

2554 - Norfolk House, Listed Building Consent Report



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Status:	DRAFT
Date:	21/03/23
Revision:	00
Job no:	2554
Prepared by:	Rob Lygo
Approved by:	Dee Voaden

HEYNE TILLETT STEEL

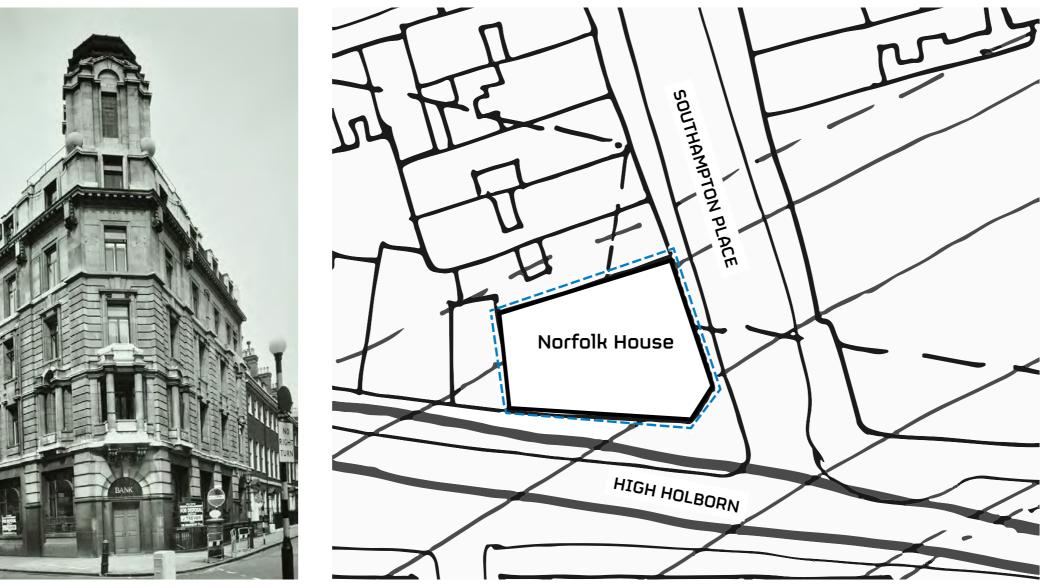
1. Introduction

This report has been prepared by Heyne Tillett Steel on behalf of Hogarth Properties to present the proposed structural alterations, to the ground floor and basement of Norfolk House, 13 Southampton Place, London. The additional alterations follow that of recent work undertaken from Level 1 to level 4, which was sanctioned under the previous listed building application.

The report is based on the following available information:

- + Desk Study information including historical maps
- + Architectural drawings issued by MICA dated 17/03/2023
- + Visual inspection of the site

A visual inspection of the building has been undertaken by Heyne Tillett Steel. However, no intrusive structural investigations have yet been carried out.







2. The site

The existing site is located in the London Borough of Camden in the Bloomsbury conservation area, on the corner of Southampton Place and High Holborn, close to Holborn underground station.

The existing buildings form part of a wider development of several of properties from the client portfolio in the area. This project considers Norfolk house, which cover the whole site footprint and measures approximately 20m x 24m on plan.

The building overlooks Southampton Place to the east and High Holborn to the south with adjacent building along the west and north boundaries. The existing building is grade II listed.

2.1 Site History

The historic maps indicate that there have been buildings on the site since at least 1876, with five buildings previously on the footprint. The site was further developed before 1916 with the introduction of the bank on the corner of High Holborn and has existed in its current form since 1952.

The existing building on site avoided any bomb damage from World War II.

2.2 Ground Conditions

The BGS maps of the area indicate that the site is underlain by a small depth of made ground with terrace gravel deposits to a depth of approximately 6m. Beneath this the London Clay extends to depth.

No ground water was recorded in the nearby boreholes.

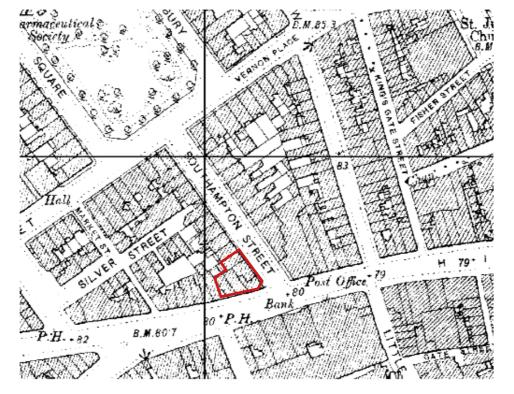


Image 3 - Historic Map published 1896

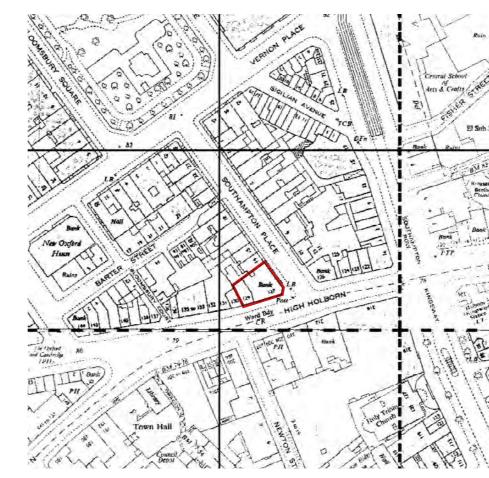




Image 4 - Historic Map published 1916



Image 5 - Historic Map published 1952

Image 6 - World War II Bomb Map



2.3 Existing site constraints

2.3.1 LUL

The central line runs along High Holborn and Norfolk house is within the zone of influence of the tunnels.

2.3.2 Mail rail

The mail rail tunnel runs to the north of the site along Vernon Place at the opposite end of Southampton Place.

2.3.3 Crossrail

The Crossrail tunnels run directly beneath Norfolk House from west to east.

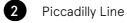


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Central Line

1 Mail Rail



3 Crossrail



Location of previous British Museum Underground Station

2.3.4 Old British Museum Station

The disused 'British Museum Station' is located beneath the site with the old entrance to the station at 130 High Holborn. The station was constructed in 1900 and closed in 1933 following the construction of Holborn Station nearby. The station originally served the central line and was used as an air raid shelter during the second world war. The central line runs approximately 26m deep beneath High Holborn.

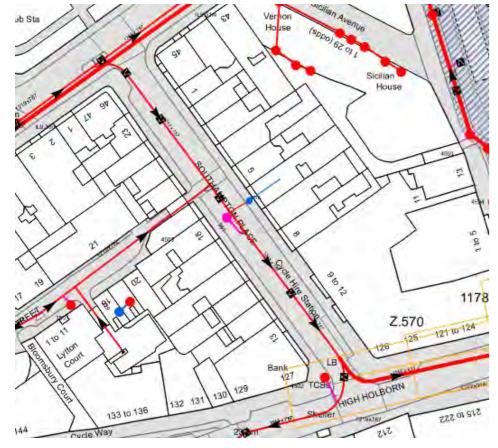
2.3.5 Thames Water Assets

The Thames Water asset maps show that combined sewers run beneath Southampton Place and High Holborn which measure approximately 1200mm x 800mm.

The distributions mains also run along both Southampton Place and High Holborn with a trunk main also along High Holborn.



