMENTS

- 8.1** H+R require formal instructions for further investigations and consultancy on this project
- 8.2** H+R require confirmation of distribution of digital and printed copies of reports and site notes

Attachment A



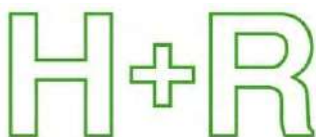
Fig 1:

Lower ground floor; showing a general view of the softwood suspended timber floor to the centre of the room



Fig 2:

Lower ground floor; showing an opening which provided access to inspect from within the floor void



11 Bloom Street, Manchester
Photographs
18 January 2022



Fig 3:

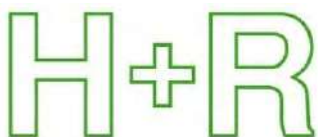
Lower ground floor; showing widespread tunnelling to the underside of the floorboards caused by wood-boring weevil infestation

Note the frass which has collected within cobwebs and on the earth below



Fig 4:

Lower ground floor; showing a close-up of the wood-boring weevil tunnelling and fungus to the underside of a floorboard



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Photographs
18 January 2022

Hutton + Rostron Environmental Investigations Ltd, Netley House, Gomshall, Surrey, GU5 9QA
Tel: 01483 203221 Fax: 01483202911 email: ei@handr.co.uk

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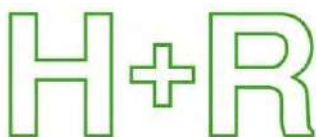
Fig 5:

Lower ground floor; showing a surface moisture content reading of 38 per cent in a floorboard. This can be attributed to inadequate natural ventilation and is high enough to sustain fungal growth and wood-boring weevil infestation



Fig 6:

Lower ground floor; showing a close-up of wood-boring weevil tunnelling and flight holes in a heavily decayed section of removed floorboard



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18 January 2022

Hutton + Rostron Environmental Investigations Ltd, Netley House, Gomshall, Surrey, GU5 9QA
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Fig 7:

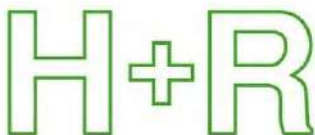
Lower ground floor; showing the end of a floorboard where it is fixed with 2 no. nails into a lower wall plate with oval wire nails. Larger cut clasp nails were also used to fix the wall plate into supporting beams beneath



Fig 8:

Lower Ground Floor; showing a close up of a oval wire nail (above). The end of the nail was corroded and snapped off during extraction from the wall plate

The heavily corroded nail (below) was removed from a supporting beam within the floor void. This appeared to be a cut clasp nail which were also traditionally used in flooring



11 Bloom Street, Manchester
Photographs
18 January 2022

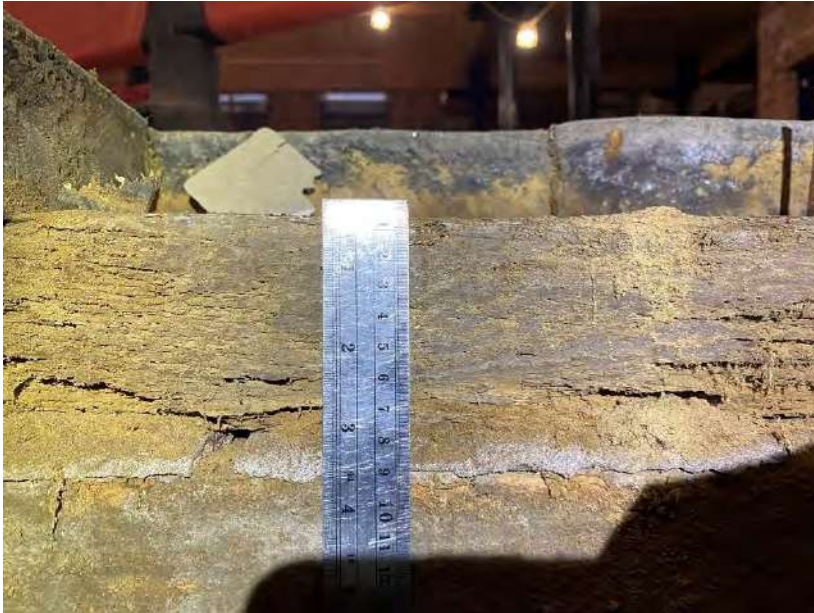


Fig 9:

Lower ground floor; showing a view of a heavily decayed wall plate from within the floor void. The wall plate was supported on a lime mortar bed above a brick sleeper wall

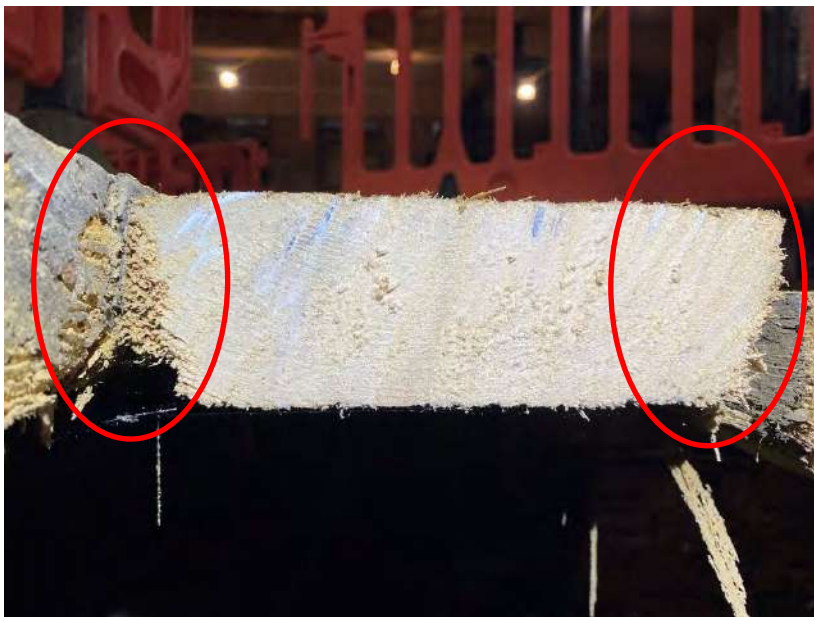
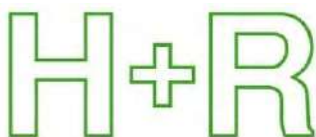


Fig 10:

Lower ground floor; showing a typical example of wood-boring weevil tunnelling concentrated in the sides of a floorboard



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Photographs
18 January 2022



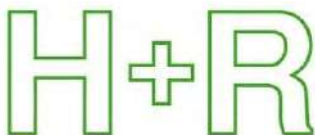
Fig 11:

Lower ground floor; showing the tight fitting square-edge floorboards that measured 220mm in width. The floorboards are tight due to their increased moisture content and swelling



Fig 12:

Lower ground floor; showing the square-edge floorboards that measured 65mm in depth



11 Bloom Street, Manchester
Photographs
18 January 2022



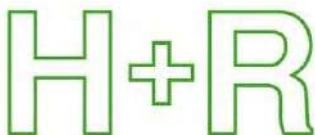
Fig 13:

Lower ground floor; showing a deep moisture content of 10.7 per cent w/w taken from the centre of a floorboard. This is a low reading which is unable to support fungal growth or wood-boring weevil infestation



Fig 14:

Lower ground floor; showing a deep moisture content of 22.6 per cent w/w taken from the supporting wall plate. This is sufficient to support fungal growth and wood-boring weevil infestation



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Photographs
18 January 2022

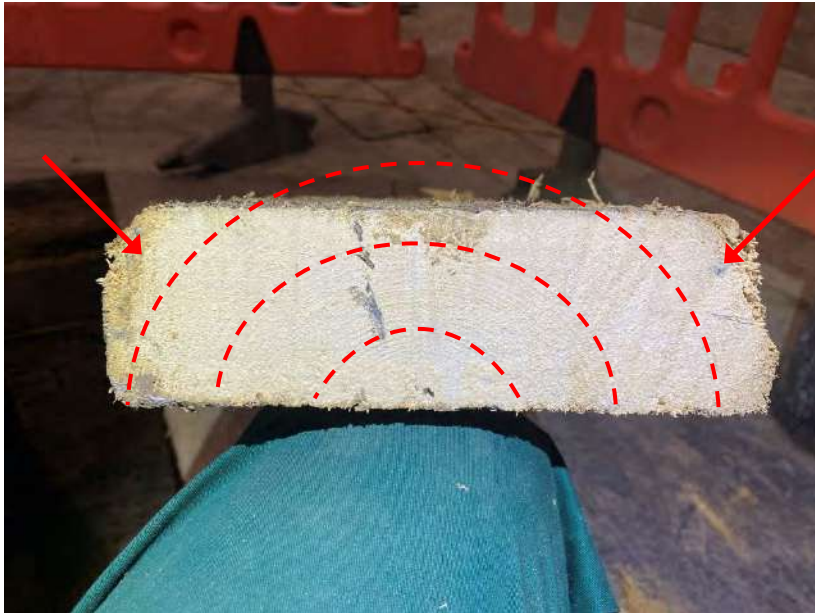


Fig 15:

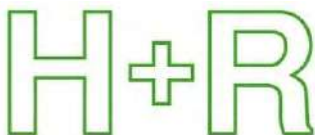
Lower ground floor; showing a typical example of wood-boring weevil tunnelling concentrated in the sides of and underside of a floorboard

Note the pith (centre of the tree) and growth rings of the tree and that the decay is concentrated in the outer, less durable bands of the timber



Fig 16:

Lower ground floor; showing a typical example of wood-boring weevil tunnelling concentrated in the sides and underside of a floorboard



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Photographs
18 January 2022



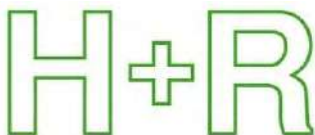
Fig 17:

Lower ground floor; showing an example of wood-boring weevil infestation on the top side of the floorboards. Tunnelling here was limited to the upper 3mm of the floorboards and can be considered superficial



Fig 18:

Lower ground floor; showing a wood-boring weevil. Note the distinctive long 'snout'



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18 January 2022



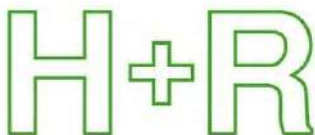
Fig 19:

Lower ground floor; showing the end of the floorboards where they abut an area of solid concrete floor. The decay was considerably worse in this location



Fig 20:

Lower ground floor; showing the end of the floorboards where they abut an area of solid concrete floor. The decay was considerably worse in this location



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Photographs
18 January 2022



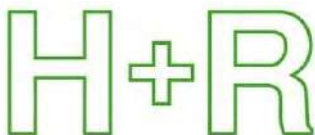
Fig 21:

Lower ground floor; showing the exposed floorboard. The underside of the floorboard was heavily decayed in this location



Fig 22:

Lower ground floor; showing extensive decay in the floorboards



11 Bloom Street, Manchester
Photographs
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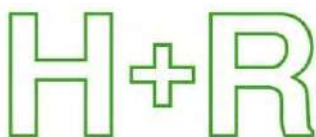
Fig 23:

Lower ground floor; showing extensive decay in the floorboards



Fig 24:

Lower ground floor; showing heavy decay in the floorboards and significant corrosion in the nail fixings



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Photographs
18 January 2022



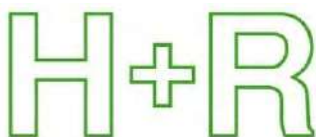
Fig 25:

Lower ground floor; showing floorboard core sample no.1 which measured approximately 57mm



Fig 26:

Lower ground floor; showing floorboard core sample no.2 which measured approximately 64mm



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Photographs
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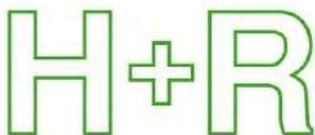
Fig 27:

Lower ground floor; showing floorboard core sample no.3 which measured approximately 59mm



Fig 28:

Lower ground floor; showing floorboard core sample no.4 which measured approximately 64mm



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Photographs
18 January 2022



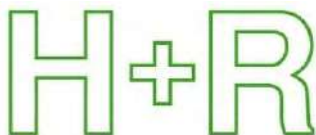
Fig 29:

Lower ground floor; showing floorboard core sample no.5 which measured approximately 52mm



Fig 30:

Lower ground floor; showing floorboard core sample no.6 which measured approximately 65mm



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Photographs
18 January 2022



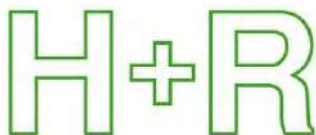
Fig 31:

Lower ground floor; showing floorboard core sample no.7 which measured approximately 55mm



Fig 32:

