MINDEL HOUSE

No. 10 Minshull Street, Manchester



Historic Heritage Assessment

Revision B

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Contents

1. Introduction 3

2. Background – Details of Listing 4

3. Location and Setting
   - General Description 5
   - Promap – Ordinance Survey 7
   - 1963 – 65 Ordinance Survey Plan 8
   - Google Map Image 9

4. Historic Setting 10

5. Mynshull's House 11

6. Roger Aytoun 12

7. Adjacent Listed Structures
   - City Police Courts 13
   - 42 Bloom Street 14
   - 11 Bloom Street 15

8. Historic Site Development
   - Map 1 16
   - Map 2 17
   - Map 3 18
   - Map 4 19
   - Map 5 20
   - Google Satellite Image 21

9. Archaeological Assessment 22
   - Ground Floor Plan 23
   - First Floor Plan 24
   - Second Floor Plan 25
   - Third Floor Plan 26
   - Fourth Floor Plan 27

10. Assessment of Original Building 28
   - Ground Floor Plan 29
   - First Floor Plan 30
   - Second Floor Plan 31
   - Third Floor Plan 32
   - Fourth Floor Plan 33

11. External Description
   - General Description 34
   - Minshull Street Elevation 35
   - Bloom Street Elevation 38
   - Main Entrance Corner Elevation 40
   - Richmond Street Elevation 43
   - Rear Elevation 45

12. Architecture
   - The Palazzo Style 48

13. Method of Construction 49

14. Internal Elements of Significance
   - General Description 51
   - Columns & Beams 52
   - Main Staircase 54
   - Rear Fire Escape Staircase 59
   - Offices – First Floor 60
   - Services 63
   - Lifts/Hoists 65

15. Cotton & Manchester Warehouses 67
   - Warehouses in Manchester 68
   - No. 10 Minshull Street 69

16. Owner 70

17. Photographic Record 71
   - Fourth Floor Plan 72
   - Third Floor Plan 73
   - Second Floor Plan 74
   - First Floor Plan 75
   - Ground Floor Plan 76
   - Photographs 77

18. Effect of the Proposed Works on the Identified Significance of the Building Elements
   - Internal Works 83
   - Detail of Proposed Works to Floors - 1 84
   - Detail of Proposed Works to Floors - 2 85
   - External Door Details 86
   - Secondary Glazing Details 87
   - External Works 88

19. Existing/Proposed Drawings
   - Drawings List 89
   - Site Location Plan 90
   - Existing Ground Floor Plan 91
   - Existing First Floor Plan 92
   - Existing Second Floor Plan 93
   - Existing Third Floor Plan 94
   - Existing Fourth Floor Plan 95
   - Existing Elevations 1 & 2 96
   - Existing Elevations 97
   - Existing Section A-A 98
   - Ground Floor Downtakings 99
   - First Floor Downtakings 100
   - Second Floor Downtakings 101
   - Third Floor Downtakings 102
   - Fourth Floor Downtakings 103
   - Proposed Ground Floor Plan 104
   - Proposed First Floor Plan 105
   - Proposed Second Floor Plan 106
   - Proposed Third Floor Plan 107
   - Proposed Fourth Floor Plan 108
   - Reflected Ceiling Plan 109
   - Proposed Elevations 1 & 2 110
   - External Signage Elevations 111
   - Proposed Section A-A 112
   - Existing & Proposed Roof Plans 113

20. Conservation Considerations 114

21. Impact

- Overview 115
- Positive Impact 115
- Negative Impact 116
- Neutral Impact 116
- Mitigation 116
- Commemoration 116

22. Repairs
- Windows 117
- Roof 117
- Staircase 117
- Plasterwork 118
- General Repairs 118

23. Statement of Significance 113
- Local Importance
- Regional Importance
- Internally

Appendixes

1. Introduction

This report presents the findings of an archaeological Heritage Survey (Level III) of the property known as Mindel House, No. 10 Minshull Street, Manchester.

The survey has been carried out by Hall Needham Associates LLP for Real Estate Venture Capital Management LLP.

The survey has been carried out in accordance with the English Heritage 'Guide to Good Recording Practice'. This provides the basic information to provide a Statement of Significance.

A Level III Survey is an analytical record and will comprise of an introductory description by systematic account of the building origins, development and use. The record will include on account of the evidence on which the analysis has been based, allowing the validity of the record to be re-examined in detail. It will also include all drawn and photographic records that may be required to illustrate the building's appearance and structure to support the historic analysis.

The information contained within the record will, for the most part, have been obtained through an examination of the building, together with other sources of historic evidence, such as historic Ordinance Survey Maps, trade directories and other published sources.

2. Background – Details of Listing

Mindel House is considered to be a building of special architectural interest by English Heritage, as the building is listed at Grade II. The warehouse was built approx. 1869 in the boom times of the cotton industry, within the commercial sector of central Manchester.



© Mr Neil Short LBIPP

IoE number:	388317
Location:	Minshull House, 10 Minshull Street (south west side) Manchester, Greater Manchester
Photographer:	Mr Neil Short LBIPP
Date photographed:	29 May 2001
Date listed:	06 June 1994
Date of last amendment:	06 June 1994
Grade:	II

MANCHESTER SJ8497NW MINSHULL STREET 698-1/32/233 (South West side) No.10 Minshull House GV II Grey warehouse, now offices. Mid to later C19; altered. Sandstone ashlar at ground floor (painted), red brick in Flemish bond with sandstone dressings, slate roof. Rectangular plan on corner site, with splayed corner, loading bay at rear. Simplified palazzo style. Five storeys and basement, 8 windows plus the corner; with banded basement and left corner, band over ground floor, moulded cornice. Segmental-headed arches to basement and ground floor, the basement openings now blocked, and segmental-headed windows at ground floor with altered glazing; sashed windows without glazing bars to all upper floors, those at 1st floor with stone lintels and the others all with flat-arched heads and raised sills; tie-plates at 2nd and 3rd floors. Corner entrance with segmental-headed doorway in moulded architrave with keystone, pilasters to left and right with worn lettering "MANUFACTURERS AND PRINTERS"; segmental-headed window above, with saw-tooth arch-band, stone cornice over 3rd floor. Right-hand return to Bloom Street, 6 bays, similar to principal facade. Left return (to Richmond Street), plain and regular, has sashed windows with flat-arched heads (those to front bay blind). Rear has (inter alia) a full-height loading slot in the centre, with a hoist canopy. Interior not inspected. Forms group with No.11 Bloom Street to rear (q.v.), No.8 Minshull Street to right (q.v.), and City Police Courts opposite (q.v.).

3. Location and Setting

General Description

The entrance of the property is on the corner of Minshull Street and Bloom Street. The site is also bordered by Richmond Street, giving frontages on the building to these three streets. To the rear of the property is a private loading street. The listing schedule states: *"forms group with no. 11 Bloom Street to rear, no. 8 Minshull Street to right and City Police Courts opposite."*



View showing 42 Bloom Street and 10 Minshull Street



View along Bloom Street showing no. 11,
10 Minshull Street and the City Police Courts



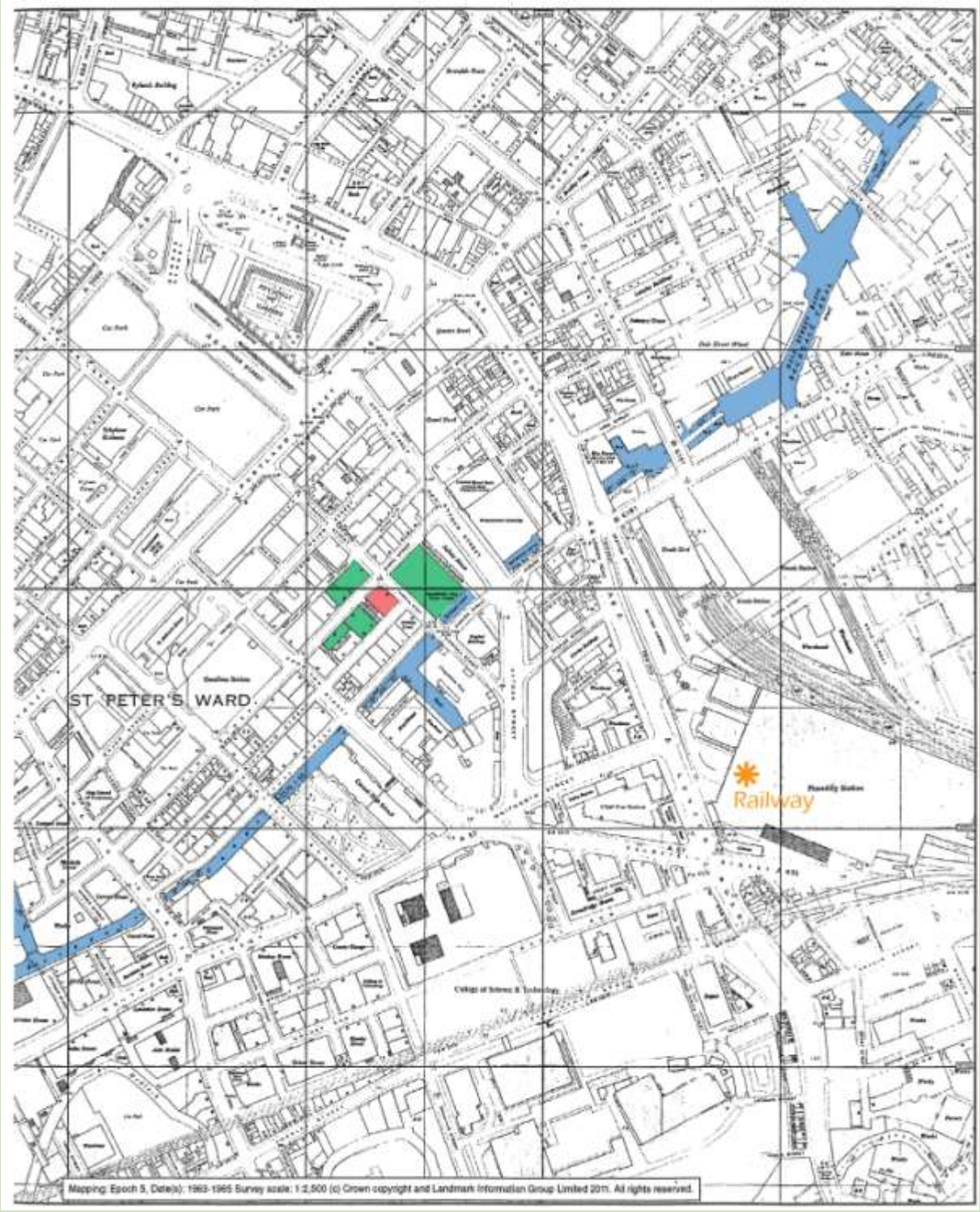
View of 10 Minshull Street and the Police Courts

The setting of the building can be described as an imposing textile warehouse sat in a commercial area, dominated by Victorian architecture; the area is a cluster of imposing buildings, generally of 4 or 5 stories built in either stone or brick. The area is considered as a concentration of exuberant architectural styles. No. 10 is one of the buildings that gives the area this context.

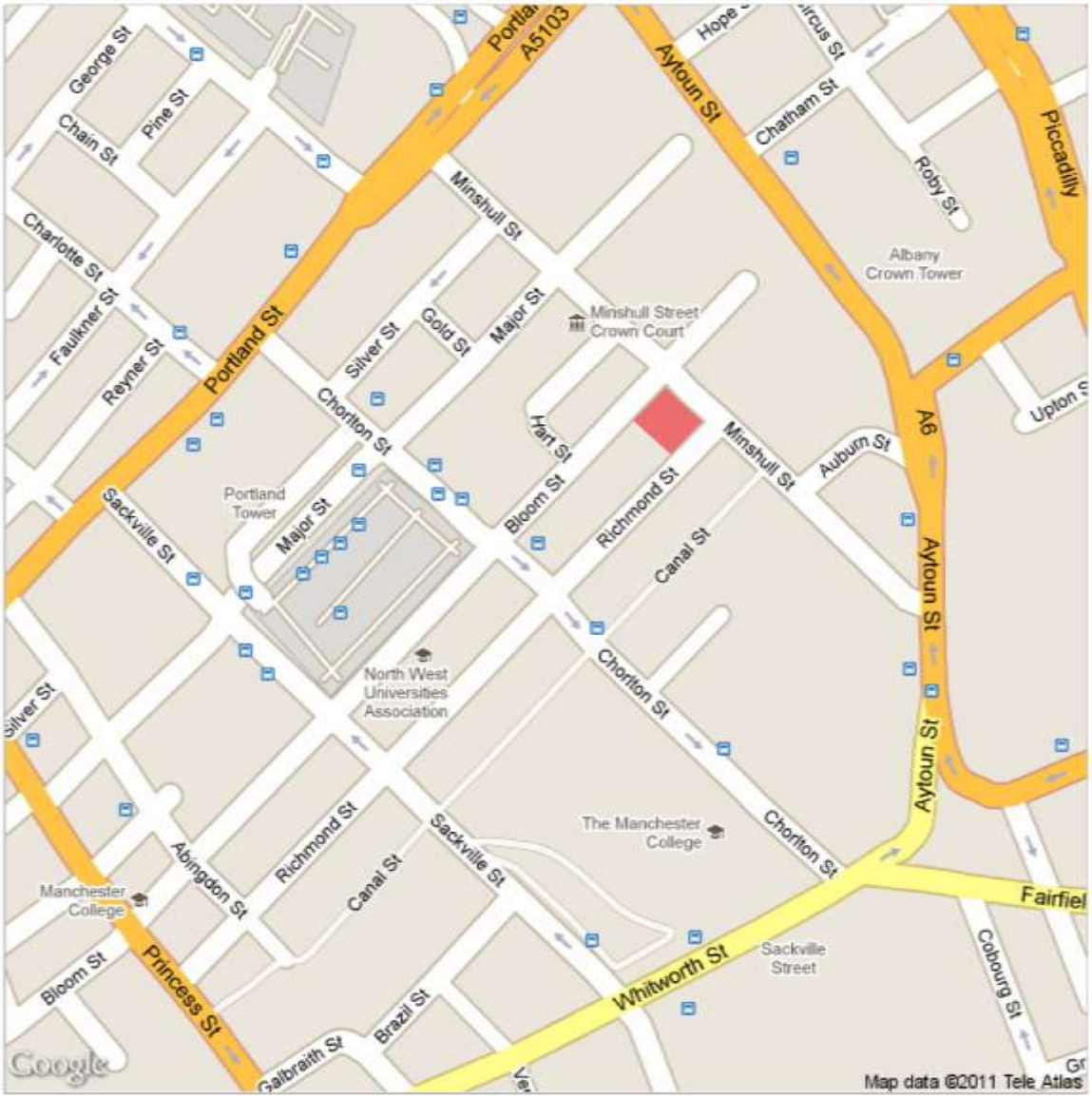
Promap – Ordinance Survey



1963 – 65 Ordinance Survey Plan



Google Map Image



4. Historic Setting

The site of No. 10 Minshull Street was split into developable blocks by Roger Aytoun in the 1770s. This formed the streets that are within the area as formed blocks with stronger links to form a block pattern.

The site lies to the east of Portland Street that historically has been a major thoroughfare as Manchester developed.

The buildings that surround No. 10 Minshull Street are also impressive, with:

- The building opposite being the City Police Courts, built in 1868 – 1871 by Thomas Worthington in an Italian Gothic Style.
- 42 Bloom Street on the opposite corner, being 4 storeys with basement, built in the Palazzo style in the mid-to-late 19th century.
- No. 11 Bloom Street, directly behind No. 10 Minshull Street is again 4 storeys with basement with an impressive colonnade.

(For further information on these buildings refer to Section 7 – Adjacent Listed Structures.)

These buildings are not the only buildings of merit in the area. There are a number of other structures that have similar principles of design, scale and massing that has developed to be the commercial centre of Manchester. The basis of the architecture in the area is impressive for the culture of its intended use, which was principally warehousing. But as the commercial centre grew from approx. 1830 till after 1900, other uses and buildings were developed in similar architectural styles for banking, shopping and insurance industries. Although some of the sites have been redeveloped on a modern style the main style of the buildings in the area are Victorian buildings based on the Renaissance Architecture principles.

5. Mynshull's House

Mynshull's House is sited at No. 14 Cateaton Street, Adjacent to Manchester Cathedral.

Designed by William Ball and Thomas Brookes E ICE, and constructed in 1890, the building is listed at Grade II.

The building is of Jacobean Revival style, in red sandstone with terracotta carving by J. Jarvis Millson.



View of Mynshull's House



View of upper floors



Detail of carving to parapet



Detail of inscriptions

6. Roger Aytoun

Major Roger Aytoun was local wealthy military man of the late 18th Century. He founded his own regiment – the 72nd Regiment of Foot, or Manchester volunteers. An active and zealous recruiter, Aytoun was often seen promenading and strutting around the streets of Manchester seeking recruits for his regiment, which earned him the nickname 'Spanking Roger'. He died in Scotland, bankrupt.

The site was originally part of the Chorlton Hall Estate, owned by the Minshull's SE of Piccadilly.

Roger Aytoun, who married the Minshull heiress in 1769, laid out and sold land between Piccadilly, Portland Street, Princess Street and the River Medlock in the 1770's.

"Nudism and Kersal Moor
This practice seems to have been indulged in by Roger Aytoun who acquired Hough Hall through marriage. It is said he was a Hero in the Siege of Gibraltar. It is written that Roger first caught the eye of Barbara Minshull (elderly widow of Thomas Minshull, a wealthy Apothecary and owner of Chorlton Hall and Garret Hall amongst others, all of which he left to Barbara) by winning a foot race on Kersal Moor in a "nude" State. They were married at the Colligiate Church (Manchester Cathedral) in February 1769; Barbara was then aged 65yrs. it is said that Roger was so drunk; he had to be held up throughout the ceremony. It appears that Roger then moved into Hough Hall and proceeded to squander his wife 's fortune. Barbara died 14yrs later. Roger by this time had to sell of most of his property to pay his debts, including Hough Hall."
(A Brief History of Kersal: www.kersalflats.co.uk/history2.html)

When looking at the maps of the area, the names of the major streets – Aytoun Street, Minshull Street and Chorlton Street – are presumably named because of the Chorlton Hall connection. Major Street may also have been named due to Roger Aytoun's military career.

7. Adjacent Listed Structures



© Mr Peter Hyde

IoE Number:	388318
Location:	City Police Courts, Minshull Street, (north east side) Manchester, Greater Manchester
Photographer:	Mr Peter Hyde
Date Photographed:	18 October 2005
Date listed:	03 October 1974
Date of last amendment:	03 October 1974
Grade:	II*

MANCHESTER SJ8498 MINSHULL STREET 698-1/28/234 (North East side) 03/10/74 City Police Courts II* City police courts. 1868-71, by Thomas Worthington. Red brick with sandstone dressings, steeply-pitched slate roofs. Rectangular plan on corner site. Italian Gothic style. Two-and-a-half storeys over basement, plus tower at north-west corner, 1:3:3:3:1 bays, the centre gabled, the left end formed by the tower and the right-hand end with a turret; with moulded stone plinth, impost bands, enriched 1st-floor sill-band, Lombard frieze, and stone parapet stepped up to the centre gable with tourelles at the corners of this. Central 2-centred arched doorway with gabled surround including shafts with carved crocket caps; three 2-centred arched 2-light windows above the doorway, and arcaded 5-light attic window in gable; 2, 3 and 2-light windows to both floors of the side ranges, with shafts and 2-centred arched lights with linked hoodmoulds; another doorway to the right-hand end, which has slightly different fenestration to the main floors, arcaded 7-light attic window, and saddle-back roof. Very tall octagonal chimney behind ridge. Tall square tower to left, with bands, 3-light window to 1st floor with balcony, 2 small lancets to next stage, clockface in arched surround, elaborate stone top stage with corner tourelles and arcaded belfry, and slated pyramidal roof. Left return (to Bloom Street) in similar style, with central doorway, windows of 3, 3, 2, 3 and 3 lights, and 2 large gables each with a 2-centred blank arch containing two 2-light windows. Interior not inspected, but probably contains features of equivalent quality.

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IoE Number:	388316
Location:	42 Bloom Street (north side) Manchester, Greater Manchester
Photographer:	Mr Neil Short LBIPP
Date Photographed:	24 September 2001
Date listed:	06 June 1994
Date of last amendment:	06 June 1994
Grade:	II

MANCHESTER SJ8498SW MINSHULL STREET 698-1/28/232 (South West side) No.8 GV II Includes: No.42 BLOOM STREET. Shipping warehouse, now offices. Mid to later C19. Red brick in Flemish bond, with sandstone dressings (roof concealed). Rectangular plan at right-angles to Minshull Street, with loading bay in long side to Bloom Street. Palazzo style. Basement and 4 storeys, with a 5-bay facade to Minshull Street and a 10-bay facade to Bloom Street; ashlar basement, sill-bands to all floors (variously decorated) and a corbel-table to the cornice. The front has in the 4th bay a large sandstone architrave containing coupled round-headed doorways with colonnettes which have foliated caps, a carved roundel between the heads, a semicircular arched hoodmould spanning both, and carved spandrels; coupled windows in the 2nd and 4th bays of all floors (except the top where all are coupled), those at ground and 2nd floors round-headed, and most with colonnettes, alternating with shouldered or stilted segmental-headed single windows; the windows of the 2nd and 3rd floors have hoodmoulds linked by bands, and the 3rd floor windows are coupled with stilted segmental heads. All these windows sashed. The left side wall has a doorway in the 4th bay (No.42 Bloom Street) coupled with a segmental-headed loading bay entrance to its right, coupled round-headed windows at ground and 2nd floors, coupled segmental-headed windows at 1st floor, segmental-headed windows grouped 5, 2, 5 and 4 at 3rd floor, and breaking the eaves in the centre a gabled attic with a triple window. Loading bay includes wall-crane. Interior not inspected. Forms group with 10 Minshull Street to left (q.v.), 11 Bloom Street to rear of this (q.v.), and City Police Courts diagonally opposite (q.v.).

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IoE Number:	387934
Location:	11 Bloom Street (south east side) Manchester, Greater Manchester
Photographer:	Mr Neil Short LBIPP
Date Photographed:	24 September 2001
Date listed:	06 June 1994
Date of last amendment:	06 June 1994
Grade:	II

MANCHESTER SJ8497NW BLOOM STREET 698-1/32/18 (South East side) No.11 GV II Various warehouses and pattern card factory, now various offices. Mid to later C19, altered (renovation in progress at time of survey). Some sandstone ashlar but mostly red brick in Flemish bond with sandstone dressings (roof concealed). Square plan including through loading bay at left side. Basement and 4 storeys, 8-window facade with channelled corner pilasters. The ground floor, of sandstone ashlar, has a round-headed doorway to the right with keyed moulded surround and dentilled cornice, a rectangular loading entrance at the left end with channelled surround, and between these almost continuous fenestration behind an unusual colonnaded screen of square columns with a plain frieze and moulded cornice; the upper floors have sashed windows, those at 1st floor with triangular-headed lintels, those at 2nd floor with gauged brick heads (those above concealed at time of survey). Rear (to Richmond Street) has loading entrance at right-hand end with convex sandstone jambs which have raised rock-faced bands, and a thin iron lintel under a relieving arch; and segmental-headed windows. The loading bay side has a well between the front and rear ranges, and glazed roof protecting the passage. INTERIOR: iron columns and wooden beams; curved wooden staircase. Forms group with No.8 and No.10 Minshull Street (q.v.).

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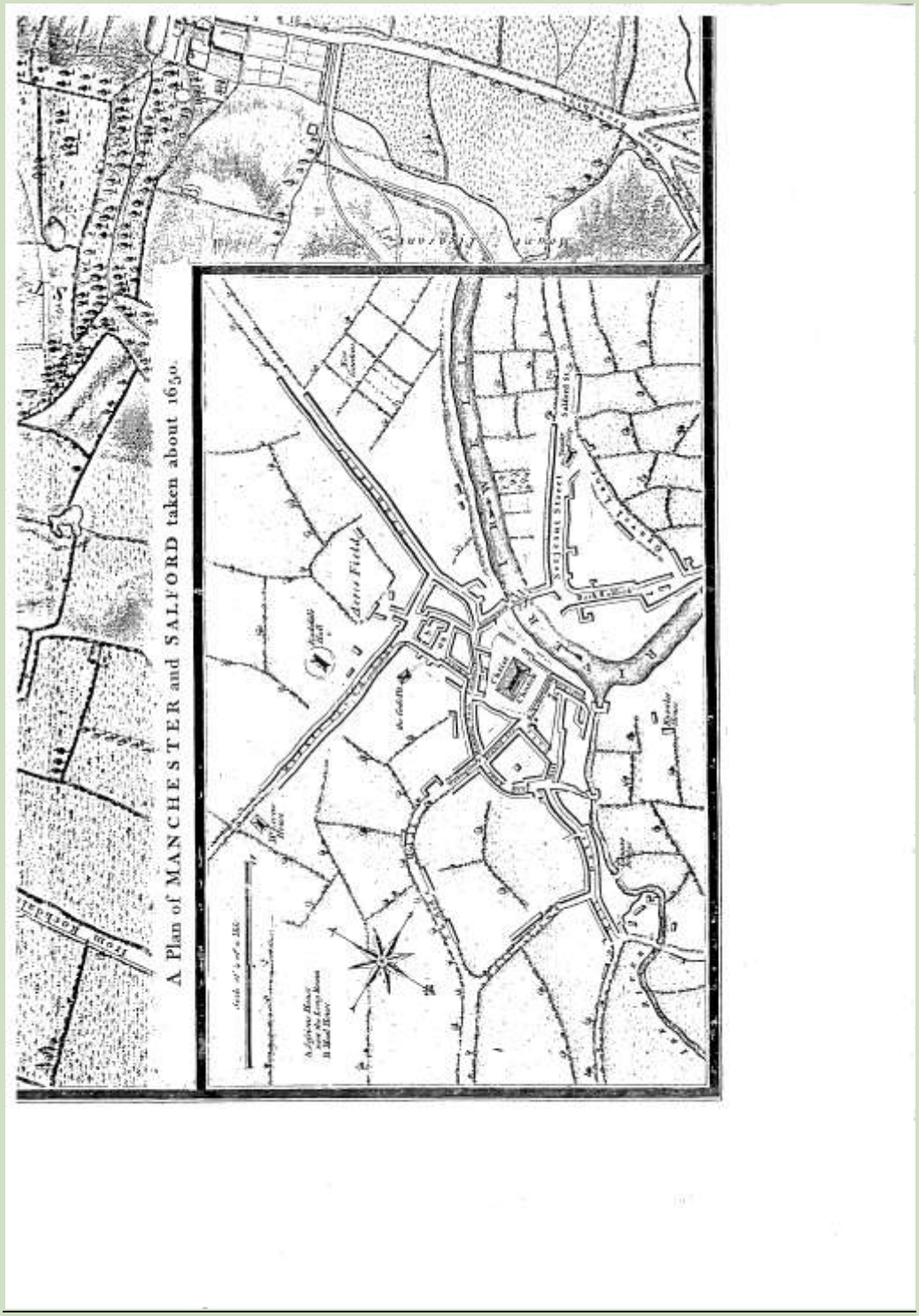
8. Historic Site Development



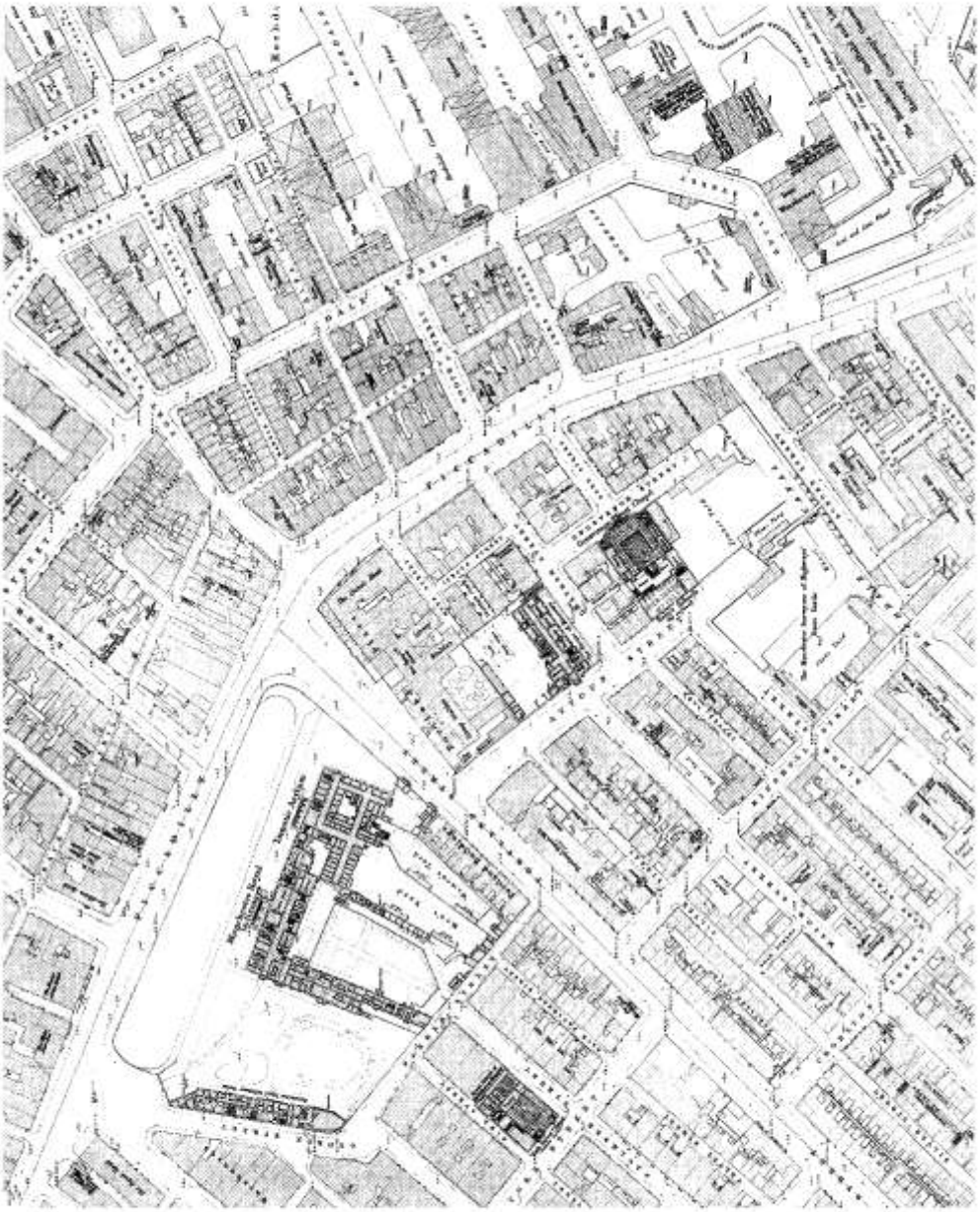
Map 1

A plan of Manchester and Salford taken around 1650 (reproduced from 'A Description of the County from Thirty to Forty miles Around Manchester'). This map shows an open field system within the area of the site. The only two streets at this time within the vicinity are Market Street and Deansgate.



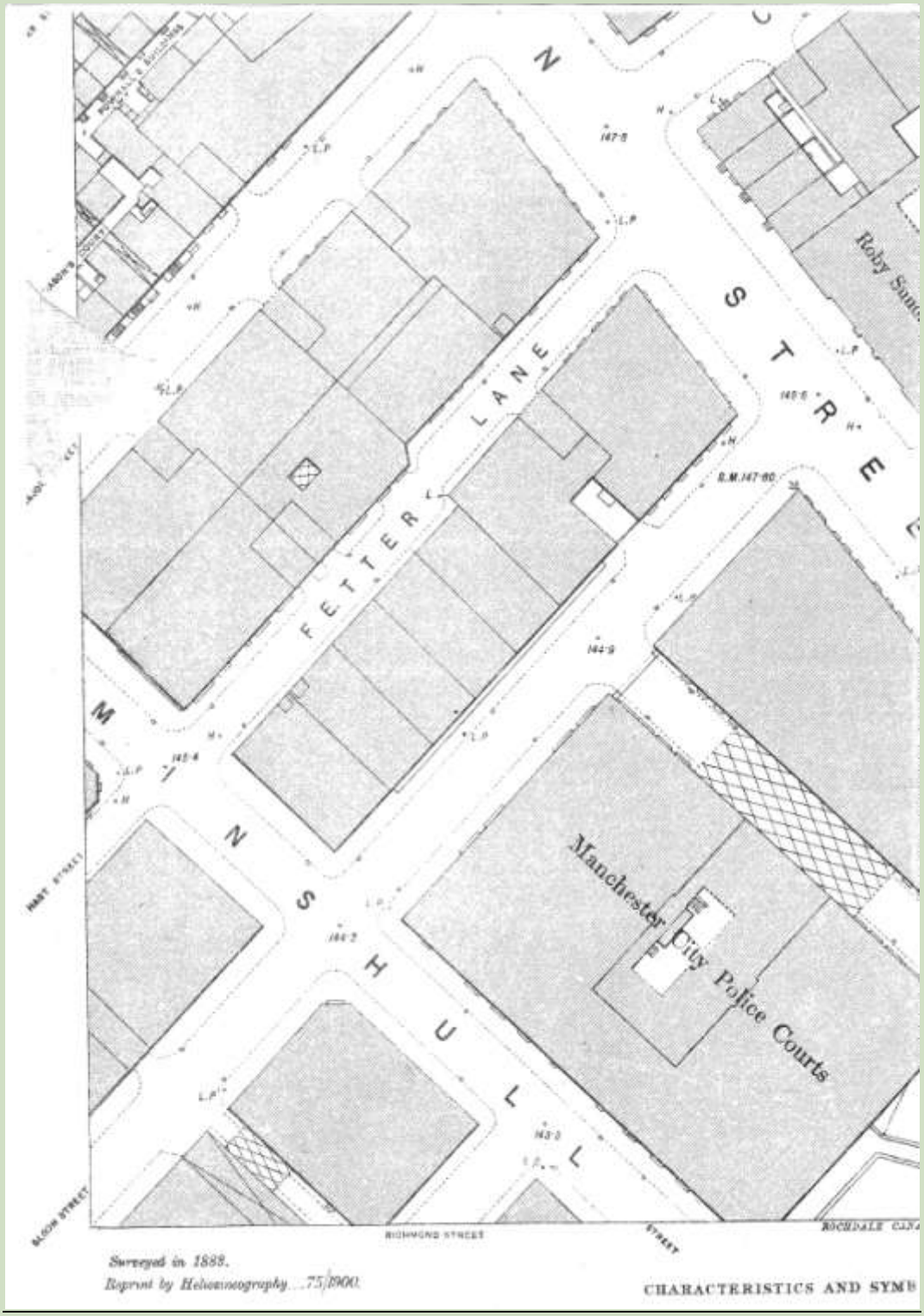
Map 2

This is also a map included in 'A Description of the County from Thirty to Forty miles Around Manchester' of around 1793. The area of the site was split into developable plots by Roger Aytoun in the 1770's. Although some of the plots are developed the site appears to be vacant.