Image 8 - London Transport Museum Sketch of British Museum Station



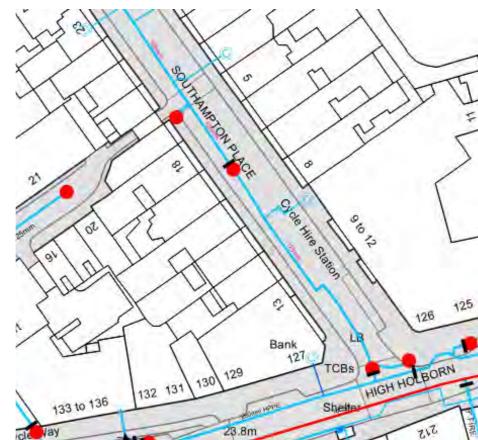




Image 11 - British Museum stop on 1921 tube map

Image 10 - Thames Water Asset Map



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3. Existing Structure

Norfolk house was originally constructed in 1904 and extends from basement to Level 4. The structure is load bearing masonry with concrete filler joisted floor structure, approximately 190mm deep.

The upper floors have previously been adapted to remove the internal load bearing masonry walls which have been replaced by steel framed columns and beams from level 2 to roof. The steel beams create a downstand approximately 600mm from the slab soffit with a void in some areas between the top of the beams and the soffit.

Archive drawings dated 1983 indicate that there was previously an area of slab infilled adjacent to the core and areas of roof rebuilt to accommodate plant.

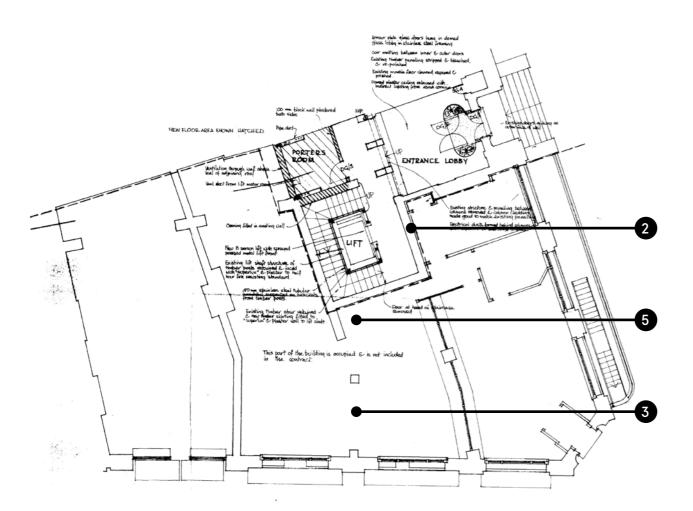
A survey of the existing building and archive information indicate that one of the internal load bearing masonry walls at ground floor has previously been removed and replaced with a steel frame.

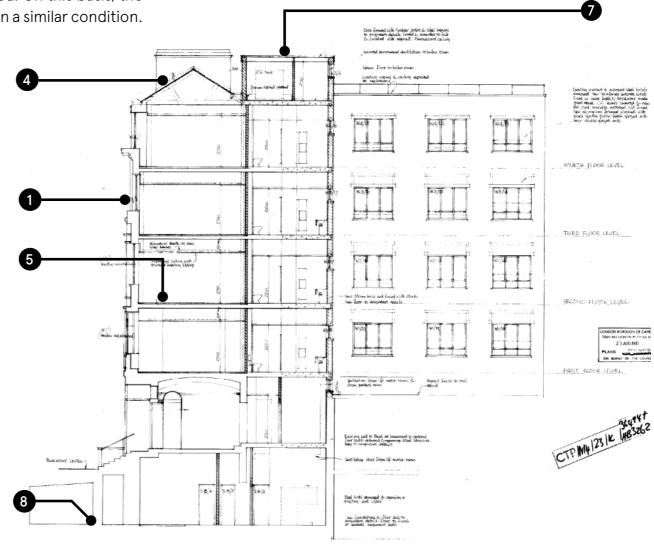
Recent works were in 2022 on levels 1-roof. These included plant replacement and minor structural alterations. The below ground drainage has been altered as part of the scheme.

3.1 Condition of existing structure

The existing ground floor and basement unit have yet to be stripped out. A post strip out inspection was carried out on the upper floors prior to the 2022 works and a significant amount of the original cornicing and ornate features had been removed. On this basis, the ground and basement units are expected to be in a similar condition.

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- asonry stair core
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- d roof of timber construction
- Omm deep filler joists
- and slab infill constructed in 1983
- imber roof extension
- ent vaults

4. Investigations

In order to carry out the detailed design investigations will be required these include

- + Structural opening up works to confirm size, framing and condition of structural elements.
- + CCTV survey to assess condition of existing below ground drainage

The structural investigations are yet to be scoped, these will be shared with heritage consultants and carried out to minimise the impact on the exiting fabric.

5. Site Access

The site is located in the Holborn area of London, close to the Holborn underground station.

The building fronts on to Southampton Place and Southampton Row. Southampton Row is heavily trafficked during working hours but are wide enough to be easily accessed by most sizes of construction vehicle.

The surrounding area is a mixture of commercial and residential properties and as such restrictions on working hours are likely to be considered.

The maximum sizes of structural elements and movement of construction materials through the buildings will need to be considered in detail by the contractor.

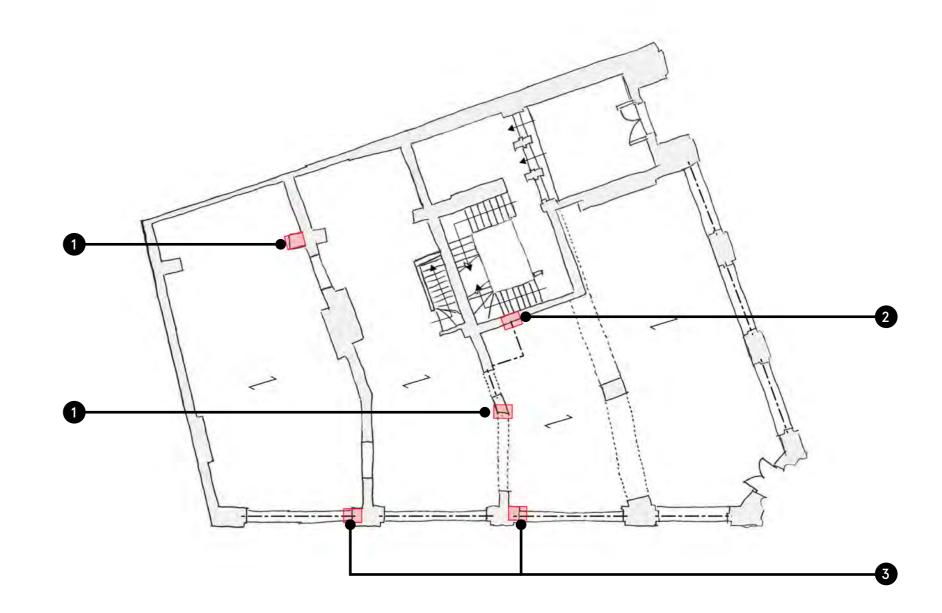


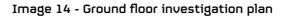
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At high level, carefully remove finishes, confirm vertical structure, locally break out the full depth of the clinker at the bearing end of the filler joist to determine embedment into the wall

2 From the ceiling at basement level, carefully remove ceiling finishes to the expose structure around slab opening.

At high level, carefully remove finishes to the side of the masonry pier and locally break out wall to reveal supporting structure above.