Lower ground floor; showing floorboard core sample no.8 which measured approximately 55mm



11 Bloom Street, Manchester
Photographs
18 January 2022



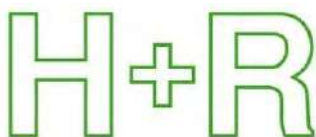
Fig 33:

Lower ground floor; showing floorboard core sample no.9 which measured approximately 65mm



Fig 34:

Lower ground floor; showing floorboard core sample no.10 which measured approximately 50mm



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Photographs
18 January 2022



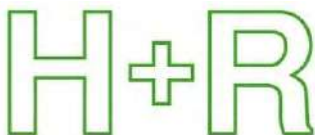
Fig 35:

Lower ground floor; showing the area of softwood suspended timber floor to the south-west corner of the room



Fig 36:

Lower ground floor; showing tongue and groove floorboards applied over engineered oriented strand board (OSB). Note that OSB only dates from the 1960's



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Photographs
18 January 2022



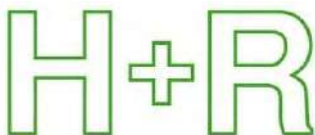
Fig 37:

Lower ground floor; showing t&g floorboards that measured approximately 155mm in width



Fig 38:

Lower ground floor; showing t&g floorboards that measured approximately 22mm in depth



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18 January 2022



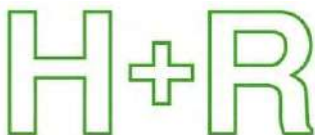
Fig 39:

Lower ground floor; showing rat droppings on the top of the OSB



Fig 40:

Lower ground floor; showing a central groove milled into the underside of the t&g floorboard



11 Bloom Street, Manchester
Photographs
18 January 2022



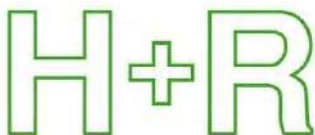
Fig 41:

Lower ground floor; showing an example of significant wood-boring weevil infestation and tunnelling concentrated in the end of a floorboard



Fig 42:

Lower ground floor; showing an example of minor wood-boring weevil infestation and tunnelling concentrated in the end of a floorboard



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Photographs
18 January 2022



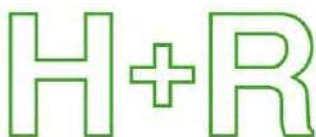
Fig 43:

Lower ground floor; showing a void of approximately 500mm between the floor level and earth beneath



Fig 44:

Lower ground floor; showing a view through the OSB. There was evidence of an earlier timber floor beneath but timbers were heavily decayed



11 Bloom Street, Manchester
Photographs
18 January 2022



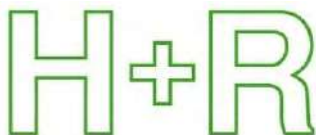
Fig 45:

Lower ground floor; showing the use of an adhesive to secure the t&g floorboards to the OSB



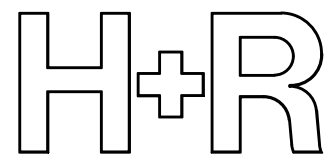
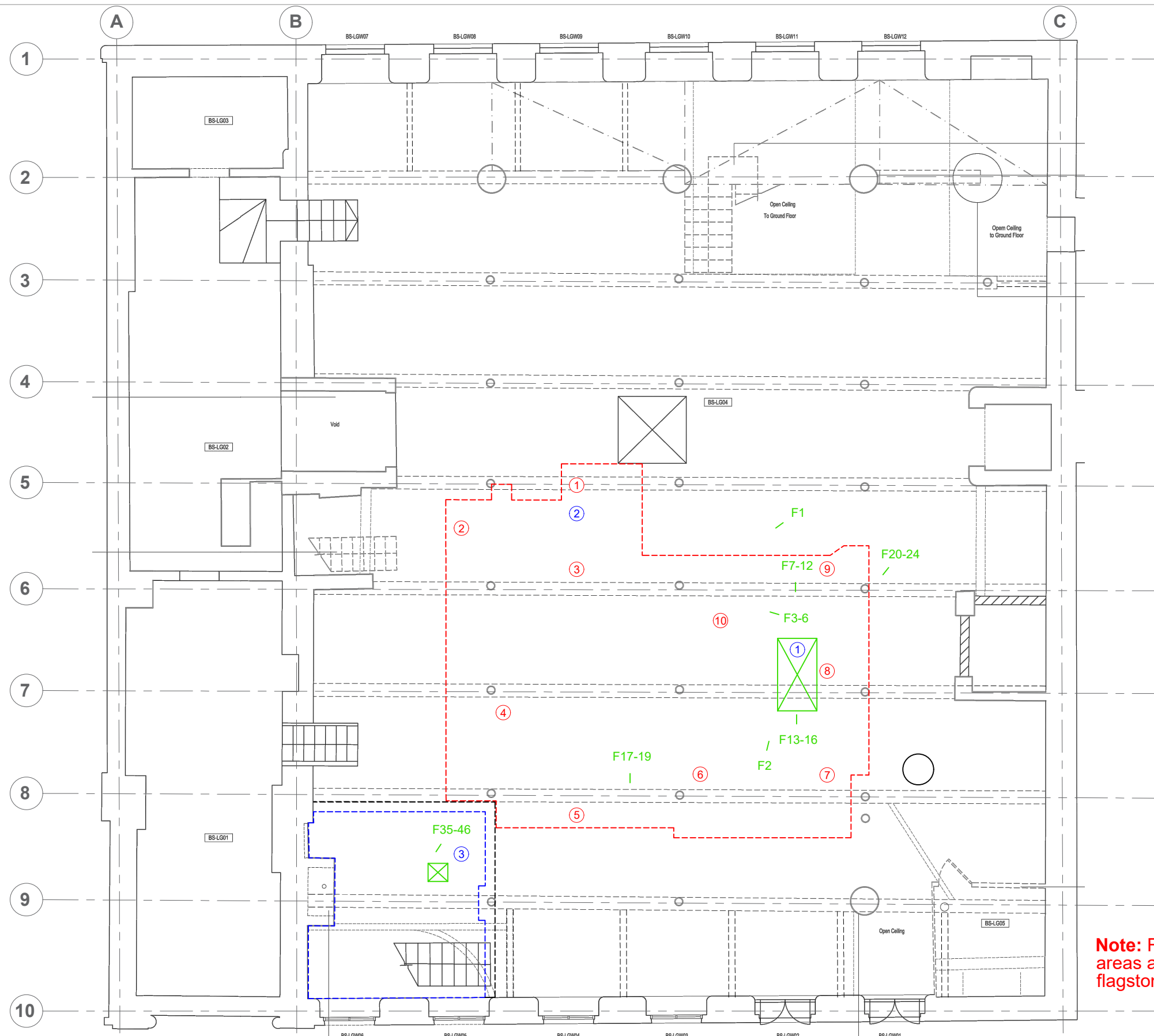
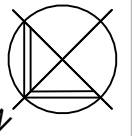
Fig 46:

Lower ground floor; showing a close-up of an adult wood-boring weevil



11 Bloom Street, Manchester
Photographs
18 January 2022

Attachment B



11 Bloom Street, Manchester - Existing lower ground floor
Timber condition survey of floorboards
18 January 2022

Hutton + Rostron Environmental Investigations Ltd
Netley House, Gomshall, Surrey, GU5 9QA Tel: 01483 203221
212.57 Site Note 6 -Not to scale- © Copyright Hutton+Rostron 2022

- Key:**
- Suspended timber floor 1
 - Suspended timber floor 2
 - Brick on end perimeter detail
 - Floorboard core sample location no.
 - Photograph location
 - Floor opening accessed during survey
 - Floorboard species identification specimen

Hutton + Rostron Environmental Investigations Limited

Mindel House, Manchester: Lower ground floor timber condition survey

Site note 7 for 24 February 2022, job no. 212.57

CONTENTS

- 1 Introduction
- 2 Staff on site and contacts
- 3 Observations
- 4 Recommendations
- 5 H+R work on site
- 6 Proposed action by H+R
- 7 Information required by H+R
- 8 Administrative requirements

Attachments

- A Photographs
- B Drawings

Distribution:

Nickesh Patel – np@beechdesignandbuild.co.uk

Prepared by:	Technical review by:	Administration by:
Chris Whitfield	DP Bannister	J Clegg

1 INTRODUCTION

1.1 AUTHORITY AND REFERENCES

Hutton + Rostron Environmental Investigations Limited carried out a site visit to Mindel House, Manchester on 24 February 2022 in accordance with instructions from Manchester Design and Building Ltd by purchase order, dated 21 February 2022 reference 1370. Drawings provided by Beech Design & Build Ltd. Ref 061 were used for the identification of structures. For the purpose of orientation in this report, the elevation facing Bloom Street was taken as facing north-west

1.2 AIM

The aim of this survey was to assess the condition of the existing floorboards at lower ground floor level and to provide recommendations on salvageability

1.3 LIMITATIONS

This survey was confined to the accessible structures. Only demolition or exposure work can enable the condition of timber to be determined with certainty, and this destroys what it is intended to preserve. Specialist investigative techniques are therefore employed as aids to the surveyor. No such technique can be 100 per cent reliable, but their use allows deductions to be made about the most probable condition of materials at the time of examination. Structures were not examined in detail except as described in this report, and no liability can be accepted for defects that may exist in other parts of the building. We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect or, in the event that such part of the property is not free from defect, it will not contaminate and/or affect any other part of the property. The contents of this report do not imply the adoption of the role of Principal Designer by H+R for the purposes of the Construction Design and Management (CDM) Regulations 2015

2 STAFF ON SITE AND CONTACTS

2.1 H+R STAFF ON SITE

Chris Whitfield

2.2 PERSONNEL CONTACTED

Nickesh Patel
Mel Hemmings

3 OBSERVATIONS

Report should be read in conjunction with the Schedule of Photographs at Attachment A and Drawings at Attachment B

3.1 LOWER GROUND FLOOR

See Figures 1-30 in the Schedule of Photographs

3.1.1 Suspended timber floor

The suspended timber floor to the centre of the ground floor comprised of 4 no. areas each with different forms of construction. Areas of floor are referenced 1-4 as per the Drawings at Attachment B

- 1 Floor 1-2 construction: The floor was of suspended timber construction and comprised abutting grooved millboards that measured 75mm deep (d) x 280mm wide (w). The millboards spanned a concrete slab and were supported at their north-east bearing atop stacks of concrete blocks. At their south-west bearing the millboards were nailed into an 80 (d) x 115mm (w) timber wall plate that sat on a brick sleeper wall. The millboards were covered by tongue and groove hardwood flooring secret nailed through the tongue into the millboards. The floorboards to Floor 1 measured 20 (d) x 60mm (w) and the floorboards to Floor 2 measured 20 (d) x 85mm (w)
- 2 Floor 3 construction: The floor was of suspended timber construction and comprised abutting grooved millboards that measured 70mm deep (d) x 230mm wide (w). The millboards spanned a concrete slab and were supported from brick sleeper walls. The millboards were covered by 18mm oriented strand board (OSB) screwed into the millboards
- 3 Floor 4 construction: The floor was of suspended timber construction comprising 85 (w) x 110mm (d) softwood joists @ 220mm ctrs. spanning north-west to south-east. The joists supported 140 (w) x 22mm (d) softwood floorboards. The floorboards were covered by 18mm OSB screwed into the floorboards. The joists spanned a ~3m deep basement which housed services probably related to utilities and perhaps the central goods lift. Note that the floor joists were supported by Acrow props that were partially corroded and appeared to have been in place for some years. Timber wedging placed above the Acrow props was decayed and floor timbers were in very poor condition in this area. This section of floor may represent a significant hazard to people accessing the building and should be cordoned off
- 4 Timber species: In all, 3 no. small specimen samples were taken. The anatomical features of sample no. 1, which was taken from a grooved millboard from Floor 2, accorded well with Norway spruce (*Picea abies*) (as per the millboards to the upper floors of Mindel House). Sample no.2 and sample no.3 were taken from the different diameter t&g floorboards to Floor 1 and 2 and were of the same hardwood timber species. The nearest match was for a species of the genus Southern beech (*Nothofagus*), possibly Myrtle beech (*Nothofagus cunninghami*) which is native to Tasmania and south-east Victoria, Australia or Patagonian oak (*Nothofagus obliqua*) which is native to Chile and Argentina. In the trade this is often called Rauli, or Rauli beech but also known as Tasmanian myrtle. Solid Rauli was imported to the UK as one timber under the name of Chile beech. Neither are available in the UK at present
- 5 Timber origin: The timbers were not thought to be original to this setting and the grooved millboards especially have probably been recycled from a different late 19th Century warehouse or mill building. All of the evidence including concrete blocks, sleeper walls using metric bricks (post 1965) with cement mortar and polythene sheets suggest significant alteration to the floor was undertaken during the late 20th Century. A newspaper dated 25th February 1996 found beneath the Floor 1 almost

certainly dated the work

- 6 Timber condition: There was ongoing rainwater penetration via the inner flat roof directly over the central goods lift and as a result, all timbers abutting or in close proximity to the lift masonry were damp and partially decayed by wet rot fungi. These decaying timbers were also subject to active wood-boring weevil infestation. Wood-boring weevil is always coincident with and dependent upon fungal growth infection in the timbers. The surface and deep moisture contents of timbers in these were typically over 40 per cent w/w and this is sufficient to sustain fungal infection and wood-boring weevil infestation. Outside of this area, surface moisture contents in the underside of millboards were typically up to 35 per cent w/w and 10 per cent w/w at depth which is too low to sustain fungal growth
- 7 Timber decay: All sheets of OSB and the floorboards and joists to Floor 4 were heavily decayed and beyond salvage. All timbers abutting the central goods lift were also heavily decayed and beyond salvage. There was evidence of a historical plumbing leak to the centre of Floor 1 and a proportion of the grooved millboards and t&g hardwood flooring in this area were heavily decayed. However, outside of these areas, a significant proportion of the grooved millboards were free from significant timber decay. Similarly, a proportion of the t&g hardwood flooring was also salvageable but this was to a lesser degree due to mechanical damage and warping attributed to fluctuating moisture contents and internal humidity