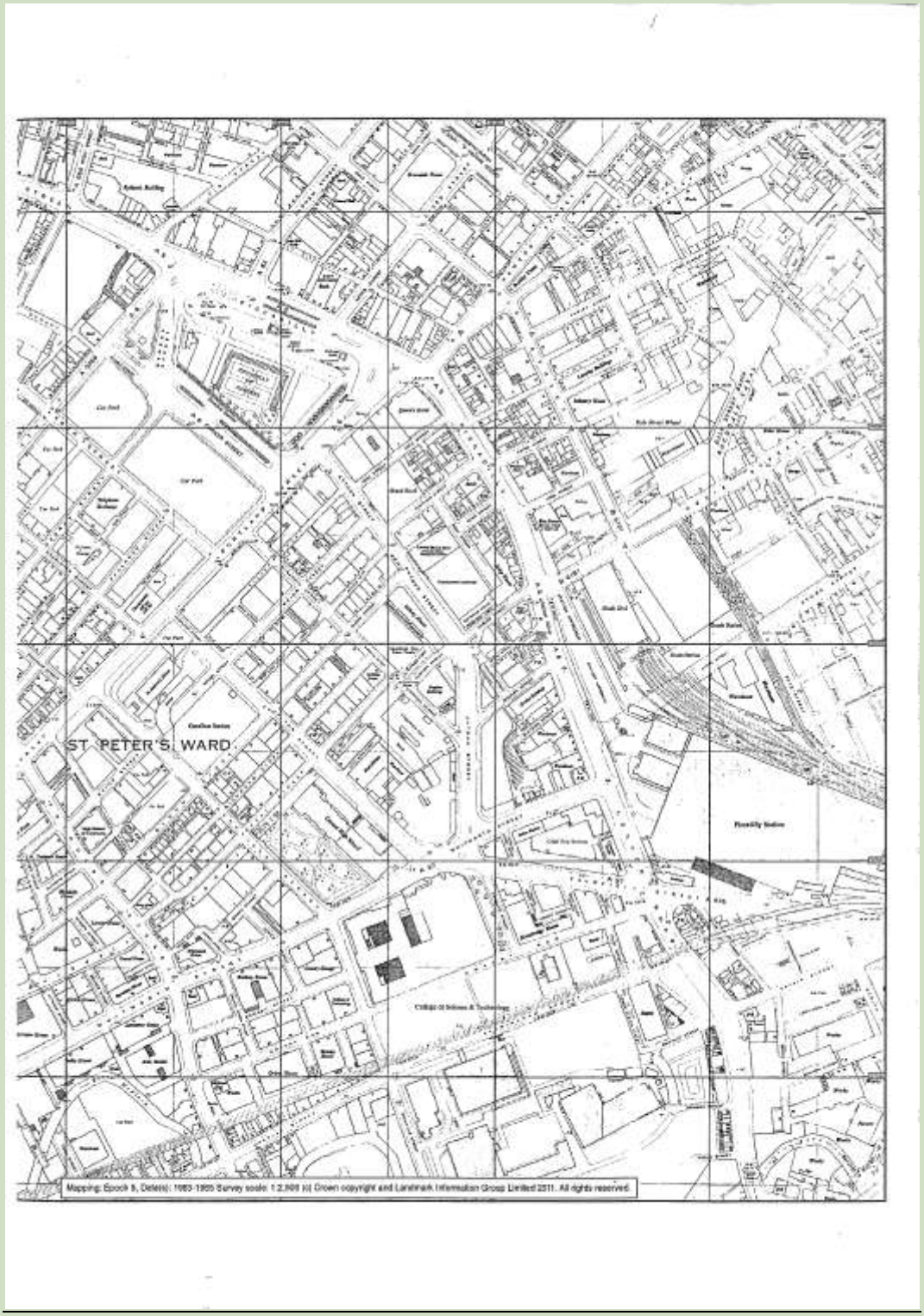
Map 3

This map is an 1850 issue of the Ordinance Survey shows a building covering the site of a similar size to the existing building with a small access street to the rear. The area is typified by closely packed terraced houses and yard areas for stone and timber merchants connected to the Rochdale Canal. This map is also useful for identifying various other local landmarks: the Manchester Royal Infirmary at Piccadilly, the developments of the extent of canal warehouses and the recently constructed Manchester, Sheffield & Liverpool Railway Company building which is now Piccadilly Station.



Map 4

This map is an 1886 issue of the Ordinance Survey (Originally plotted at 1:500th scale). This map is at quite large scale and shows more detail than the smaller maps, even to the extent of showing positions of lamp-posts. The site has been developed with the building that now sits on the site. Also shown is the rear cart-way area, the adjacent building on Bloom Street with its hovel area, Manchester City Police Courts. This is the time that was prominent for trade and expansion, and most of the impressive buildings were completed that now gives the area its unique context.



Map 5

This map is a 1963 – 1965 survey shows very little change to the immediate area of the site, and represents the same situation as today, with the redevelopment of a number of sites in the area for University.



Google Satellite Image

This map shows the present building and its surroundings.

9. Archaeological Assessment

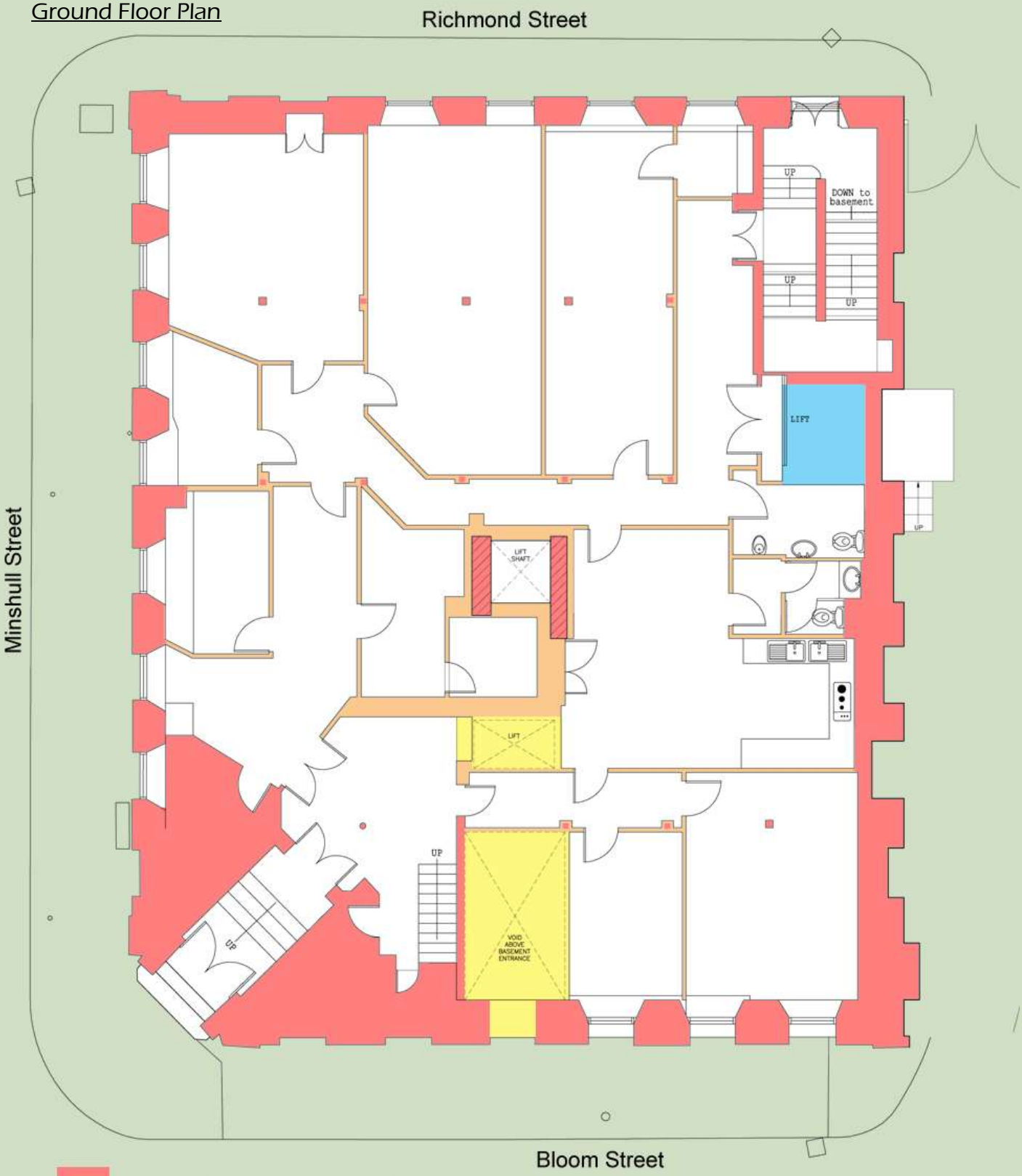
An analysis of the age of the alterations and variations made to the building has been made, based on the site survey.

A further investigation including photographs should be commissioned after a soft strip of the recent office partitioning and suspended ceilings.

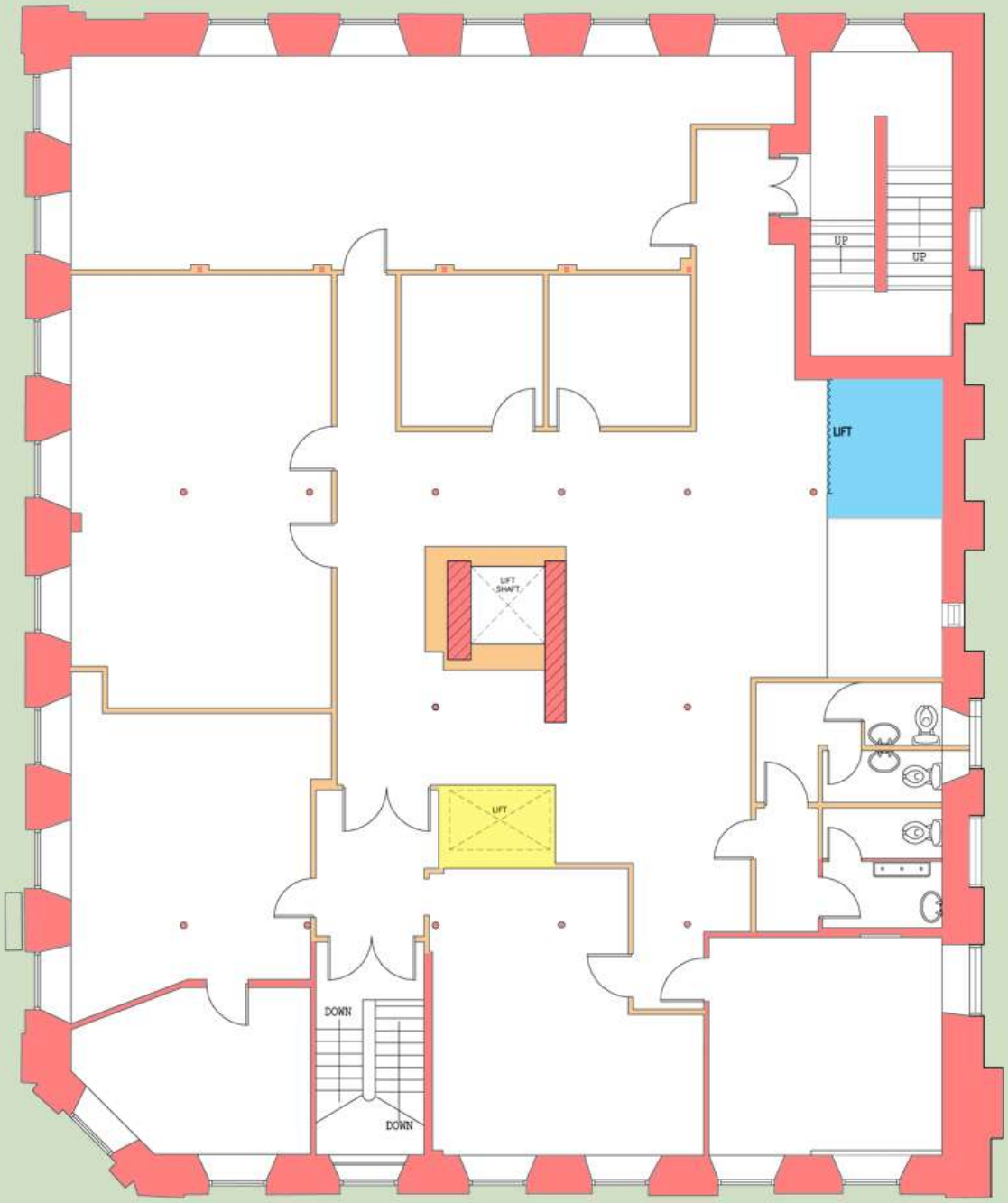
This may reveal more of the existence of historic building elements, and inform further on the original layout.

Note: - The following drawings are for indicative purposes only. They are **not** to scale.

Ground Floor Plan



First Floor Plan



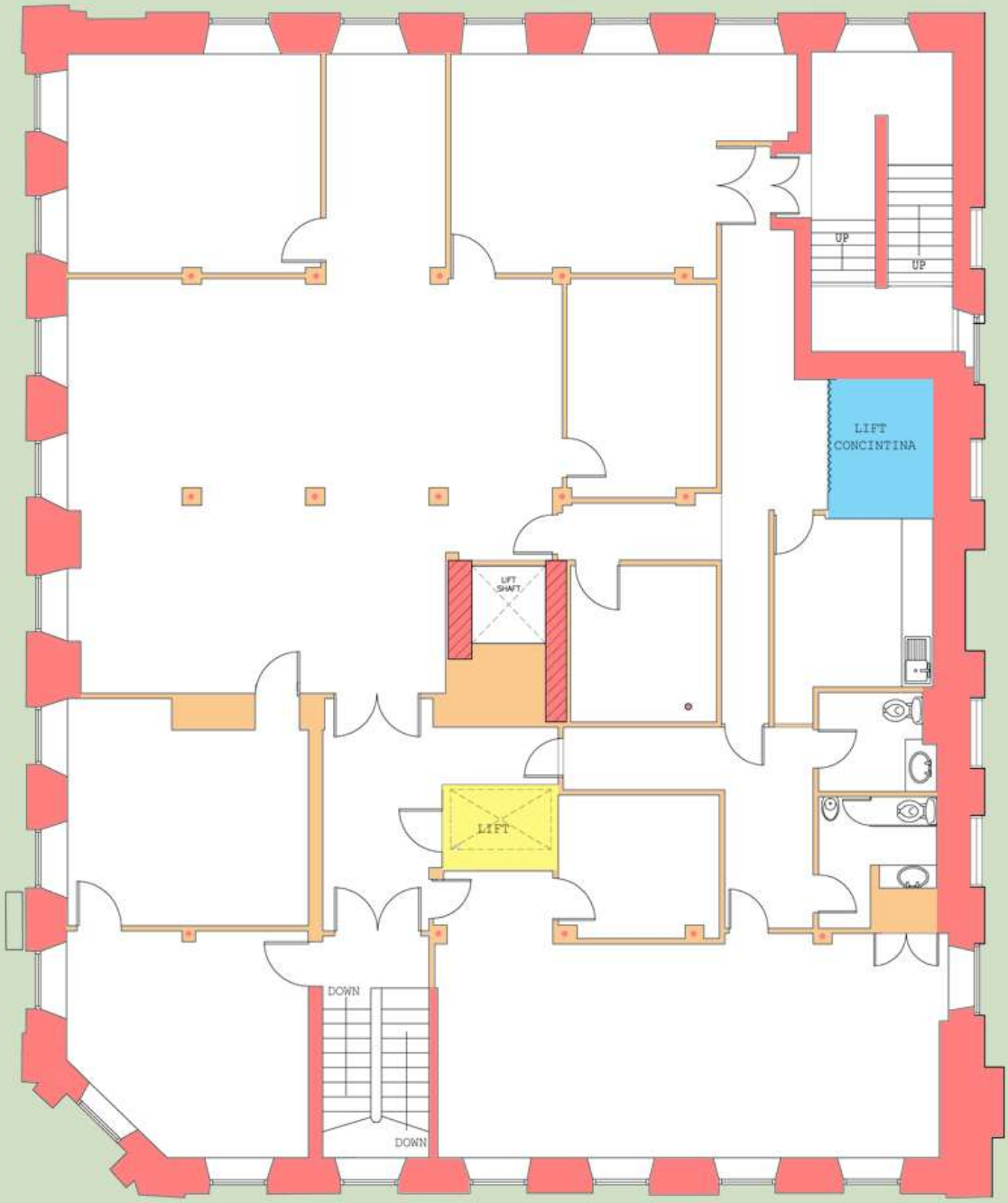
Original Building - Approx. 1869

Additions - Circa 1940/50's

Additions - Circa 1990's

Office Partitions - Circa 2000

Second Floor Plan



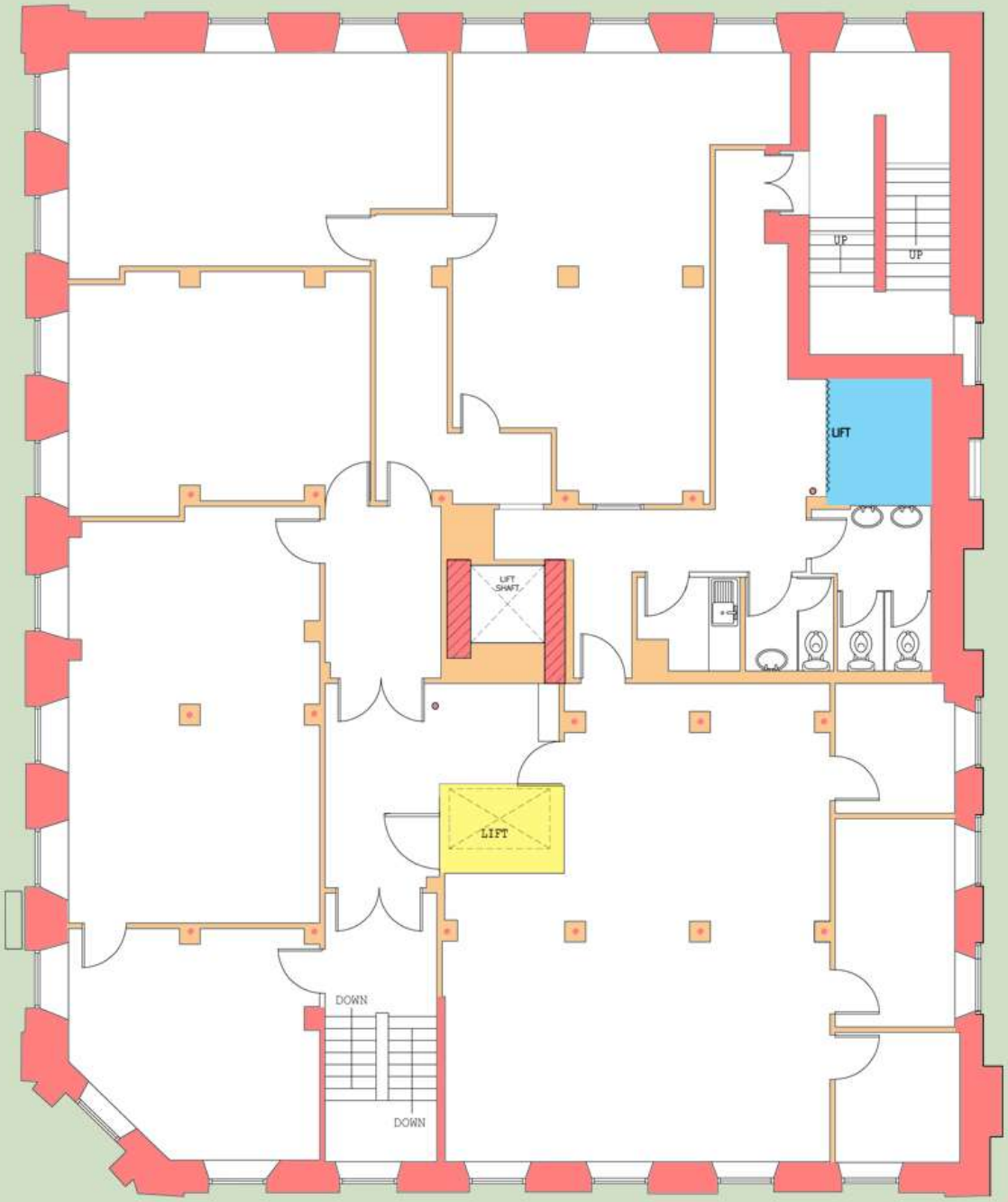
Original Building - Approx. 1869

Additions - Circa 1940/50's

Additions - Circa 1990's

Office Partitions - Circa 2000

Third Floor Plan



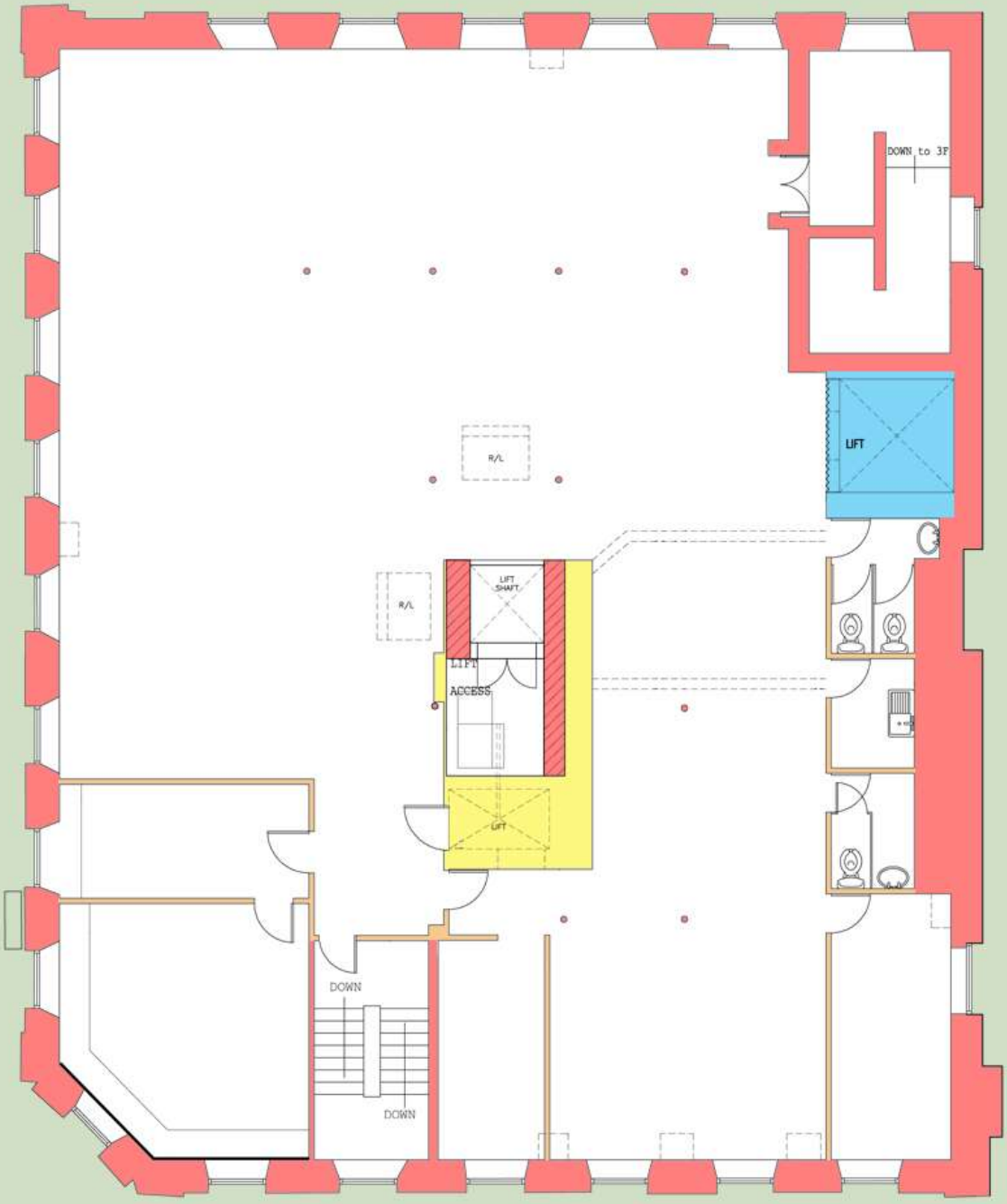
Original Building - Approx. 1869

Additions - Circa 1940/50's

Additions - Circa 1990's

Office Partitions - Circa 2000

Fourth Floor Plan



Original Building - Approx. 1869

Additions - Circa 1940/50's

Additions - Circa 1990's

Office Partitions - Circa 2000

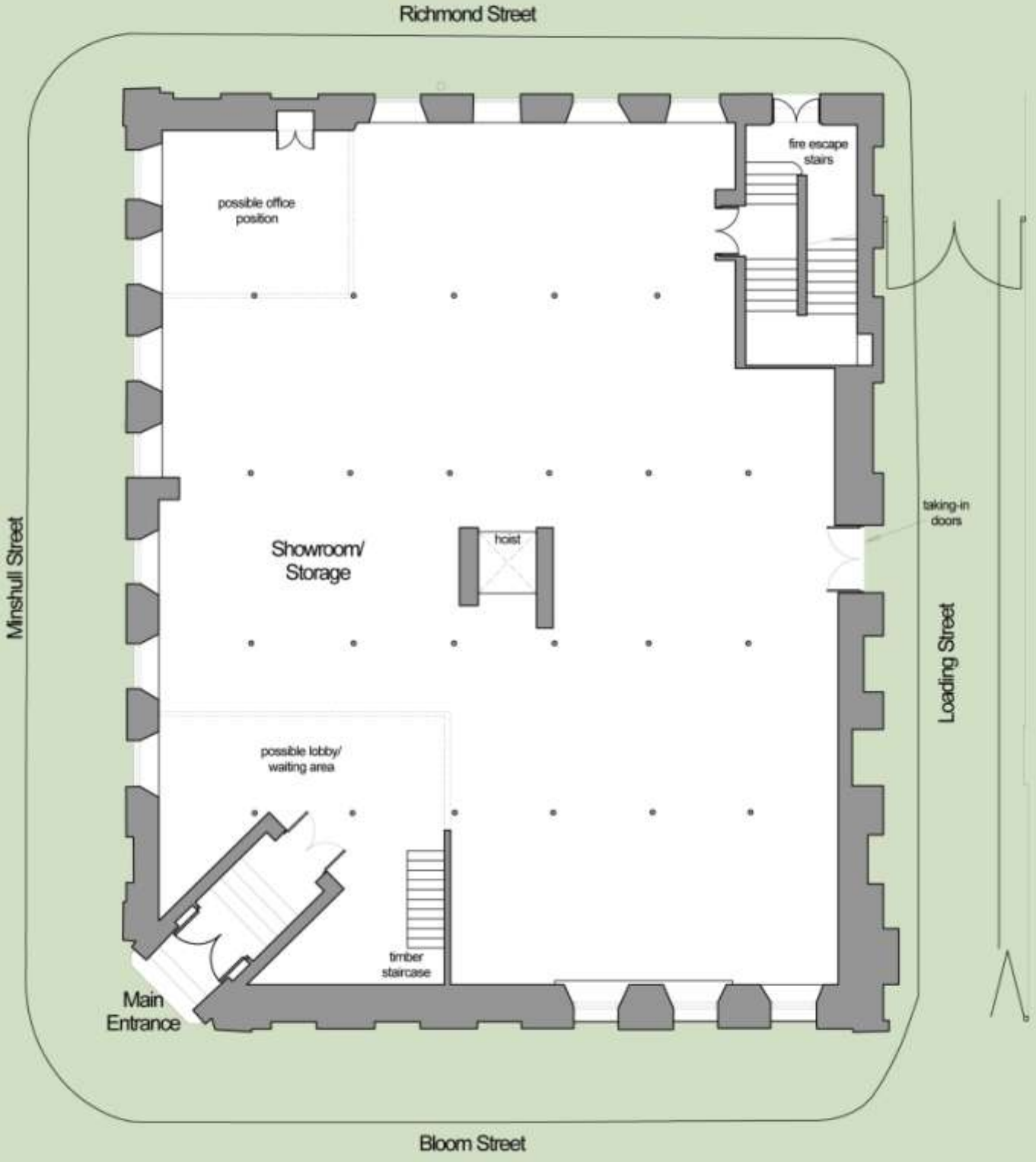
10. Assessment of Original Building (as built)

Based on measured plans, an assessment has been carried out of internal features and information relating to other buildings of a similar nature/use in the area.

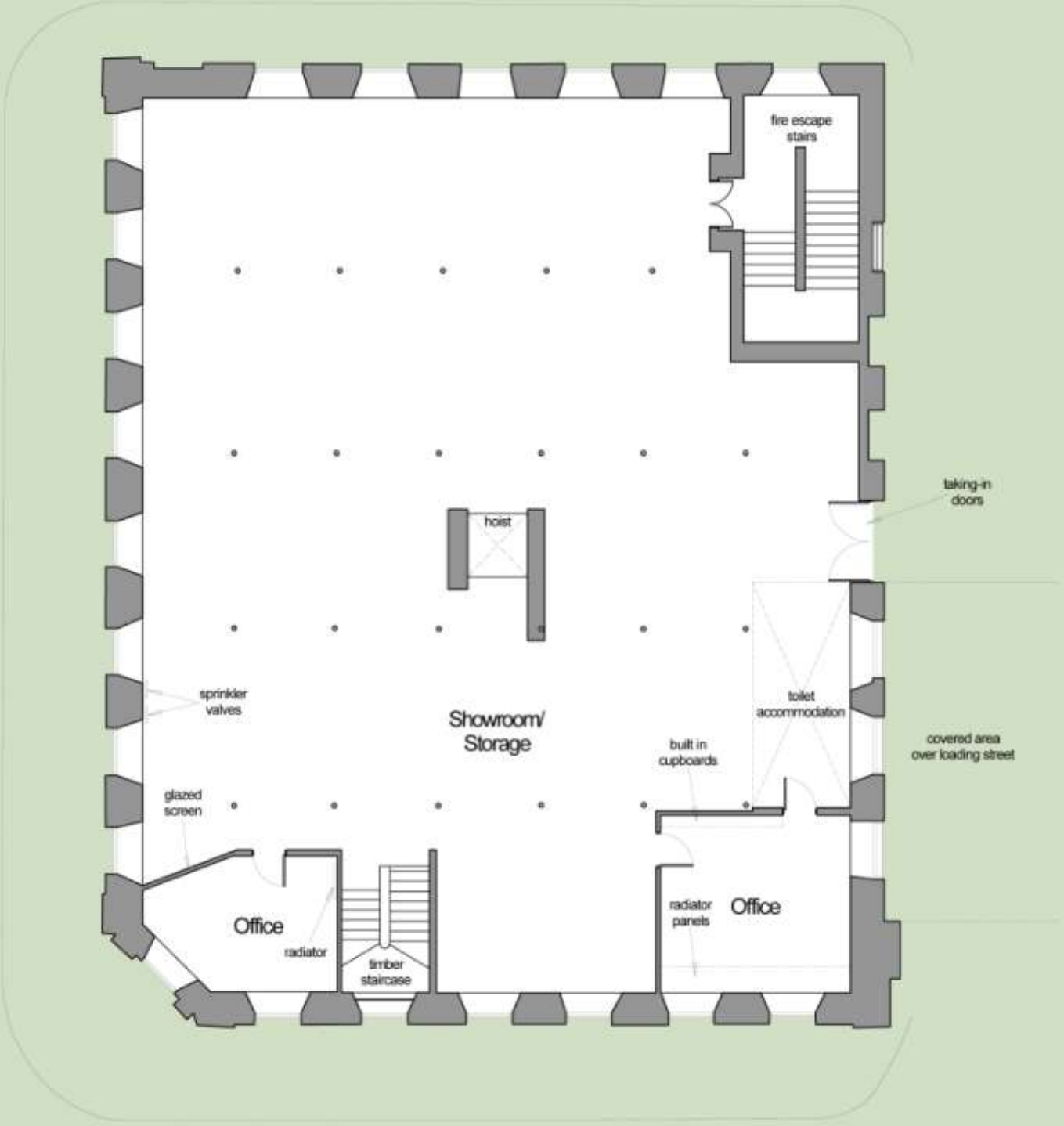
"Each floor was divided up into departments that specialised in certain types of goods and were overseen by a foreman, under whom worked assistants and salesmen. The upper floors were used for the least heavy goods and for those that required the best light for inspection. Heavier goods were to be found on the lower floors. Buyers moved between departments to sample and inspect the goods and to place orders. Purchased items were sent by hoist down to the packing room where they were given a final check, invoiced and packed prior to dispatch."
(English Heritage – Manchester: The Warehouse Legacy)

Note: - The following drawings are for indicative purposes only. They are **not** to scale.