6. Proposed Structure

The proposed works are summarised in the sections below:

Basement level:

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- + The northwest staircase and hoist lift are to be demolished.
- + Iterations to the below ground drainage to suit proposed layouts. Local demolition and reinstatement of exiting ground bearing slab to suit new below ground drainage runs.
 - Existing hoist lift to be removed
 - Northwest staircase to be removed
 - Indicative propping to basement for works at ground floor

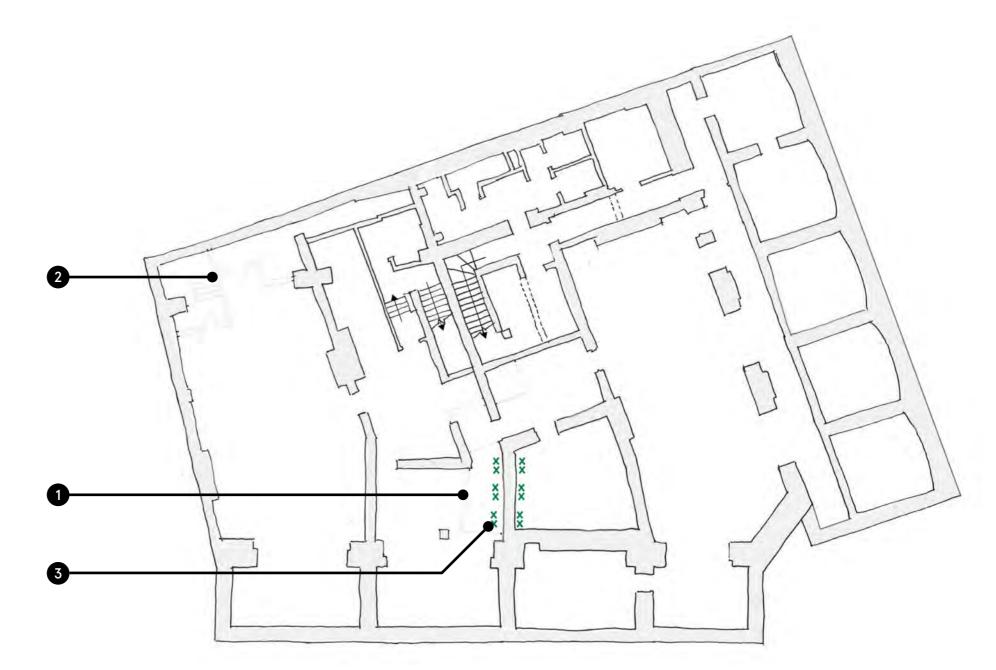


Image 15 - Basement level - proposed structural alterations

Legend

- New Opening New Masonry New Steel
 - Indicative Propping



Ground Floor:

- + An existing load bearing masonry spine wall is to be demolished and replaced with a steel box frame supported on masonry walls below.
- + Openings in internal walls are to be infilled with masonry, which is to be fully bonded and toothed into the existing wall.
- + Three small openings are to be cut into the slab to form new risers.
- + Existing façade openings to be altered, based on historic photos; structural work is not expected.
- + Existing hoist lift opening to be infilled with timber joists.

The proposed structural elements will be limited in deflection to span/500, under full load at the serviceability limit state to protect the existing structure and prevent movement or cracking of the existing masonry.

All works will be carried out sympathetically to the historic fabric of the building and in line with any guidance or requirements set out by the local Conservation Officer and English Heritage. The existing internal and external fabric shall be suitably protected throughout the entire duration of the works and the contractor undertaking the works shall have relevant listed building experience. The works are confined to the basement and ground floor only.



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Timber joists to be installed following staircase demolition. New wall plate to be resin fixed to existing masonry. Floor joists to be hung from MS hangers, face fixed into timber wall plate.

Masonry infill to be fully bonded and toothed into existing masonry

Slab span direction assumed.

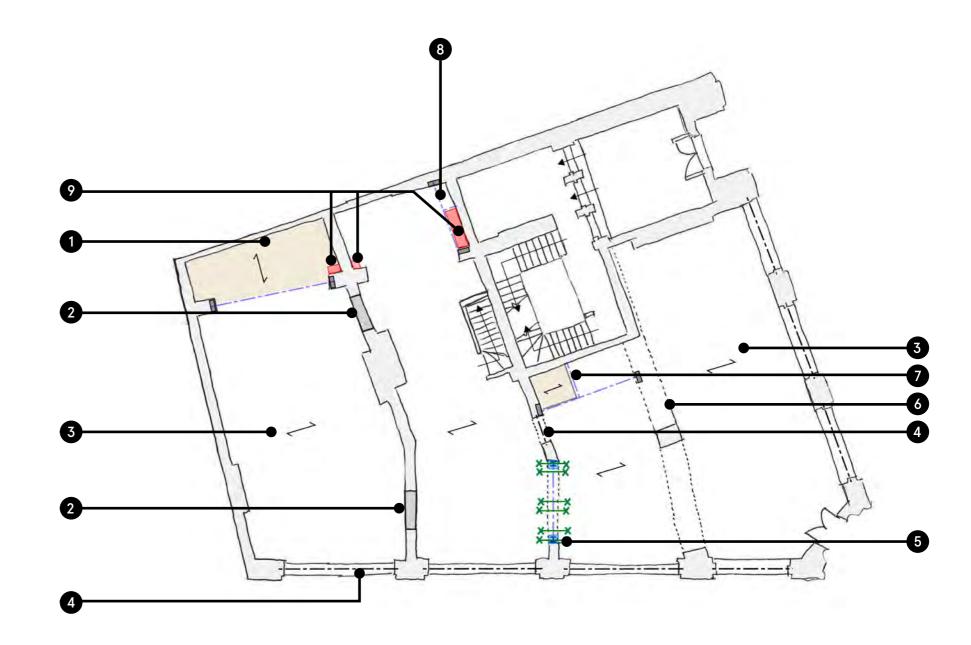
Assumed existing beam at high level, to be confirmed by intrusive investigations

New steel box frame, to be formed from beams and columns

Wall below

Allow for new steel beams to support hoist lift timber joist infill.