4 RECOMMENDATIONS

4.1 LOWER GROUND FLOOR

4.1.1 Suspended timber floor

- 1 Discussion: None of the timbers to Floor 4 are salvageable for reinstatement as a floor finish. H+R estimate that approximately 80% of the grooved millboards and 60% of the t&g hardwood floorboards could be salvaged in their current form, if desired. This would however only provide cover for a small area of floor
- 2 Salvageability: The millboards and floorboards could be carefully raised and transported to a timber yard for de-nailing and re-milling. If desired, the reinstated millboards could receive new loose tongues or be secret nailed through the groove for fixing purposes. The t&g hardwood floorboards could also be secret nailed. The upper surface of the millboards and floorboards should be cleaned and although they could also be planed or sanded, this process would remove the historic patina
- 3 Moisture content: The moisture contents of all floorboards should be reduced to below 12 per cent w/w prior to reinstatement. This could be achieved by forced or natural drying under controlled conditions at the timber yard to ensure no warping occurs. Upon reinstatement, the timbers would also need to acclimatise so that their moisture content reaches equilibrium so some minor warping should be allowed for

5 H+R WORK ON SITE

- 5.1** H+R inspected timber floor structures to the lower ground floor so as to determine their decay state and deep moisture content

6 PROPOSED ACTION BY H+R

- 6.1** H+R will advise on repair and conservation of timber elements, so as to minimise the risk of decay after refurbishment if instructed
- 6.2** H+R will advise on remedial detailing, so as to minimise the risk of damp and decay problems after refurbishment if instructed
- 6.3** H+R will advise on conservation of original fabric with regard to damp, decay and salt damage, as necessary and if instructed
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8 ADMINISTRATION REQUIREMENTS

- 8.1** H+R require formal instructions for further investigations and consultancy on this project
- 8.2** H+R require confirmation of distribution of digital and printed copies of reports and site notes

Attachment A



Fig 1:

Lower ground floor; showing a general view of the suspended timber floor around the central goods lift. The floor comprised 4 no. areas each with different forms of construction

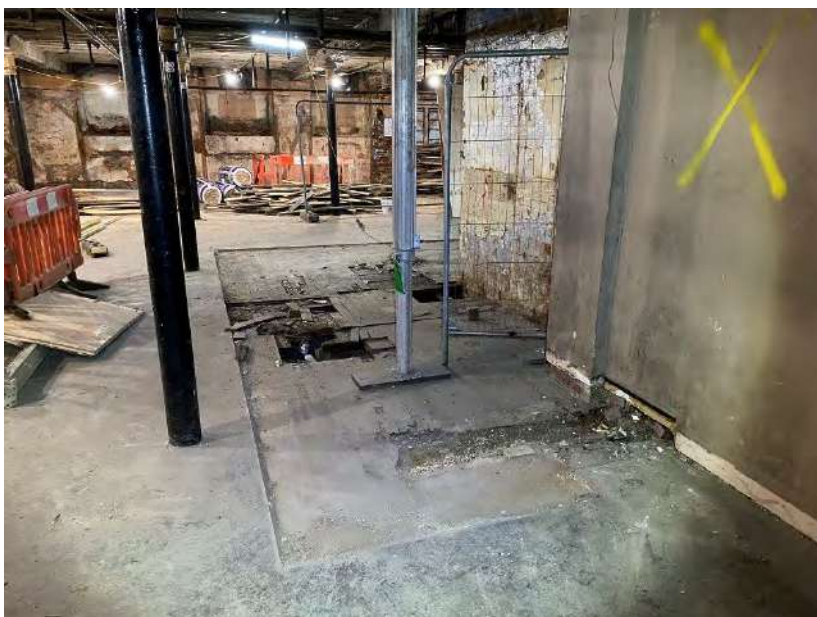
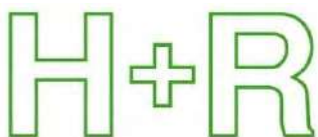


Fig 2:

Lower ground floor, Floor 1; showing a general view of the floor timbers which were bounded by a solid concrete floor



Mindel House, Manchester
Photographs
24 February 2022



Fig 3:

Lower ground floor, Floor 1; showing an area of decay in the grooved softwood millboards and hardwood t&g floor covering. Decay was historical and appeared to be related to a former plumbing leak



Fig 4:

Lower ground floor, Floor 1; showing a close-up of the heavily decayed timbers in the location of a former plumbing leak



Mindel House, Manchester
Photographs
24 February 2022



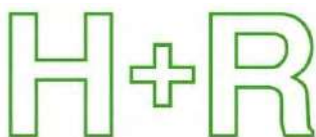
Fig 5:

Lower ground floor, Floor 1; showing exposure of the void beneath the millboards. The millboards were supported atop stacks of concrete blocks in many locations



Fig 6:

Lower ground floor, Floor 1; showing a view of the concrete blocks from within the floor void. The blocks were stacked from a concrete slab



Mindel House, Manchester
Photographs
24 February 2022



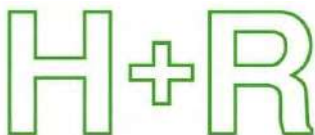
Fig 7:

Lower ground floor, Floor 2; showing the millboards bearing on a timber wall plate over a sleeper wall around the central goods lift



Fig 8:

Lower ground floor, Floor 2; showing the date of a newspaper found beneath the floor. This probably dates from the period of alteration to this floor structure



Mindel House, Manchester
Photographs
24 February 2022



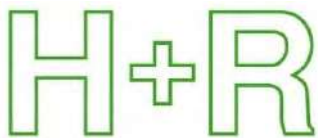
Fig 9:

Lower ground floor, Floor 2; showing decay in the ends of the millboards where they were abutting the central goods lift masonry wall



Fig 10:

Lower ground floor, Floor 2; showing an example of a live wood-boring weevil



Mindel House, Manchester
Photographs
24 February 2022



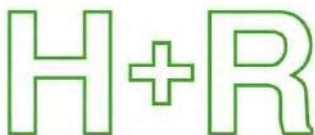
Fig 11:

Lower ground floor, Floor 2; showing a length of millboard that was removed for inspection. Note the milled grooves in the upper 1/3rd of the boards



Fig 12:

Lower ground floor, Floor 2; showing a ruler placed in the groove. This is representative of a loose metal tongue



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Photographs
24 February 2022



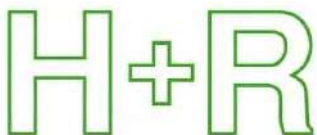
Fig 13:

Lower ground floor, Floor 2; showing a view of the underside of a millboard. There was no significant decay in this millboard



Fig 14:

Lower ground floor, Floor 2; showing a section of removed hardwood t&g flooring. There was no decay in this floorboard



Mindel House, Manchester
Photographs
24 February 2022



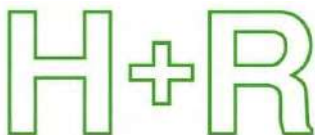
Fig 15:

Lower ground floor, Floor 2; showing the underside of a section of removed hardwood t&g flooring. There was wet rot mycelium growth over the timber but no decay was identified



Fig 16:

Lower ground floor, Floor 2; showing a view of the concrete slab beneath the millboards. Note that there was no evidence of decay or wood-boring weevil or beetle infestation to the underside of the millboards



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Photographs
24 February 2022

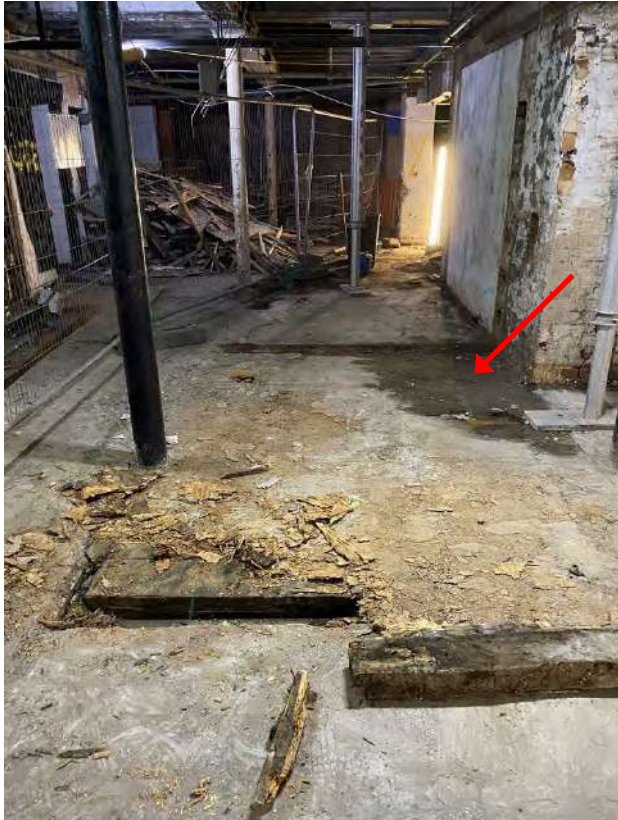


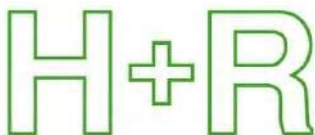
Fig 17:

Lower ground floor, Floor 3; showing area of ongoing water penetration via the central roof. Timbers were wet and decayed by wet rot fungus and active wood-boring weevil infestation



Fig 18:

Lower ground floor, Floor 3; showing millboards exposed beneath the OSB floor covering. Note the millboards were laid directly onto concrete and were heavily decayed by wood-boring weevil in this location



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Photographs
24 February 2022



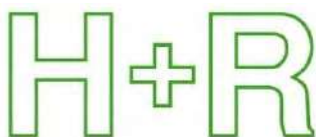
Fig 19:

Lower ground floor, Floor 3; showing millboards spanning between brick sleeper walls



Fig 20:

Lower ground floor, Floor 3; showing brick sleeper wall to the perimeter of the area of timber floor. Note that the concrete floor was applied over loose concrete blocks



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Photographs
24 February 2022



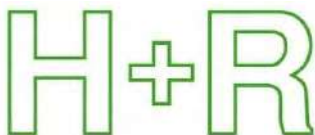
Fig 21:

Lower ground floor, Floor 3; showing a removed brick that was of metric dimension (post 1965). The sleeper wall appears to have been built during the late 20th Century



Fig 22:

Lower ground floor, Floor 3; showing a view of the concrete slab beneath the millboards. Note that there was no evidence of decay or wood-boring weevil or beetle infestation to the underside of the millboards here



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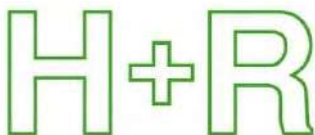
Fig 23:

Lower ground floor, Floor 4; showing a small opening made through the decayed OSB floor covering



Fig 24:

Lower ground floor, Floor 4; showing softwood joists and tongue and groove floorboards beneath the OSB. The joists spanned a small basement



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Photographs
24 February 2022



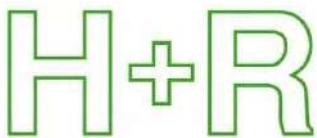
Fig 25:

Lower ground floor; showing a view inside the basement beneath Floor 4. Note the surface corrosion to the Acrow props



Fig 26:

Lower ground floor; showing the Acrow props supported from an RSJ to the floor of the basement



Mindel House, Manchester
Photographs
24 February 2022



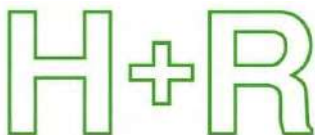
Fig 27:

Lower ground floor, Floor 4; showing significant decay in the timber wedging placed beneath the floor joists



Fig 28:

Lower ground floor, Floor 4; showing an example of a high surface moisture content in a partially decayed floor joist. The timber was subject to active wood-boring beetle infestation



Mindel House, Manchester
Photographs
24 February 2022



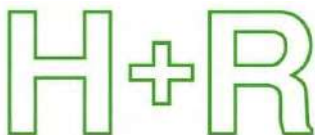
Fig 29:

Lower ground floor, Floor 4; showing hazard warning spray painted onto the floor by H+R



Fig 30:

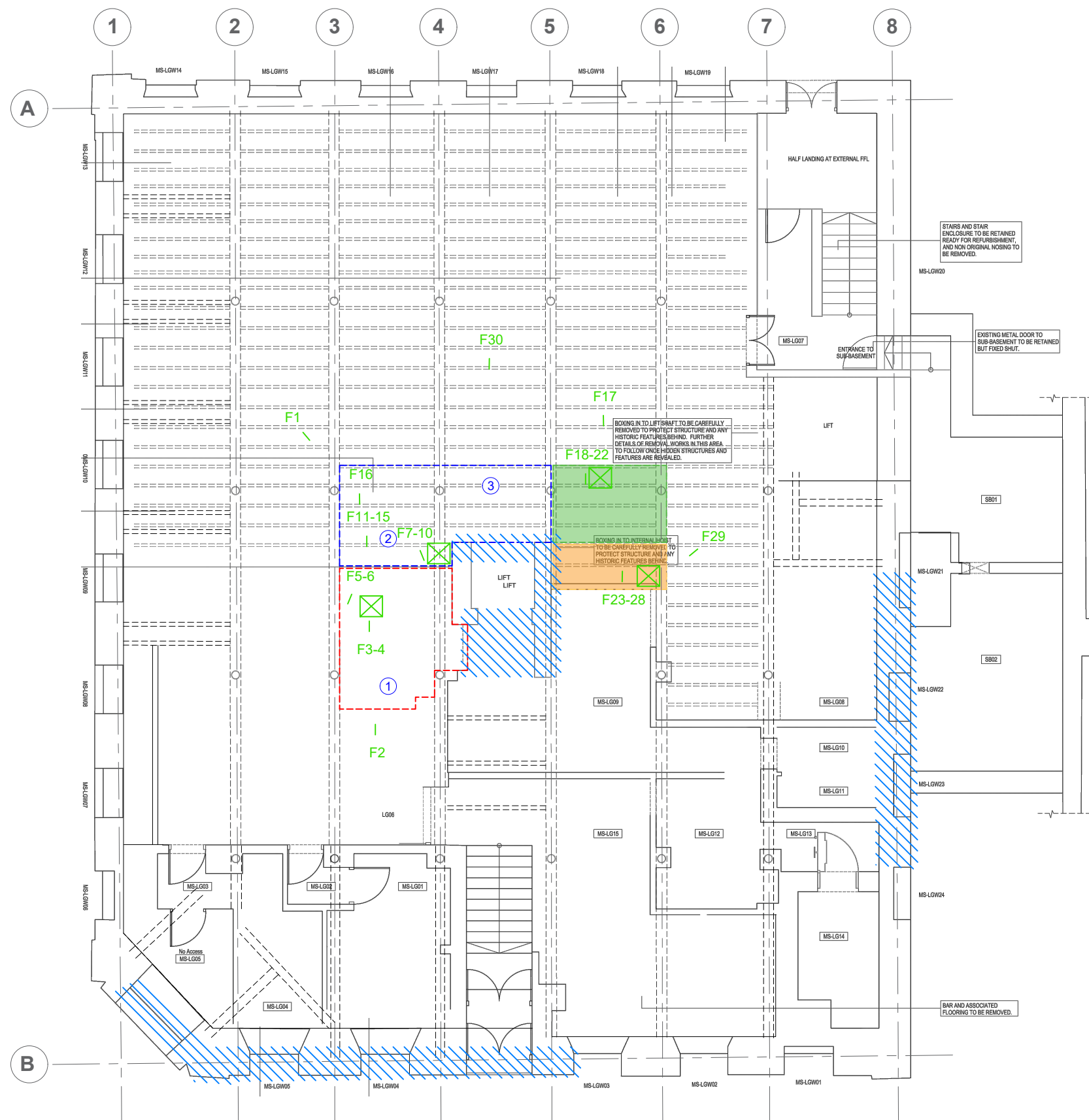
Lower ground floor, Floor 4; showing the area of floor cordoned off by H+R following completion of the survey



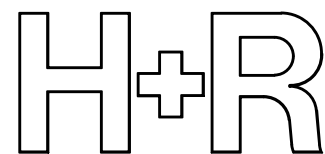
Mindel House, Manchester
Photographs
24 February 2022

Hutton + Rostron Environmental Investigations Ltd, Netley House, Gomshall, Surrey, GU5 9QA
Tel: 01483 203221 Fax: 01483202911 email: ei@handr.co.uk
Job no. 212-57 Site Note 7 Page15 © Copyright Hutton+Rostron 2022

Attachment B



Note: Floor finishes outside of hatched areas are of concrete, screed, earth or flagstone

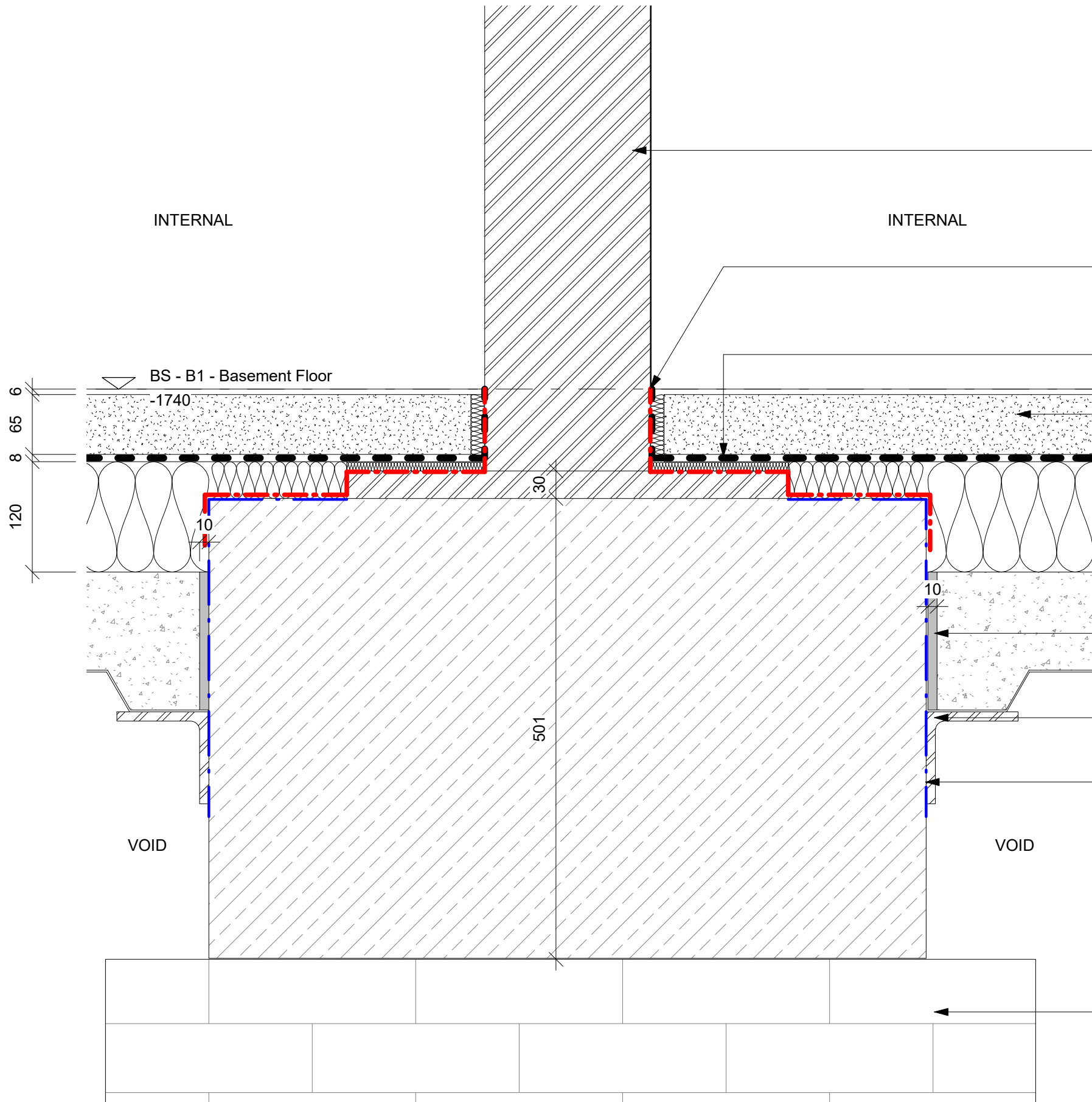


Mindel House, Manchester - Existing lower ground floor Timber condition survey of floorboards 24 February 2022

Hutton + Rostron Environmental Investigations Ltd
Netley House, Gomshall, Surrey, GU5 9QA Tel: 01483 203221
212.57 Site Note 7 -Not to scale- © Copyright Hutton+Rostron 2022

Key:		Suspended timber floor 1		Area subject to rainwater penetration
		Suspended timber floor 2		
		Suspended timber floor 3		
		Suspended timber floor 4		
		Photograph location		
		Floor opening inspected during survey		
		Floorboard species identification specimen		

F – Details relating to Solution A1 & B1



The sealing of gaps and air paths are to be in accordance with NBS Clause K10/510.

Whole of existing lead painted iron column and bearing plate to be stripped of failed and defective paint back to existing bare material, as per specialists details and specifications. Primed and re-coated with intumescent as per fire paint sub-contractor specialists specifications in accordance with fire paint manufactures details and specification. Only after this process should any tanking materials be applied to the existing structure.

Newton 109-LM liquid membrane to be applied to existing column and overlapped on to cementitious waterproofing applied to stonework as per tanking specialists details and specification.

Perimeter as per tanking specialists details and specification, 8mm drainage layer to be dressed up and around existing column and bearing plate, with insulation below.

Floor build-up:
65mm Power floated sand cement floating screed,
8mm tanking membrane to tanking specialists details and specifications,
50mm Tape jointed closed cell insulation boards (compressive strength to be confirmed by SE),
150mm Metal deck concrete slab to SE details and specifications supported by existing brick dwarf walls.
Floor finish to be applied to screed as per ID specifications and details.

Structural movement joint between existing and proposed materials to SE details and specifications.

Structural steel resin bolted into existing stone pad supporting proposed floor build up. To SE details and specifications.

Cementitious waterproofing slurry applied to existing; foundation pad stone, metal bearing plate and column. As per tanking specialists details and specifications.

Existing floor build up consisting of timber boards screeds, and other unsuitable materials to be removed from site to make way for new proposed build up to be laid.