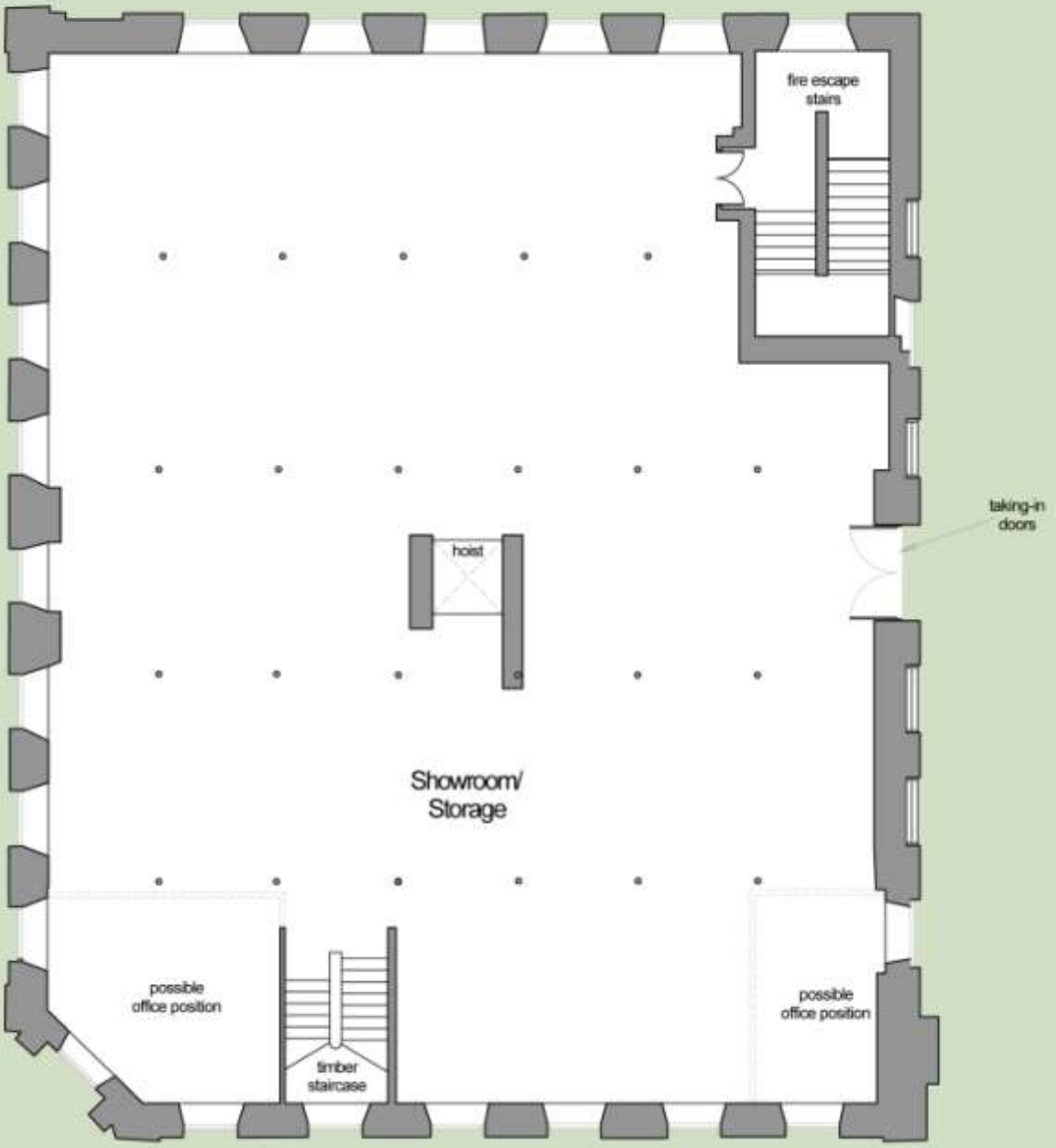
Ground Floor Plan



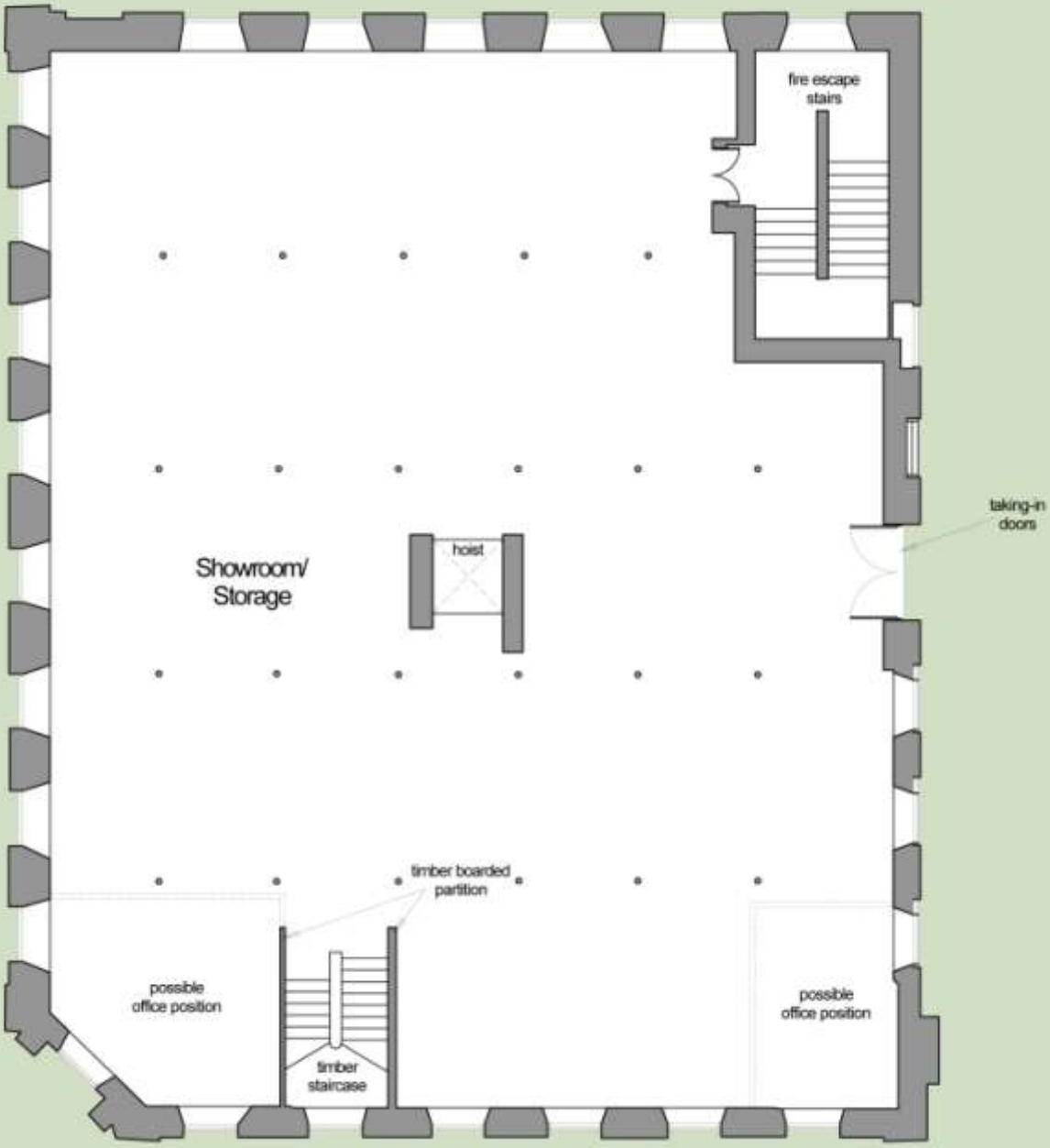
First Floor Plan



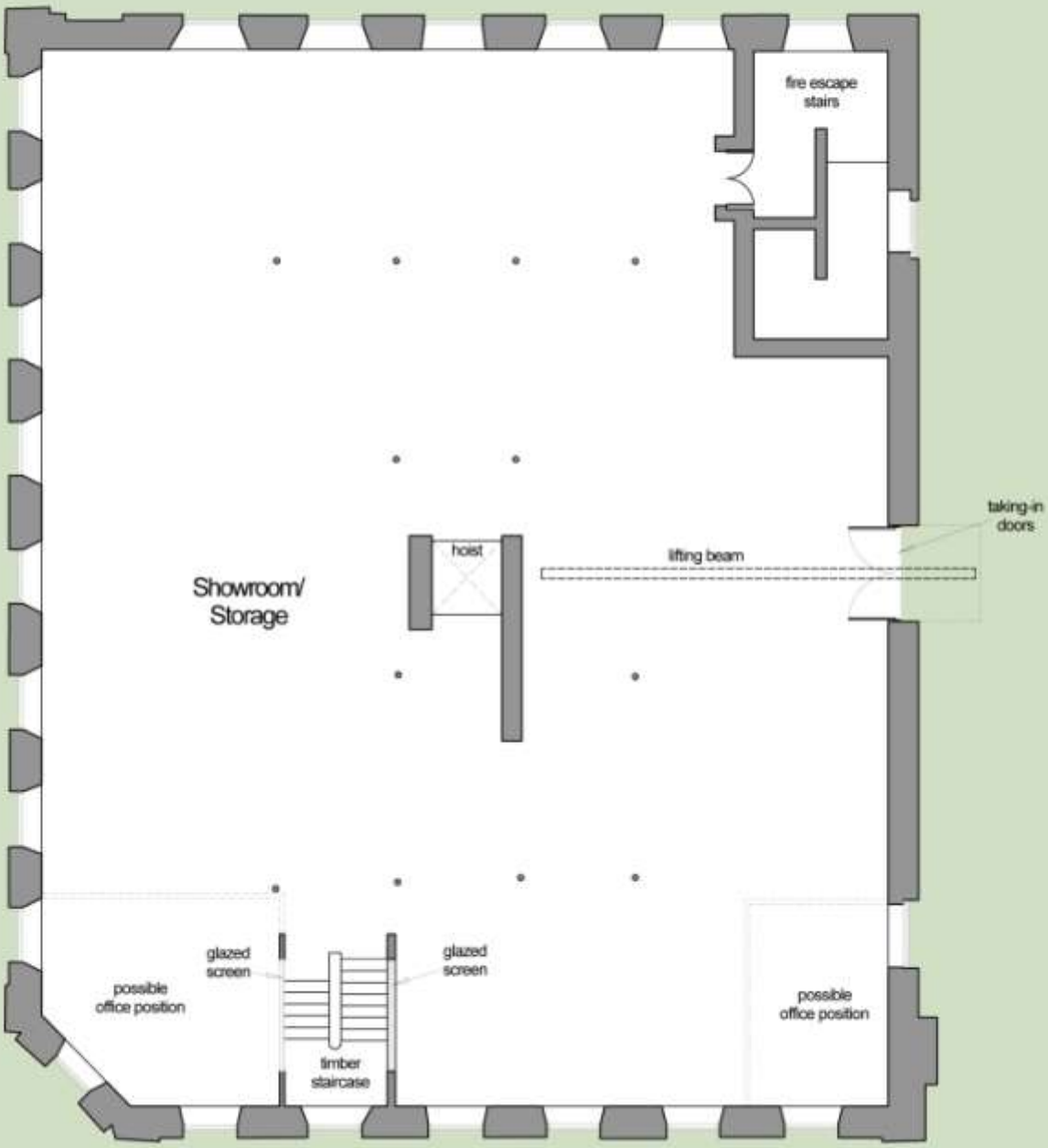
Second Floor Plan



Third Floor Plan



Fourth Floor Plan



11. External Description

General description

The site is a rectangular site boarded by Bloom Street, Minshull Street and Richmond Street with a cart yard to the rear.



View of corner of Bloom Street and Minshull Street

The building has a basement, raised ground floor with 4 storeys above, giving a height to the parapet of 5 ½ storeys from road level.

The building is of the palazzo style (further described in Section 12). The principle elevations are to Minshull Street - which includes a string of 8 window bays, and to Bloom Street - which includes a string of 6 window bays. The corner between these two elevations is chamfered to form the vertical emphasis of the entrance corner that is more ornate than the other elevations. The elevation to Richmond Street is less ornate with no sandstone plinth; this has a range of 7 window bays with the window bay adjacent to the Minshull Street elevation being blind (bricked up). The rear elevation has a full height loading slot in the centre which includes a hoist canopy. There are 3 bays of windows to each side of the loading slot, with an external chimney to the left hand side (adjacent to the Bloom Street elevation).



View of Richmond Street Elevation



View of
Rear Elevation

Minshull Street Elevation

The base of the building is sandstone ashlar construction from pavement level to the sills of the first floor windows. This is over 1 ½ storeys, as the ground floor is raised above pavement level by approx. 1.4m.

There is banded stonework to the basement windows which are now blocked over. The detail head of these windows that form the sills of the ground floor windows are of moulded stone. The head of the ground floor windows is a segmental arch with a moulded frieze detail, raising it to a continual band course which incorporates the sill detail of the first floor windows. The windows to the ground floor feature a different, altered fenestration to the other floors, having been replaced from probably arched, headed sashes.



View of Elevation up to first floor



View of blocked basement opening



View of ground floor window

Details included within the sandstone plinth are a series of cast iron ventilators; 4 no. at low level & 2 no. at high level to the ground floor, and a sprinkler intake valve together with sprinkler valve information plate.



Detail of cast iron ventilator



Detail of sprinkler information plate

Above the stone plinth line, the walls are of plain English bonded brickwork with stone heads to the windows at first floor level, detailed to replicate the stone head detail of the basement.



View of brickwork element of elevation

Window openings on the second floor and above have sandstone sills with a flat arch heads, with 5 course deep voussoirs. The windows decrease in height over each floor of the building, with the first floor being the largest, the fourth floor the smallest, and mid-sized windows to the intermediate (second & third) floors. All the windows from first floor and up are original sash windows without glazing bars.

There is a large stone coping to the parapet projecting a scroll moulding. Detailing the left hand corner (at junction with Richmond Street) is finished with stacked quoins.

Details included within the brickwork element are a series of plain circular tie bar end plates; 4 no. at high level on second floor and 4 no. at high level on third floor.



Detail of stone coping to parapet and tie bar plates



Detail of Stacked quoins to end of elevation

Bloom Street Elevation

This elevation is detailed on similar principles as the Minshull Street elevation, with various differences as follows:



View of Bloom Street Elevation

1. Roller shutter door has been added to the basement area at a later date. There is a simple splayed head detail, but there is a likelihood that access was always provided at this position as the opening is wider than the windows above which is significantly different in this position. Also, the band coursing of the sandstone has been returned into the jambs and this looks like the original stonework. The canopy which was a later addition has been removed.



Detail of opening to basement with roller shutter

2. 3 basement windows on the right hand side have been built up in brickwork, not rendered as the openings on the Minshull Street elevation. The brickwork coursing is English bond.

3. There is one section of metal railings sat in a stonework groove to the end bay, suggesting that there was probably a window behind this position. There is no evidence of any grooves to the other window reveals.



Detail of railing to bricked up opening

4. A central rainwater pipe drops from below a hopper set below the coping to above the stonework string course line and returns horizontally to the rear of the building.

5. A cast iron vent pipe rises from adjacent to the main entrance from above the coping level and returning into the building above the stone plinth line.

Main Entrance Corner Elevation



View of corner elevation at junction of Minshull Street and Bloom Street

There are steps rising to the front entrance door, with further steps rising inside the porch area to the raised ground floor level.



Detail of front entrance



Detail of architrave and pilaster

The front entrance has a segmented arch head, Portland stone doorway with a moulded architrave and detailed keystone, with pilasters to both flanks. There is a detail of original signage to each pilaster stating 'MANUFACTURERS & PRINTERS', though this has now almost completely worn away.



Detail of original signage to left pilaster



Detail of original signage to right pilaster

There is a flat headed window to the first floor with a moulded stone head featuring a triangular arch detail and ½ brick recess to window jambs. Window sill formed as part of cornice band to top of stone plinth.



Detail of First Floor window

The window to the second floor has a segmental arch head with saw tooth detail, elongated projected sandstone sill and ½ brick recess to head and jambs.



Detail of second floor window

Third and fourth floor windows both feature flat arch heads with 5 course deep voussoirs, and ½ brick recess to heads and jambs. Third floor window sill is projected moulded sandstone on stone brackets. Detailed brick and stone string cornice band above third floor window head, which also forms sill for fourth floor window. Detailed stone cornice with scroll detail to parapet from Minshull Street and Bloom Street continues through into this elevation.



Detail of third and fourth floor windows

All windows to this elevation are original sliding sash windows with glazing bars to the second, third and fourth floor windows. The windows to this elevation follow the same proportionality as the windows on the Minshull Street and Bloom Street elevations.

Richmond Street Elevation

This is a much simpler elevation than the Minshull Street elevation, having no stonework to the plinth line. There are 7 bays of windows, with the bay adjacent to the Minshull Street elevation being blind (bricked up), which appears to have been an original feature of the elevation.



View of Richmond Street Elevation

All windows have flat arch heads, and all windows to the basement area have been filled and rendered. There are no apparent fixing points for any cast iron railings to the basement windows.



View of basement & ground floor window

The second bay on the ground floor from Minshull Street is altered and partly built up. The fire escape door within the far left bay is set within the same width of opening as the window above, split with a stone transom and fan light. There are stone steps up to an intermediate level within the fire escape.



Detail of partially bricked up window



Detail of fire escape door

The stone coping is simple and does not receive the carved detail that is apparent on the Minshull Street and Bloom Street elevations. A rainwater pipe drops down between the third and fourth bays from the left, and is directed to the rear elevation below the sill of the first floor windows (in a similar position to the rainwater pipe on the Bloom Street elevation).



Detail of blind final bay and quoins to corner

Rear Elevation

The rear of the property has a central full height loading slot with a hoist canopy. There are 3 bays of windows to either side of the loading slot, all of which are box sash, with a fenestration of '6 over 6' on the first, second and third floors, and '3 over 6' on the fourth floor. All windows have flat arch heads with projecting sandstone sills, though many have been altered. The window bay next to Richmond Street is blind.



View of rear elevation

A chimney stack is positioned on the left hand side of the wall rising from the basement to above the roof. The detail cornice of Bloom Street wraps around the corner a short distance and terminates just before the chimney stack. The main coping to this elevation is simple, matching the Richmond Street elevation.



View of corner with Bloom Street

There is a new section of brickwork adjacent to the loading slot canopy that is associated with a later addition of a larger hoist. The ground floor stonework of Bloom Street returns to the chimney stack, but is detailed in such a way that it facilitates the gate to close.



Detail of stonework return

There have also been a number of alterations to the elevation at the lower level including the building up of the loading slot to the head of the first floor opening, the insertion of a folding door to the new hoist's position, alterations to the drainage system and the introduction of flues from the basement.



Detail of new sliding door



Detail of build-up to loading slot



Detail of built up basement window

The loading slot has been changed by the building up of the lower section. There is a more modern door construction to the doors at high level; the original doors would have been vertical boarded timber. The reveals are detailed with bull-nose brickwork.



Detail of loading slot with new doors

The soil and ventilation system, which is original, signifies the principle position of the internal toilet and kitchen areas as being in the range to the left of the loading slot on the first floor only. The rainwater pipes are plastic, but in the same position as originally built with the exception of the hopper and connection from the right hand side of the new hoist position (the alterations to the rainwater pipe system are shown on the elevation drawing).



Detail of flues and waste piping



View of rainwater pipes

There are 4 no. cast iron tie bars with circular end plates to this elevation; 2 no. at high level on the second floor and 2 no. at high level on the third floor.

12. Architecture

The Palazzo Style

"The Palazzo style was first introduced in the Italian Renaissance period of the fifteenth century, and had its birth in Florence, where under unique conditions and influences, a type of palace building was evolved.

There is a general absence of pilasters as decorative features in the façades, which are therefore called 'astylar'. While sparing the use of detail together with concentration of pronounced features produces a boldness and simplicity of style.

The imposing appearance of these massive palaces fronting onto narrow streets is emphasized by boldly projecting roof cornices, which crown the walls and are proportionate to the height of the buildings."
(Sir Bannister Fletcher – A History of Architecture)

As stated above the style is based upon the palazzo (palaces) built by wealthy families of the Italian Renaissance. The term refers to the general shape, proportion and a cluster of characteristics rather than a specific design.

The Basement and Ground Floor is generally differentiated in the treatment of its masonry, and is often rusticated. There are several storeys with regular rows of windows which are generally differentiated between levels. The façade is symmetrical and usually has some emphasis around the portal.



Example of the Palazzo style (Sir Banister Fletcher – A history of Architecture)

13. Method of Construction

The method of construction of the building was based on the experience of the mill architects of south east Lancashire.

The floor construction is a heavy timber floor without joists. The floor boards – which are over 65mm thick – span onto transverse timber beams, which in turn are supported on cylindrical cast iron columns that sit on stone foundations. The external walls are constructed in English bond brick, presumably solid, with stonework decoration to the lower floors.

The thick floorboard construction, which in some instances were jointed by steel plates, which were laid directly on heavy transverse timber beams transferring the loads to cast iron columns may have permitted higher floor loadings than a joisted timber floor (the warehouse, due to the storage, would require high loading floors). Another advantage was improved fire resistance, since heavy beams and boards could be charred in a fire without being significantly weakened.



Detail of floor boards

The beams are attached to the columns by compression plates mounted on top of the columns, where the jointing of the beams will occur.



Detail of the compression plates supporting the timber beams

The roof is constructed of a series of heavy timber king post trusses supporting purlins and, in turn, spars. Due to the size of the warehouse this necessitated a double ridged roof with an internal gutter (this area is now penetrated by the lift shaft - which can clearly be seen on the Google satellite image). As a central water collection point for approximately a quarter of the building, rainwater from this gutter is removed by pipes dropping below the top storey ceiling and directing the rainwater to a pipe at the rear of the building. Now in plastic rainwater goods but within timber boxing, it originally may have been a lead lined timber boxing system.



Detail of king post truss



Detail of drainage boxing

The building contains a stone fire escape at the rear corner of the building, diagonally opposite to the main entrance, and an open staircase to the front of the building which is of timber construction.

14. Internal Elements of Significance

General Description

As described in the previous section, the principle of the construction is the heavy timber floors. This is supported on timber downstand beams fixed to cast iron columns. This would have been the view from the main staircase entering each floor, the internal layout with its simple front staircase rising the full height of the building, together with the enclosed fire escape to the diagonally opposite corner of the building. There are also some existing office areas that have been identified on the first floor. It appears that the building was plastered internally on all floors with a lath and plaster ceiling to the top floor/roof position.

All floors with the exception of the top floor have been laid out with office partitioning and suspended ceilings concealing the majority of columns and beams. The introduction of 2 extra lifts into the original construction breaks up the area even further with more robust construction required for the lifts than the lightweight construction of the partitioning for the offices. From our observations there was originally only toilet accommodation on the first floor. This has now been superseded with new fittings but there are remnants of existing timber partitions in the vicinity.

The significance of the construction is that the heavy timber floor construction was designed and used within a very narrow time frame from around 1840 - 1870. This was due to the introduction of more sophisticated steel structures and fireproof flooring systems developed by mill architects such as Stotts and Dixons. It is therefore important to recognise the principle of the floor plate and the method of construction in the significance of the building (See Section 13: Method of Construction for more information).

Significant Details:

1. Columns
2. Beams
3. Floors
4. Stairs
    a. Front (Main)
    b. Rear (Fire Escape)
5. Offices/Partitions
6. Services
7. Lifts

Proposed Works to Required Floors; see page 83 for detail drawing

The floors, although constructed of thick boards spanning onto timber beams, do not provide adequate fire proofing between the floors to retain the principles of the timber beams. It is intended to provide a plastered ceiling fixed to new joists, this consists of 2 no. layers of Glasroc 7 Multiboard on 150x50mm sw joists at 600mm centres with 38x38mm sw noggins at ceiling perimeters to support the outer layer. Ceiling board joists to be sealed to the main beams with an intumescent mastic bead, existing beams will be redecorated.

Columns and Beams

There is the same connection detail between the beams and the columns on all floors, with the exception of the top floor, where there are less columns with a different bracket system to the top of the columns to take the beam loadings associated with the king post trusses.



Detail of column/beam connection to top floor

The main timber beams, which are typically 350mm deep x 200mm wide, sit on top of the columns in compression shoes. This allows the beams to be jointed to the columns and allows the floor loads to be transferred to the cast iron columns. The columns are circular grey cast iron which was the typical cast iron type used for construction purposes in the mid-to-late Victorian period. The columns have no detail to the lower areas, with a circular bulge detail about 150mm from the head and an extended plate fixing to the compression shoe.



View of column/beam connection



Close-up view of connection

The connection between the beams and the floor joists is finished with a small timber moulding.



A typical view of an area of cast iron columns and floor beams where there is no suspended ceiling and no column encasement, giving a view of how the building would have looked when constructed.

Proposed Works to Columns and Beams

The scheme layout has endeavoured to leave as many of the columns and beams and connection fittings exposed. It is not intended to remove or alter any as part of the proposals. The columns that are to be included within the partitioning will be either painted with intumescent paint. Details and positions of the treatment can be seen by inspection of the floor plans and referenced to notes 2 and 3, Timber beams are to be repainted, all to remain insitu.

Main Staircase

On the first flight of stairs from ground floor level there is a rounded edge detail to the first two steps with a newel post to the second step. The existing balustrade has been panelled over, concealing the spindles.



View of ground floor stair flight showing panelled balustrade and newel post

The balustrading to the first ½ landing in front of the window has also been panelled over.



View of panelled balustrade to ½ landing

The ½ landings between the ground to third floors feature a single quarter winder step to both sides. The ½ landing between the third & fourth floors does not feature these winders. The wall strings to all landings have a swept moulding detail between the flight and landing.



View of landing showing winders



View of swept moulding

<u>Proposed Works to Main Staircase</u>

All flights of the stairs are to remain insitu as existing.

Repair works may be required on a like for like basis; this is mainly due to the movement that can be seen in some of the landings. It is suggested that the landings are assessed by a structural engineer to ascertain structural safety; see note 6 on proposal drawings.

The staircase is of timber construction with a moulded (probably hardwood) handrail featuring plain square spindles on an arrangement of 2 per step. The handrail forms a continuous curved section over the whole staircase. Detailed mouldings are returned to the outside string for the length of the tread with a planted scrolled bracket detail underneath. The underside of the staircase is finished in plaster on laths up to the outer string with a moulded stop bead to the edge.



View of balustrading to staircase



View of detail work to outer string

The half landings above the first floor feature balustrades across the window openings that match the main balustrade design.



View of half landing to highest level showing balustrade to window opening

On the top floor the handrail & baluster spindles return across the landing into the side wall.



View of balustrade return

The walls to the sides of the stair shaft at the top floor level are finished in vertical tongue & groove boards. There are existing openings with timber sills still visible in these walls that have now been plasterboarded over. Due to the still visible sill boards, it is likely that there would have been a glazed screen to this area.



View of timber boarding to shaft walls



View of existing opening to shaft wall

Rear Fire Escape Staircase

There are typical fire doors to the stairwell from the main areas. The staircase is of stone construction, made up of individual treads and inserted risers. There are no handrails to the staircase. There is a slight amount of wear to this staircase, indicating it was not often used (when a staircase of this type was well used, a lot of wear usually occurred due to the workman wearing clogs with steel undersides). The inside of the escape stairwell is white painted brickwork.



View of escape doors on top floor from main area



Detail view of stone steps



View of escape stairwell showing wall finish

Proposed Works to Rear Fire Escape Staircase

Existing doors to staircase to be upgraded if required giving the correct fire protection on the staircase side; closing requirements may also need upgrading.

Existing walls in the staircase to be painted, staircase to remain. Small metal handrail to be fixed to conform to Building Regulations.

Offices – First Floor

The office adjacent to the main staircase was probably a foreman of salesman's office. Notable features include timber boarding to partition walls, glazed panels in timber frames (which have now been re-glazed), an openable transom window above the door and moulded skirtings. The door itself is a modern replacement within the existing framework.



View of corner of room showing original features



View of glazed panels and transom window



View of Glazed screening to partition

Proposed Works to Screen

Remove modern door. Leave existing screen in position and redecorate; see note 33 on proposal drawings.

The corner office away from the staircase has plastered, painted walls with a picture rail at high level. The ceiling is also painted plaster with a moulded plaster cornice. A floor beam runs through the centre of the ceiling and part of a cast iron shoe can be seen. The door frames are original, but the entrance door has been replaced with a modern door. This office was probably the manager's office.



View of corner of room showing original features

The secondary door in this room features the original frame and door. This is likely to have lead to private toilet accommodation for this office. This door is no longer openable, as it has been boarded over on the other side. Note the original vent above the picture rail.



View of original door and panelling

There is some timber panelling from the skirting up to dado level. Within this area are some concealed built-in cupboards adjacent to the entrance door. On the opposite side of the room, the timber panelling forms some boxing-out for the heating radiator. This element is most likely an original feature, but the top has been replaced with a modern fixture.



View of concealed cupboards within low level timber panelling



Boxing around heating radiator

Proposed Works to Existing Office

See note 34 of proposal drawings which states: 'Existing historic room with Wainscotting and cornicing – remove modern door and leave room walls unaltered'.

Services

The building has a sprinkler system by Mather & Platt. I do not know if it is still operable. The following photograph shows the valves on the first floor, on the Minshull Street elevation wall. The main bells are situated in the same position on the external face of the wall, probably fitted just before the 1900's.



View of sprinkler valves

Proposed Works to Sprinkler Valves

See note 31 of first floor proposed drawing which states: 'leave existing historical plumbing in place'.

There is a heating system in the building and various types of radiators can be seen, generally hospital style cast iron radiators. The boiler would have been in the basement at the rear of the building and flued to the external brick flue to the left hand side of the rear elevation to the loading road.



An early feature radiator, fitted in the foremen/salesman's office

Proposed Works to Radiator

See note 32; leave original radiator in position.

Ventilation detail boxes can be found on the first floor, connected to the external vents which were cast iron (described in more detail in Section 11: External Description).



View of ventilation box

Proposed Works to Ventilation Boxes

All existing vents are to remain, with only decoration taking place.

Lifts/Hoists

There were originally 2 means of lifting in to the building. The main one was the external lifting beam that came from the top floor, however, no details have been found of any existing workings. The other means of lifting within the building was the internal hoist, situated in the centre of the building on the top floor, which is the only floor where the hoist is reasonably accessible. A pair of steel doors are fixed, presumably in case of fire. The walls around the hoist are of painted brickwork.



View of steel doors to hoist

Works Required

See note 1 on proposal drawings.

Existing hoist shaft and walls to remain. Existing metal doors to remain.

New 1hr fire-rated timber floor constructed; see detail.

A goods lift is located in the area adjacent to the rear staircase. This lift has a folding shutter picket gate with a small viewing panel (probably circa 1950/60), though the shaft looks older. Although it was not part of the original building, the shaft may be from the early 1900's.



Left: View of folding door to goods lift

Works Required

See note 5 on proposal drawings.

Existing hoist car, cables and machine to be removed.

Door to be retained.

Part of shaft to be floored over with 1 hr fire-rated new timber joisted floor to form plant/storage area, other part of shaft to be enclosed with 1 hr rated metal stud and plasterboard services shaft; see details.

A passenger lift is located in the centre of the building close to the original hoist location. This lift shaft is of new construction from around 1980/90's.



View of door to passenger lift

Proposed Works to Existing Passenger Lift

See note 20 on proposed drawing, lift to continue in use.

15. Cotton & Manchester Warehouses

Manchester grew up and owes its heritage to the manufacture of cotton. In 1781, Richard Arkwright opened the world's first steam driven textile mill. Previous to that, cotton mills were powered by water turning machinery that sprung up across Lancashire.

Originally textile manufacturing was carried out from the home. When this moved to purpose built factories besides fast flowing streams, Manchester and the surrounding south east Lancashire towns became the largest cotton spinning centre in the world.

Manchester cotton mills declined from its peak of 108 in 1853, but the surrounding towns continued to boom. A large number of warehouses were constructed as the large town expanded to be the commercial centre of the cotton industry.



View showing congestion when loading & unloading on streets
(from: The Lancashire Cotton Industry – A History Since 1700)

Warehouses in Manchester

With the growth in the population of Manchester relating to the expansion of the cotton industry, from its origins in the late 18th Century and its phenomenal expansion through to the early 20th Century, there was a great need for warehousing.

Every 19th Century town of any size had warehouses where perishable goods and foods were stored before being distributed within the town. The earliest warehouses were connected to the road and canal networks, later buildings were connected to the railway system.

There were 2 basic types of warehouse:

1. Carrier warehouses, which included:
    a. River warehouses
    b. Canal warehouses
    c. Railway warehouses
2. Commercial warehouses

River, canal and railway warehouses were purpose built for the movement of large quantities of food, fuel and other goods to support the growing population.

Most of Manchester's river warehouses developed around Quay Street and at the side of the Irwell River.

Canal warehousing developed from around 1798 when the Rochdale Canal was opened.

The area in the vicinity of the site was developed around the canal infrastructure. Railway warehousing was developed at the end of the railway system.

10 Minshull Street was a commercial warehouse. Commercial warehousing developed from merchants storing wares such as cotton materials in their houses, but as the industry grew the need for larger warehouses specifically designed for the purpose developed. The important time for warehouse developments of this type was after 1840 when the economic character of Manchester was changing from one of cotton manufacture to a centre of commerce and merchants.

10 Minshull Street is a manufacturer's warehouse to a typical plan, being almost square. Having all of the plot boarded by roads, they were built as show rooms. Each floor was generally divided into specialist departments. The upper floors were generally used for smaller, lighter items and the lower floors for heavier goods.

Potential purchasers moved between departments to inspect the samples, usually fixed to tables near windows. All goods being received came down the cart street. After 1948 by law, due to the congestion on the roads and also for security, all loading had to be carried out off the main highways on cart streets or by hovels.

No. 10 Minshull Street

The 1:500th scale plan (Section 8; Historic Site Development - Map 4) shows that there was a covered area across the loading street. There is also evidence of a later addition of a covering of the loading street at the Richmond Street end.

The plan of the building was designed around warehousing with offices situated on the ground floor and first floor. Very little officing would be on other floors. There is a small office that has existing coverings, panel doors and internally simple fillings, the walls being constructed of timber with boarding to the warehouse side. It is difficult to identify any existing features on the ground floor as the over-cladding and suspended ceilings hide the details. A toilet appears to have been positioned on the first floor adjacent to the office. The service entrance is at the rear of the building on Richmond Street. From the late 1840's the staircase at the rear of the building had to be constructed of fireproof materials; stone and brick with heavy self closing fire doors.