- Allow for new steel beams to trim out riser
- New risers

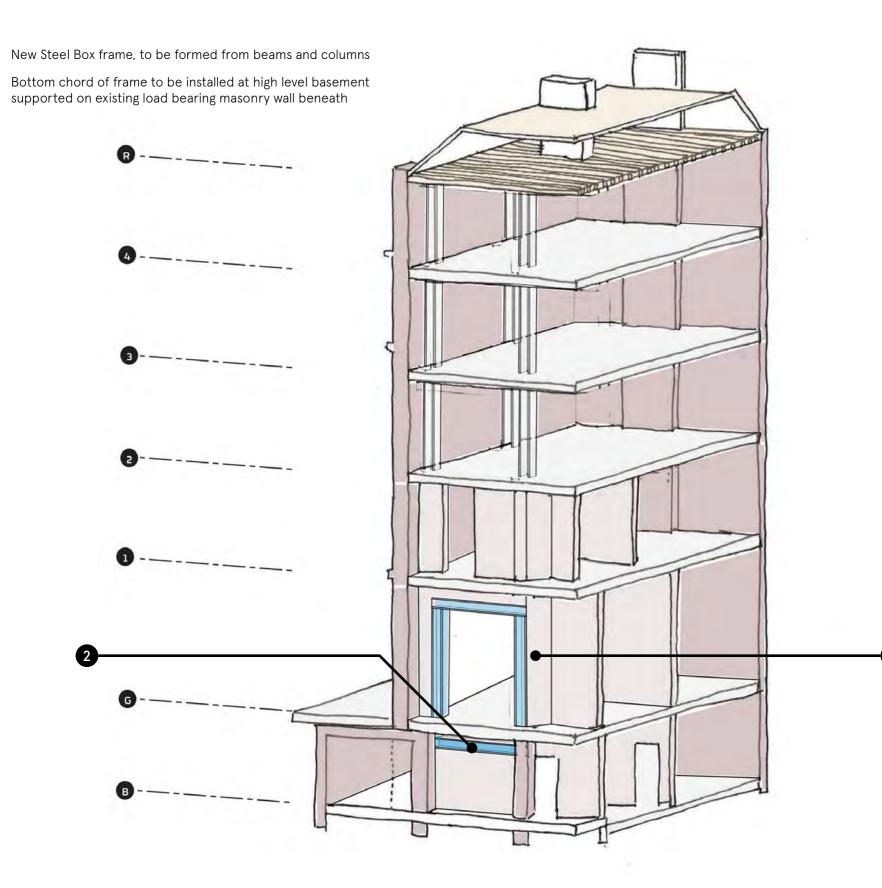




Legend

- New Opening New Masonry New Steel
 - Indicative Propping

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6.1 Fire

It is expected that the existing structural soffits and steelwork will require protection adequate for a 60-minute fire resistance period. The existing structure is to be fire boarded or intumescent paint where required.

All new steelwork is to be intumescent painted or encased to provide 60 minutes. In areas where the client would like to expose steelwork the structure will require intumescent paint to provide the resistance.

6.2 Disproportionate collapse

requirements.

All new structural elements will be designed with horizontal and vertical ties as required by approved document A. Steelwork connections will be designed for the appropriate tying forces in all directions.

6.3 Repairs to existing structure

Localised repairs will likely be required to the existing structure due to areas of damaged soffits and loose brickwork. All repair details shall be agreed with the conservation officer and/or English Heritage as appropriate.

6.4 Listed Building Consent

All works will be subject to listed building consent and approval.

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The existing building is classified as consequence class 2B in accordance with Approved Document A of the Building Regulations. The alterations to the existing building are not material changes as the building is not becoming more unsatisfactory in relation to the

7. Temporary works and Buildability

Temporary works are required to form the new opening at ground floor, this will likely involve propping from basement to level 1.

Temporary works design and method statements shall be reviewed by HTS to ensure any temporary works installed shall suitably protect the existing structure.

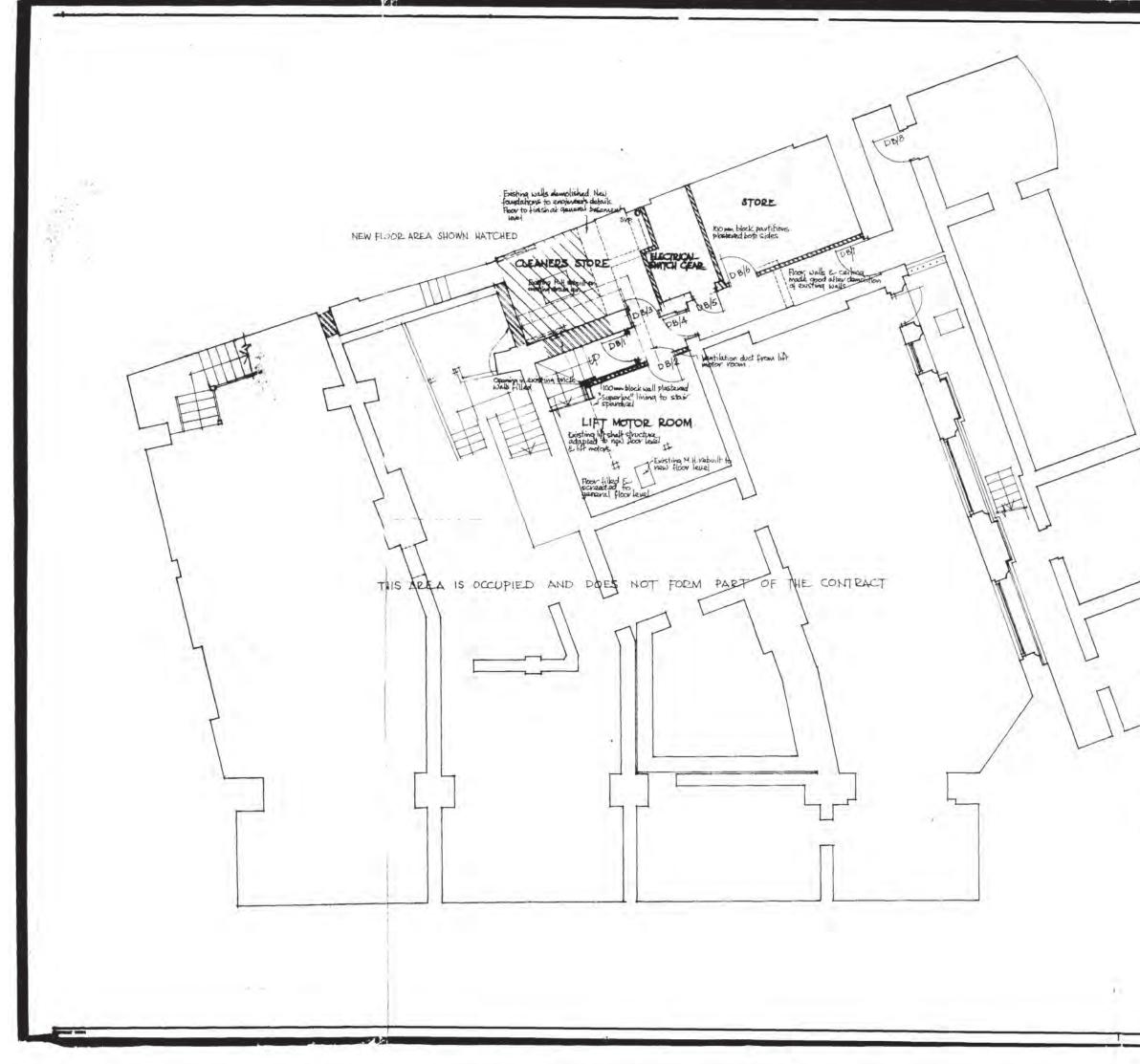
8. Health and Safety

In line with CDM Requirements all potential risks relating to the structural works, outside of those which should normally be identified by a competent contractor, will be highlighted on our drawings. A list of these risks will also be circulated to the design team and updated as new ones are identified.