Existing brick pad foundation

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
2. ALL LEVELS ARE IN METRES UNLESS OTHERWISE STATED
3. DIMENSIONS ARE NOT TO BE SCALED FROM THE DRAWING
4. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF THE BUILDING REGULATIONS 1991 (INCLUDING AMENDMENTS) AND ALL RELEVANT BRITISH STANDARDS/CODES OF PRACTICE
5. CONTRACTOR IS RESPONSIBLE FOR THE CORRECT SETTING OUT OF THE WORKS ON SITE, ALL DIMENSIONS TO BE CHECKED PRIOR TO FABRICATION OF MATERIALS
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS
7. THIS DRAWING SHALL NOT BE DUPLICATED WITHOUT THE EXPRESS WRITTEN PERMISSION OF BEECH DESIGN AND BUILD LIMITED

C	ISSUED FOR APPROVAL	NP	28-02-22
B	ISSUED FOR APPROVAL	NP	06-12-21
A	ISSUED FOR CONDITIONS RELEASE	NP	20-08-21

Rev	Description	By	Date
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CLIENT:

PICCADILLY WAREHOUSE

PROJECT:

BLOOM - PROPOSED
EXISTING BASEMENT
COLUMN TO NEW FLOOR
JUNCTION DETAIL

DRAWING TITLE:

APPROVAL

DRAWING STATUS:

DRAWN: NP | CHECKED: NP

SCALE: 1 : 5 | DATE: 18.08.21

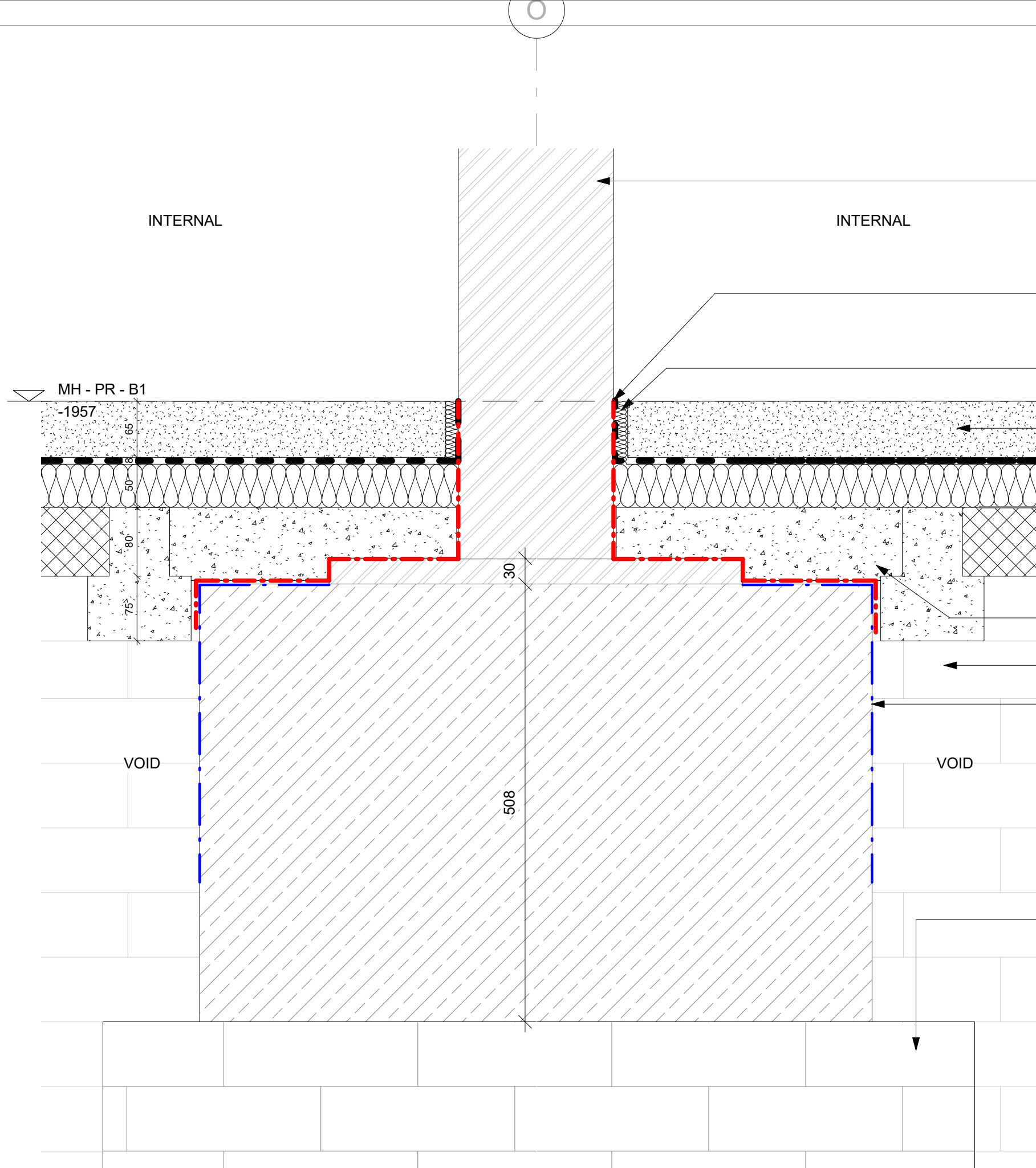
013-MDB-PW-XX-DT-A-0001

DRAWING NUMBER:

C

REV:

1 EXISTING BASEMENT COLUMN TO NEW FLOOR JUNCTION



The sealing of gaps and air paths are to be in accordance with NBS Clause K10/510.

Whole of existing lead painted iron column and bearing plate to be stripped of failed and defective paint back to existing bare material, as per specialists details and specifications. Primed and re-coated with intumescent as per fire paint sub-contractor specialists specifications in accordance with fire paint manufactures details and specification. Only after this process should any tanking materials be applied to the existing structure.

Newton 109-LM liquid membrane to be applied to existing column and overlapped on to cementitious waterproofing applied to stonework as per tanking specialists details and specification.

Perimeter as per tanking specialists details and specification, 8mm drainage layer to be dressed up and around existing column and bearing plate, with insulation below.

Floor build-up:
65mm Power floated sand cement floating screed,
8mm tanking membrane to tanking specialists details and specifications,
50mm Tape jointed closed cell insulation boards (compressive strength to be confirmed by SE),
Existing structure/ New beam & block floor to SE details and specifications supported by existing brick dwarf walls.
Floor finish to be applied to screed as per ID specifications and details.

Concrete infill over stone pad

Existing supporting dwarf walls

Cementitious waterproofing slurry applied to existing; foundation pad stone, metal bearing plate and column. As per tanking specialists details and specifications.

Existing screeds and or timber boards and other unsuitable materials to be removed from site to make way for new proposed build up to be laid.

Existing brick pad foundation

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
2. ALL LEVELS ARE IN METRES UNLESS OTHERWISE STATED
3. DIMENSIONS ARE NOT TO BE SCALED FROM THE DRAWING
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A ISSUED FOR APPROVAL NP 28.02.22

Rev Description By Date



CLIENT:

PICCADILLY WAREHOUSE

PROJECT:

MINDEL - PROPOSED
EXISTING
COLUMN TO BASMENT
FLOOR JUNCTION

DRAWING TITLE:

APPROVAL

DRAWING STATUS:

DRAWN: NP | CHECKED: NP

SCALE: 1 : 5 | DATE: 28.02.22

013-MDB-PW-XX-DT-A-0002 A
DRAWING NUMBER: REV:

G – Protectahome CV, Layouts, Details, Specifications and Technical Responses

Information is also contained within digital folder provided to MCC along with submission.



Established 1980

PROTECTAHOME LTD

*Targeting problems with the **best** solutions*

Our Ref: 92425.2/RDT/RLB/NM
Your Ref:

17th August 2021

Natalie Silva QS
Beech Design and Build
Bridgwater House
58-60 Whitworth Street
Manchester
M1 6LT

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Grafton House, Paget Close, Bromsgrove,
Worcestershire, B61 7JE
Telephone: (01527) 577766
Email: info@protectahome.co.uk
Website: www.protectahome.co.uk
UK Enquiry Line: 0845 601 1980

By Email Only

Dear Natalie

Re: TENDER FOR SCHEME OF WATERPROOFING, PICCADILY WAREHOUSE (11 BLOOM STREET & MINDEL HOUSE), MANCHESTER

Further to our recent emails, telephone conversation and subsequent meeting on site, I write to provide our scheme and offer in respect of installing a Type C, drained protection, system of Waterproofing to walls and floors as denoted on the plan and sections attached.

In reviewing our offer, I respectfully advise that my design negates the need for the perimeter and cross floor drainage channel to be set within a trench like void to the slab. The design allows for the void to be formed via a 50mm layer of closed cell insulation, as **Section A**. This not only saves the contractor a significant outlay in forming the trench, but enhances serviceability.

I have included with the offer to treat the overhead vaulting with a standard 8mm cavity drain membrane with brick plug fixings installed at a rate of 14 per square meter. It is assumed that the finishes to such will be formed by others, and via a self-supporting frame. It is further assumed that the vaulting is not subject to live water ingress, or is sited below an external soffit or deck.

We understand the Lift pits are also to be incorporated in to the scheme, and will require the benefit of a long term guarantee and design PI. Accordingly and in accordance with BS8102 and good practice, is it proposed such be treated as per the accompanying Section Detail with each pit being built from water tight concrete.

The listed nature of the building limits the protection we are able to provide, in essence limiting such to the fitment of a Type C drained down system only. With this in mind it is of some importance the structure be thoroughly overhauled with all defects, poor mortar and or mortar coursing being made good, in advance of our work.

The basement incorporates 48 concrete columns that penetrate the structural slab, and therefore provide a passage way for water ingress. For the sake of this offer we have allowed to treat the lower portion of such with a (non-reversible) Type A Cementitious tanking material, for example Newton 107f. Given the above statement on listing, we suggest you seek separate approval for this treatment.

Given the complexity of the project and the need to continue dialogue, not least regarding sequencing, I recommend a further on site meeting be arranged once the new floor slabs are in place.

I suggest the items listed below form the agenda for this meeting:

- Discharge from the internal drain (connection to mains drain).
- Surface deviation from datum (flatness and regularity of the floor slab).
- 50mm closed cell - void forming- floor insulation (included in to our scheme of works).

Regional Offices: Birmingham, Bristol, Bromsgrove,
Caldicot, Cardiff, Cheltenham, Leamington Spa,
Llanelli, London, Newport, Plymouth, Stockport

Registered in England and Wales No. 1476443



- Service Port (location and accessibility).
- Service penetrations.
- The lightwells (drainage and maintenance).
- Vaulted / overhead masonry.
- Lift pits (2 platform and 2 standard depth).
- Listed nature of building.
- Concrete columns.
- Battery backup / power outage.
- End use (Environmental grade as referred to below).
- Primary defence (as referred to below).
- Sequencing and program.

The scheme that follows assumes all enabling, preparatory and finishing works will be carried out by you or your builders and that Protectahome's work will be limited to the design and fitment of waterproofing only.

I confirm systems designed by Protectahome are covered by our own Professional Indemnity Insurance and the installation carries a 10 Year Guarantee. In addition, we can provide optional Guarantee Protection Insurance if required.

The scheme complies with general guidance set out within BS8102 Code of Practice for Protection of Structures Against Water from the Ground.



SPECIFICATION OF WORK

1. FOR WATERPROOFING TO BE CARRIED OUT BY YOUR BUILDERS

To be read in conjunction with the plan and section attached:

Preparation - Summary

Allow parking for one van for the duration of the works.

Provide welfare, a free supply of water and electricity and allow uninterrupted access.

Provide, free of charge, a skip for the disposal of waste and membrane off cuts.

Remove all and any fittings, electric cables and plumbing.

Remove all joinery.

Remove the existing linings, including all plaster

Remove any unwanted walls and affect all structural works.

Repair and make good any defects within walling.

Remove all floor finishes including any screed

Clean/Scabble and/or make good the lower 1.0m margin of all 48 concrete columns.

- If the wall / column joint is defective, such must be made good.

Construct the 4 lift pit super structures from Type B watertight concrete, as the attached section detail, with such incorporating a sump chamber void being 650mm x 650mm x depth relevant to the type of lift pit.

Remove the existing floor and replace with a new concrete slab, such to be laid on a simple curing membrane – wall to wall only.

- The new floor slab must be smooth, flat and level and not deviate from datum, being the sump chamber edge / lip, by +/- 5mm. See important notes below.
- The slab must incorporate 8 number concrete lined voids being 650mm x 650mm x 650mm ready to accept our sump liners.
- If the existing slab is to be retained such must be in good order, being free from defect.
- If levelling required this must be carried out utilising Ardite two part self-levelling compound or, if required, a sand / cement based fully bonded sacrificial screed (not gypsum based).

Finishes: (to be carried out following our work):

Once the floor insulation and floor membranes are installed, lay a min 65mm thickness screed to appropriate British Standard.

In front of our clear cavity drain wall membrane, construct a timber or metal framed dry lining.

To the meshed membrane of window reveals apply, via dot and dab adhesives, standard 12.5mm plaster boards and skim plaster finish.

Connect all sump chamber stand pipes to the mains drainage utilising 50mm pressure pipe only.



To each of the sump units (12 in number) provide a 240v power supply (2 x 13amp non switched spurs to each), and make all final electrical connections.

- If battery backup devices are purchased, make all final electrical connections.

Install first/second fix electrics as required.

Fit 12.5mm plaster board to dry linings.

Make good /Install new ceiling, insulate if required.

Supply and fit new skirting board/joinery/door linings/staircase.

2. FOR WATERPROOFING TO BE CARRIED OUT BY PROTECTAHOME

To be read in conjunction with our sketch plan attached.

Apply PTS Tanking slurry / Newton 107f, or other similar approved material to the column to an approximate height of 1.0m, extending to the floor slab by 50cm.

To maximum height, install 8mm Clear Cavity Drain membrane to all walls, with brick plug fixings at 1.5m horizontally and 1.0m vertically.