The materials were lifted into the building via the taking-in doors on the loading slot with a hoist fitted at roof level; movement between floors was carried out by this centrally positioned hoist.

Heating was provided to some of the areas as a boiler would have been situated in the basement. Lighting would have been provided by gas light.

16. Owner

"The building was built as a warehouse for the company 'E. Harrison & Co. Manufacturers and Printers (circa 1869). The type of materials they produced were sateen, jeans, drills, royal ribs & jeanettes.

They produced these products in 2 factories: 9 Palace Street and 9 Palace Square - Oldham and Todmorden."
(information contained in Slater's Directory – 1872, 1869 & 1874)

The only reference to E. Harrison & Co. Todmorden appears at Crow Carr Ings Mill, Whiteplatts Street, Todmorden, where it appears that Enoch Harrison & Co. had 139 looms in 1869. They employed 70 hands and produced 104 tonnes of goods. By 1878, they had 469 looms working full time. They were manufacturers of satins and fancy goods for printing and dying.
(Information found at:
http://freepages.genealogy.rootsweb.ancestry.com/~todmordenandwalsden/crowcarrings.htm)

There is no information regarding the Oldham operation.

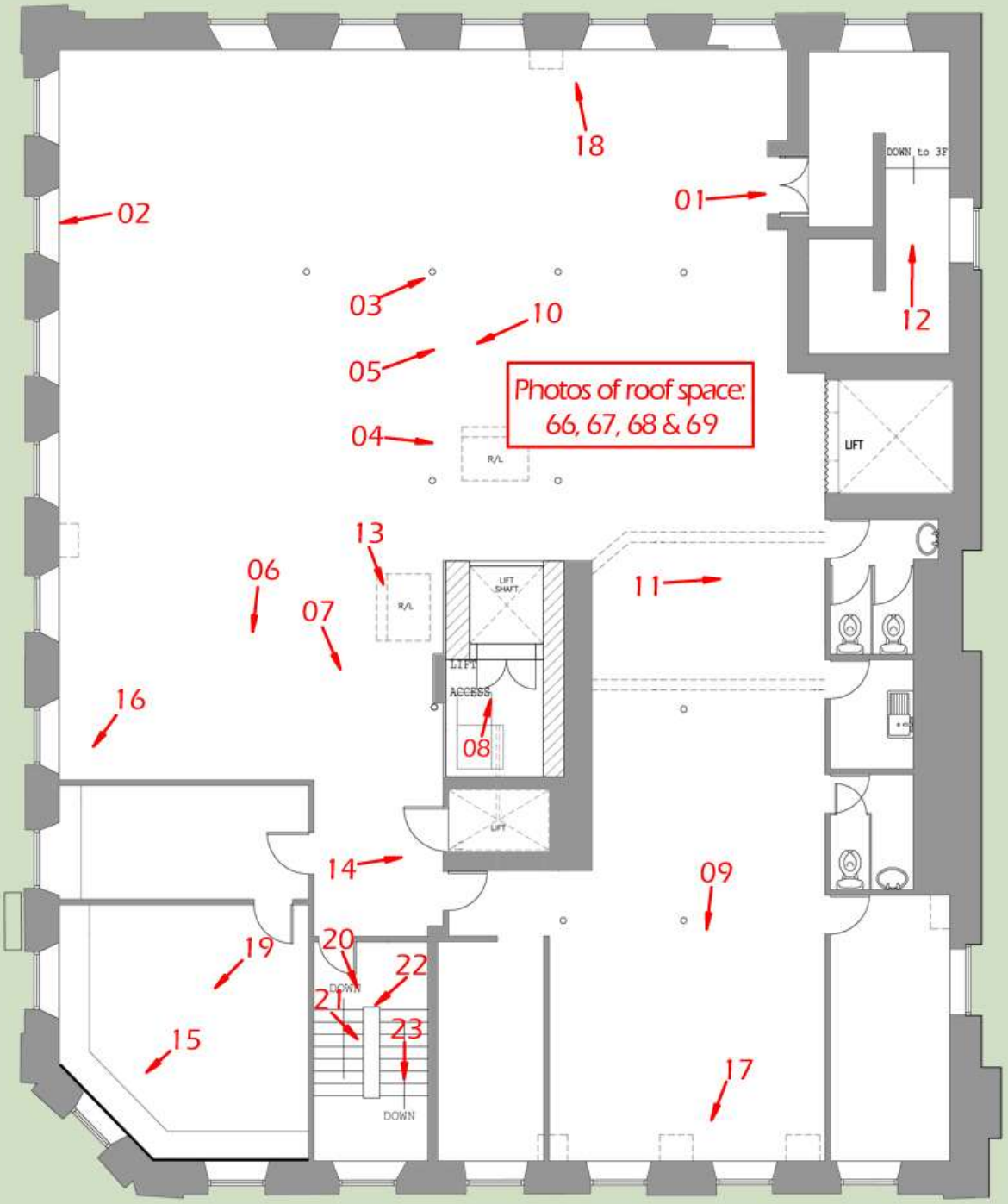
17. Photographic Record

This photographic record includes photographs of the inside of the building, taken in June 2011. The photographs have been taken to provide a record of each floor and the significance of any architectural details.

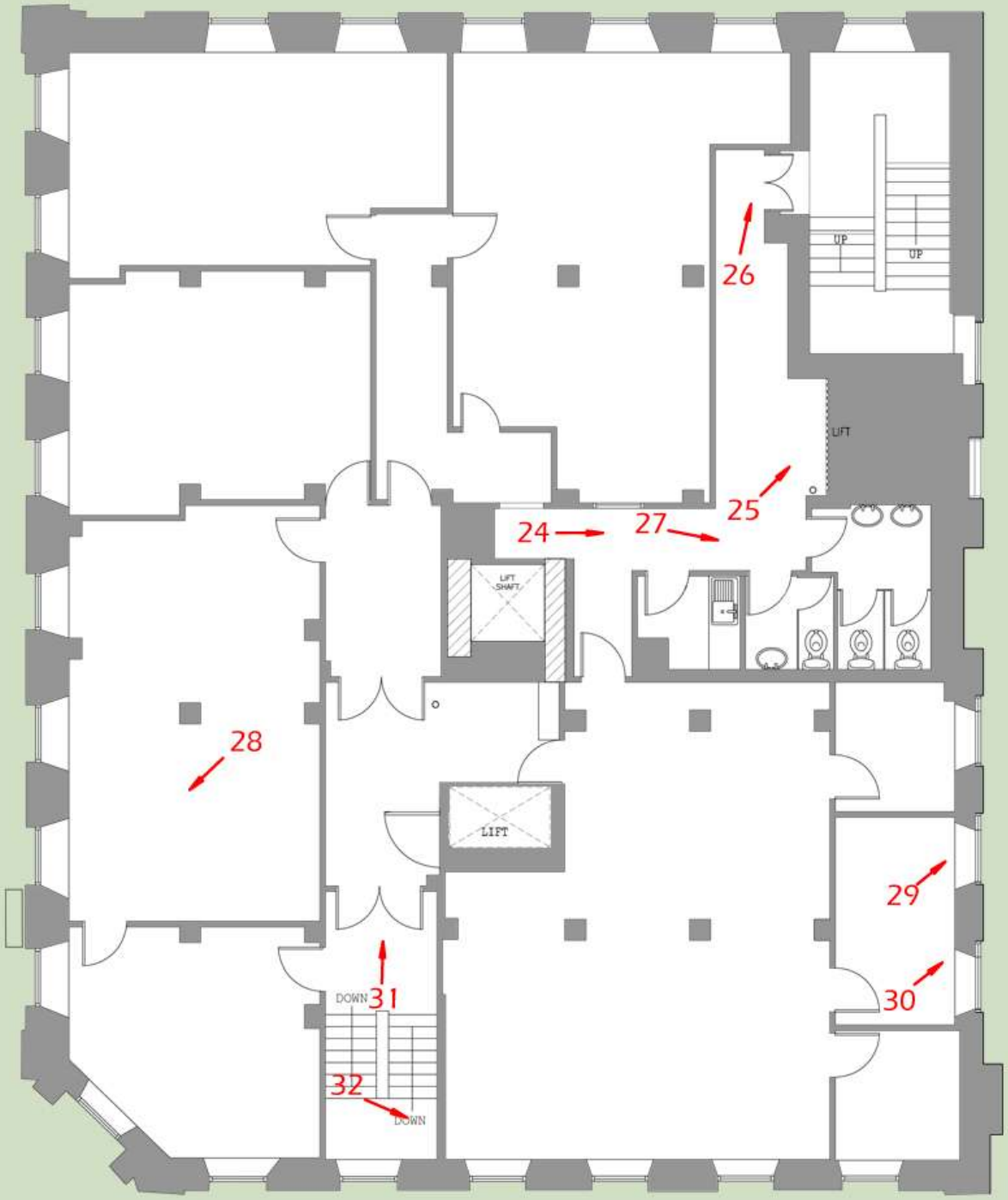
The photographs are referenced to each of the floor plans.

Note: - The following drawings are for indicative purposes only. They are **not** to scale.

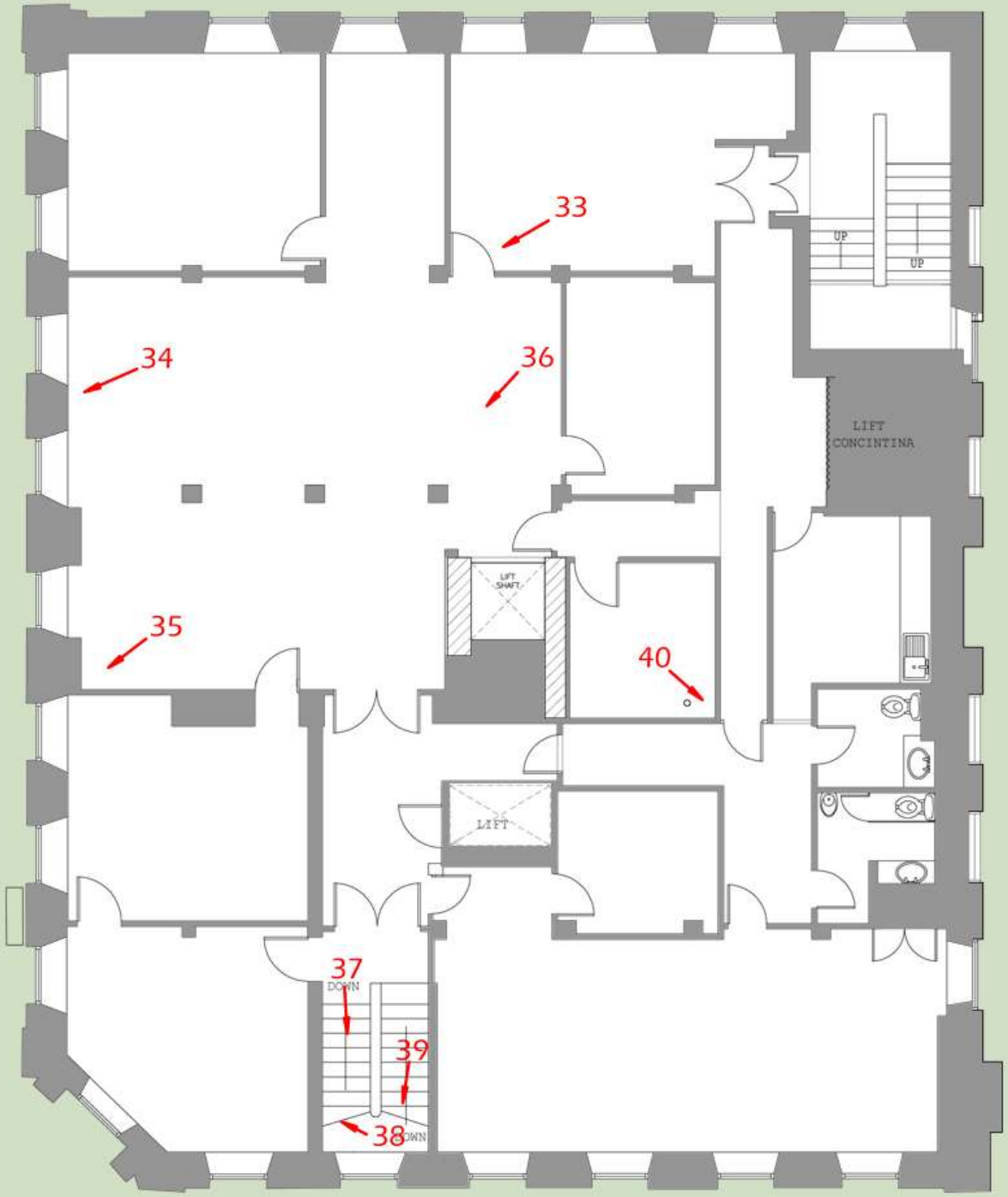
Fourth Floor Plan



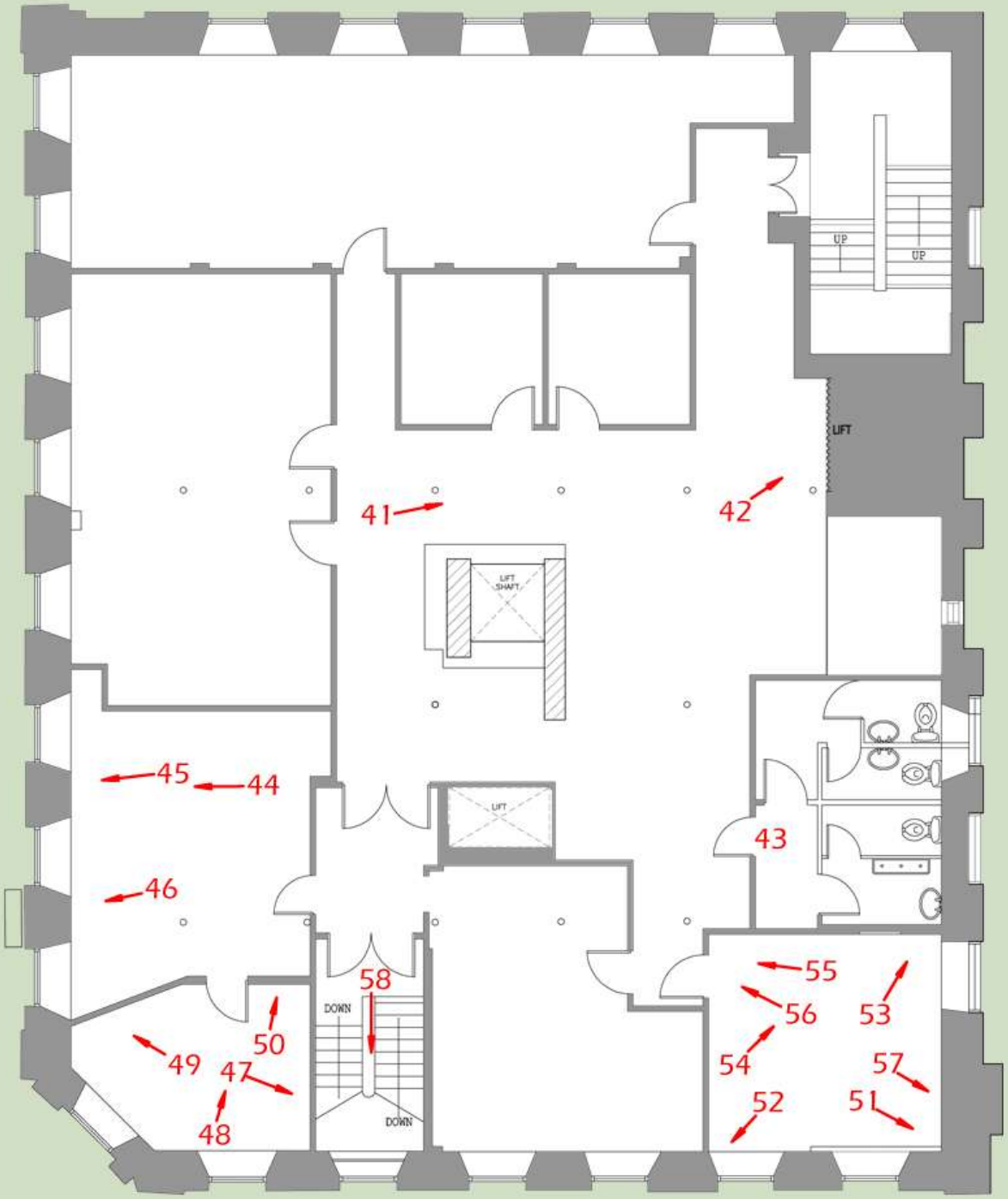
Third Floor Plan



Second Floor Plan



First Floor Plan



Ground Floor Plan





Photo Ref: **01**



Photo Ref: **02**



Photo Ref: **03**



Photo Ref: **04**



Photo Ref: **05**



Photo Ref: **06**



Photo Ref: **07**



Photo Ref: **08**



Photo Ref: **09**



Photo Ref: **10**



Photo Ref: **11**



Photo Ref: **12**



Photo Ref: 13



Photo Ref: 14



Photo Ref: 15



Photo Ref: 16



Photo Ref: 17



Photo Ref: 18



Photo Ref: 19



Photo Ref: 20



Photo Ref: 21



Photo Ref: 22



Photo Ref: 23



Photo Ref: 24



Photo Ref: **25**



Photo Ref: **26**



Photo Ref: **27**



Photo Ref: **28**



Photo Ref: **29**



Photo Ref: **30**



Photo Ref: **31**



Photo Ref: **32**



Photo Ref: **33**



Photo Ref: **34**



Photo Ref: **35**



Photo Ref: **36**



Photo Ref: **37**



Photo Ref: **38**



Photo Ref: **39**



Photo Ref: **40**



Photo Ref: **41**



Photo Ref: **42**



Photo Ref: **43**



Photo Ref: **44**



Photo Ref: **45**



Photo Ref: **46**



Photo Ref: **47**



Photo Ref: **48**



Photo Ref: **49**



Photo Ref: **50**



Photo Ref: **51**



Photo Ref: **52**



Photo Ref: **53**



Photo Ref: **54**



Photo Ref: **55**



Photo Ref: **56**



Photo Ref: **57**



Photo Ref: **58**



Photo Ref: **59**



Photo Ref: **60**



Photo Ref: **61**



Photo Ref: **62**



Photo Ref: **63**



Photo Ref: **64**



Photo Ref: **65**



Photo Ref: **66**



Photo Ref: **67**



Photo Ref: **68**



Photo Ref: **69**

18. Effects of the Proposed Works on the Identified Significance of the Building Elements.

Alterations to historic buildings do have effects on the integrity of certain elements of the building. At present, the majority of the structural columns, beams, etc. are not seen due to the position of the internal walls, the boxing out of the columns and extensive suspended ceilings.

The building at present does not conform to building regulations in terms of fire and any proposals will be required to provide a fire strategy for egress from the building to the adjoining roads. It was originally considered that the main timber staircase was not wide enough for the number of people exiting the building to conform.

Internal Works

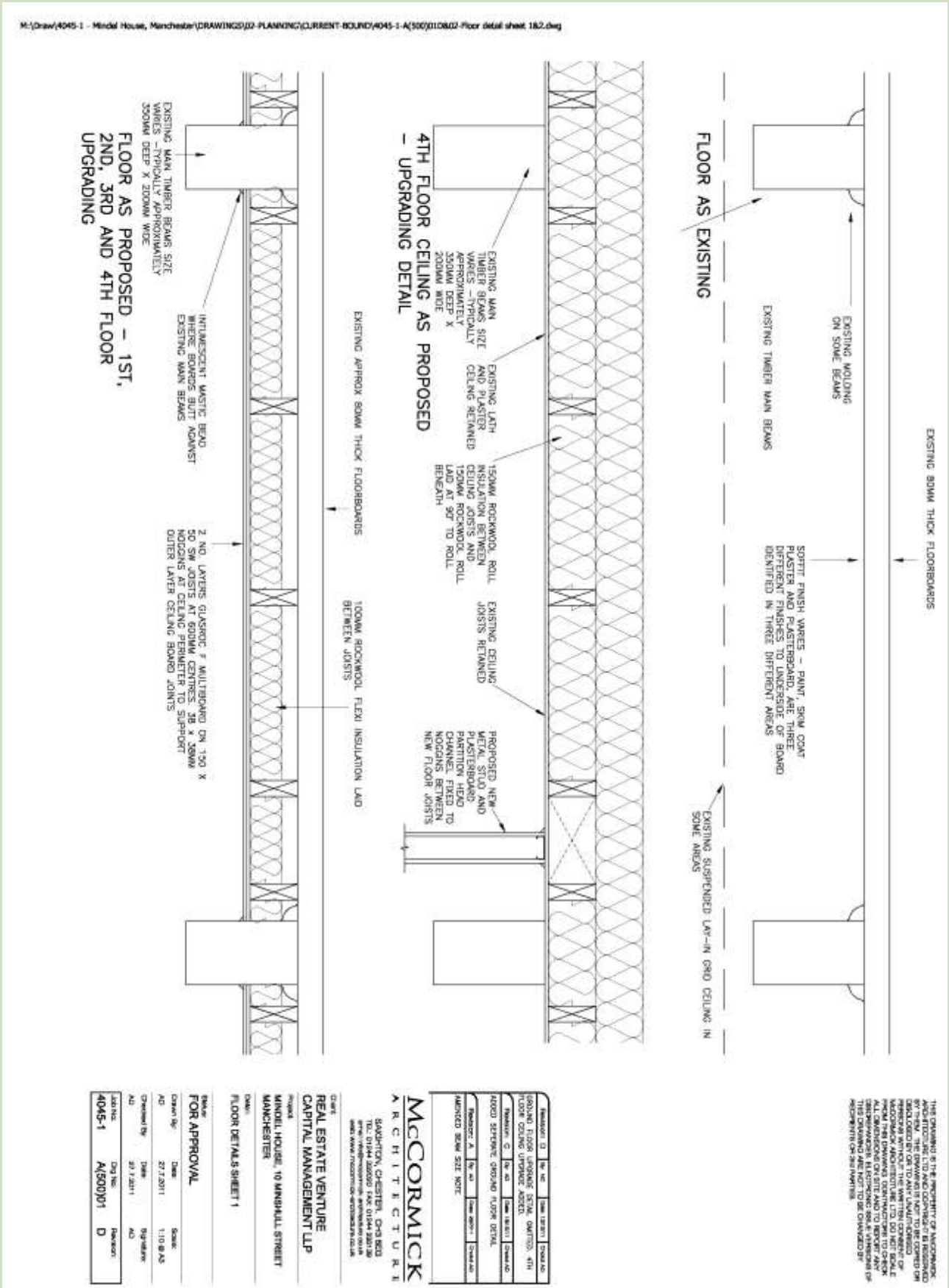
After lengthy discussions between the architects 'McCormick's' and the building inspectors, a fire strategy has been developed that retains the main staircase (there are some concerns with regard to loading and heights of handrails but this can be overcome with detailing).

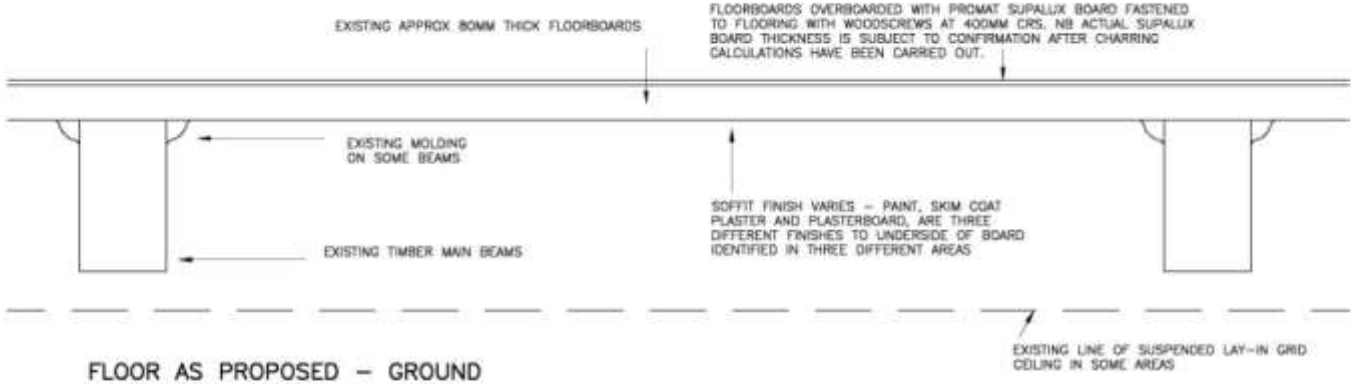
The other main concerns are in relation to the columns and beams. As stated previously most are unseen due to boxing in. The revised layouts have been developed to provide, as much as possible, columns that are not encased, but painted with intumescent paint to provide fire protection. The suspended drop-in ceilings have been removed and fire protection to the floors is to be provided between the beams, leaving the beams exposed to view them together with the cast iron shoe fixings (see drawing on following page).

The scheme fully respects the position of the existing offices to the first floor by leaving the partitions as existing but removing the modern doors.

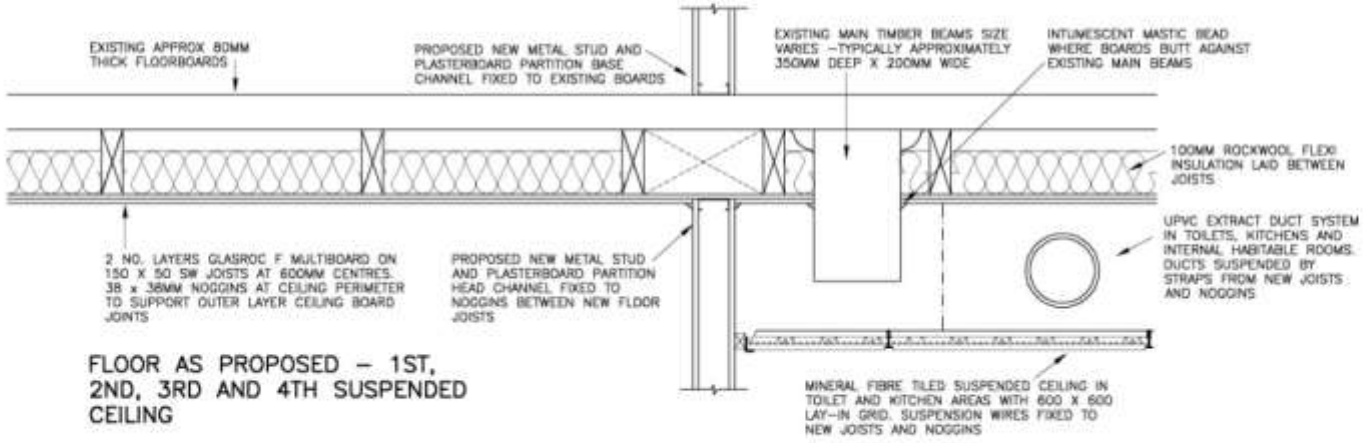
The proposal does involve the introduction of a number of new walls that will reduce the amount of openness associated with the original constructed building, but this is similar to the situation that exists with the existing office partitioning on all floors (excepting the top floor). The alteration to the ceiling detailing and the column exposure, especially in the cafe, lounge and reception area will be a great improvement to the existing boxing in.

Detail of Proposed Works to Floors





FLOOR AS PROPOSED – GROUND FLOOR UPGRADING



FLOOR AS PROPOSED – 1ST, 2ND, 3RD AND 4TH SUSPENDED CEILING

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MINDEL HOUSE, 10 MINSHULL STREET MANCHESTER

Detail
FLOOR DETAILS SHEET 2

Status
FOR APPROVAL

Drawn By	Date	Scale
ND	13.11.2011	1:10 @ A3
Checked By	Date	Signature

Job No	Dwg No	Revision
4045-1	A(500)02	

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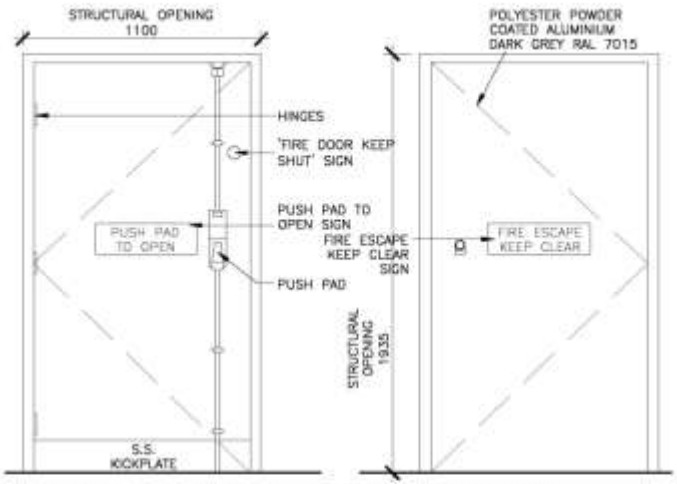
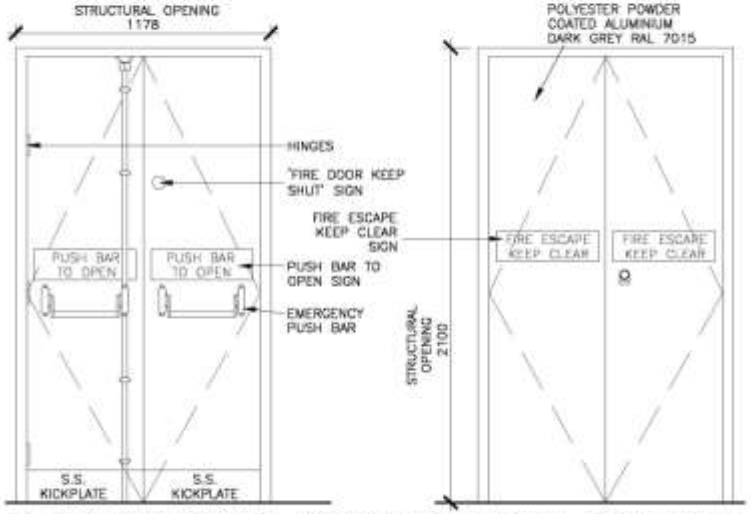


REAR ENTRANCE DOOR SCALE 1:20

INTERNAL SIDE EXTERNAL SIDE



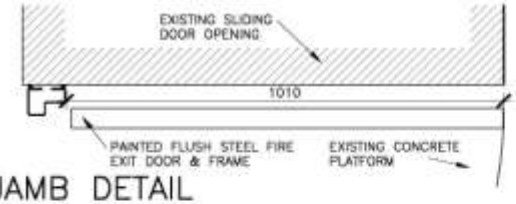
REAR STAIRCASE GROUND FLOOR FIRE EXIT

INTERNAL SIDE EXTERNAL SIDE



HEAD DETAIL SCALE 1:10

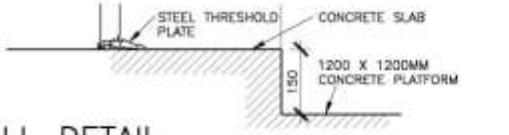
CILL DETAIL



JAMB DETAIL



HEAD DETAIL



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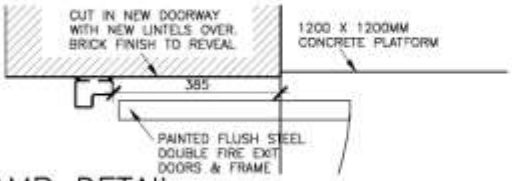

JAMB DETAIL

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CAPITAL MANAGEMENT LLP

Project:
MINDEL HOUSE, 10 MINSHULL STREET
MANCHESTER

Detail:
EXTERNAL DOOR DETAILS

Status:
FOR APPROVAL

Drawn By:	Date:	Scale:
ND	13.01.2011	1:10/1:20 @ A2

Checked By: Date: Signature:

Job No:	Dwg No:	Revision:
4045-1	A(500)03	

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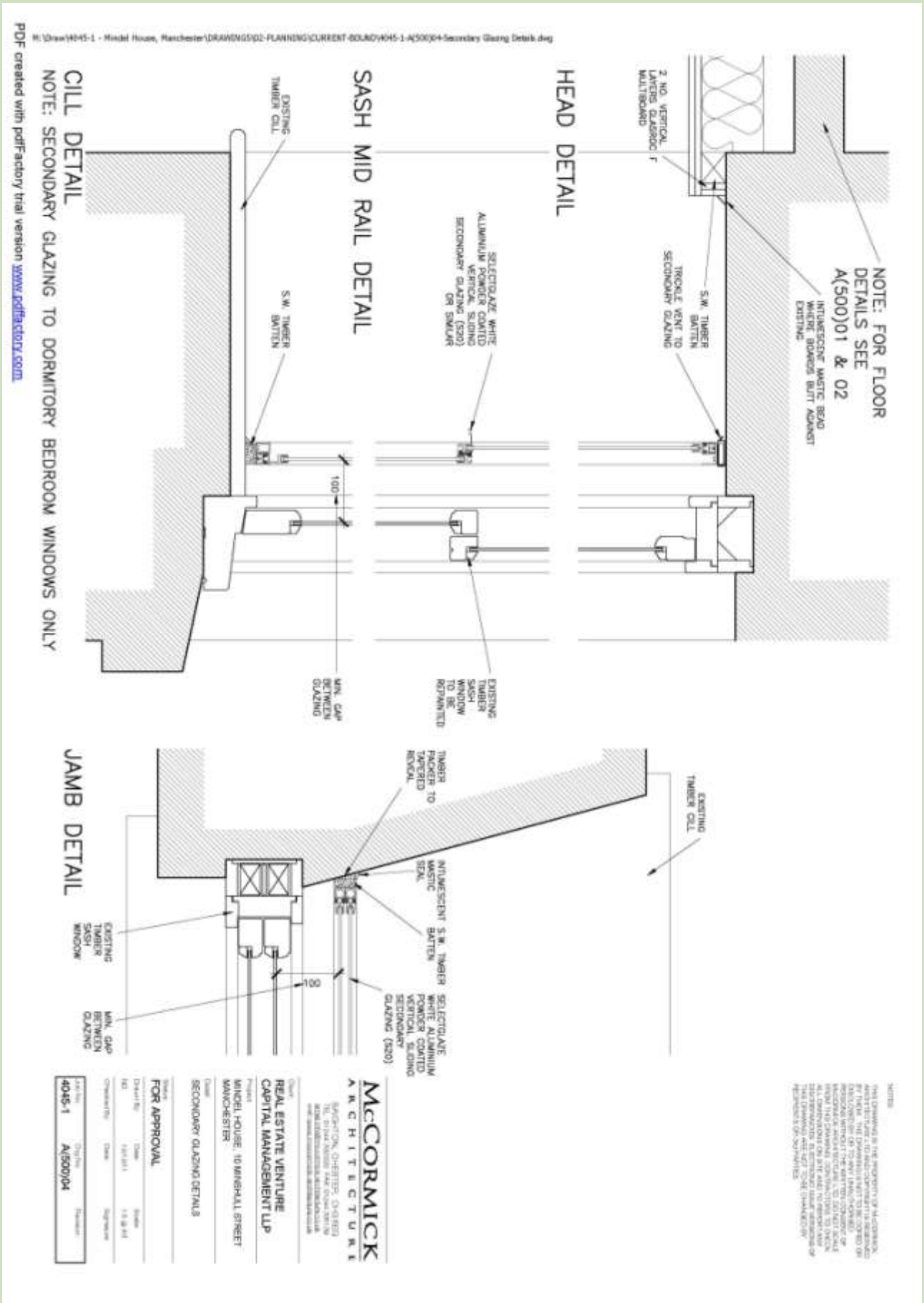
Secondary Glazing Details



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External Works

There are only two areas of works other than maintenance works to be carried out to the exterior of the building. The first is the introduction of a new doorway to the loading street to act as a fire exit from the rear fire escape relating to the basement use. It is intended to form a new doorway as shown on the proposed ground floor plan and proposed elevation 2. The door is to have a new lintol & steel double doors, painted in a colour to be agreed. There is also a requirement to provide a 1.2 x 1.2m landing which is suggested to be in concrete.