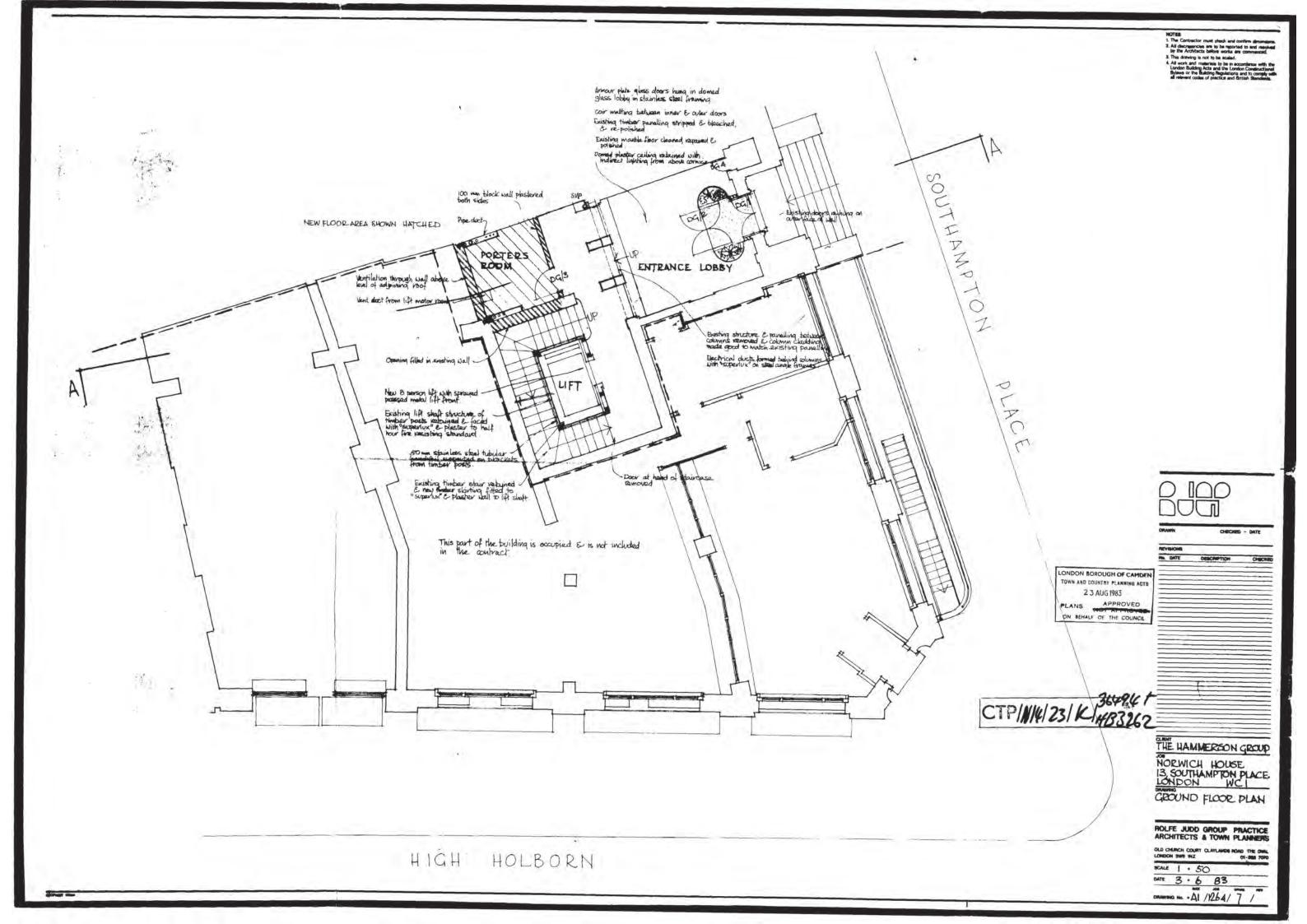
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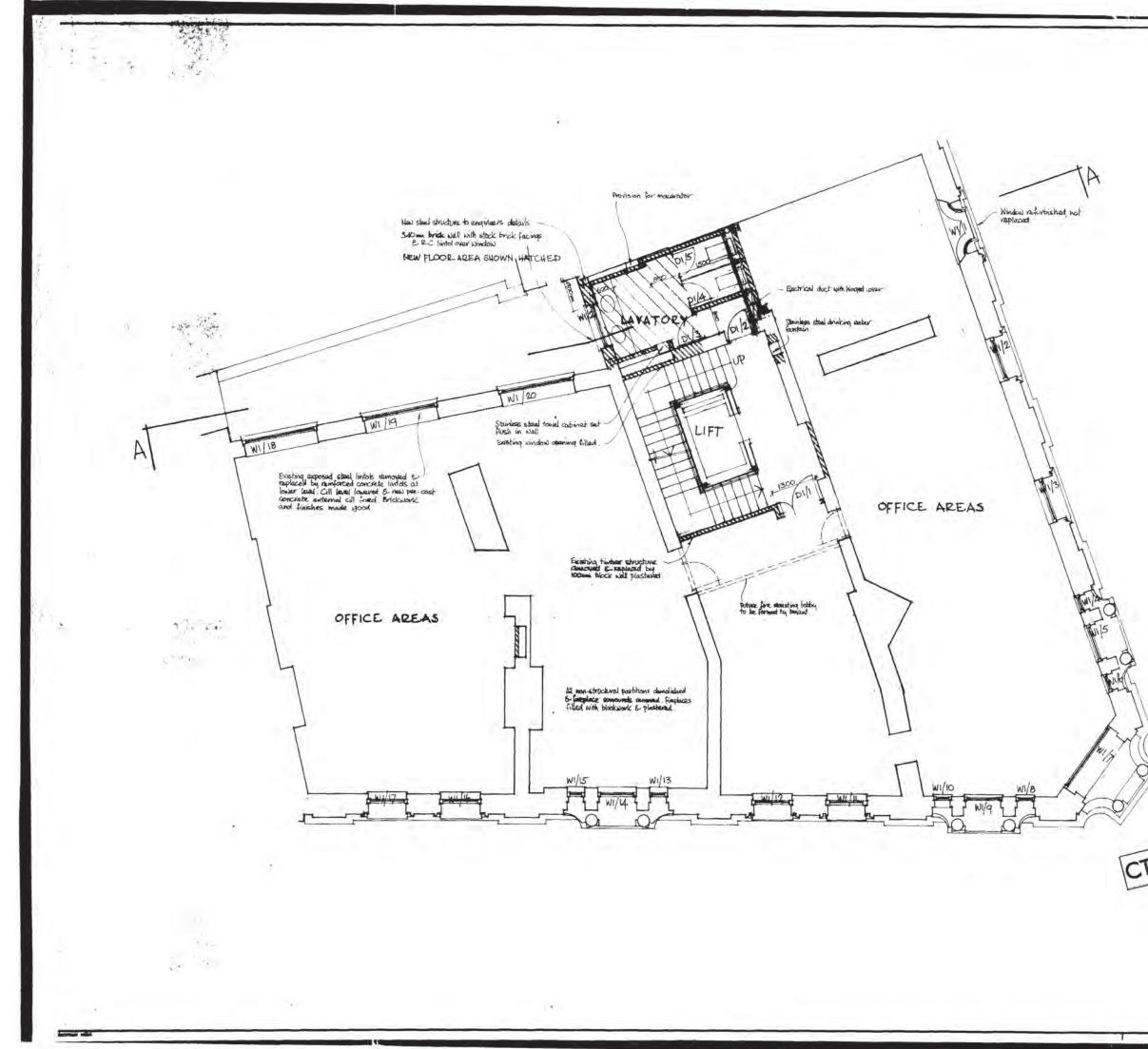