Install Meshed Cavity Drain Membrane to window reveals.

Install 8mm Clear Cavity Drain membrane to the underside of vaulting, with brick lug fixings at a rate of 14 per square metre.

Install 8mm Clear Cavity Drain membrane to the lift pits as designated on the section attached.

Install drainage channels as indicated on the enclosed sketch plan, including the lift pit sections. Test and leave in full operating order ready for waterproofing to be applied.

Install servicing ports (see plan for location).

- It is imperative these ports are made accessible (for servicing) and that any dry lining accommodate access to such. We suggest, for aesthetic reasons, the ports be concealed via an electrician blank back box.

Install 2 pumps and a battery operate alarm to each of the lift pits.

Install sump liner to 8 prepared voids and concrete in to place.

Install 2 automatic pumps the sump liners.

Install 1.0m long discharge pipes to each of the pumps.

- For the purpose of this offer, I have allowed to install short, 1.0m long, discharge pipes only. Onward supply and final connection to mains drain is to be carried out by your own plumber. It is important 50mm pressure pipe / solvent weld plumbing is utilized in all locations

Install battery operated high water alarms.

To the entire floor areas install 50mm closed cell insulation.

To the entire floor area install 8mm Cavity Drain Floor Membrane, such tape sealed to wall membrane.

Revisit site to commission all sump units.



IMPORTANT NOTES:

PRIMARY DEFENCE (especially important as scheme is restricted to one form of waterproofing defence only)

Any drained down waterproofing system relies on the structure to provide the primary defence against ingressing ground water. With this in mind it is important all defects, voids and poor mortar coursing within original walling is made good prior to the installation of our membranes. Obviously, this also applies to any new walling being constructed in the basement.

SURFACE REGULARITY AND DEVIATION FROM DATUM:

Where Protectahome are to lay drainage channels on top of the new structural slab, such must be level and have a Surface Regularity (flatness) of no less than SR1 (3mm on a slip gauge) as defined in table 5 of BS 8204 – 1 2003. The base on to which the drainage channel sits plays an essential role in the drained protection waterproofing system and therefore the surface should have a surface regularity and departure from datum in keeping with the subsequent fitting of “specialised equipment”.

The discharge points for the drained protection waterproofing system must be considered as the datum point for the waterproofing system. The deviation from the datum may not be more than +/-5mm at any point between the datum and the furthest point on the floor to which the continuous waterproofing system extends. Equally, the deviation from the datum may be up to +15mm as long as this point of deviation is at the furthest point from the datum and does not occur at any mid-point that may lead to water becoming stranded.

SERVICE REQUIREMENTS:

The drained protection (Type C) waterproofing system is wholly reliant upon the removal and management of seepage of ground water from behind the membranes employed. In order to ensure the long term efficacy of the waterproofing system regular inspection and servicing will be required.

The Peripheral Drainage Channel (PDC) and Cross Floor Drainage Channel (CFDC) must be inspected and periodically flushed out, subject to site conditions, to ensure that any seepage/free water behind the drained protection waterproofing is managed and safely discharged.

The sump units and drainage channels will require an assessment by Protectahome six months after installation / commissioning at which point we will be happy to provide you with our recommendations and the frequency of servicing requirements. The post installation assessment is made at no further cost to you but is subject to the account for the works being paid in full and on time

The post installation assessment does not include for any service requirements that might be identified at the time of the assessment being completed.

Protectahome can provide regular/annual services of the waterproofing system on an ongoing charged basis for the duration of the guarantee period or longer if so required. This is subject to the instructions of the beneficiary of any guarantee being received and a service agreement being offered and accepted.

END USE:

It is anticipated your client wish to utilise the area we are to treat as semi domestic living accommodation, with bin stores and plant room areas ?

- It is imperative when designing a suitable system of waterproofing the end use is accurately assessed. Should you consider our anticipated end use to be inaccurate please advise us so in order that we may reconsider our recommendations.

Having given consideration to the proposed end use and the environmental grades defining performance levels as set out in British Standard 8102 – which are as follows, we have allowed within our costs to provide a waterproofing solution capable of delivering a **Grade 3 Environment for the accommodation with Grade 2 for the bin stores etc.**



Grade	Example of use of structure	Performance Level
1	Car Parking; plant rooms (excluding electrical equipment); workshops	Some seepage and damp areas tolerable, dependent on the intended use. Local drainage might be necessary to deal with seepage.
2	Plant rooms and workshops requiring a drier environment (than Grade 1); storage areas	No water penetration acceptable. Damp areas tolerable; ventilation might be required
3	Ventilated residential and commercial areas, including offices, restaurants etc., leisure centres	No water penetration acceptable Ventilation, dehumidification or air conditioning necessary, appropriate to the intended use
The previous edition of BS8102 referred to 4 Environmental Grades . Grade 4 has not been retained in the current standard as the only difference in performance to a Grade 3 Environment related to the level of ventilation, dehumidification or air conditioning being provided.		

- Support measures including the provision of heating, ventilation, servicing of drainage provisions and general maintenance will be required to meet and maintain **Environmental Grades**. Such measures have **not** been included for within our quotation.

FLOODING FROM ABOVE:

This system has not been designed to control water penetrating from the ground floor due to catastrophic/flash surface flooding of the area surrounding the property.

CONDENSATION:

Once the waterproofing system has been applied, all rooms treated will require the application of natural/powered ventilation to ensure that the environmental grade is met and maintained. We have not costed for the installation of condensation control products, as the exact conditions may only be established once the waterproofing has been completed.

We would advocate testing of the relative humidity on site once the waterproofing system has been installed and any "wet trade" work has dried out. **Please Note:** Failure to embrace this advice may lead to the formation of black spot mould.

For your assistance we have reproduced below information relating to environmental grades as contained within CIRIA documents C139 and C140. This information is given for your guidance and as an indication of the relative humidity and temperature ranges that may need to be achieved. For site-specific information we recommend that you consult a heating and ventilation specialist.

Grade	Relative Humidity	Temperature Range
3	40-60%	Offices: 21-25 °C
	55-60% for restaurants in summer	Residential: 18-22 °C

Note: In order to install some powered ventilation products it may be necessary to install ducting and a power supply.

It is often beneficial to incorporate these requirements into the finish of the water proofing system to aid the installation process at a later date. We would be happy to discuss this with you in more detail when the works are underway.



POWER OUTAGE:

The Type C Drained Protection waterproofing system is wholly reliant upon the removal of water from the behind the membranes. Where drainage discharges to a sump and is then pumped away there is a risk of flooding occurring in the event of a power failure. In properties prone to short term power outage we advise a battery backup system be installed. In properties prone to regular and / or long term outage we advise consideration be given to the fitment of a generator pack.

For your consideration we have provided a unit cost for a single battery and back up device as per the attached pdf.

Side Note 17/08/2021 - As discussed via telephone and email we have agreed to supply 6 number units

GENERAL:

No provision is yet made to treat steps or staircases, light wells and overhead soffits other than that specifically mentioned.

It is essential that the external fabric of the building be maintained in a weatherproof and watertight condition to ensure that penetration of rainwater is prevented.

It is vitally important that the waterproofing is not punctured in any way. If a fixing, through our membrane, is required advice should be sought from ourselves. Similarly, should the membrane be damaged or disturbed after completion we must be advised immediately as repair will be necessary.

This quotation assumes the structure is sound enough to accept the direct application of the waterproofing system. Should it be found that this is not the case, the specification may have to be changed and additional costs may apply.

We reserve the right to amend this specification of remedial works at any time. We would of course consult with the client regarding fundamental changes to the specification.

Any works undertaken must comply with all appropriate statutory planning and building control regulations. Failure to do so could result in any non-compliant works being removed as well as give rise to other liabilities. Please note that our engagement does not include any analysis of or giving any opinion on what needs to be done to comply with such planning and building regulations matters.

It is your responsibility to apply and abide by all conditions imposed and we recommend that you take independent advice from a suitably qualified professional (e.g. an architect/planning designer) on such matters.

Our enclosed specification is based upon waterproofing requirements as set out in BS8102 but we would be pleased to upgrade our specification and quotation to accommodate any statutory compliance required if you're planning/building regulations adviser tells us what additional works need to be undertaken in this regard.

The company accepts no responsibility for additional costs/fees and/or delays as a result of your failure to obtain necessary permissions. Furthermore, receipt of your written order will signify to us that all permission/approval, if required, has been granted.

Please note that, in addition to the above, a structural engineers design may be required for certain works such as light-well construction, underpinning, floor construction etc.



OFFER

Re: TENDER FOR SCHEME OF WATERPROOFING, PICCADILY WAREHOUSE (11 BLOOM STREET & MINDEL HOUSE), MANCHESTER

To carry out the work as set out within the specification of remedial works above:

2. FOR TYPE C WATERPROOFING, TO INCLUDE:

- Cavity drain wall membrane to a maximum height of 3.0m
- Meshed Cavity drain membrane to window reveals
- Perimeter and cross floor drainage
- Service ports for the above
- 50mm void forming closed cell floor insulation
- 8mm Cavity drain floor membrane
- 8mm Cavity drain membrane to vaulted masonry
- 8mm Cavity drain membrane and drainage to lift pits (4 in number)
- Two pumps and a high water alarm to each of the lift pits (4 in number)
- 8 number sump units, with each including two pumps and a high water alarm, as the basement as plan

£ **Plus VAT at standard rate.**

2. FOR TYPE A WATERPROOFING TO THE 48 COLUMNS

£ **Plus VAT at standard rate.**

2. FOR THE SUPPLY OF SIX NUMBER BATTERY BACK UP DEVICE (as per the attached pdf file)

£ **Plus VAT at standard rate.**

2. FOR GPI BACK UP INSURANCE

£ **Zero rated for VAT (this is based on 10 separate dwellings)**

(Note: If there are to be more or less dwellings/units within the Waterproofed area, please advise in order that we may provide a revised figure)

All quotations issued by the company are subject to our standard terms and conditions a copy of which is attached.

Our quotation for work does not include VAT, which will be charged at the standard rate unless otherwise stated.

Our quotation has been prepared on the basis waterproofing and drainage works will be carried out in NO MORE THAN 6 separate, but continuous visits to site. The need for return visits as a result of inadequate or poor preparation, for example, will be chargeable to the client at a rate of ...per return visit.

The final visit is to commission the pump units and will require the client to have a 240v power supply in place.

The Protectahome Guarantee for the waterproofing system will not be issued unless the sump and pumps have been commissioned, tested and a commissioning certificate has been created.

The system Guarantee must be validated by regular inspection and servicing (annually as a minimum) of the sump/s, pump/s and connected drainage channels which will be subject to site conditions and requirements as directed by Protectahome Limited following the post installation assessment.



The guarantee for the work will not be issued until the work has been completed to specification and our account has been paid in full.

This quotation will remain open for acceptance for a period of 28 days from the date of issue. Once accepted the work must be carried out within three months.

GUARANTEE INSURANCE

With over Forty years of trading behind us we consider that your Guarantee for the work will be meaningful and worthwhile. In addition, we are able to offer you the opportunity to obtain an Insurance backed Guarantee to compliment that issued to you by Protectahome Limited.

This Insurance backed Guarantee gives you the opportunity to obtain totally independent Guarantee Insurance for a nominal one off fee.

The insurance issued will give you peace of mind that should Protectahome Limited cease to exist during the 10 year period of the Waterproofing Guarantee, your interest is secured by the existence of the Guarantee Insurance.

Protectahome will offer the Guarantee back-up insurance, which will be issued if the fee is paid by the client. See estimate/quotation.

Upon completion of the Protectahome work and settlement of the account, Protectahome will forward the guarantee insurance documents to the insurer, who will process them and issue the insurance certificate.

In addition, Guarantee Insurance **does not attract VAT** and there are **no annual premiums** to be paid.

PAYMENT TERMS

Commercial Accounts

A 50% deposit is payable upon acceptance of our quotation. The balance is payable in full within 30 days of the date of valuation/invoice. We reserve the right to issue interim valuations/invoices from time to time for work completed and materials on site.

In the event of late payment, interest may be charged in accordance with ***The Late Payment of Commercial Debts (Interest) Act 1998*** (and any amendments thereto) in addition to costs and collection charges that may accrue.

The content of this entire document and attachments are provided for the stated purpose and the sole use of the named client/addressee on page one. It may only be used within the context of the instructions under which it has been prepared. Any inspection, investigation, letter or report has been carried out and prepared with skill, care and diligence reasonably to be expected of a competent specialist contractor within our field of expertise. However we accept no responsibility whatsoever to any third party for the whole or any part of this document and attachments, any such persons rely upon this document and attachments expressly at their own risk.