There is obviously a requirement for fire safety for the occupants of the building which requires a separation of people using the basement and the floors above. The positioning of the door on this elevation, that is hardly seen, is in my opinion a sensible position. This elevation has been changed and altered over the life of the building and the position of the door on this elevation has less effect on the significance of the building than any of the other elevations and would not detract from the principle elements of significance.

The second alteration to the external fabric is again shown on the ground floor plan and elevation 2, where the lift door is removed, partially bricked up and a new door fitted, suitable for wheelchair use, within the existing opening. Due to the configuration of the main entrance steps and the raised ground floor level, access for disabled persons is positioned off the loading street. The platform that exists requires steps and a painted handrail in accordance with the building regulations and the disabled access requirements.

This is a minor alteration to an area of the building that has been altered in the past and does not affect any historic fabric, therefore will have no relevant adverse effect on the significance of the building.

19. Existing/Proposed Drawings

The following are the existing building drawings prepared by McCormick Architecture and City Surveys Ltd.

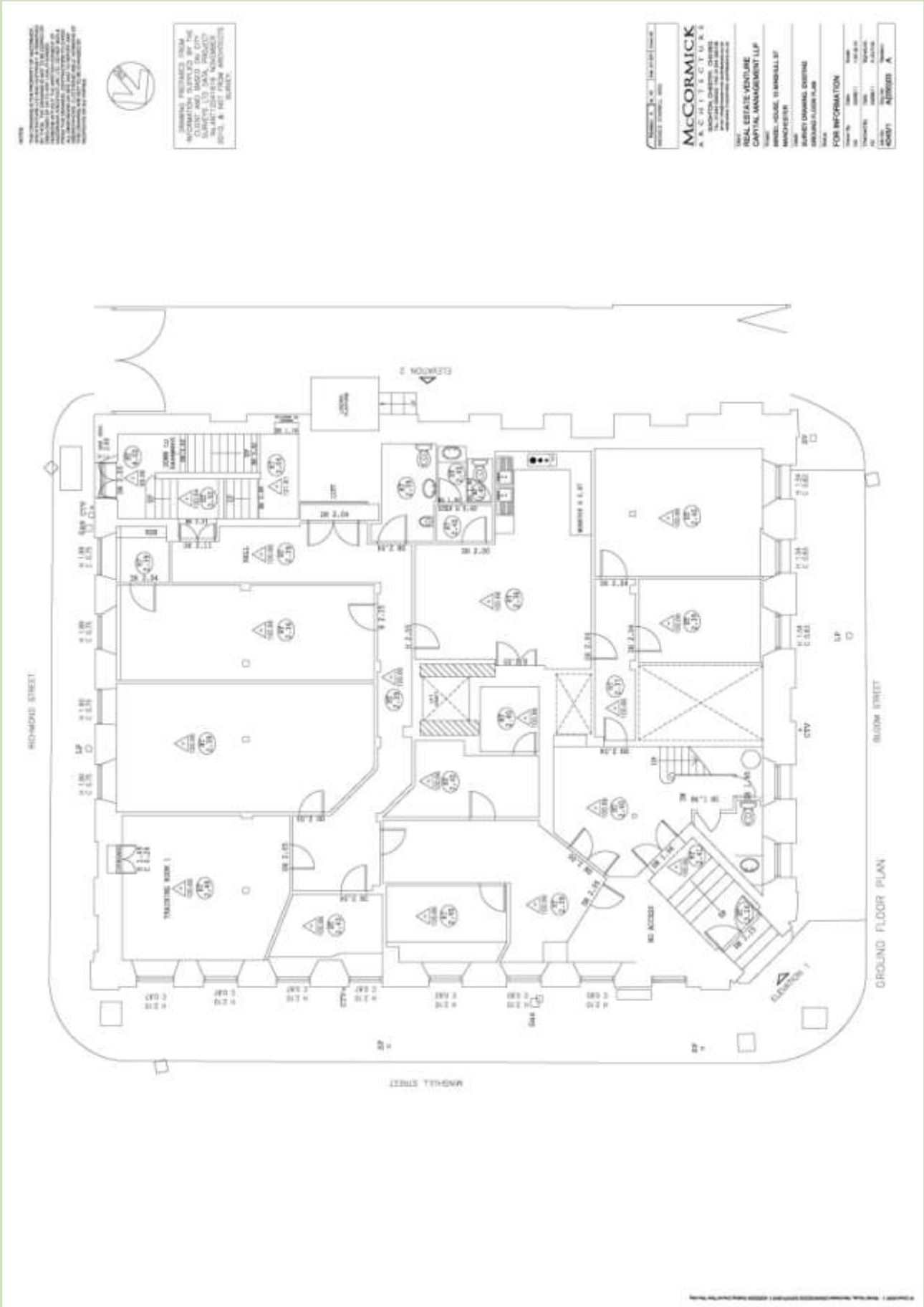
Drawings List:

Site Location Plan	(McCormick Architecture)
Existing Ground Floor Plan	(McCormick Architecture)
Existing First Floor Plan	(McCormick Architecture)
Existing Second Floor Plan	(McCormick Architecture)
Existing Third Floor Plan	(McCormick Architecture)
Existing Fourth Floor Plan	(McCormick Architecture)
Existing Elevations 1 & 2	(McCormick Architecture)
Existing Elevations	(City Surveys Ltd.)
Existing Section A-A	(McCormick Architecture)
Proposed Ground Floor Downtakings	(McCormick Architecture)
Proposed First Floor Downtakings	(McCormick Architecture)
Proposed Second Floor Downtakings	(McCormick Architecture)
Proposed Third Floor Downtakings	(McCormick Architecture)
Proposed Fourth Floor Downtakings	(McCormick Architecture)
Proposed Ground Floor Plan	(McCormick Architecture)
Proposed First Floor Plan	(McCormick Architecture)
Proposed Second Floor Plan	(McCormick Architecture)
Proposed Third Floor Plan	(McCormick Architecture)
Proposed Fourth Floor Plan	(McCormick Architecture)
Reflected Ceiling Plan	(McCormick Architecture)
Proposed Elevations 1 & 2	(McCormick Architecture)
External Signage Elevations	(McCormick Architecture)
Proposed Section A-A	(McCormick Architecture)
Existing &Proposed Roof Plans	(McCormick Architecture)

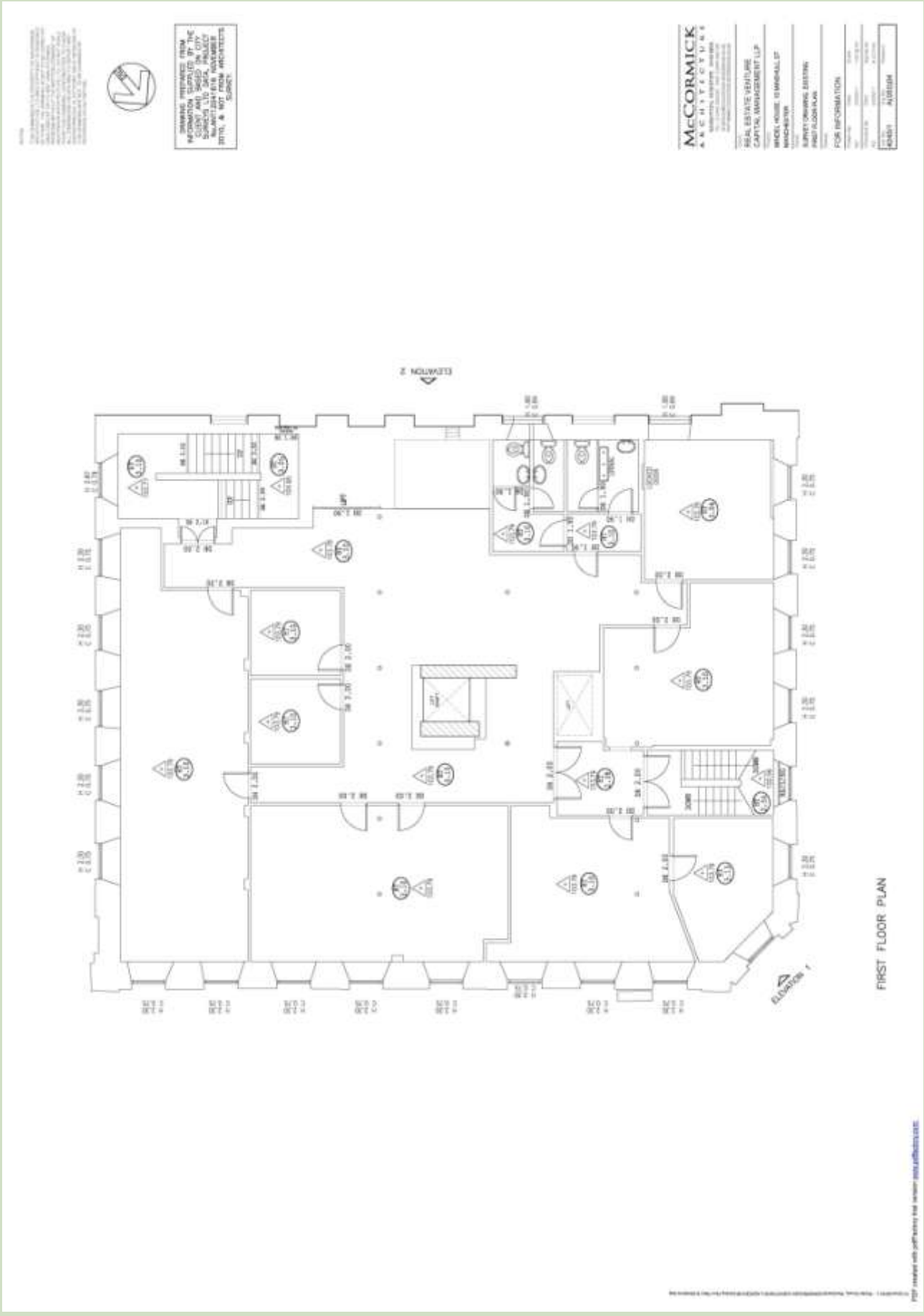
Note: - The following drawings are for indicative purposes only. They are **not** to scale.