Appendix A Archive Drawings



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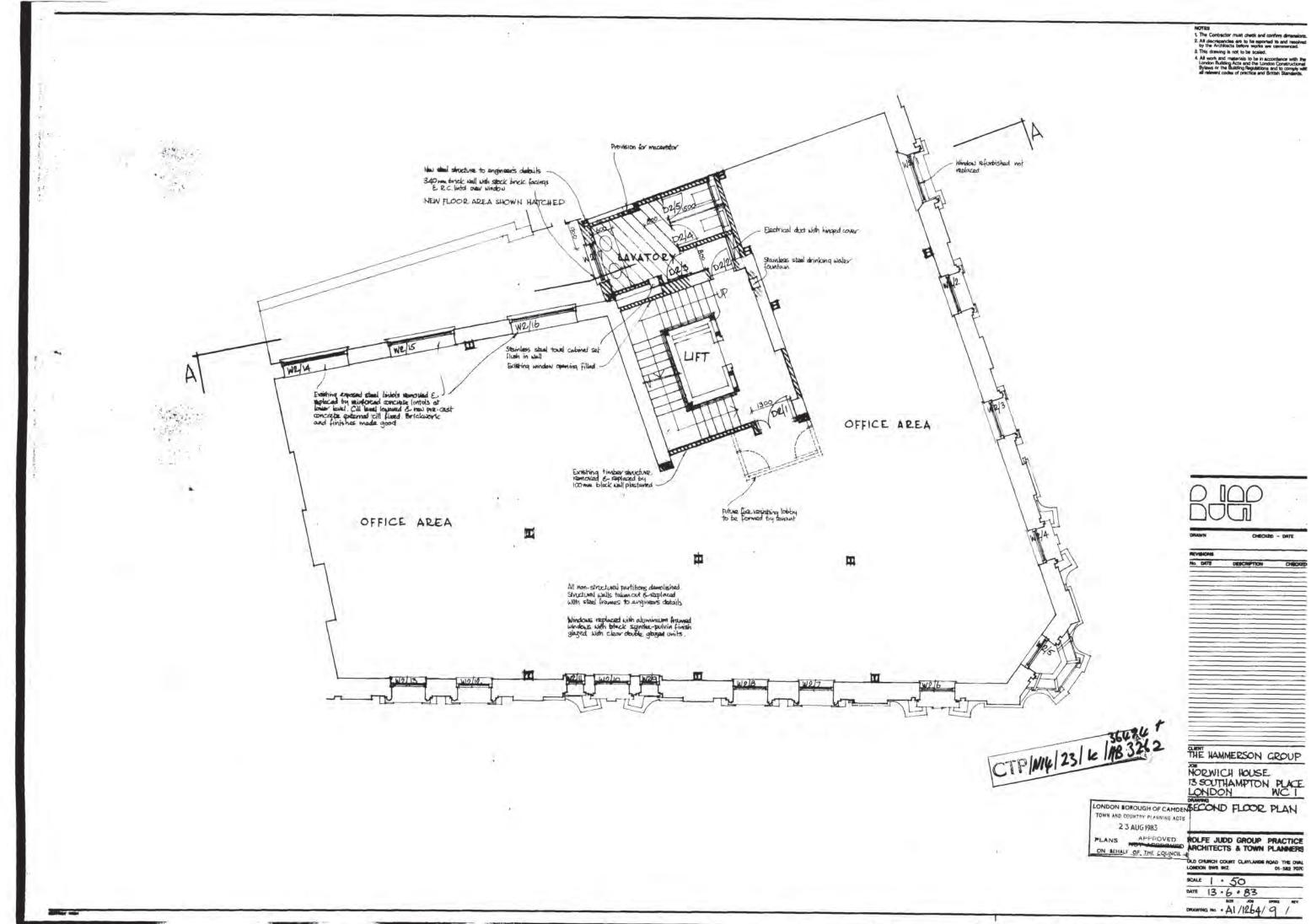
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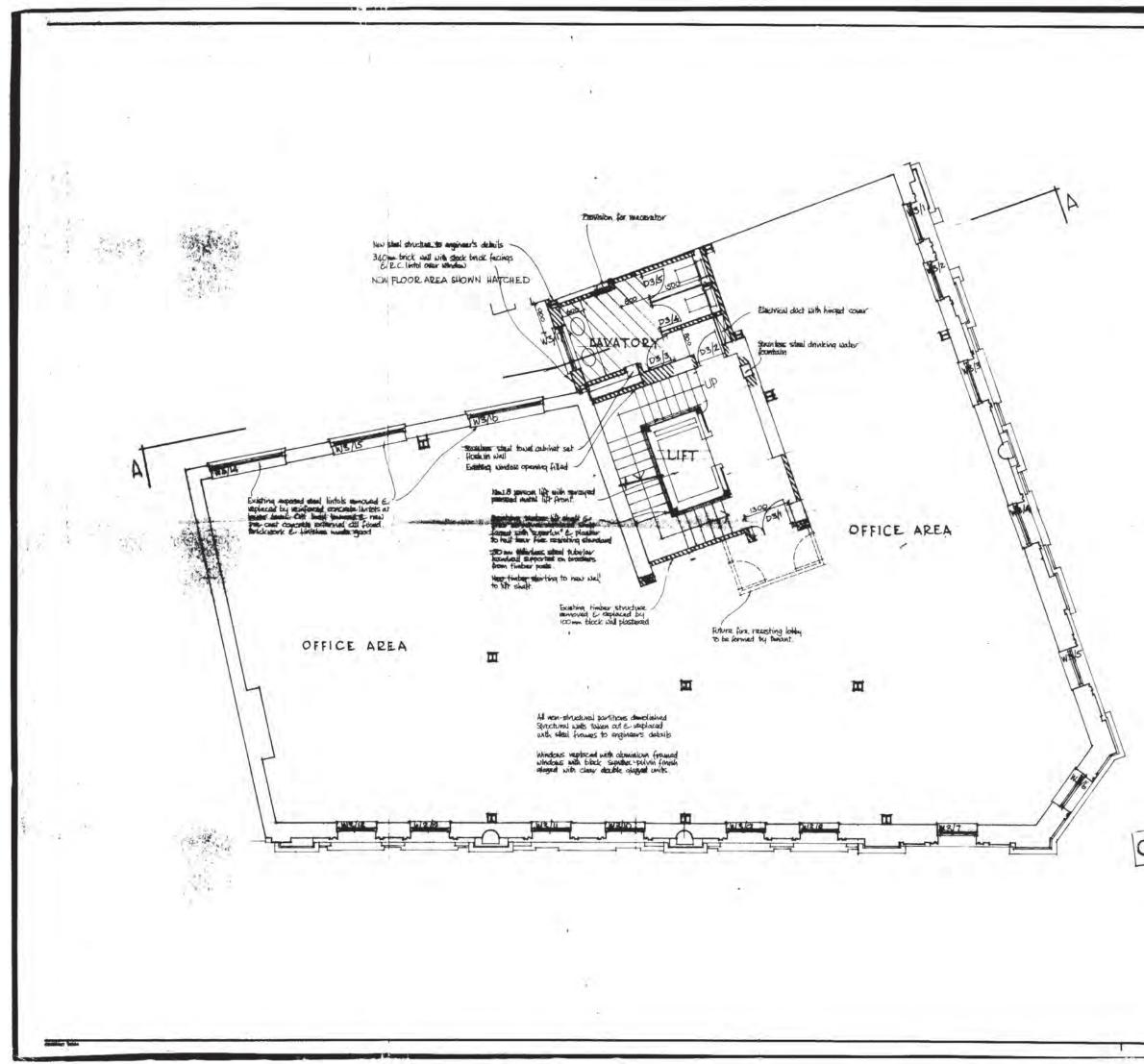
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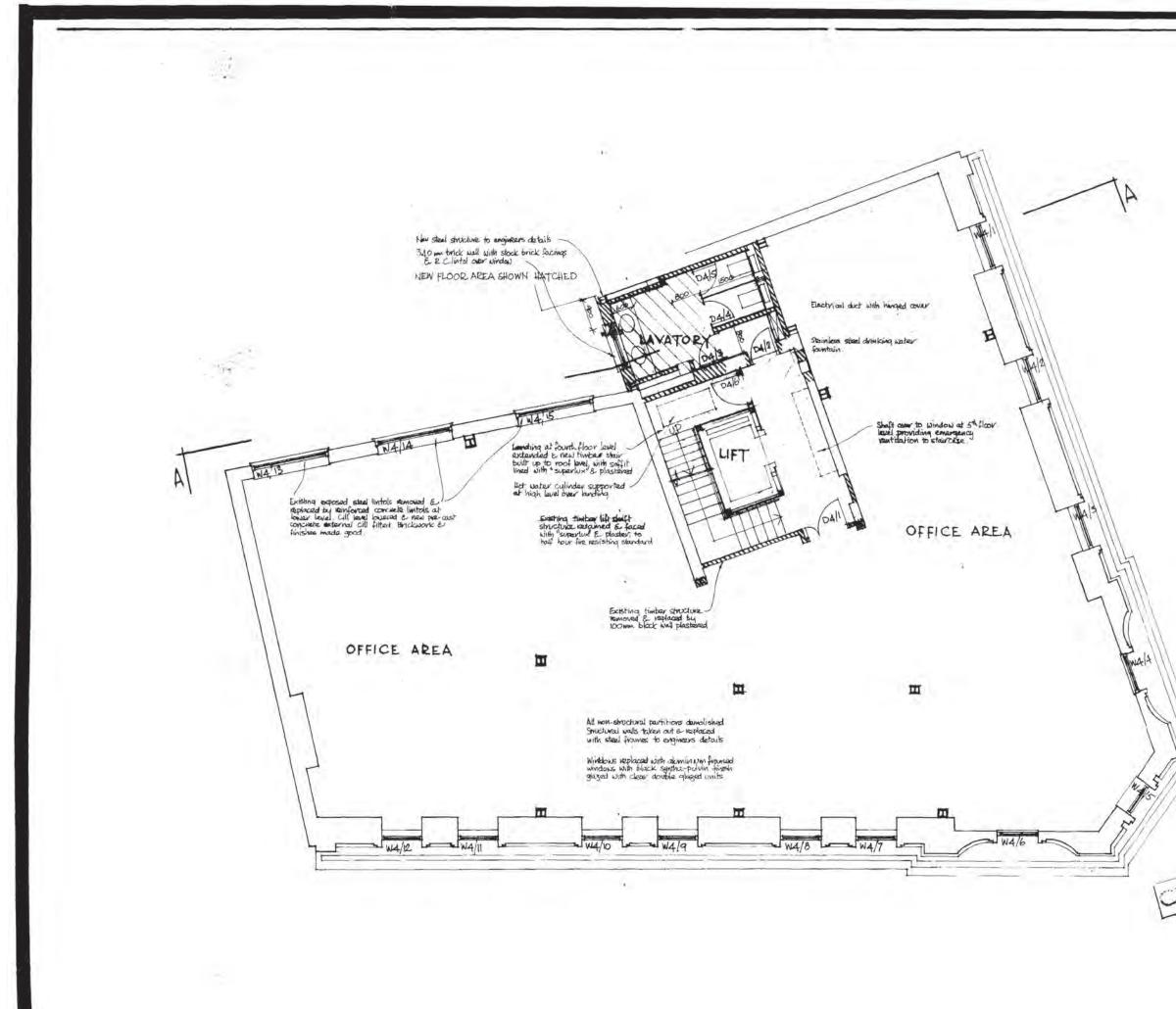
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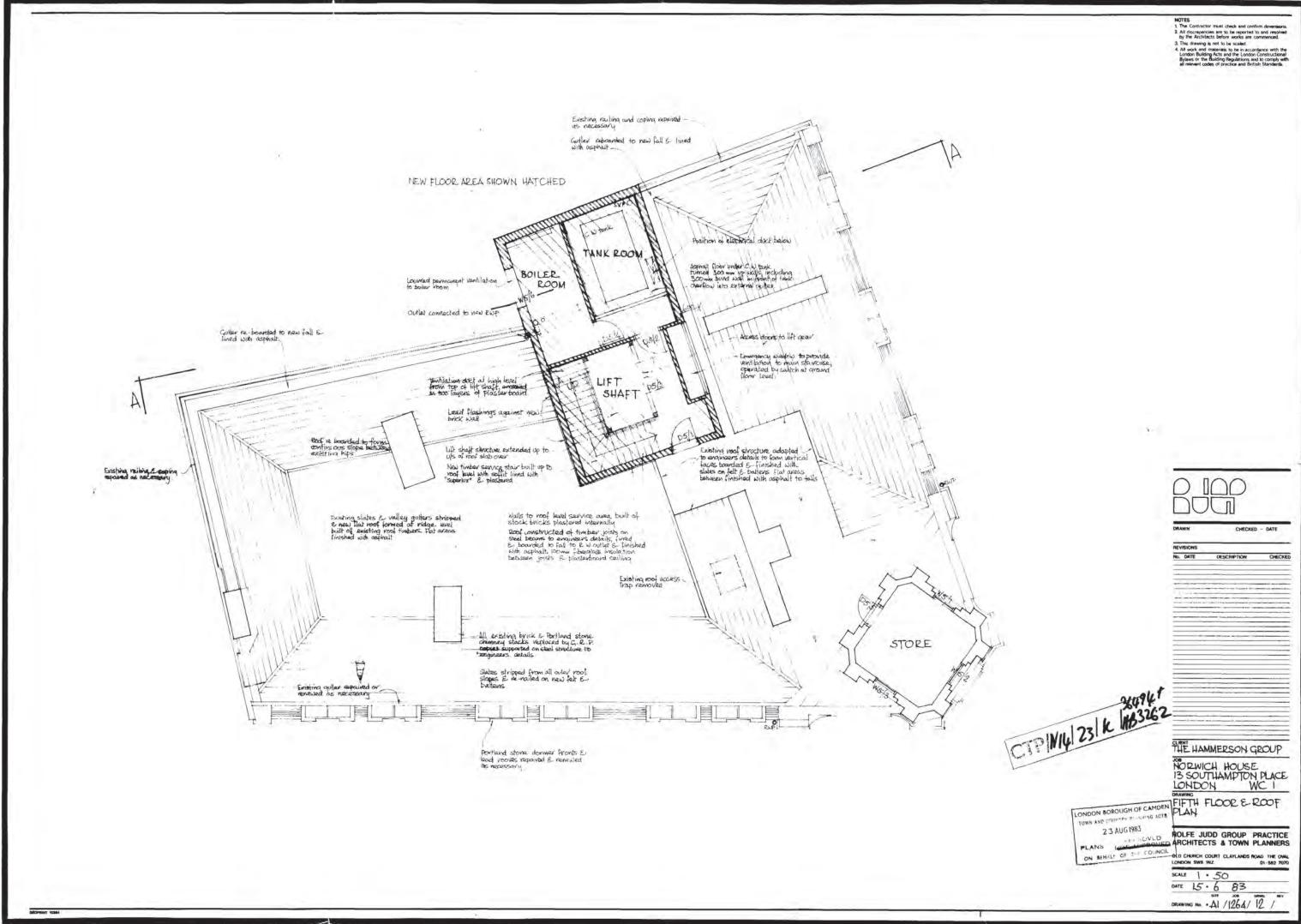
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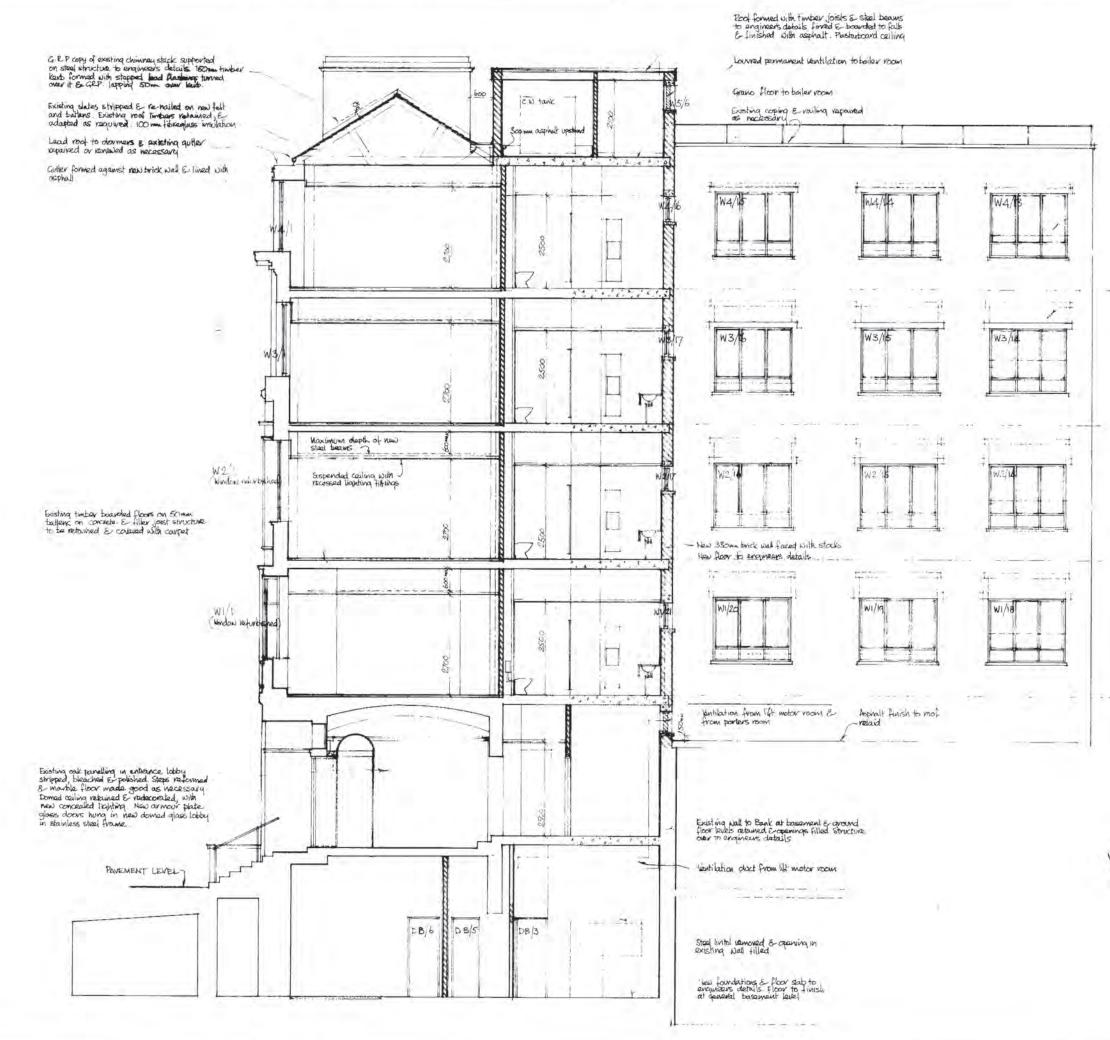
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- Stock brick wall to service area. FOURTH FLOOR LEVEL THIRD FLOOR LEVEL П CHECKED -DATE SECOND FLOOR LEVEL REVISIONS CHECKED No DATE DESCRIPTION LONDON BOROUGH OF CAMDEN TOWN AND COUNTRY OF ANNUAL ACTS 2 3 AUG 1983 PLANS NET OVED FIRST FLOOR LEVEL CTF My 23 K HB3262 THE HAMMERSON GROUP NORWICH HOUSE NOEWICH HOUSE 13. SOUTHAMPTON PLACE LONDON WCI ELEVATION TO SOUTHAMPTON PLACE ROLFE JUDD GROUP PRACTICE ARCHITECTS & TOWN PLANNERS OLD CHURCH COURT CLAVLANDS ROAD THE OVAL LONDON SWB INZ 01 582 7070 SCALE 1 • 50 DATE 20 • 6 • 83 5126 00 000 NEV DRAWING NU AI 1264/ 15 /