Please confirm your instructions to proceed with the works on the acceptance form enclosed with this report. Acceptance of this budget quotation signifies that you have read and understood this report and all attachments and agree to be bound by the company's standard terms of trading.



We look forward to receipt of your instructions to proceed with the work, in the interim should you have any queries please do not hesitate to contact me directly.

Yours sincerely

PROTECTAHOME LIMITED

Richard tye

RICHARD D TYE CTIS, CSSW
Area Manager

Enc: Terms and Conditions of Business
Acceptance



Commercial Customers Accepting this Quotation

VAT Domestic Reverse Charge

In line with new legislation, could you please answer the following questions:

Tick where appropriate please

Are you the end User

Yes

☐

No

☐

Are you registered for VAT

Yes

☐

No

☐

If "Yes", please provide your VAT number: _____

Are you registered for CIS

Yes

☐

No

☐

If "Yes", please provide your Unique Tax Reference (UTR): _____

Unless specified differently the following wording will be included on our invoice where VAT Reverse Charge applies:

Customer to pay output tax of £ to HMRC

Or

Please include the specific narrative that you would require on an invoice from us to comply with reverse charge VAT:

PROTECTAHOME LIMITED

Usk House, Langstone Business Park, Priory Drive, Newport, NP18 2LH
Tel: 01633 411977 Fax: 01633 411903
Email info@protectahome.co.uk

ACCEPTANCE OF QUOTATION

TENDER FOR SCHEME OF WATERPROOFING, PICCADILY WAREHOUSE (11 BLOOM STREET & MINDEL HOUSE) – MANCHESTER

		Please tick Item/s Accepted in the box	✓
2. FOR TYPE WATERPROOFING			
2. FOR TYPE A WATERPROOFING			
2. TO SUPPLY SIX NUMBER BATTERY BACK UP DEVICES)	Quoted 17/08/2021		
TOTAL	(VAT is chargeable at the standard rate)	£ TBC + VAT*	
Deposit Due = 50% of total	Deposit enclosed	£ To Be Confirmed	✓
GUARANTEE INSURANCE		£ This is zero rated for VAT	

*VAT is chargeable at the standard rate, unless otherwise stated

Name of person placing Instructions:

Address:

Tel. Daytime:

Tel. Evening:

We may make a search with a credit referencing agency, which will keep a record of that search and will share information with other businesses. We may also make enquiries about the principal directors of companies with a credit reference agency.

Invoice Address if different:



We accept all major cards for your deposit or the full contract sum



Card Number:

Expiry Date & Issue No:

Deposit* / Full Amount* * please delete

Name as it appears on the card:

I/We confirm I/we have read and understand the scope of the works as detailed in the quotation. I/We confirm I/we have been provided with a copy of Protectahome's Terms and Conditions and have retained a copy for our records and agree to act in accordance with those Terms and Conditions. I/We accept Protectahome's terms of payment are strictly 30 days.

Signed

Date

Payment Terms: Within **30 days** of date of invoice

If retention is to be withheld, we reserve the right to apply interest to the outstanding unpaid balance of our account for the duration of the retention/defects liability period at a rate to be agreed.





Established 1980

PROTECTAHOME LTD

*Targeting problems with the **best** solutions*

Our Ref: 92425A/RDT/RLB
Your Ref:

15th September 2021

Regional Office: Houldsworth Mill, Houldsworth Street,
Reddish, Stockport, SK5 6DA
Email: info@protectahome.co.uk
Website: www.protectahome.co.uk
UK Enquiry Line: 0845 601 1980

Alexandra Radu
Construction Project Manager
Beech Design & Build

Dear Alexandra

Re: SCHEME OF WATERPROOFING, PICCADILLY WAREHOUSE, MANCHESTER

Further your email correspondence of the 14th September, I write as follows, in order to clarify and answer the points you have raised.

For clarity and continuity I have also attached our offer and scheme dated 17th August 2021.

STEEL POSTS BUILT FROM OFF STONE COLUMNS:

Subsequent to our on-site meeting, it is agreed our treatments to the stanchions will, in view of their historical importance, be restricted to the depth of the flooring system only and no tanking / waterproofing material will be deliberately applied to the visible section of steel column.

The material to be utilised for this process is to be JN LM 109 Liquid Membrane, as per the attached data sheet.

This treatment, necessitating thoroughly cleaning the lower steel post stanchion, is essential in order to protect the steels from further decay (rust), and in order they may be incorporated in to the scheme of waterproofing.

Your drawing, 013-MDB-PW-XX-DT-A-001, dated 18.08.2021, perfectly portrays the detailing

TERMINATION OF WATERPROOFING SYSTEM BELOW THE FLOOR OF GFL, THUS EXPOSING A SMALL SECTION OF BRICKWORK:

My understanding is this suggestion is one put forward by the planners, as they wish to leave an area of original brickwork exposed for future generation to view?

Whilst I have no strong objection with this suggestion, I advise you emphasize to the planners that the exposed section of masonry will, especially during the early stages of drying, be prone to damp patching and salting that may be unsightly. This may cause the end user, home owners or tenants some annoyance as there decor may become spoilt and require remedial work on a fairly regular basis.

From a technical point of view, leaving an area of damp masonry exposed may, at least theoretically, result in a reduction in the internal environmental grade, as referred to under Ciria and BS 8102.

In the circumstance, I advise you discuss these issues with the planners as it may be they are not fully aware of these risks.

THE RETENTION OF INBUILT AND FLOORING TIMBERS TO THE BASEMENT:

Unfortunately, this is unacceptable and impractical as no form of waterproofing or moisture / vapour control system can accommodate such.

Many of the timbers are already in a state of decay and if these, together with any sound timbers, were left in place, they would rot in short order. The likelihood is that these timbers, due to ground contact, together with poor / non-existent ventilation would be prone to attack by Dry Rot.

The retention of any timber in a below ground level situation and where one wishes to convert to habitable space, is a highly risky strategy and not something we would wish to be associated with.

I regret to advise we will be unable to accept this as a condition of contract, as such goes against all good practice, BS 8102 and our design PI.

THE RETENTION OF EXISTING PLASTER TO THE BASEMENT:

Much of the retained plaster is a gypsum based product, circa 1980, or a poor sand / cement render which, in my opinion, has little historical value.

From our walk through inspection a good deal of this was seen to be loose, friable and de-bonded from the wall.

Any waterproofing system relies on the structure to provide the primary defence against ingressing ground water and general dampness.

If we were to accept the retention of existing plaster, we would be unable to inspect the wall fabric and advise you on the need for the repair of poor or defective masonry. This would have a major impact on the long term integrity and efficiency of the waterproofing system and almost certainly result in a significant increase in servicing requirements, something the new owners would have to pay for

Furthermore, if plaster was retained and we were to fit our cavity drain wall membranes to / over such, the plaster would very soon fully de-bond with resultant debris forming blockages within the cavity of membranes and the perimeter drainage channelling.

Again, I regret to advise we will be unable to accept this as a condition of contract, as such goes against all good practice, BS 8102 and our design PI

DOCUMENTS ATTACHED TO YOUR EMAIL:

As denoted above, the stone / column detail works very well.

The window reveal details seem to work well, but I would like to better review such on site.

I trust the above is of assistance to you and aids your negotiations with the planners. However, should you require any further assistance/information, please do not hesitate to contact me.

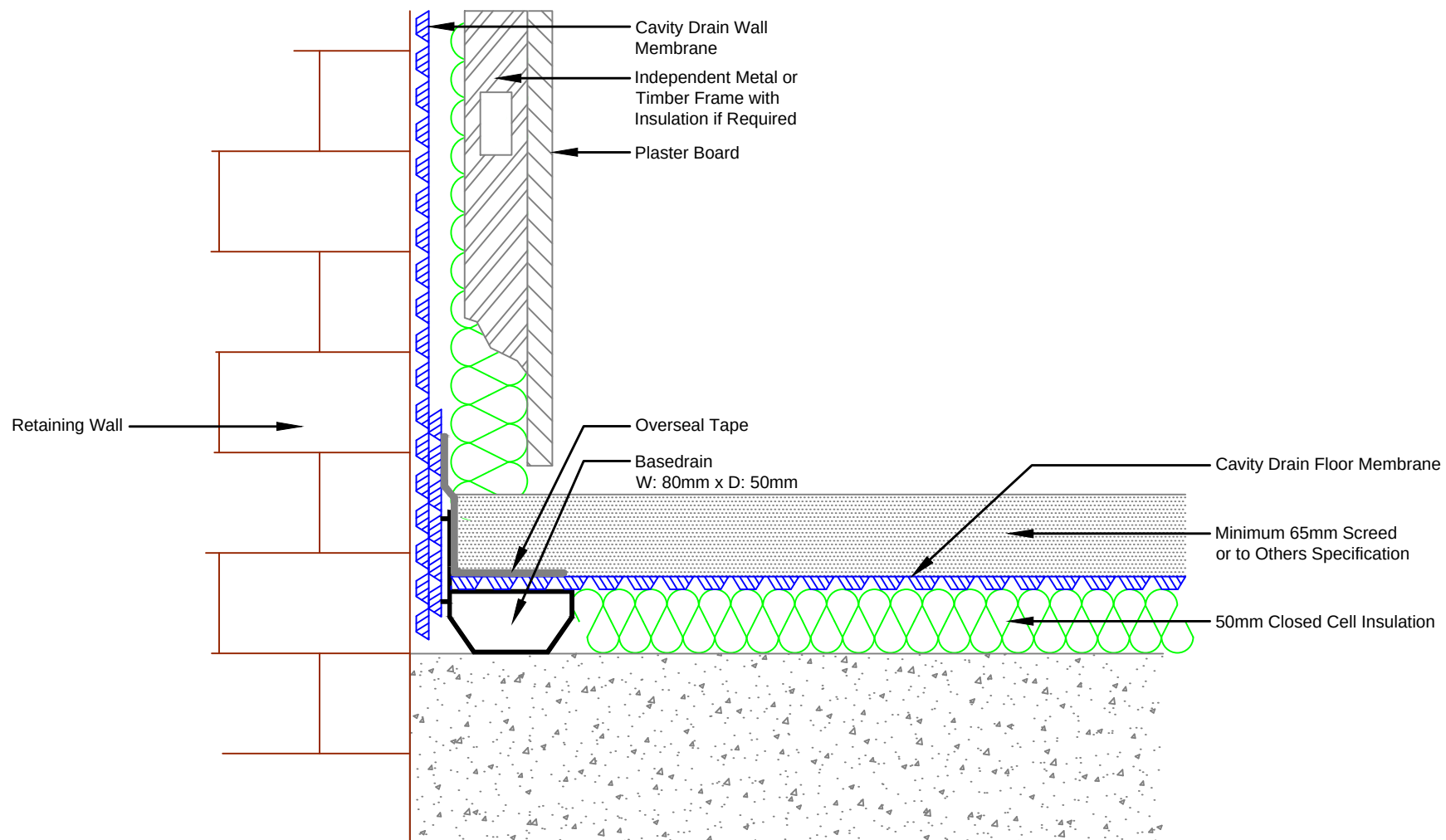
Assuring you of our best attention.

Yours sincerely
PROTECTAHOME LIMITED

Richard tye

RICHARD D TYE CTIS, CSSW
Area Manager





These drawings are not to scale. They are schematic diagrams for layout purposes only.
Should you have any queries or questions, please revert back to us for clarification.