Site Location Plan

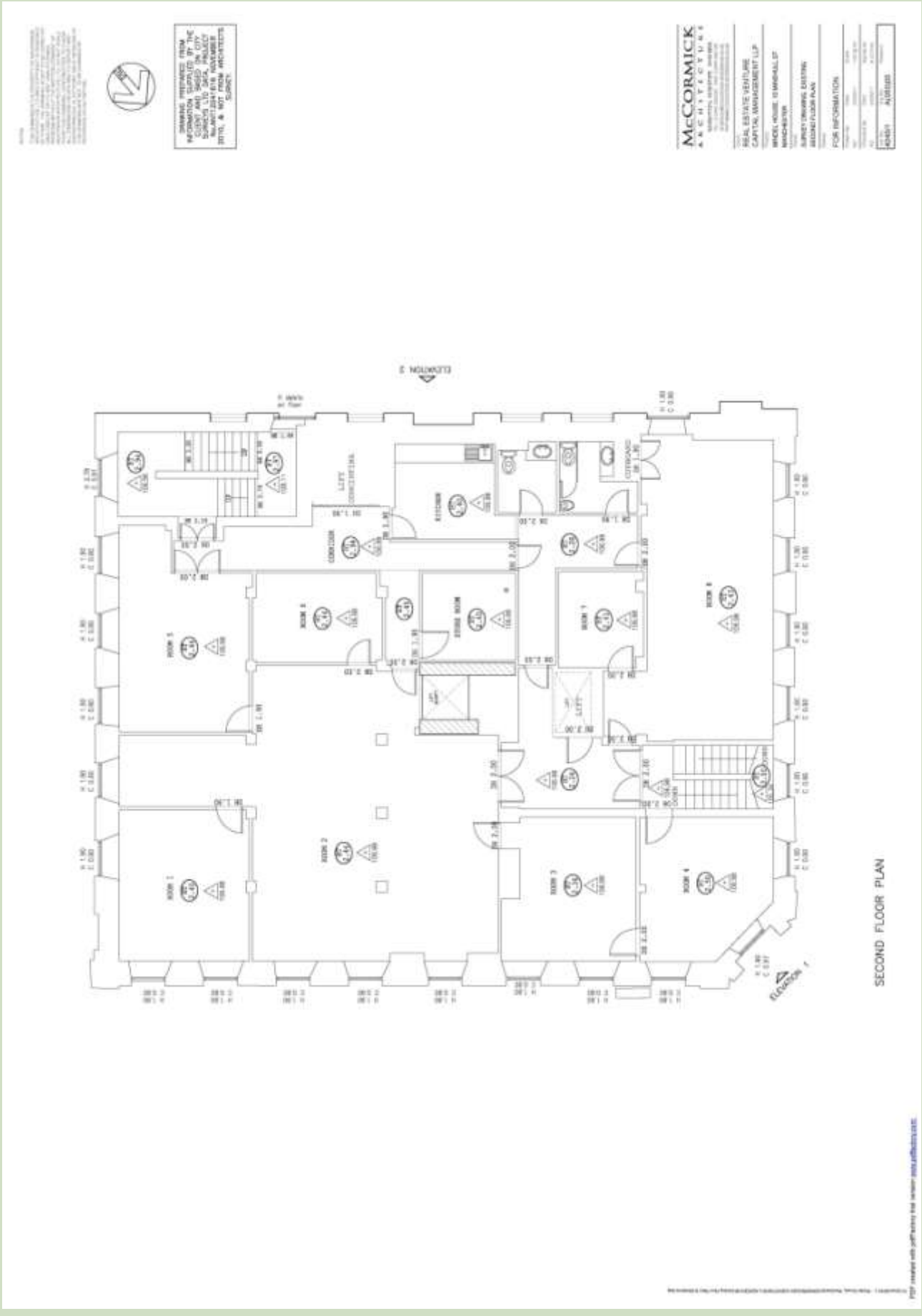
Existing Ground Floor Plan



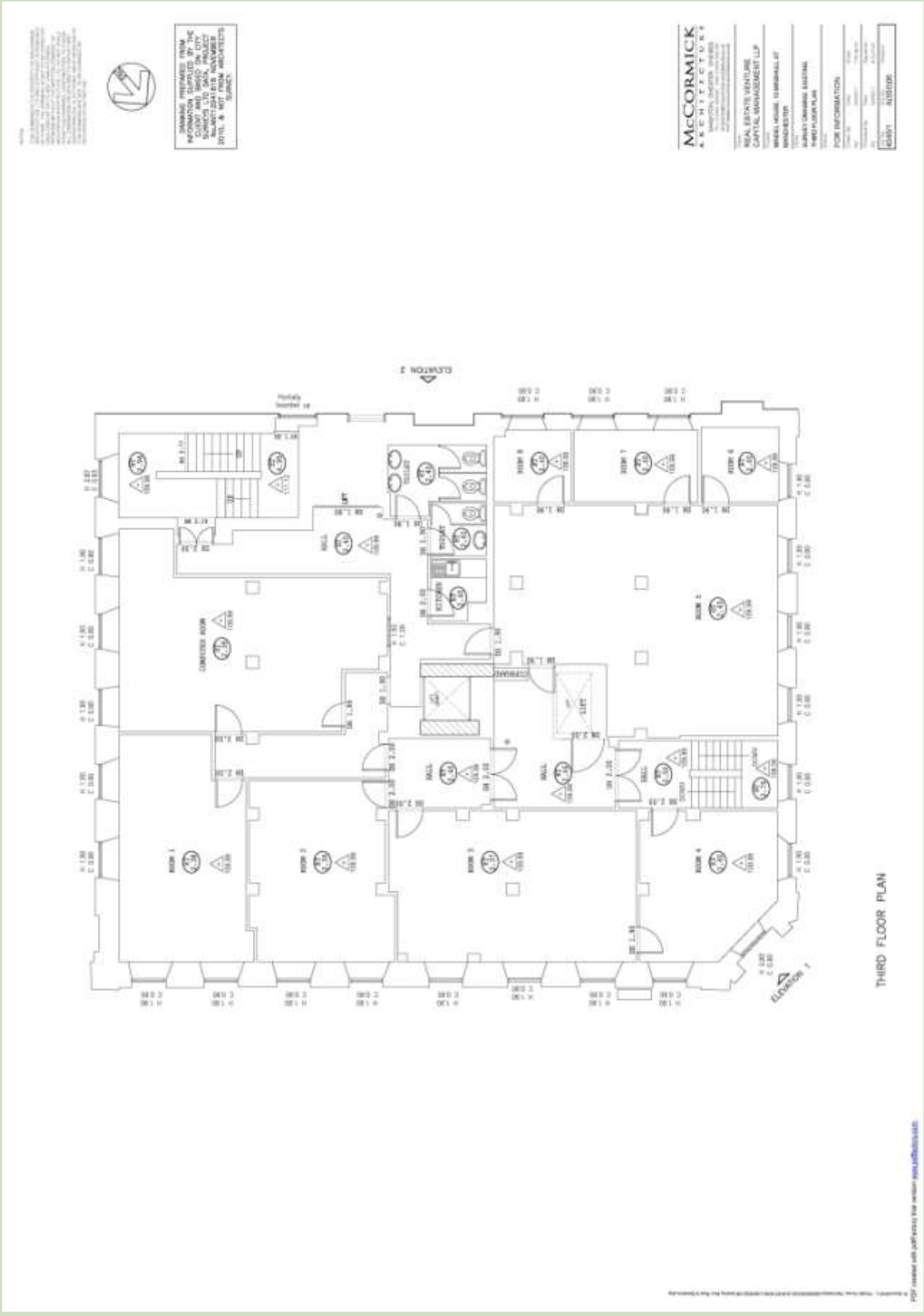
Existing First Floor Plan



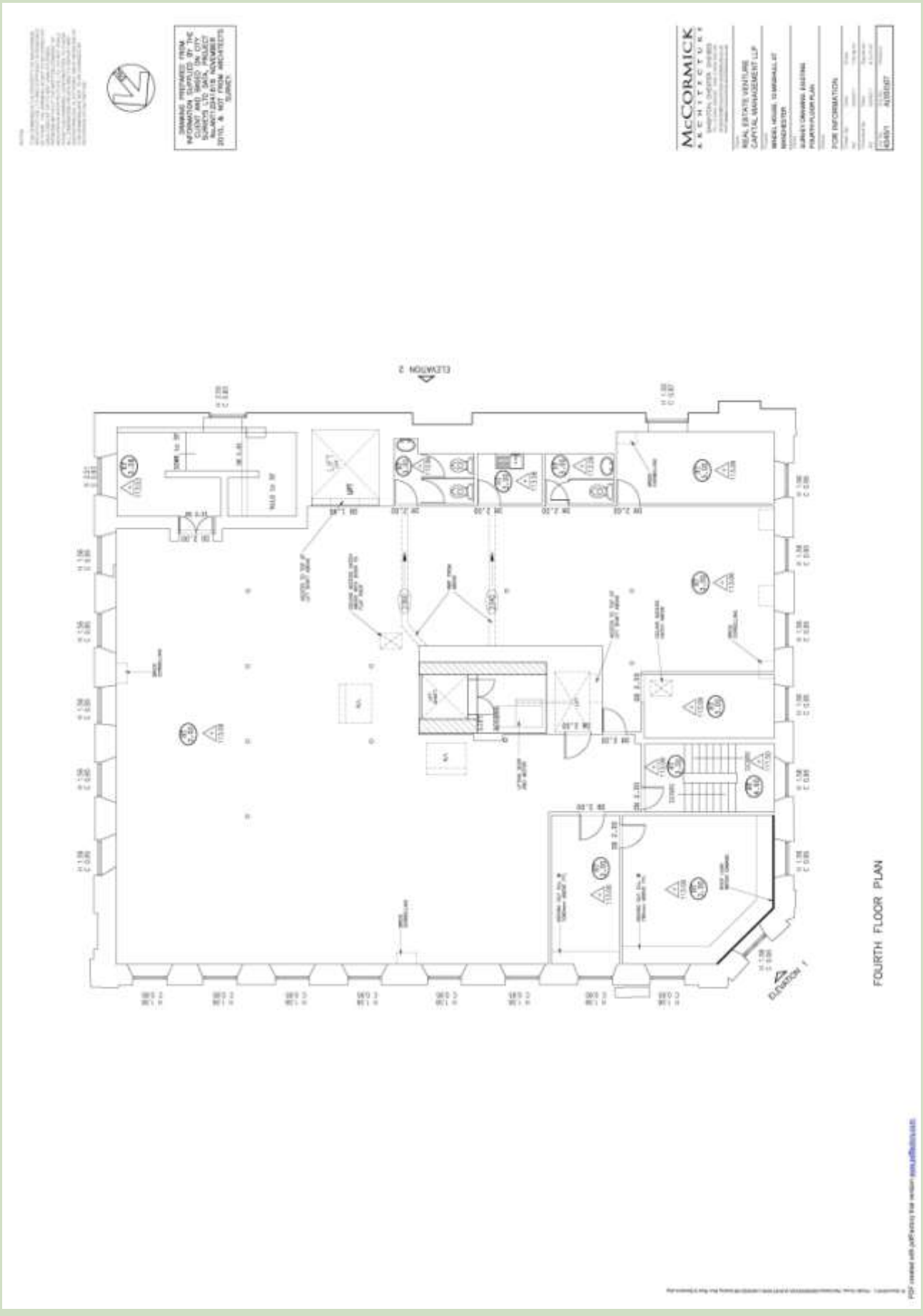
Existing Second Floor Plan



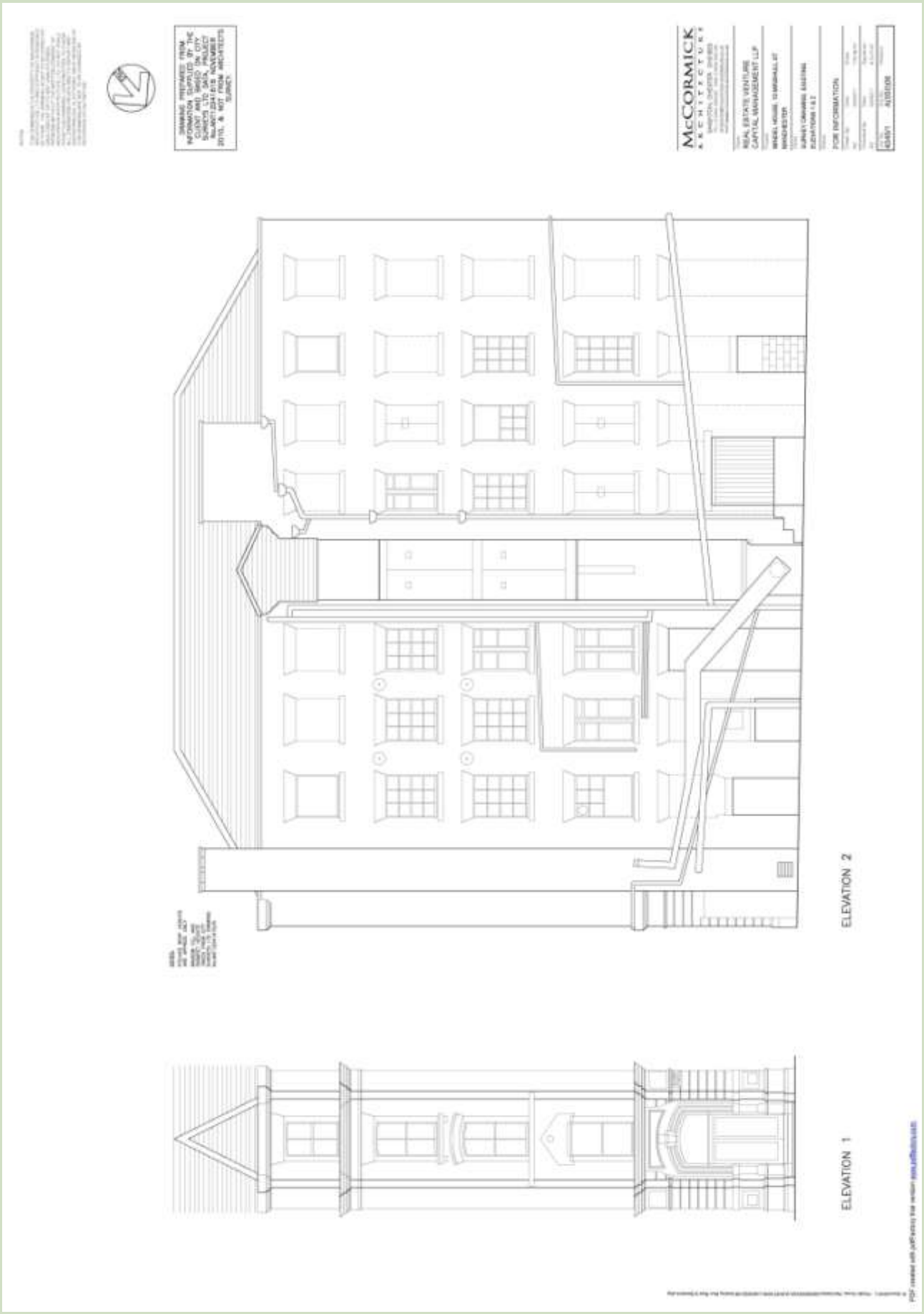
Existing Third Floor Plan



Existing Fourth Floor Plan



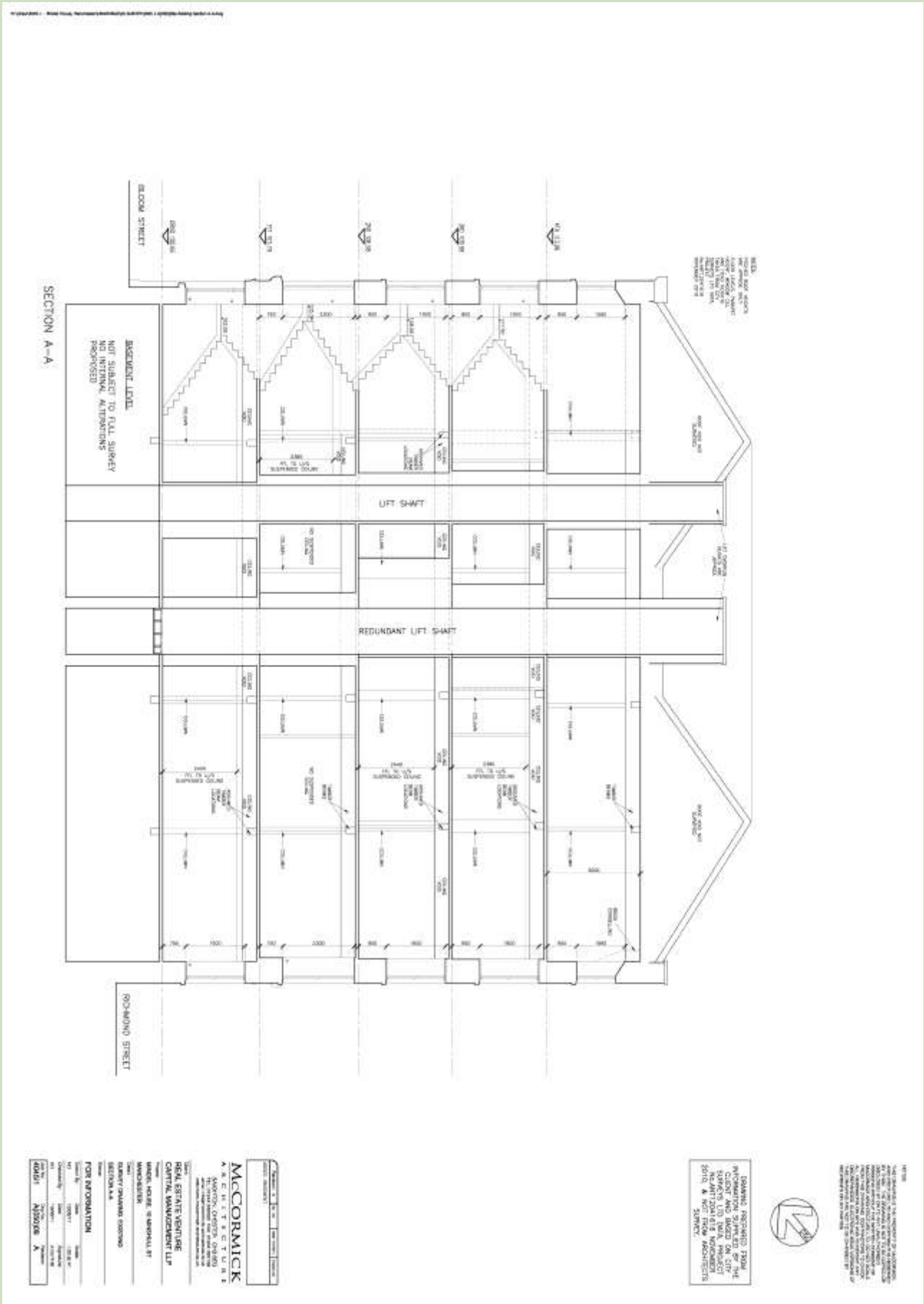
Existing Elevations 1 & 2



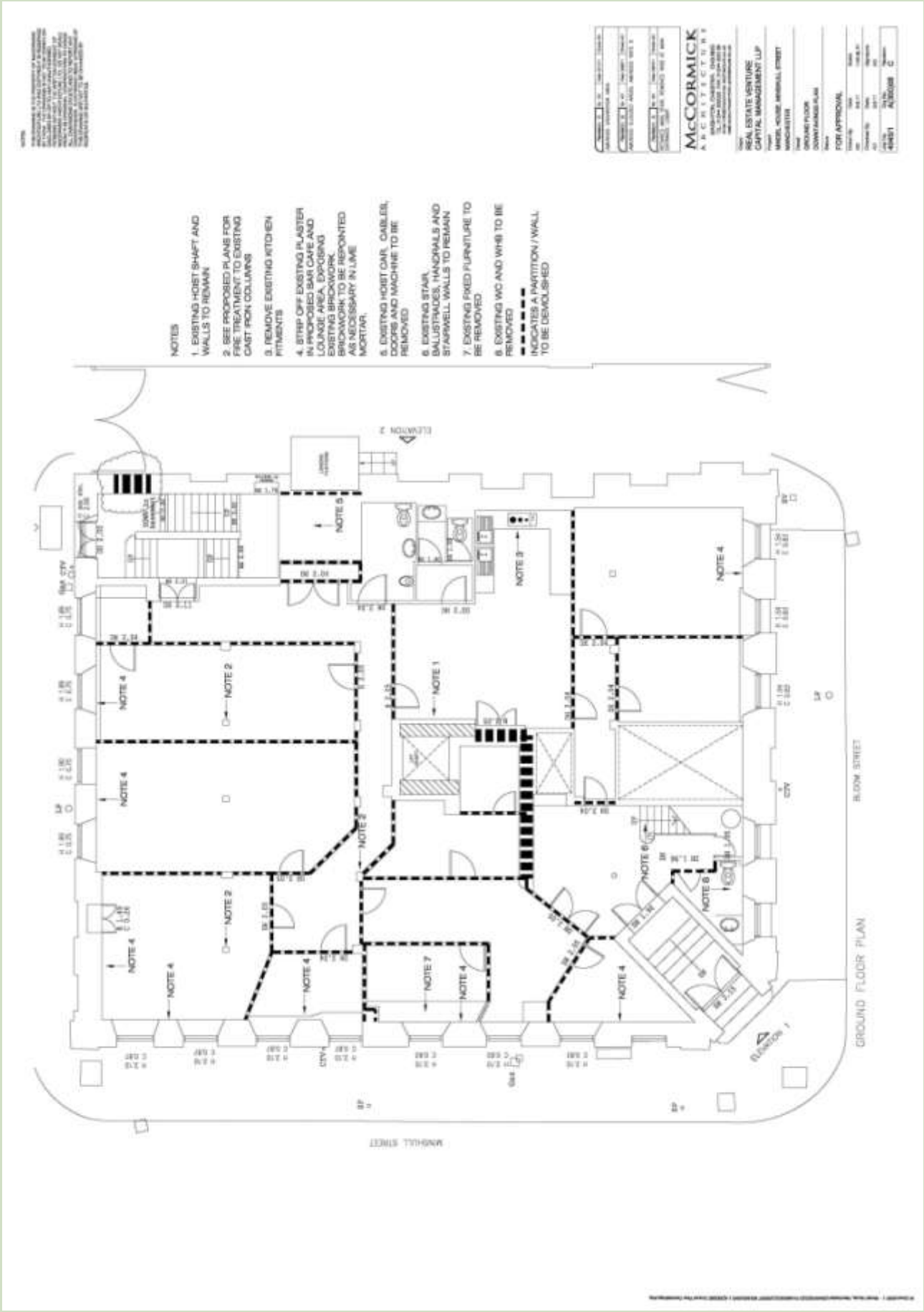
Existing Elevations



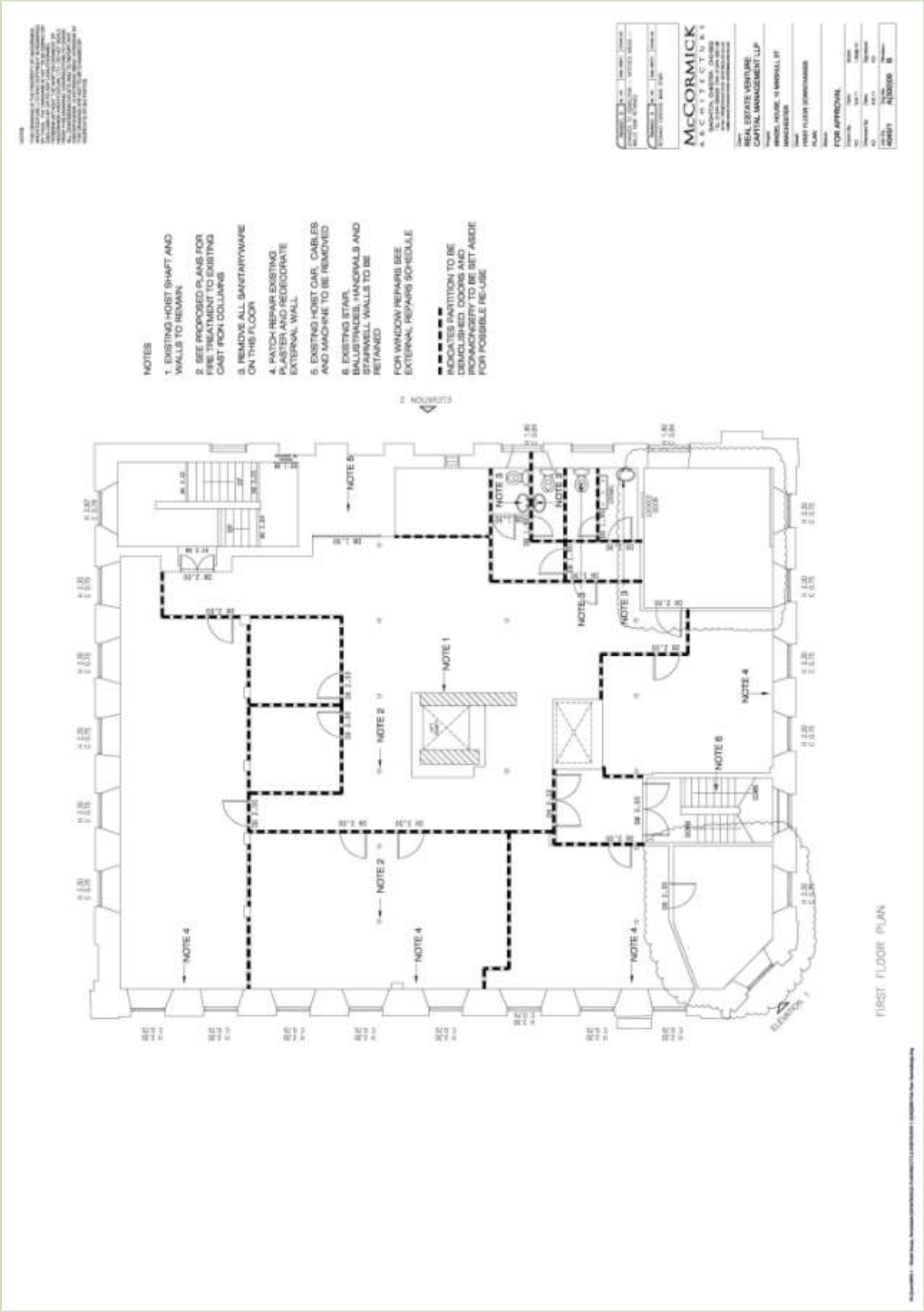
Existing Section A-A



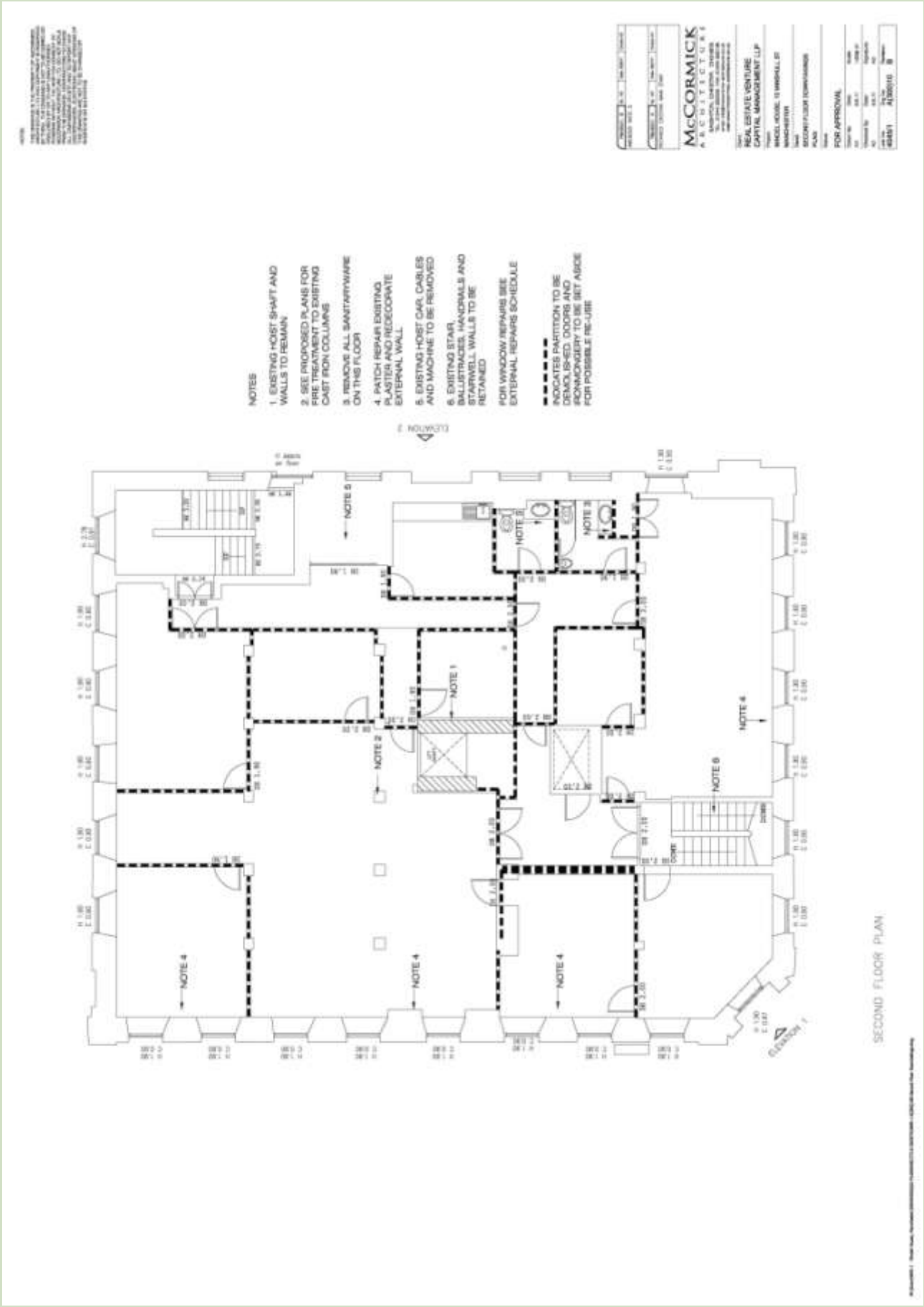
Proposed Ground Floor Downtakings



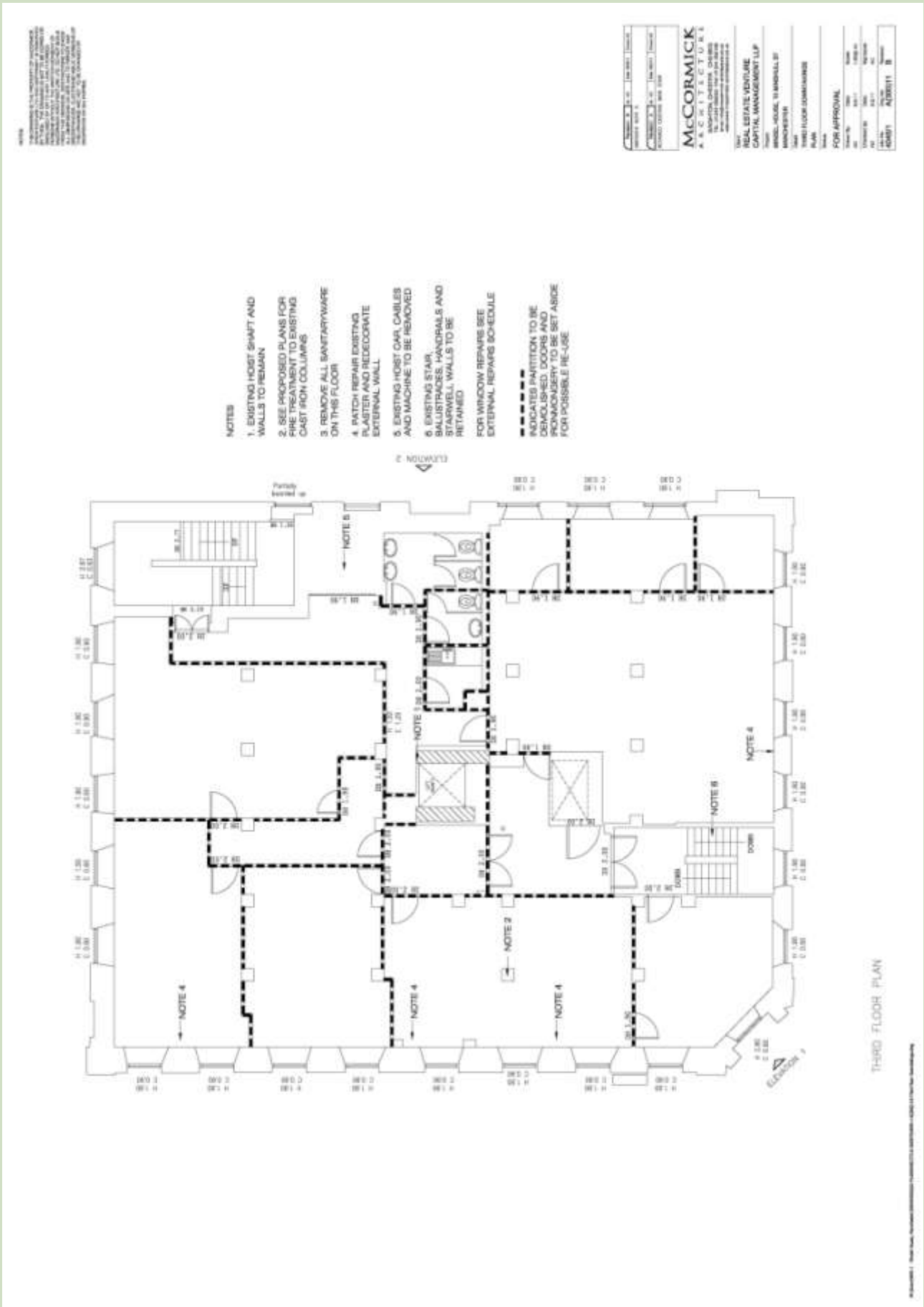
Proposed First Floor Downtakings



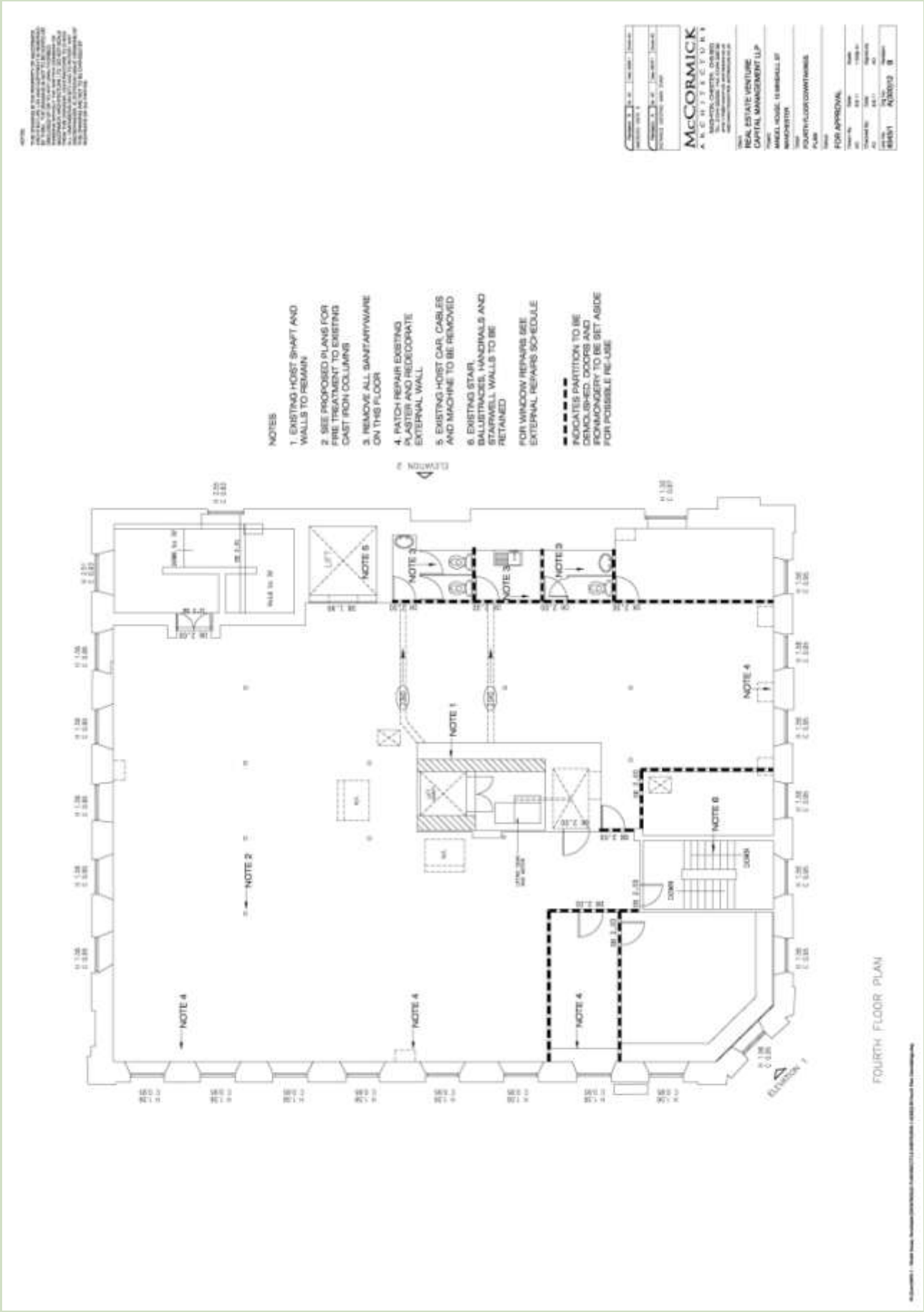
Proposed Second Floor Downtakings



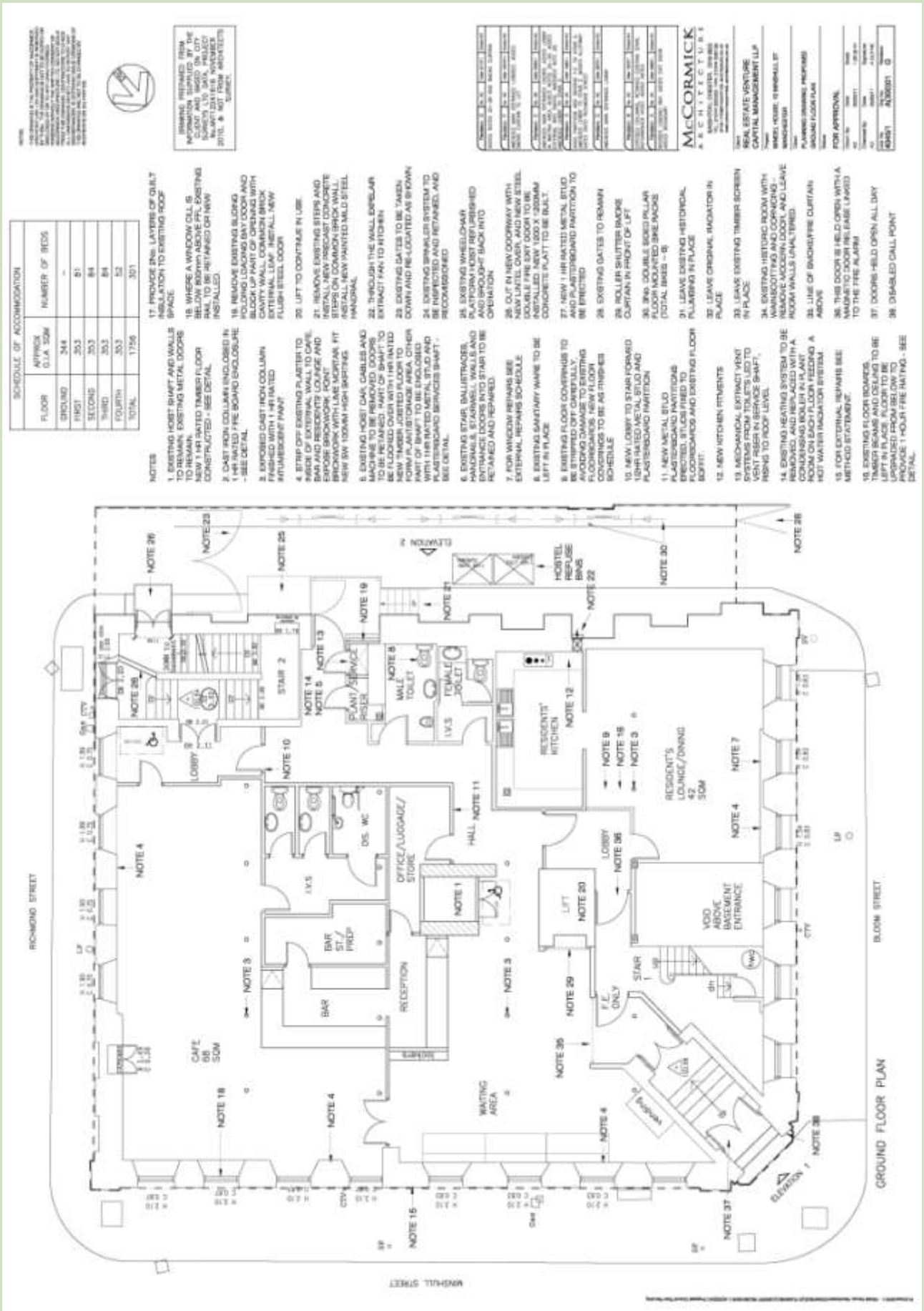
Proposed Third Floor Downtakings



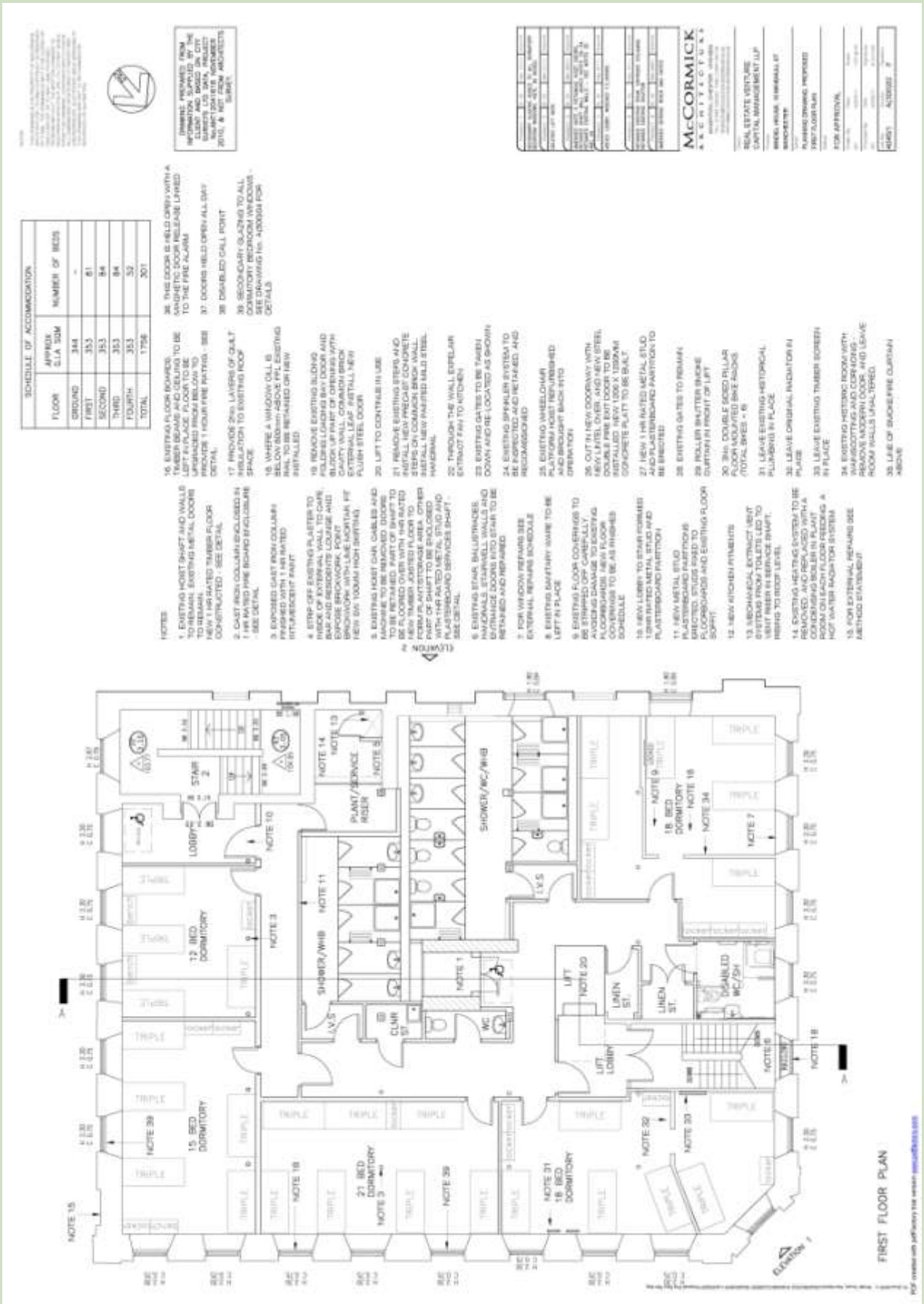
Proposed Fourth Floor Downtakings



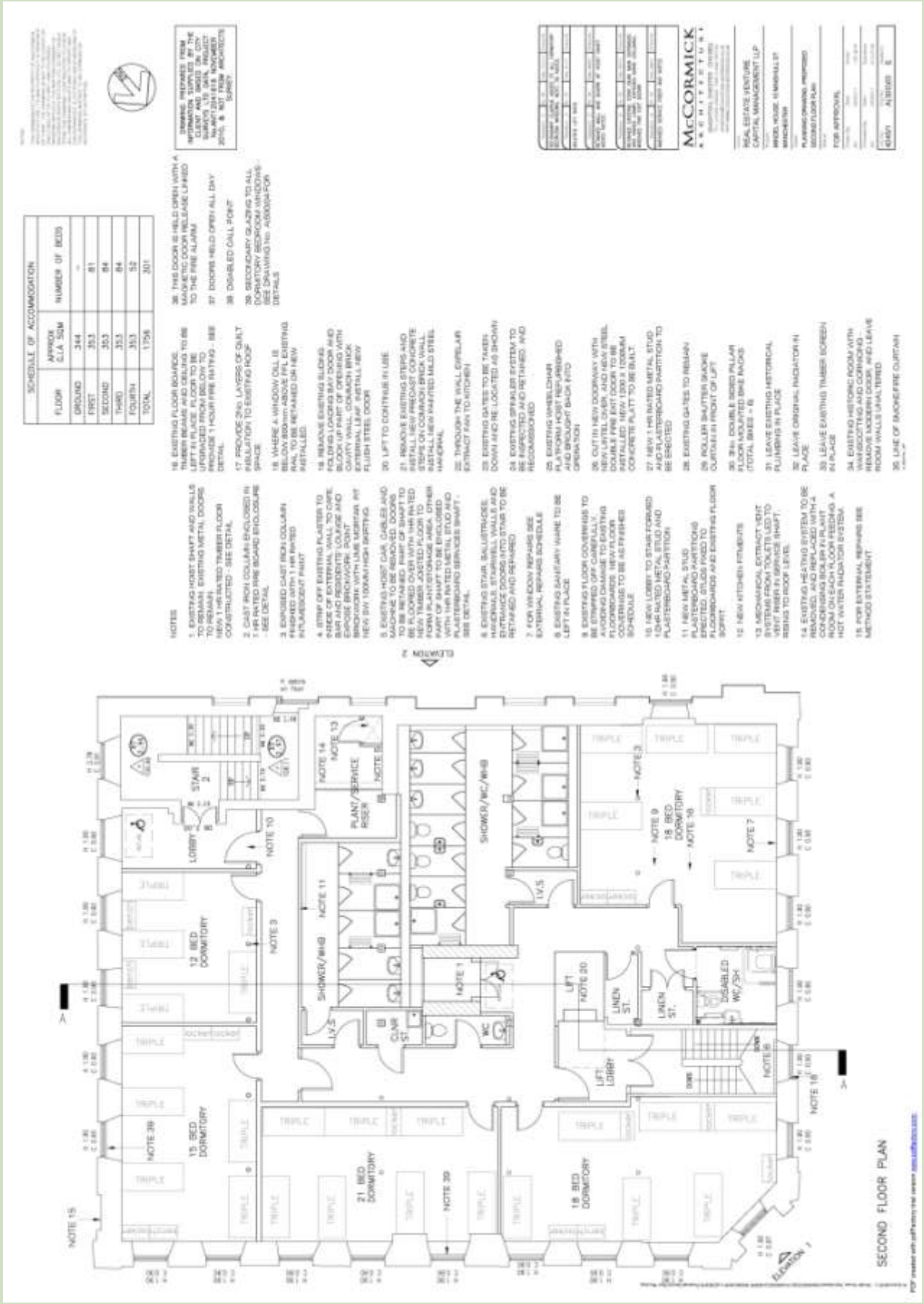
Proposed Ground Floor Plan



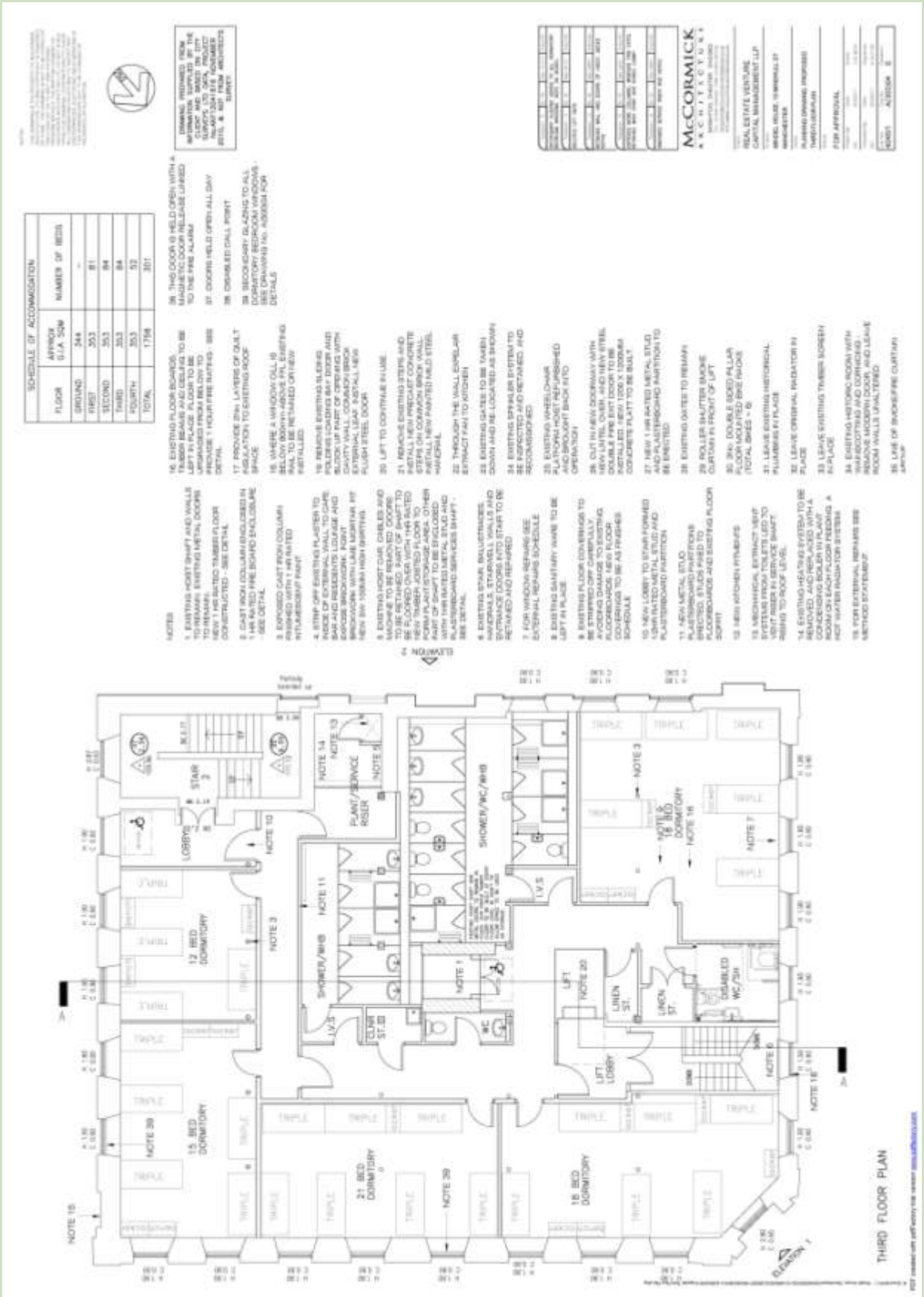
Proposed First Floor Plan



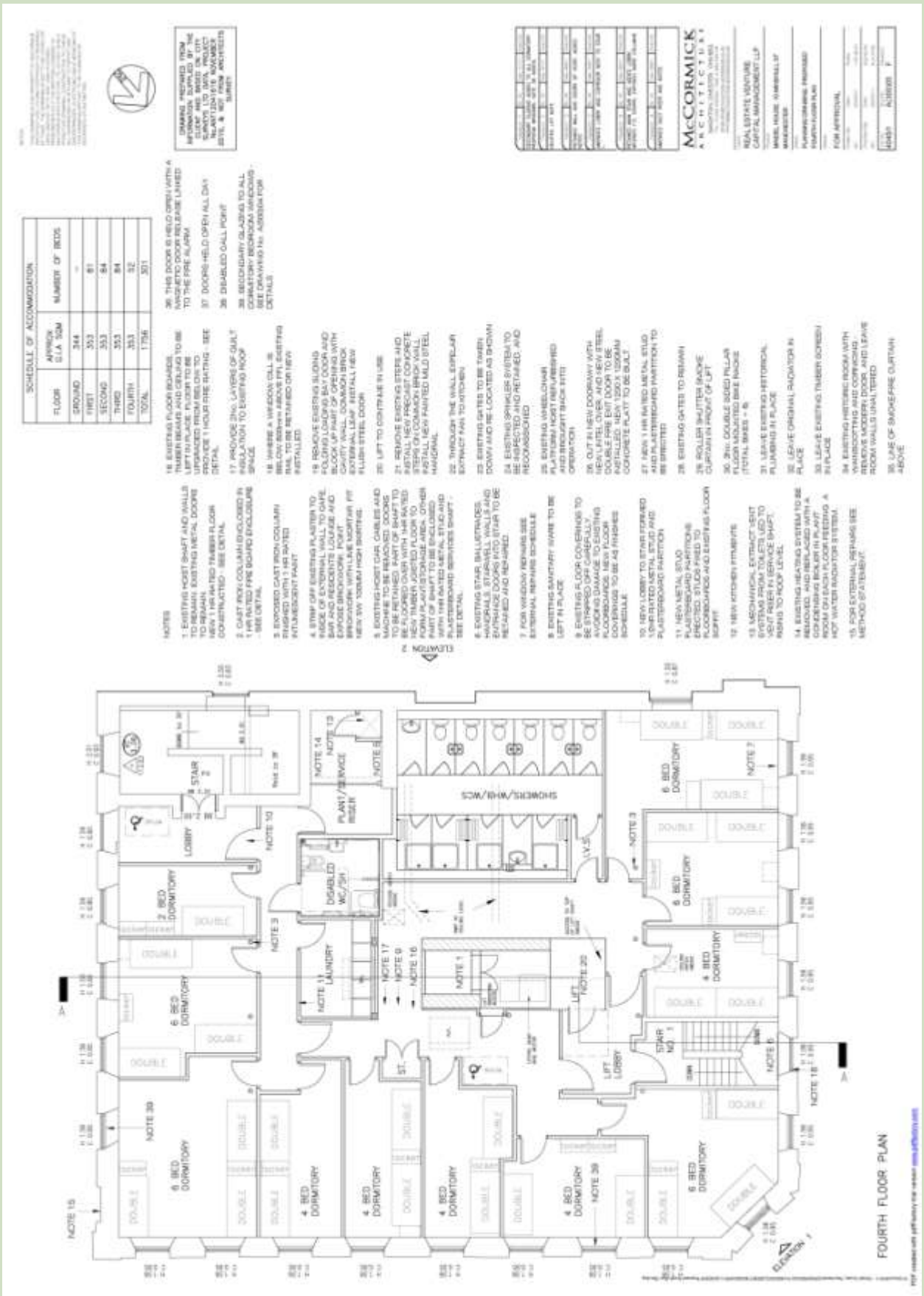
Proposed Second Floor Plan



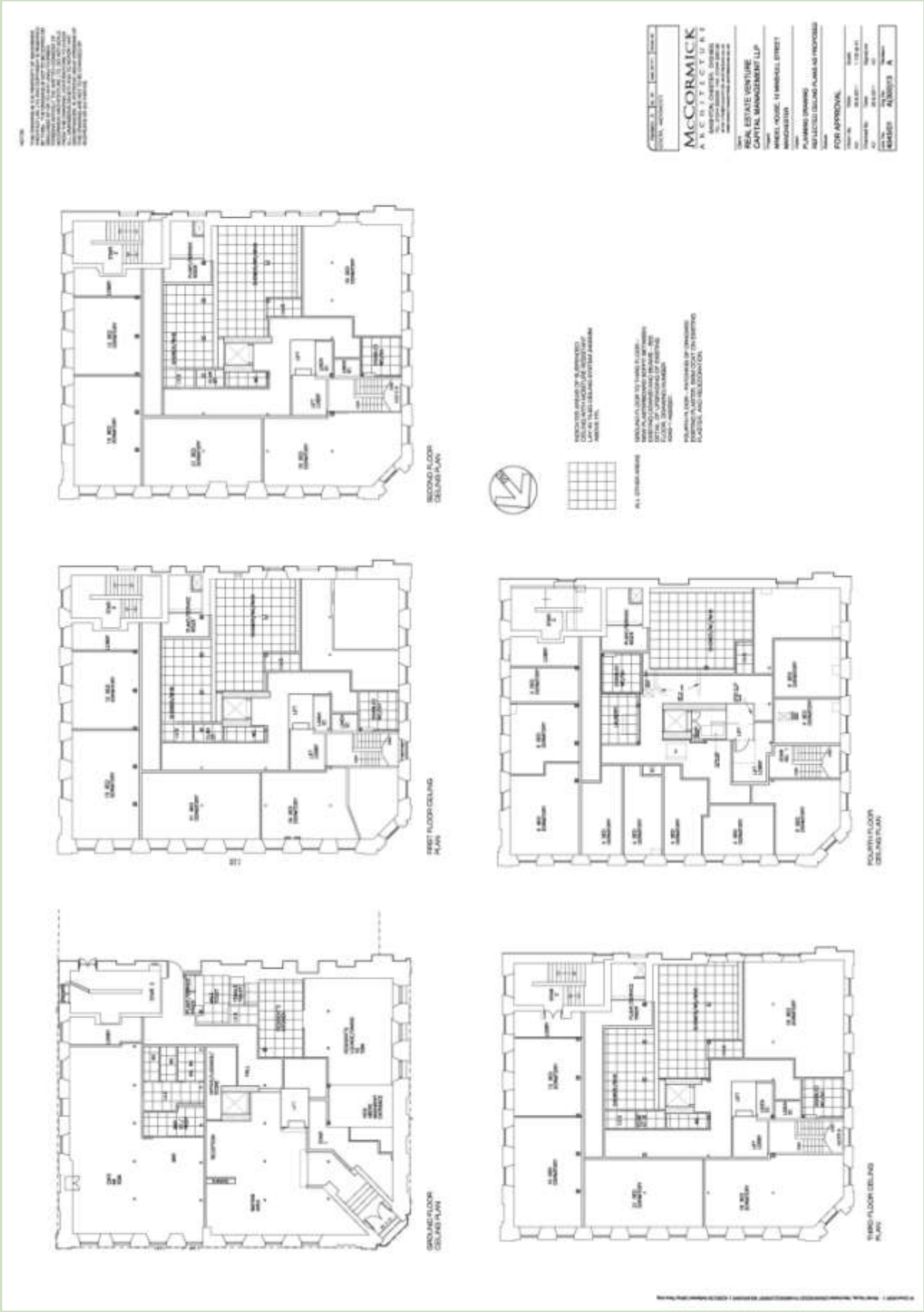
Proposed Third Floor Plan



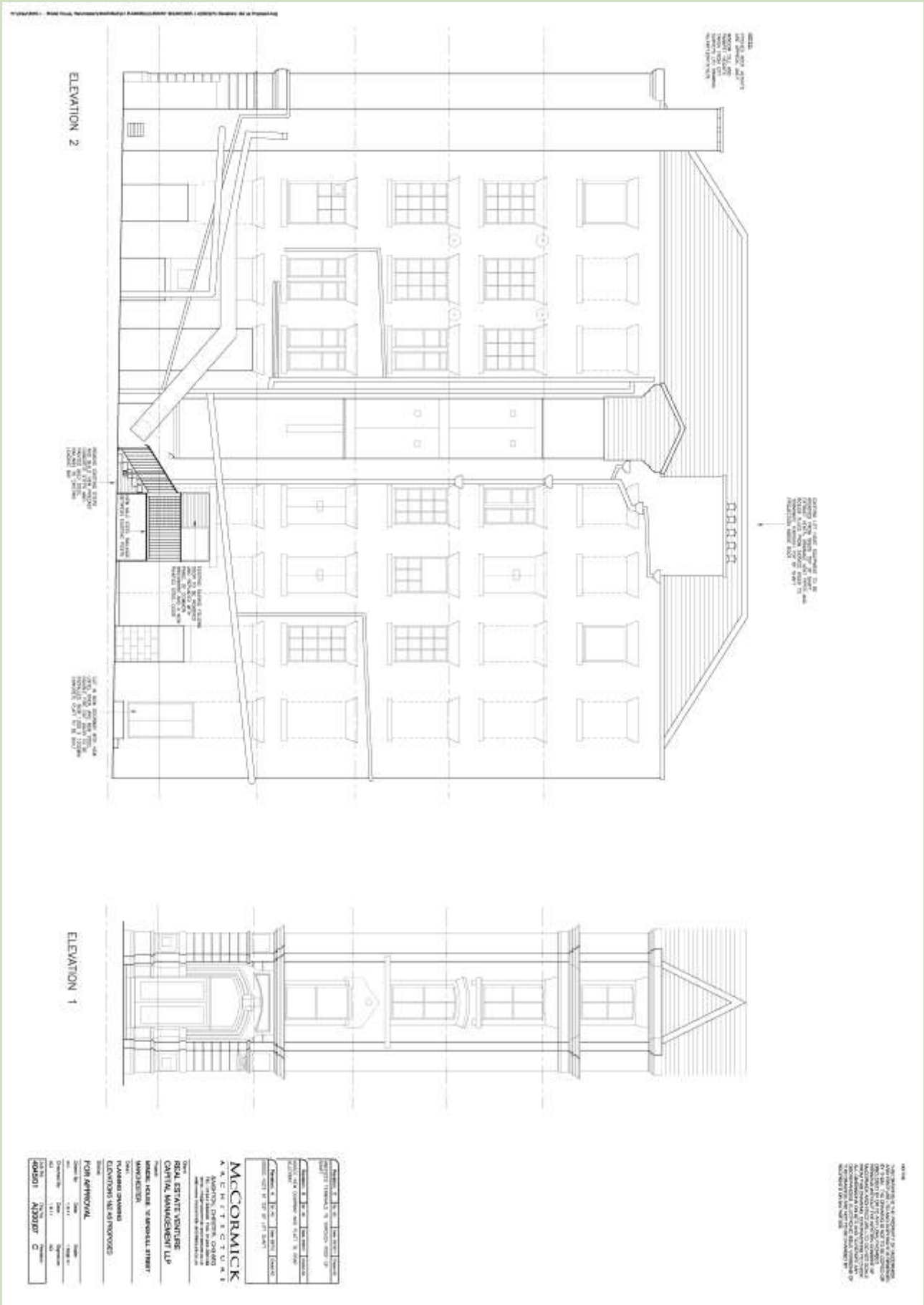
Proposed Fourth Floor Plan



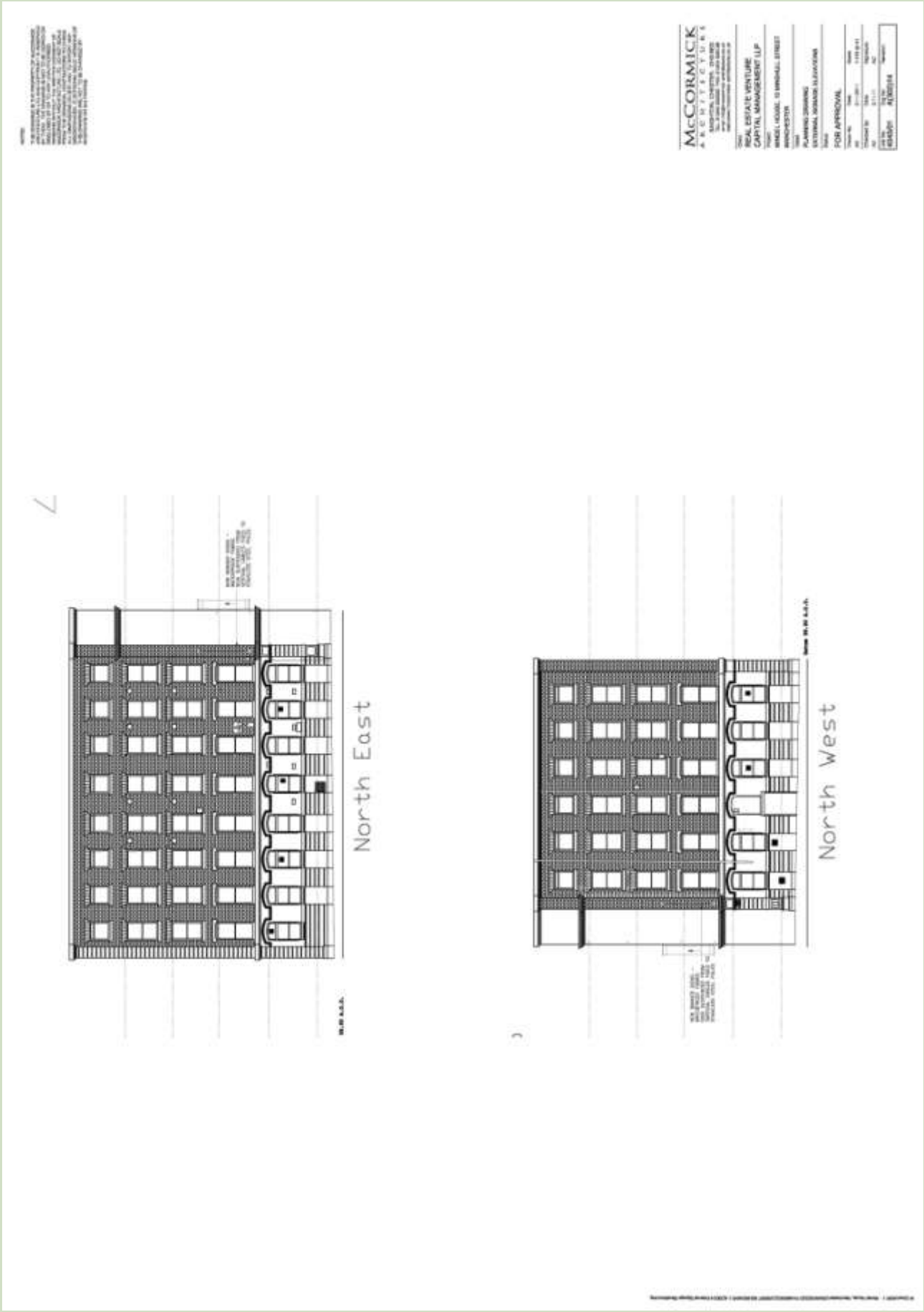
Reflected Ceiling Plan



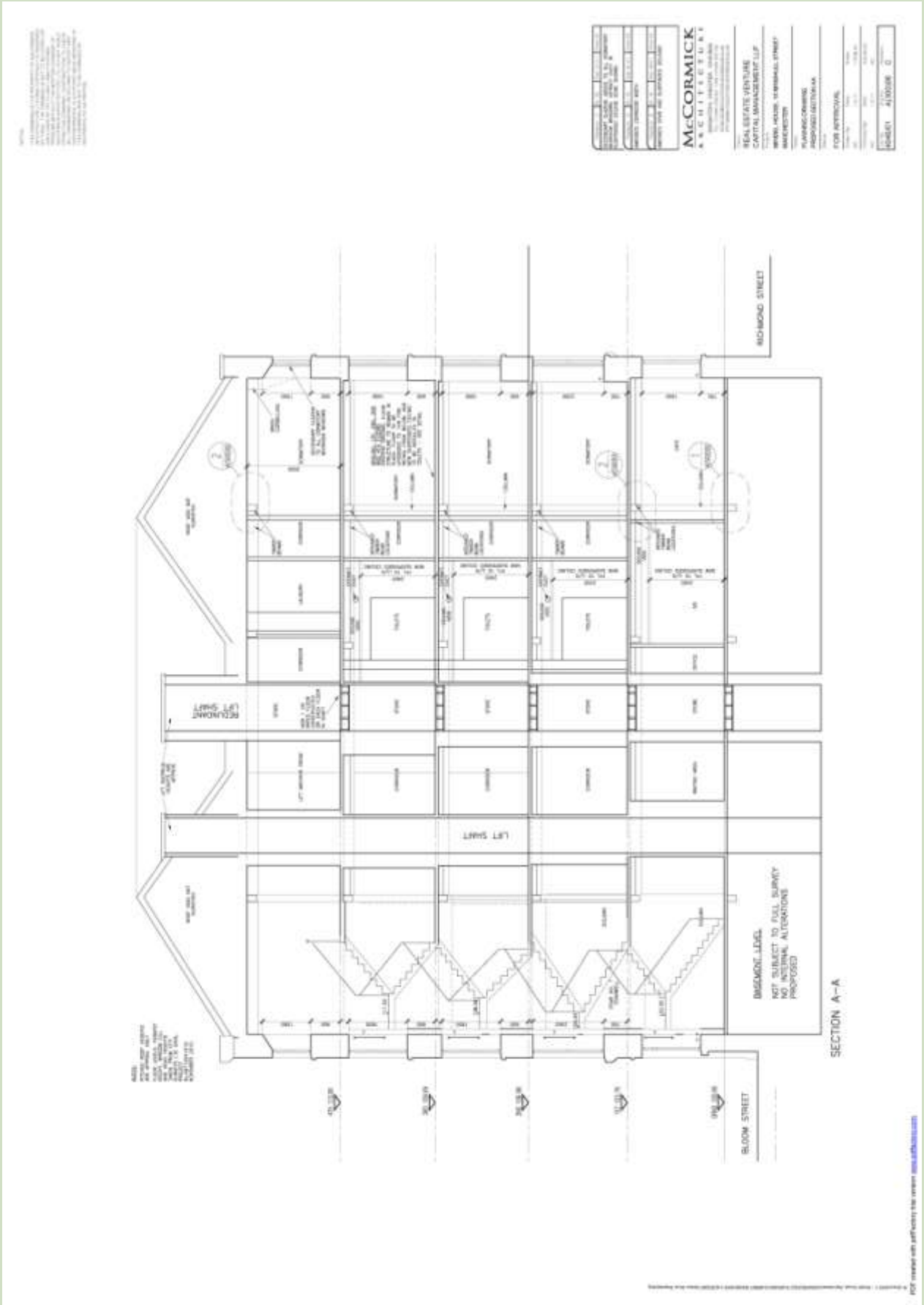
Proposed Elevations 1 & 2



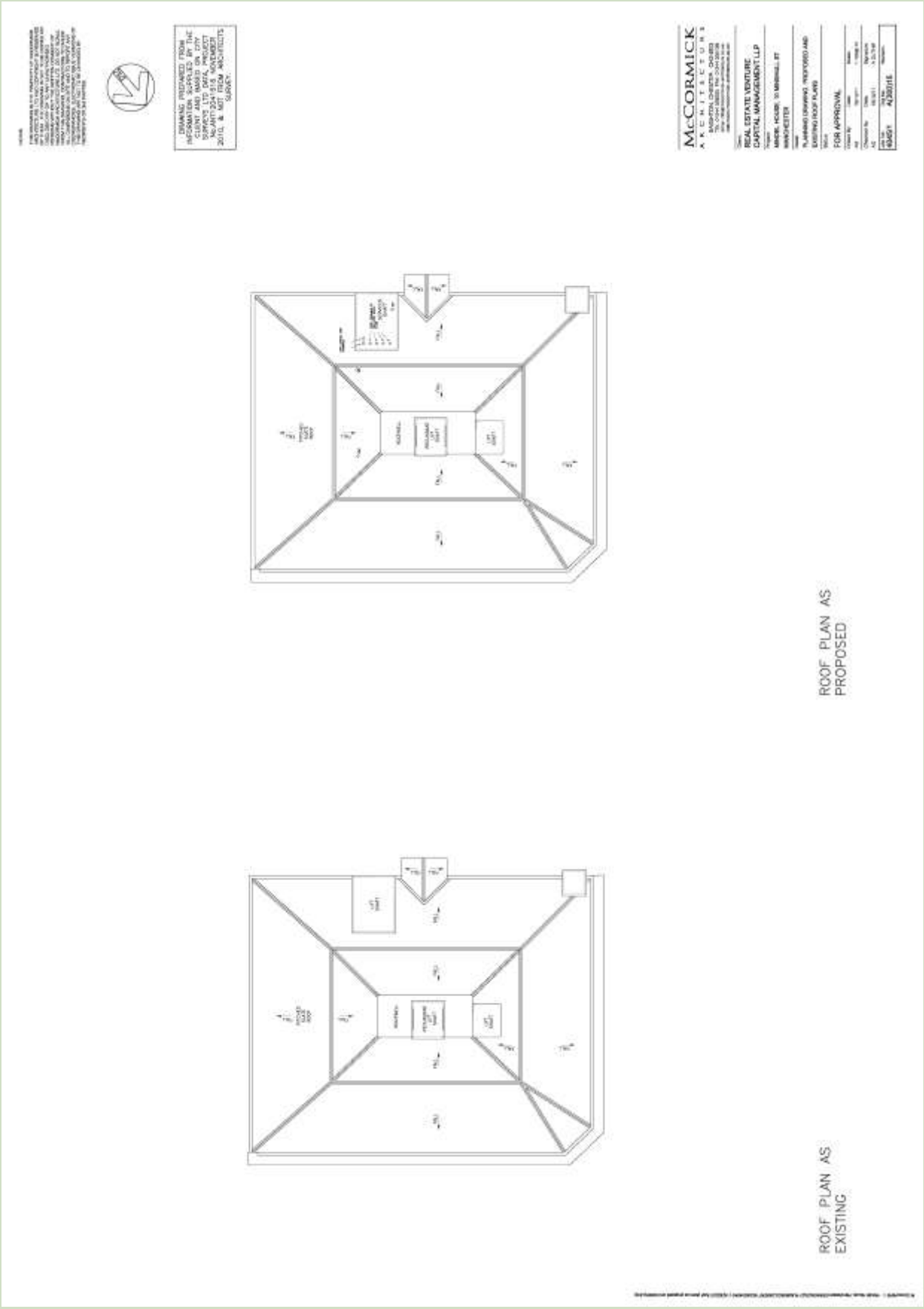
External Signage Elevations



Proposed Section A-A



Proposed & Existing Roof Plans



20. Conservation Considerations

Mindel House is sat within an area of Manchester that is dominated by four and five storey buildings, being part of the historic warehouse area of Manchester from the time of the industrial revolution. Although the property is not within a conservation area, nevertheless it is surrounded by other buildings that, as a group, form an interesting historic view. A number of these buildings are also listed, each having their own architectural heritage, but as a group this historic heritage is reinforced.

The buildings within this grouping are Mindel House (Grade II), No. 8 Minshull Street (Grade II), No. 11 Bloom Street (Grade II) and the Law Courts (Grade II*)

As explored in Section 11: External Description, the building's main entrance and best architectural facades are associated with the elevations to Minshull Street and Bloom Street, whilst the more basic and simple elevation faces Richmond Street.

The rear of the building facing the loading street is very difficult to see within the context of the other buildings.

As stated in Section 18: Effects of the Proposed Works, the positioning of a proposed new doorway on the rear elevation will have no negative impact on the main 3 elevations of the property. This and the alterations for the disabled access are the only external features that will be altered as part of the application.

There is no further information within the historic environment record that is held by G.M.A.U nore than the listing description.

21. Impact

Overview

The proposal seeks the refurbishment of the warehouse from existing use as an office building to a hostel.

The proposal will have an effect on the internal layout of the building but no affect on the principle elevations and the setting of the building. The proposal will therefore have a positive and a negative impact on the historic status of the building together with some impact that in our opinion is neutral. The works that are being proposed are to be carried out in lightweight construction that is fully reversible and will have no affect on the principles of any of the elements of significance referred to in this report. All items of internal significance have been kept and in some instances enhanced i.e. the ground floor layout will open up the original columns allowing them to be viewed as the original building intended.

The proposal is a highly sustainable project, reusing an existing building in a position that is well-connected with both local and national nodes of transport, together with easy access to shopping and leisure facilities.

Positive Impact

There are no alterations that will impact on the major elevations therefore there will be no change to the character of the building and its setting in relation to its grouping with other buildings that form this important group.

The proposal would bring the building back into use in a sustainable way and protect its long-term future as at the present time there is only the basement and ground floor which is in use, the remainder of the building is unoccupied space.

There is evidence of water ingress from the roof gutters affecting wall finishes on the top floor. The proposal would fund a comprehensive repair on a like for like basis of the roof.

There are also defective windows that require repair and it is intended that when scaffolding is erected, a comprehensive assessment of the windows is to be carried out, again this is to be carried out on a like for like basis; traditional methods of repair will be employed to the windows.

Any services are to be installed in accordance with 'Guide to Building Services for Historic Buildings (Sustainable Services for Traditional Buildings)' by the Charted Institute of Building Services Engineers.

All leadwork is to be carried out in strict accordance with the Sheet Lead Association Standard details.

The proposals require a soft removal of the most recent office partitioning, this will allow for further investigation and photographic records to be compiled.

All internal elements referred to in the items of internal significance will remain.

There is an opportunity on the Cart Yard elevation to remove, if possible, later interventions of flues, pipes, blocked-up window openings etc, further investigation is required and consultation with the conservation officer regarding any works.

Negative Impact

The floor plans originally would have been large open spaces including small offices. The proposals do involve the construction of lightweight partitions to provide bedroom areas and accompanying toilet blocks. The impact of this is to reduce the openness of the space; this should be assessed in relation to the extent of office partitioning that has been erected on the majority of the floors.

There will be junction connections between the new works and the existing historic fabric, the details of these connections have been considered to minimise any intrusion that is not reversible so changes can be undone without harm to the historic fabric.

The introduction of a new door to the Cart Yard elevation will alter the elevation slightly. The details of the opening will be important and will follow the principles of the existing opening in relation to the reveal head and sill details. The door will be a steel door, set back as the original detailing set within a steel frame; both the door and frame will be painted.

Neutral Impact

The building at the present time is an office building, this contains a large number of office partitions that reduce the overall impression of space. The introduction of partitions into the proposed plans after the removal of the existing non-historical partitions will have a similar impression to the situation that exists.

Mitigation

Given that Mindel House is an important example of a city centre warehouse from the Victorian era, relatively unaltered eternally, it is essential that mitigation strategies are implemented when the development proceeds.

During the construction phase of the work and after the soft strip and clean out, a photographic survey should be undertaken of each of the floors, this will add to the knowledge and understanding of the building. Should any further items of historic significance be discovered, a full assessment should be made and reported to and discussed with the city conservation officers.

Commemoration

The building is expected to see a large number of people visiting and staying. Photographs of the building could be displayed in the ground floor reception rooms and cafe areas that would give the visitors an insight of the building's history.

22. Repairs

The main area of works that are classified as repair are:

1. Windows
2. Roof
3. Staircase
4. Plasterwork

The principle of repairs to the building are on a like-for-like basis.

Windows