Appendix B Historic Maps







Published 1953



Published 1983 - 1990



Published 1896

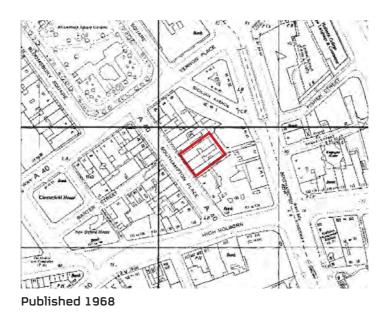


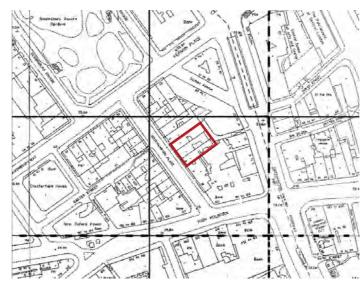
Published 1958 - 1969



Published 1991

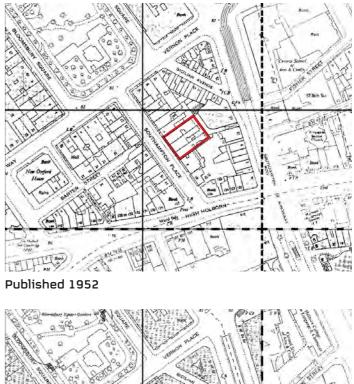
KAJT Published 1916

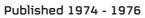




Published 1992 - 1995







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