Not to Scale
Refer to report for product details and dimensions

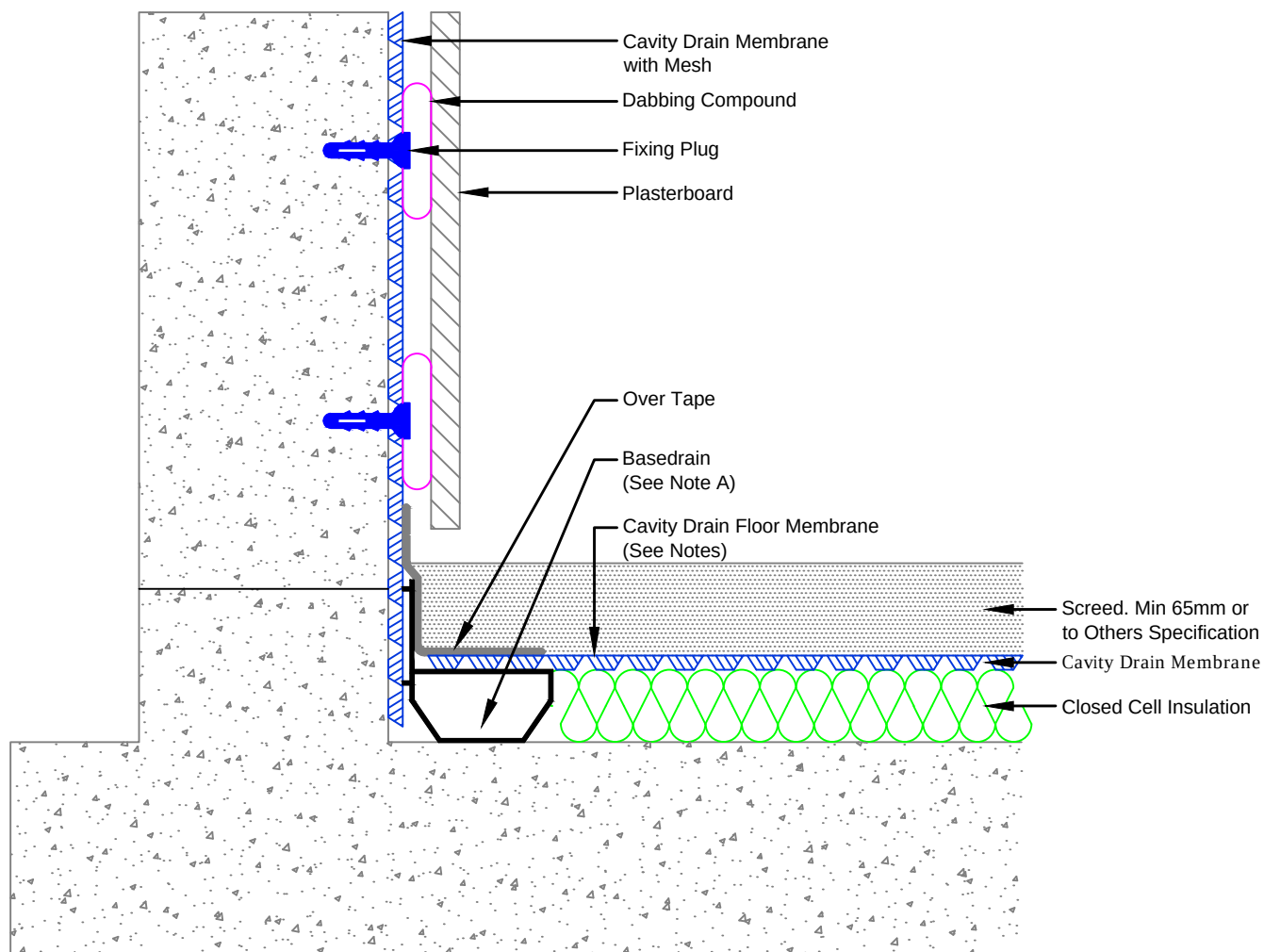


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JOB REF	DATE	PS No.	REV
92425	25/5/2021	PS40	A



Notes

This detail assumes that the slab is in good condition - constructed to either BS8007 or BS8110, or is of sufficient mass and quality that the slab is able to resist heads of water pressure as required by BS8102.

- A. To receive water from the membranes basedrain should always be laid level and connected to the sump chamber or safe form of drainage with two drainage connectors. Construction joints in the floor should be protected by floordrain.
- B. Screed to manufacturers recommendations or to current British Standard.
- C. It is recommended that new concrete includes a lime scale inhibitor or is treated with lime inhibitor prior to installation of the waterproofing system.

This is a waterproofing detail. For the design of the structure, please use a professional designer.

These drawings are not to scale. They are schematic diagrams for layout purposes only.
Should you have any queries or questions, please revert back to us for clarification.

Not to Scale
Refer to report for product details and dimensions

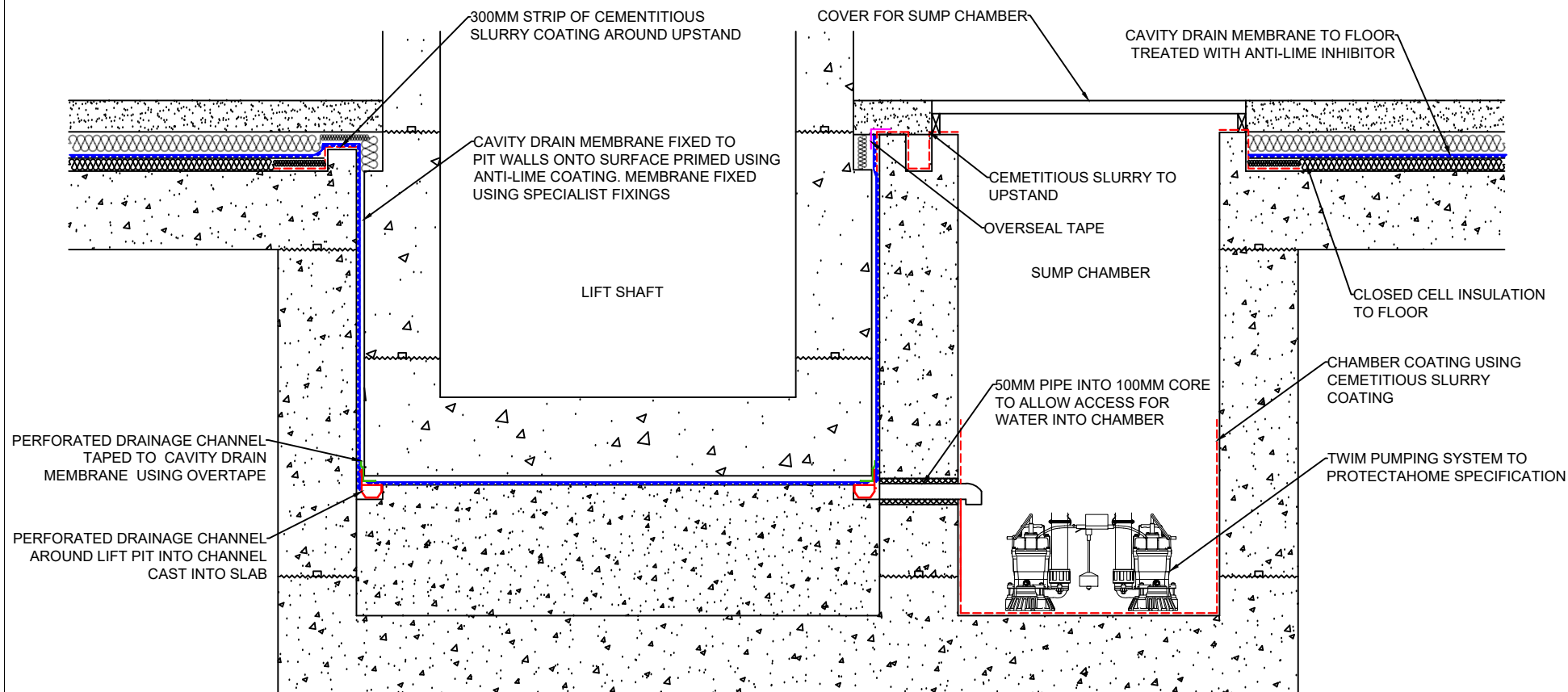


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JOB REF	DATE	PS No.	REV
92425	25/5/2021	PS42	A



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PROJECT TITLE:
 STANDARD DETAIL

DRAWING TITLE:
 PROPOSED LIFT PIT WATERPROOFING DETAIL USING TYPE C WATERPROOFING SYSTEM

DRAWN BY:

JK

DRAWING NO:

001

DATE:

04-09-2018

REVISION:

A

H – PBA Heritage Statement on Later Mindel House Timber Floor Boards



Job Number:	14.936
Project:	Mindel House and 11 Bloom Street, Manchester
Client:	Beech
Date:	March 2022

Introduction and Background

This Heritage Note has been prepared in relation to the existing timber flooring found within the basement of Mindel House and 11 Bloom Street, Manchester. The Note should be read alongside the 'Tanking Details Proposals' report prepared by Manchester Design & Build.

The primary purpose of this note is to assess the heritage significance of existing timber flooring located within the basement of both buildings, and to appraise the heritage impact of proposed basement floor works.

Heritage Significance and Heritage Appraisal

Mindel House Basement Flooring: Heritage Significance

The basement floor of Mindel House was assessed during a site visit on 10.02.2022 and timber mill boards were found within a central area of the building around the lift core. Investigation by Hutton + Rostron has suggested that the boards are not thought to be original to this setting and may have been recycled from a late 19th Century warehouse or mill building. We support this finding.

Structural evidence including concrete blocks, sleeper wall using metric bricks (post 1965) with cement mortar and polythene sheets confirms that significant alteration to the floor was undertaken during the late 20th Century. A newspaper dated 25th February 1996 found beneath the floor is thought to date the alteration works.

The Hutton + Rostron report has assessed the condition of the timber boards, which advises 'all timbers abutting or in close proximity to the lift masonry were damp and partially decayed by wet rot fungi. These decaying timbers were also subject to active wood-boring weevil infestation. Wood-boring weevil is always coincident with and dependent upon fungal growth infection in the timbers. The surface and deep moisture contents of timbers in these were typically over 40 per cent w/w and this is sufficient to sustain fungal infection and wood-boring weevil infestation.' There was evidence of a historical plumbing leak and a proportion of the grooved millboards and t&g hardwood flooring was heavily decayed.

Whilst original timber mill boards would undoubtedly contribute to the heritage significance of the building, the evidence suggests that the boards are not original to the building, and have undergone significant alteration likely within the late 20th Century. Adding to this the condition of the timber boards also reduces their significance. Hutton + Rostron confirm that the timber boards

cannot be retained in their current condition, a conclusion that is also shared with the Structural Engineer. Based on the above it is concluded that the heritage value of the boards is **low**.

Hutton + Rostron have considered 'salvageability' of millboards. They advise that 'the millboards and floorboards could be carefully raised and transported to a timber yard for de-nailing and re-milling. If desired, the reinstated millboards could receive new loose tongues or be secret nailed through the groove for fixing purposes. The t&g hardwood floorboards could also be secret nailed. The upper surface of the millboards and floorboards should be cleaned and although they could also be planed or sanded, this process would remove the historic patina'.

Given the low heritage value of the boards identified and the fact that the re-milling of the boards would result in further change, we do not believe that there is a strong heritage rationale for the 'retention' of the boards.

11 Bloom Street Basement Flooring: Heritage Significance

The basement floor of 11 Bloom Street was assessed during a site visit on 10.02.2022 and timber mill boards were found within a central area of the building.

Investigation of these boards by Hutton + Rostron states 'original natural ventilation of the sub floor has been removed due to historical alterations and this has increased moisture contents in the timbers and provided the suitable conditions for fungal decay and active wood-boring weevil infestation. Wood-boring weevil is always coincident with and dependent upon fungal growth infection in the timbers. Surface moisture readings in the underside of the floorboards were typically over 35 per cent w/w and over 10 per cent w/w at depth. Deep moisture contents of the wall plates were typically over 20 per cent which is sufficient to sustain an active wood-boring weevil infestation. Corrosion in the oval fixing nails is also believed to be widespread. The increased moisture content in the floorboards has encouraged them to swell and become tightly abutting, further reducing natural ventilation of the sub-floor and exacerbating the rate of decay'.

The condition survey goes on to state that 'Where visible, the weevil tunnelling was concentrated around the perimeter of each floorboard particularly to the ends and sides. Decay in the ends typically extended 50-100mm into the floorboards and decay to either side typically extended 30mm into the floorboard. Decay in the floorboards was concentrated in the outer sapwood bands of the tree which are less durable than the inner heartwood. An increment borer was used to extract 10 no. core samples of floorboards so that the extent of decay in the base of in situ 65mm floorboards could be measured. Sampling determined the depth of 'sound' material was between 50-65mm. There were also some localised areas of weevil tunnelling on the upper surface of the floorboards but this was limited to a depth of ~3mm'.

Hutton + Rostron advise that in their current form none of the millboards are salvageable for reinstatement as a floor covering. However, if desired, approximately 90% of the floorboards could be re-milled by removing the outer sections of decay to form a new standard dimension. This work would change the dimensions of the boards and would also remove historic patina.

The timber boards within 11 Bloom Street contribute to the heritage value, although their current poor condition confirmed above means this is judged to be **medium**. Attempting to salvage the boards through re-milling (which would be essential in order to allow reuse) would change their

appearance and dimension and further degrade their significance. Given these factors, and as the covering of the floor has previously been accepted here and throughout the building as part of the wider development scheme, it is considered that removal of the timber boards is justifiable in heritage terms when taking a balanced and reasonable approach.

Conclusion and Recommendations

In conclusion, taking into account the identified heritage significance of existing timber boards in the basement of both buildings, their poor condition, and the extent of works that would be involved in re-milling timber boards (which would effectively result in a new pieces of timber), it is our view that the removal of the timber boards can be justified.

The nod to the areas of timber boards through the floor decoration within the proposed apartments is considered to be a balanced and proportionate mitigation.