Repairs to the windows will be required to be carried out to a schedule of repairs that can only be determined when the building is scaffolded and a close inspection of the windows externally can be carried out. It is not intended to replace any of the windows, but to carry out repairs; we enclose a copy of '*6 Window Repairs*' within 'Appendix A' that itemises the repair principles to be employed for sash and case windows.

The main principles are that all repairs must be carried out with matching materials and to the original details. All repairs must be sympathetic to the character and quality of the surviving original windows.

Roof

The roof requires to be inspected when the scaffolding has been erected to ascertain the condition. The inspection should include the fixings of the slates: the repair or replacement of any slipped or missing slates, any replacements should be the same colour, thickness and size as existing. It may be required that slates are fixed using lead ties. All ridge/hip tiles should be checked and re-pointed if required.

There are lead valley gutters and abutments around the building, these should be checked and repaired using the Lead Sheet Association Specification Clauses and Details.

Special inspection and repairs are to be carried out urgently to the leadwork behind the main corner (entrance) roof which is allowing water to enter the inside of the building.

'It may be prudent on inspection to replace the vulnerable areas of lead parapet gutters if found to be vulnerable.'

Staircase (Main Front)

There are a number of landings that appear to be out of alignment and are affected by movement. This is to be checked by a Structural Engineer. All repairs are to be carried out on a like-for-like basis to any balusters etc. A supplementary repair report should be prepared, subject to planning and listed building approval. It is essential that the features that remain on the stairs are not affected by any repairs.

Plasterwork

The building was originally constructed with a lime-based plaster. It is suggested that on the top floor where the walls have been affected by moisture from the roof defects, that the plaster is removed from the affected areas (as little as possible) and left to dry as much as possible. The wall should be treated with a salt stabiliser to reduce the occurrence of the salts affecting new plaster finish and re-plastered using a lime-based plaster. Build up plaster with course stuff in max. 10mm layers. Finish with fine stuff of approximately 2mm thickness. Copy of Ionicbuilding materials information enclosed within 'Appendix B'.

General Repairs

a) Any repairs to existing timber components should be carried out in well-seasoned timber on a like-for-like detail.

b) Services should be carried out using the *'Guide to Building Services for Historic Buildings'* produced by the Charted Institute of Building Services Engineers, i.e. plumbing, ventilation and electrical installation.

c) Pointing – It is not intended to carry out any pointing works to the scheme as the existing pointing on inspection looks acceptable.

A further inspection should be made to the copings of the parapets when the scaffolding has been erected to ensure they are fully bedded.

d) Ongoing – The fabric is the most important part of the asset's significance. We have therefore retained as much, if not all, of the historic fabric as possible. It is therefore important that after the soft strip, a further report is carried out to record any further items of significance that come to light.

23. Statement of Significance

No. 10 Minshull Street has been recognised as a property that has special architectural interest by being designated as a Grade II listed building. The building has remained very similar on the three public sides with very little alteration from when it was constructed around 1869.

Local Importance

No. 10 Minshull Street was developed when the cotton trade gave central Manchester a distinctive physical appearance. The building is within the grouping of the law courts, no. 8 Minshull Street and No. 11 Bloom Street which make up a group of similar buildings in the commercial area. The architectural style was that of the Palazzo of Renaissance Italy but exploiting the latest construction methods and materials. Manchester warehouses are one of the glories of its architectural heritage.

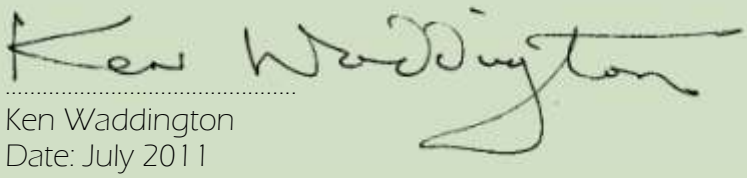
Regional Importance

The warehouses of Manchester provide a unique resource for those who live and work there and increasingly for visitors to the city, and are major contributors to the experience of the wider cityscape.

Internally

There is little evidence on the lower floors of any distinctive surviving features, most being hidden within the new fabric forming the office layouts. The construction of the building, with timber beams, cast iron columns and its central hoist and taking in doors to each floor are symbolic of the warehouse's previous use.

Signed,



.....
Ken Waddington
Date: July 2011

Appendix A - 6 Window Repairs

6 WINDOW REPAIRS

6.1 Preparing a specification for sash and case window repairs

This chapter describes a range of repairs, one or more of which may be required to return a sash window to good working order. The aim should always be to retain as much as possible of the original fabric, and to ensure that any replacement materials are introduced in ways that would allow them to be distinguished from the original. The need for a careful survey of each window within a building undergoing repair has already been stressed. It should not be assumed that the nature or condition of a sample window is repeated throughout a building. In the same way the use of standard or generic specifications for repair should be avoided.

Those responsible for instructing window repairs should have an understanding of conservation issues. The recommendations made in good faith by a joiner or building contractor should not be adopted without exercising judgement. In addition, ongoing communication between the conservation professional and the tradesperson carrying out the work will be necessary to properly address any unforeseen problems encountered as the work progresses.

Before commencing repairs to sash windows, it will be necessary to consider the context in which the window is expected to operate. External factors, such as leaking rainwater goods or saturated masonry, which might contribute to the degradation of the fabric, need to be dealt with before window repairs are put in hand. This will ensure that repair work will not be abortive, and avoid any further damage.

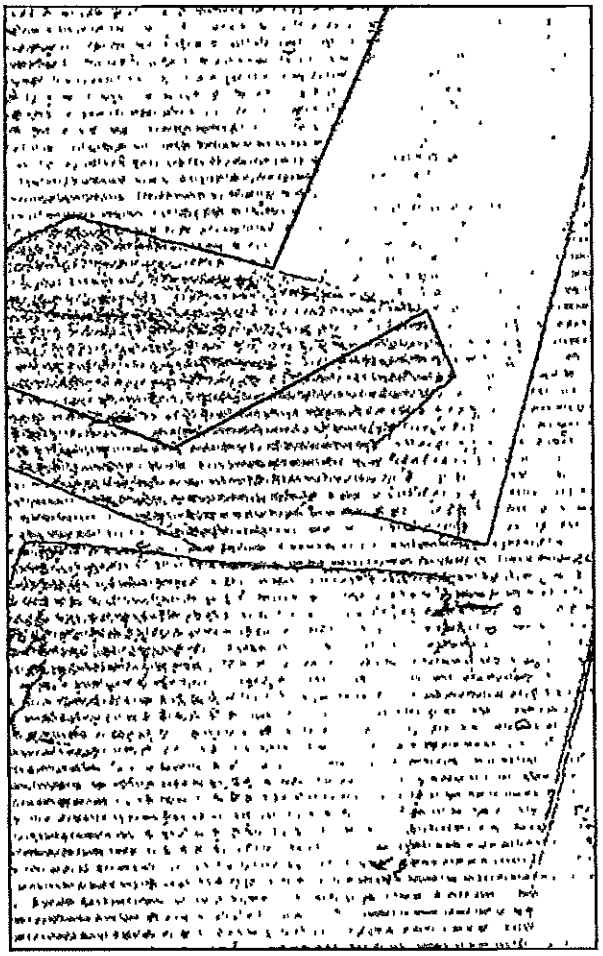
Window repairs should be scheduled to ensure that maximum benefit, through improvements in the operating efficiency and performance of the windows, are gained whilst minimising loss of original material.

Any risks to health or safety should be considered before carrying out repair work. There will be a need for proper access to the work area. It will also be necessary to take precautions against cuts from broken glass, and to follow manufacturers' guidance when using glues, toxic or corrosive chemicals.

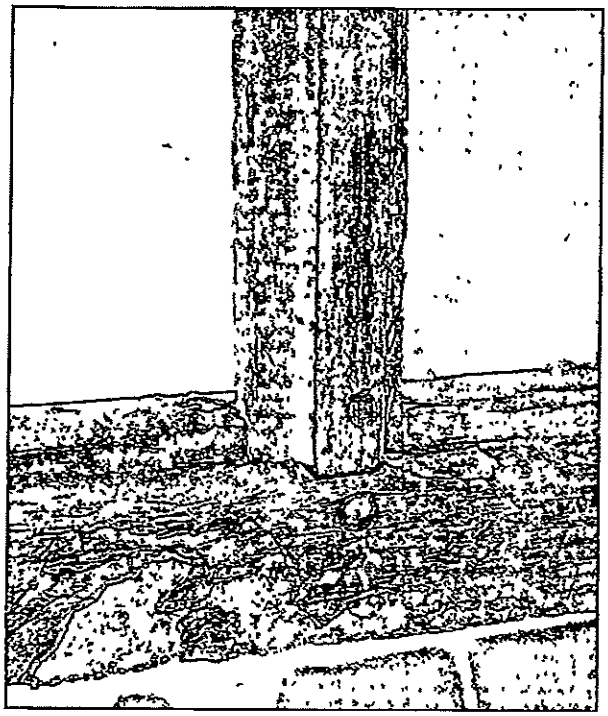
The work required to 'overhaul' a sash window, including re-roping, balancing and easing the moving parts, as well as cleaning and painting is not considered here. This work of basic or routine maintenance is dealt with in Chapter 7.

6.1.1 Selection of replacement timber and suitable glass for repairs

As with all joinery repairs it is important to select any replacement timber to match the existing as closely as possible. Species, density and grain all affect the performance of timbers that are subject to wetting and drying, and incompatible timbers will shrink and expand at different rates, causing gaps to open up in otherwise sound repairs (see illus 66 and 67) . The use of timber salvaged from windows that are being replaced should be considered as a means of achieving a close match.



67 New oak for cills.



68 A loose sash joint.

Replacement timber should meet the following criteria:

- 100% heartwood
- close-grained (8 –10 grains per centimetre),
- radially cut, with the radial cut inserted parallel to the widest dimension of the repair object
- air-seasoned, NOT kiln-dried, for at least two years, and in the workshop for as long as possible prior to use.

In order to avoid excessive shrinkage and subsequent opening up of joints, moisture content of 14% is preferable in most new joinery work within dry existing buildings. A further reduction of 2% is desirable if the building is continuously heated. The new timber must always have a moisture content compatible with that of the component undergoing repair. This may involve storage of the component alongside the intended new timber within the same part of the workshop, where time permits.

New replacement timber may benefit from some form of preservative treatment, but if this is proposed the type of treatment should be selected to ensure it will be appropriate for the location, and will not affect later applied paint coatings.

A variety of suitable woodworking glues are available, but care should be taken to ensure they are waterproof. A specialist manufacturer or supplier should be able to give advice.

6.1.2 Repairs to defective joints

Mortice and tenon joints are commonly used in the manufacture of sash windows. These joints rely on accurate tolerances to provide a secure joint, and often used waterproof glue to ensure a tight fit. Thin timber dowels were frequently placed through the joint so that it would not be released. Over time and through misuse these joints may become loose, or timber decay may weaken them (see illus 68). It is usually possible to repair damaged joints. Often gluing, wedging and clamping the joint will suffice, but it may involve taking the damaged sash apart, and re-forming the joint with new timber pieced-in. Guidance on the dismantling of sashes is given in section 6.1.2 below. The cuts made in the old wood should, wherever possible, be angled so as to direct moisture away from the site of the repair.

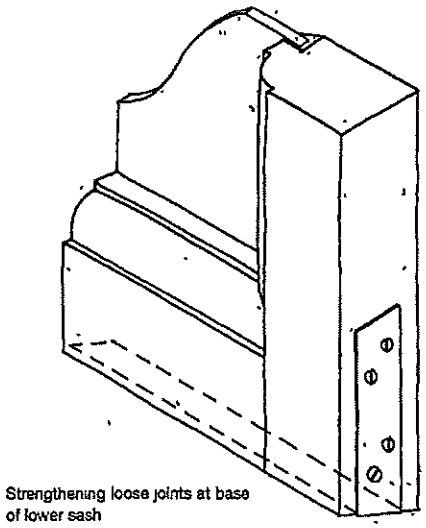
Where no damage has occurred it may be possible to improve the strength of a weakened sash. Old loose dowels can be carefully driven out (dowels were often tapered and the corresponding holes in the sash frame tenon joints were offset so as to use the driven dowel as a means of drawing the joint tight) and new dowels glued into place. Strengthening can also be achieved by the addition of galvanised, or stainless steel, plates recessed into the inside face of the timber, and secured with non-ferrous screws (see illus 69). Metal plates and brackets can become a focus for moisture through trapping rainwater in contact with the surface of the wood, and should therefore not normally be considered for repairs on the external face. Internally they may become a cold surface onto which condensation forms more readily.

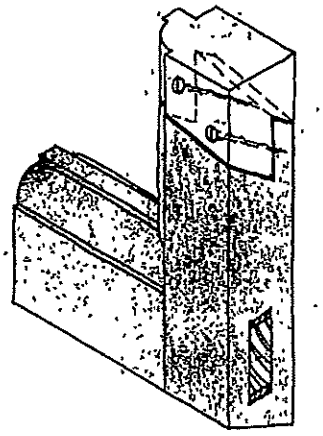
6.1.3 Sash repair

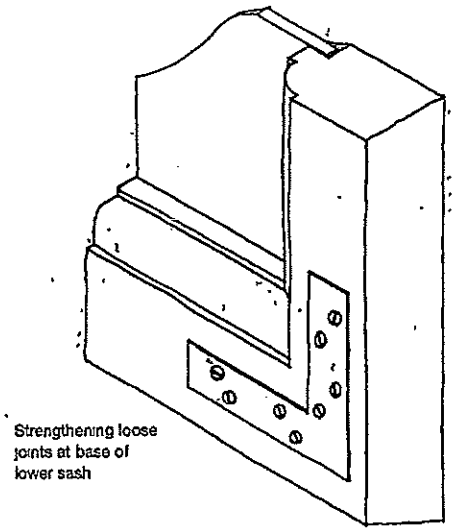
In addition to defective joints, sashes may also have suffered excessive wear, leaving wide gaps or making them difficult to operate. Damage may also have occurred to stile or rail arrises (illus 70). Judgement will be required to determine the extent to which new timber should be inserted to make good such defects. Severely warped or damaged sashes may need to be completely renewed. Many sash repairs can be carried out without dismantling the sash, and subject to the need for matching timber and suitable glues in any repair, can be readily achieved.

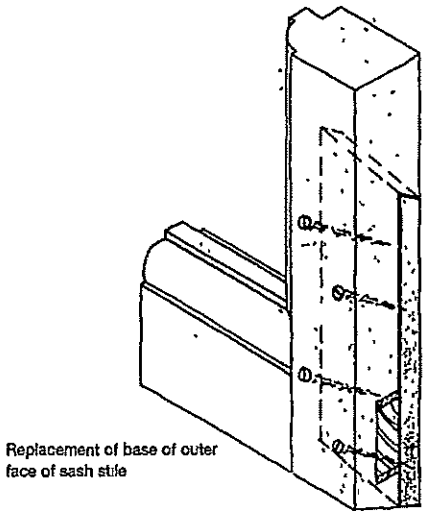
Should the need arise, then a sash can easily be taken apart. Carefully remove the glass as described in 6.1.7. Then identify any wedges or dowels and remove these, before carefully easing apart the sash rails and stiles by gentle tapping with a hammer (against a wood block placed inside the frame) near to the joints. Any glued joints can be released by the application of steam.

Care will be needed to ensure any new timbers have









69 Strengthening joints

70 Rail and stile repairs

profiles that exactly match the existing. Samples may have to be run using the proposed metal profile cutters before approval for use (illus 71).

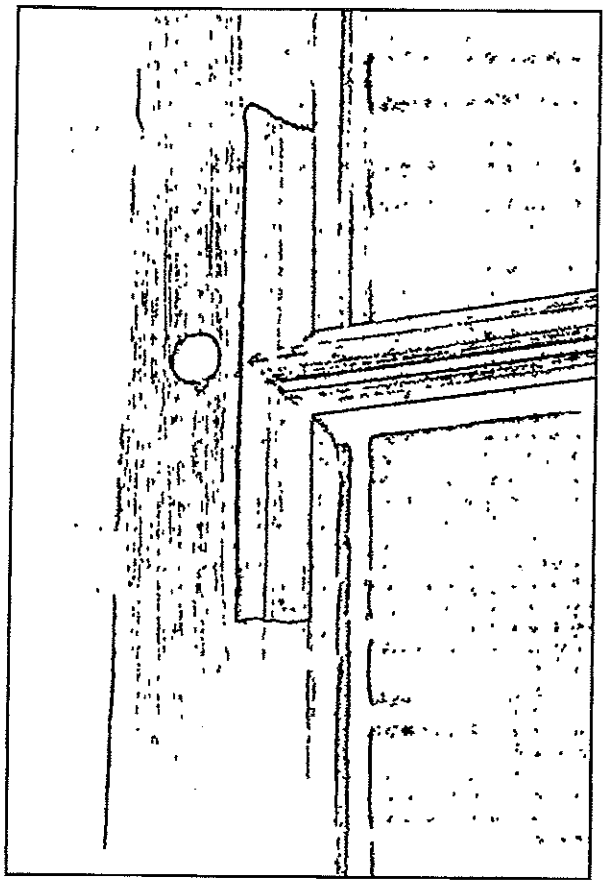
6.1.4 Frame repair

Repairs may be made to frame members using the same techniques as used for sash repairs. It is usually possible to repair frames *in-situ* and this is preferable as, where timber decay is present, frames can become distorted during their removal and may become unsuitable for re-use. Special tools are required to rout out decayed or defective timber to allow new wood to be spliced into place, replicating the necessary jointing. Always ensure that decayed timber is completely removed, as any remaining rot will continue to decay behind the newly indented timber.

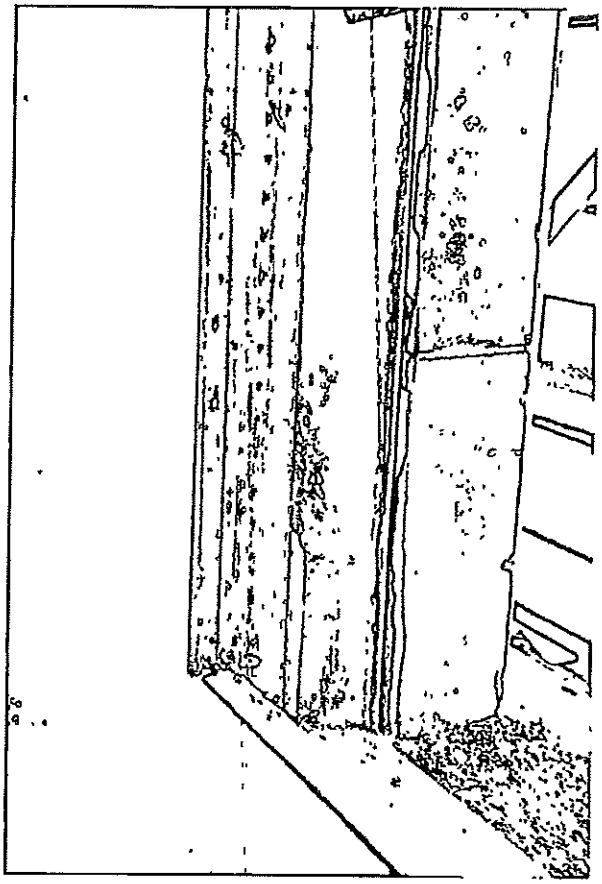
Sections of parting beads or baton rods that are damaged or decayed can be pieced-in, or commonly they may be replaced by a piece of matching cross-section. This is best done in complete lengths to ensure they are securely fixed.

Where weight boxes are provided with removable covers these may be defective or missing, and replacement should be carried out to the original profile (illus 72 and 73). This work is often done while accumulations of debris are being cleared from the base of weight boxes (see 7.3).

The decay of cills is one of the most commonly occurring defects in sash windows, as they are subject to constant wetting. The complete cill can be replaced *in-situ*, together with the lower parts of the outer lining and pulley stile (illus 74 and 75). Where decay is more limited, and to avoid unnecessary disruption of an otherwise sound frame, the outer half of the cill only can be replaced (illus 76). Full cill repair is complex but if correctly carried out will ensure adequate protection of the sash window. Half-cill repairs tend to



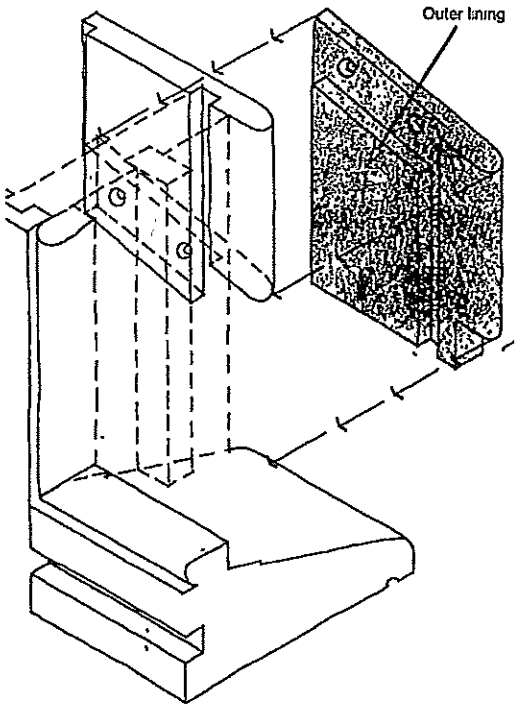
71 Sash repair, showing a dowelled mortice and tenon joint.



72 Weight pocket before repair.

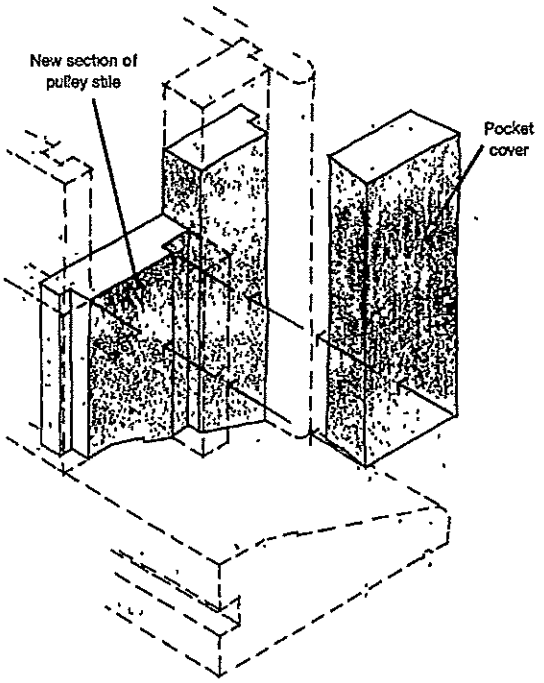


73 New weight cover fitted.



Replacement of section of outer lining

74 Lining repair

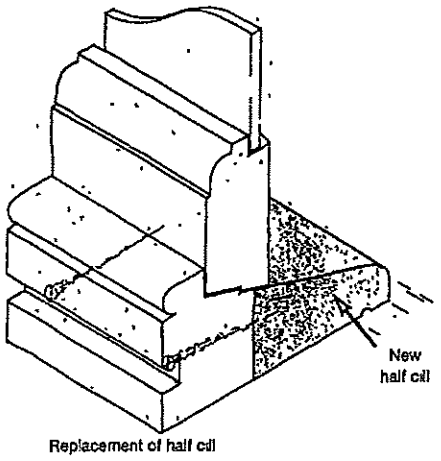


75 Pulley stile and pocket cover repair

be more easily achieved but are likely to be successful only as a stopgap measure. Judgement will be required to assess the type of repair most appropriate in each particular case.

The use of proprietary plastic fillers, including modified epoxy resins or acrylics is not recommended, as they are unsuitable for anything other than the smallest patch repairs. This form of repair will serve to trap moisture within the remaining wood, and will accelerate, rather than reduce, decay. Careful preparation, following the manufacturer's instructions, is essential to the success of any plastic repairs.

In exceptional cases it may be necessary to remove the entire window frame from the masonry opening to allow for more extensive repairs or, for example, if work to the surrounding wall is to be carried out. Removal of a window frame is a major undertaking and should only be undertaken once all other options have been considered. Internal finishes around the window will have to be carefully removed, shutters and window sashes set aside, and any internal plaster removed from the ingoes. Mastic pointing should also be removed from the external face. The frame is normally secured into the masonry with hardwood wedges, but iron wedges or fastenings may also be found on older examples and these should be carefully retained for re-use. After removing any wedges the window can be gently manhandled (inwards) and set down gently onto a cleared level surface. If the frame is in poor condition then the installation of temporary timber bracing will help prevent torsional stress from damaging sound



76 Cill repair

joints. On completion of the repairs the window should be lifted into position and wedged in its original manner. The provision of additional fixings should be considered to ensure long-term stability. Care should be taken during the installation of driven wedges, to ensure the frame does not distort. Window frames should always be set plumb and level, despite any discrepancies in the dimensions of the masonry opening, and this may require careful thought to ensure a water-tight external seal is achieved. The sashes should then be re-hung and tested to ensure they are working before the reinstatement of internal finishes and mastic pointing.

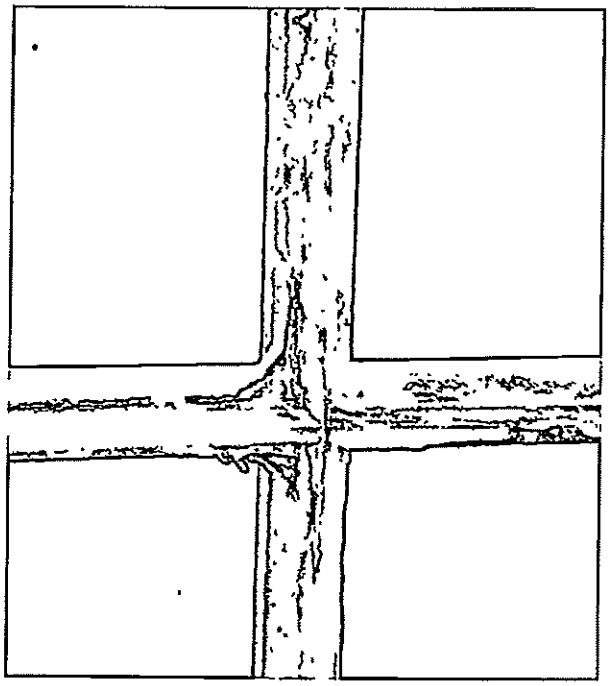
6.1.5 Glazing bars

Glazing bars of relatively thin sections frequently suffer accidental damage due to impact, or due to decay where dampness has collected at one or more joints in poorly maintained timber. They may also have been weakened by unsympathetic treatment during previous glass replacement (illus 77).

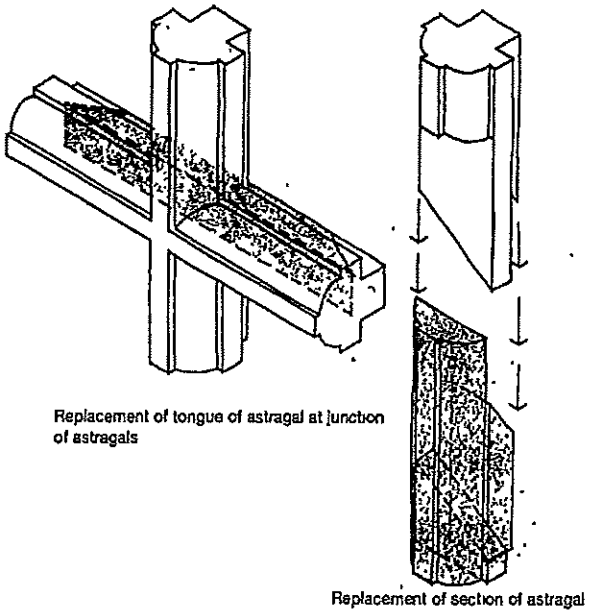
The oldest sashes may have glazing bars formed with the moulded profile separate from the glazing checks. Care will be needed to ensure any repairs take this into account.

Where consent has been granted for glazing bars to be inserted (to replace those previously removed to allow large single sheets of glass to be installed in a sash), evidence for the location and profile can usually be found at the filled tenon holes in surviving sash frames.

Sections of matching timber can be pinned and glued in situ to repair minor damage, but where significant material has to be replaced it will be necessary to remove the sash to the workbench (illus 78). Here the valuable early glass must be protected or temporarily removed (see 6.1.7) before timber repairs are carried out.



77 Glazing bars damaged when hacking out glass and old putty. This might have been avoided if the putty was softened beforehand (See 6.1.6).



78 Glazing bar repairs

6.1.6 Ironmongery

Specialised ironmongery is essential to ensure the proper working of sash and case windows. Harm can be caused to the window assembly as a result of the failure of a single item of ironmongery. The maintenance and repair of these components is therefore vital. Any original fittings should be retained, repairing where necessary.

Although replica ironmongery is now more commonly available it should not be assumed that existing items should be replaced. The quality and durability of much replacement ironmongery cannot match that of the originals, which may have been in use for many years. Weights, pulleys and sash lifts can all be re-used following minor maintenance (see 7.3), and catches and hinges, which have vulnerable moving parts, can be repaired by specialists, often using spare parts taken from previously salvaged fittings.

Layers of paint should be removed from ironmongery using appropriate solvents, before assessing the full extent of damage. Paint removal will itself improve the efficiency of their operation.

Often the ironmongery of a sash window will have been replaced or re-fixed several times before, and this can lead to weakening of the timber at fixing positions. It may be necessary to insert new timber into sash rails to allow the ironmongery to be properly secured.

6.1.7 Putty and glazing repair

Over time putty based on linseed oil may dry out, losing its ability to accommodate the frequent dimensional changes associated with timber windows. When this occurs the putty will tend to crack and allow water in to attack the vulnerable timber. Replacement with matching material is relatively straightforward. Any defective putty can be carefully chipped out, or may first have to be softened to avoid damaging the surrounding timber or the glass. Putty can be softened using an alkali paint stripper or, with careful use to avoid cracking the glass, a hot-air gun.

Other methods of softening putty have been recently developed, using infra-red and microwave heat sources. These methods involve expensive equipment, which is not yet readily available in Scotland, and are therefore only likely to be employed in large repair projects.

The practice of using alkali immersion as a means of removing paint and softening putty is recognised but there is no data available on the effects of such treatment on the long-term durability of timbers (see 6.1.9).

Any metal nails or sprigs used to secure the glass should be carefully retained and re-fixed as necessary. It is often worthwhile to apply a coat of linseed oil thinned with turpentine to the exposed timber before applying new putty, as this will reduce the possibility of the wood drawing the oil binder out of the putty.

Where sashes had previously been glazed with crown glass, timber profiles may have been adjusted to accommodate the distortions found in the glass. Difficulty may occur when using glazing nails where glass has to be inserted into frames that are not true, particularly if the replacement glass is also distorted. Experience has shown that siliconised latex (painter's caulk) as an adhesive can be successfully substituted for the back putty, obviating the need for glazing sprigs. Once set, the caulk may be neatly trimmed with a sharp knife, before traditional fore putty is applied. Glazing can be released from the caulk by careful prising with a knife.

New putty should not be painted until at least 28 days after installation, as this will allow the correct degree of hardening to take place. Painting should occur as soon as possible after this time, so that the putty does not become too brittle.

Glass that has been broken should be replaced as soon as practically possible. This will avoid the risk of decay to window and other interior timbers and finishes. Otherwise sound original panes with only small corner cracks may not need to be replaced, as the crack will not affect performance unduly and because historic glass is a limited resource.

Where a sash must be replaced, any sound historic glass should be salvaged and stored for future use in repairs. Many architectural salvage yards will receive such glass and can provide a source of replacement material when breakages occur.

Sources of new replacement glass should be carefully considered. Of the available alternatives, the following are not recommended for use in historic windows:

- Modern float glass is perfectly flat and its appearance is totally alien to the subtle variations of reflection and surface that are such a feature of historic glass. Float glass that has been distorted by heating in a kiln is available, but it still lacks surface brilliance.
- Drawn sheet or horticultural glass has been used to replicate the patina of historic glass, but it cannot be generally recommended, as poor colour matches may occur and its surface will usually be excessively distorted.
- Cathedral glass, which is machine made, is unlikely to be appropriate for use in sash and case windows due to its heavily obscured textured finish.
- Effects placed on drawn sheet glass by pressing into a mould or by stroking with wire when still hot are only suitable for the art glass market.

The only modern hand-made glass that is readily available is cylinder glass (although confusingly, it is now described commercially as Crown Glass). This glass is blown into a tube in the traditional manner, but not spun as for genuine historic crown glass. No glass of this type is currently manufactured in the UK, but reliable supplies are available from Poland or Germany, where the glass-blowing tradition has continued to this day.

Care must be taken to select the appropriate glass, based on samples of sufficiently large pane size, to assess the visual effect. Exaggerated surface patterns should be avoided.

6.1.8 Repair of pointing materials

As with glazing putty, the pointing used to seal the gap between a window frame and the masonry opening can deteriorate due to excessive drying out or as a result of differential movement. Missing or defective pointing can lead to water ingress and subsequent timber decay.

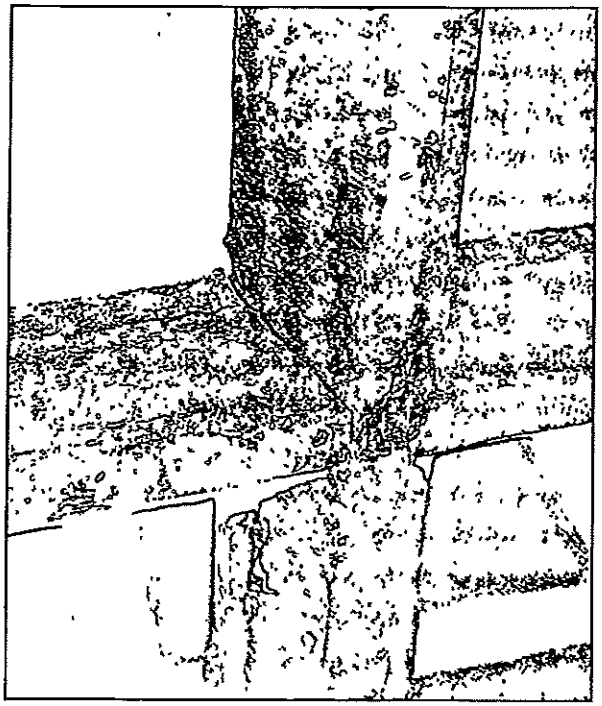
Loose or otherwise defective pointing materials should be cut out, and the backing material (if any) should then be examined. Traditionally, lime mortars were used to seal these gaps over a gap filler of rolled, wetted newspaper, with a fillet of more flexible burnt sand and boiled linseed oil mastic in front to waterproof the joint. Where a deep masonry check is found it is likely that the mortar will have deteriorated and alternative packing materials may have been substituted during later repairs (see also section 4.5 and illus 50).

Repairs may be carried out using the traditional materials. Some experimentation may be required to gauge the thickness and degree of soaking of the rolled newspaper required to correctly fill the gap. The lime mortar backing should be applied in a relatively dry form, and may be reinforced using added animal hair to give more cohesion to the mix. Alternatively compressible foam strips can be used, or modern aerosol-propelled foam fillers, provided precautions are taken to avoid the risk of the filler being foamed within the weight box. For both these modern substitutes, periodic replacement may be required as they do not have proven durability.

Burnt sand and boiled linseed oil mastic is available through specialist merchants, and is usually preferable to modern one- or two-part polysulphide mastics. Before the application of the mastic the dry mortar and adjacent timber should be primed with boiled linseed oil to maximise the bonding action. The mastic is trowelled on and finished at a neat chamfered angle. The material will take about 28 days to become sufficiently hard, and may have to be protected until then.

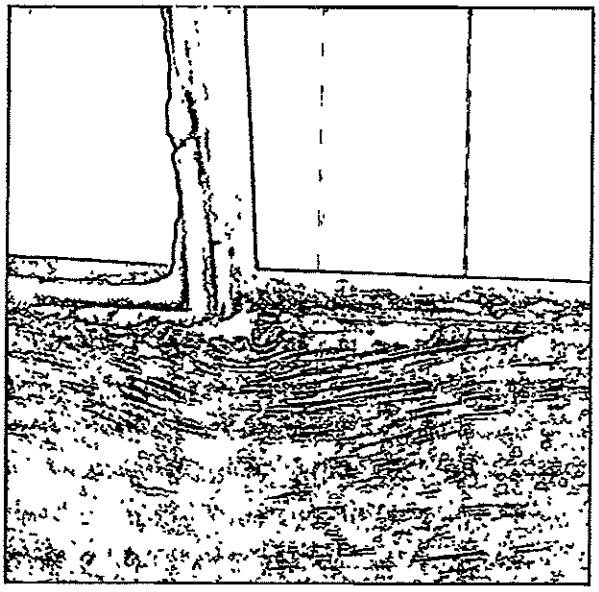
There is some debate whether the finished pointing should be painted along with the window timbers. Once painted there will be less flexibility in the mastic, but it may be more durable. It has been known for

certain birds to be attracted to mastic containing linseed oil (as well as to glazing putty) and painting may help to deter them from pecking it. Painted mastic can be visually detrimental by enlarging the apparent size of the frame members and, on balance, should be avoided.



79 Layers of paint on an old window.

sandpaper and a thin-bladed scraper, taking care not to damage the underlying timber. For some windows this may be all that is required. If it is necessary to remove further paint, or to return the timber to its natural state prior to repairs and re-painting, then an alkali paint stripper or gentle heat from a hot-air gun, taking care to avoid heating any glass that may be in place, may be successful. The use of a gas-fuelled blow-torch is not recommended.



80 The affects of caustic dipping on timber. The grain on the rail member has opened up and splintered.

6.1.9 Paint removal techniques

Methods of painting are described in detail in 7.2, the intention here is to provide information on removal of existing paint. This may be in preparation for re-painting, but may also be a necessary preparatory step for many of the timber and glazing repairs described above.

Excessive build-up of layers of paint over time will tend to interfere with the smooth running of sliding sashes and if painting has been incorrectly carried out working parts can become stuck (illus 79). Paint build-up on parting beads may wear a groove into the sash stiles over time. However the regular painting of the exposed timbers against water penetration is essential to ensure the longevity of the window. There is therefore a need to ensure painting is done regularly and well.

Paint failure may occur on internal surfaces due to the effects of condensation, and more frequently on external surfaces where they are exposed to the sun and rain. Paint may blister, peel or flake, and discoloration will occur. Defective paints may craze or crack to allow moisture to attack underlying timber, causing decay.

Loose paint can easily be removed by rubbing with

Elsewhere in Europe, large-scale projects have successfully employed microwave equipment to loosen paint, so that it may be easily scraped off. This technique has not yet been tried in Scotland but may have advantages over alkali immersion as a quick and efficient method of paint removal.

Caustic stripping, most commonly by alkali immersion, is widely used for paint removal. There are concerns that some timber, putty and old glass may undergo irreversible damage during this process and it cannot therefore be recommended (illus 80). There is evidence that an adverse reaction can develop between caustic solutions and certain timber species, notably oak. Recent experience with oak windows has shown that timbers can be irreversibly stained black and, if inadequately rinsed after treatment, they may sustain the development of mould and other microbial growths.

6.2 Trade skills and training

It is essential to the successful completion of sash window repairs that those concerned have an understanding of the value of the original window,

Appendix B - *Lime Plasters*

Lime Plasters

FEATURES & BENEFITS

Lime plasters allow old walls to breathe moisture out of themselves. They are better able to accommodate small amounts of seasonal movement and are therefore less prone to micro cracking. Our internal lime plasters contain no gypsum and are therefore not damaged by occasional damp penetration through old solid walls.

USES

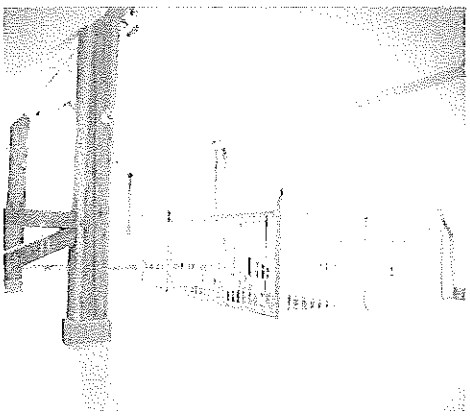
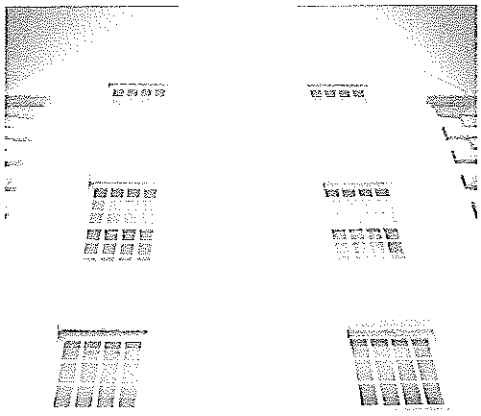
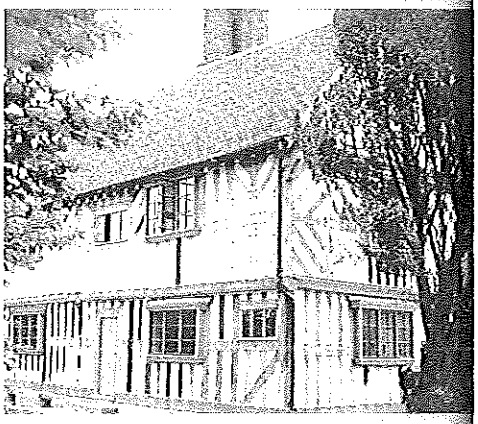
Plasters we supply do vary in strength, flexibility, durability and appropriateness for different backgrounds and constructions. The table below sets out which are most appropriate for different situations and which preparation treatments may be required.

PLASTER/RENDER	SIZE	PRICE CODE	SUGGESTED USES (FOR GUIDANCE ONLY) please consult your Ionic distributor for further advice
1:3 Course Stuff with fibres hair. Lime putty / fat lime mortar. All natural hair reinforced plasters must be used within one week of supply.	tub/bag	1201	For the fist coat of plaster on to riven wooden lath. Maximum depth 12mm. Covers 2m² at a total depth of 10mm. For the second coat of plaster on to riven wooden lath and for plastering old soild walls. Maximum depth 8-12mm. A 22 litre tub covers 2m² at a total depth of 10mm. A bulk bag covers 50-60m² at a depth of 10mm.
	bulk bag	1202	
1:3 Course Stuff with hemp straw. Lime putty / fat lime mortar.	tub/bag	1201	For undercoat plasters and external renders on straw bale buildings. Maximum depth 12mm. A 22 litre tub covers 2m² at a total depth of 10mm. Bulk bag covers approx 50-60m² at a depth of 10mm.
	bulk bag	1202	
1:1 / 2:3 Fine Stuff lime finish plaster.	tub/bag	1203	Lime plaster top coat to be applied no more than 2mm thick on to the lime plaster undercoats. One tub covers approx 5-6m².

The above mixes represent only a small selection of what we can produce, please contact your Ionic distributor to discuss your requirements.

Ancillary Plastering Products

	SIZE	PRICE CODE
Bundled goat hair	1kg	1204
Bundled horse hair	1kg	1205
Bundled pig hair	1kg	6059
Bundled cow hair	1kg	6060
Alkali resistant glass fibres	1kg	1206
Alkali resistant glass fibre mesh	m²	1207
4 x 4mm and 10 x 10mm	roll	6061
Polypropylene fibres	1kg	2009
12mm, 19mm, 25mm, 38mm, 50mm		
Prependuit	35kg	1208
Lime Green Prepbond	25kg	1211
(priming plasters to allow fine stuff finish lime plaster to be applied over gypsum plaster / plaster boards and on to difficult to coat surfaces including external insulation systems and wood-fibre boards)		
Intercromex	30kg	1209
Lime Green Lath Rend	25kg	1210
(priming plaster to allow lime plaster to be applied over steel mesh / lath)		

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