

STRUCTURAL STATEMENT

**7 UPPER ST MARTIN'S LANE
LONDON
WC2H 9DL**

FOR

**ANGLE PROPERTY (ST MARTINS) LTD &
TELENOMICS LTD**

Project No. P1986

**Version 1.3 IH
Issued for Planning**

September 2011

1.00 INTRODUCTION

- 1.01 Michael Alexander Consulting Engineers have been appointed by Angle Properties (St Martins) Ltd and Telenomics Ltd to prepare a structural statement to accompany the Planning Application for alterations to 7 Upper St Martin's Lane, London WC2H 9DL. This Report was prepared by Isaac Hudson CEng MStructE.
- 1.02 7 Upper St Martin's Lane is a seven-storey building including a single level storey of basement. The building currently provides office accommodation at all floors. The proposal is to convert the upper five storeys of the building to residential use and with a retail use for the ground floor and basement.
- 1.03 This report should be read in conjunction with Michael Alexander Consulting Engineers 'Pre-Acquisition Structural Survey Report' - Issue 2.
- 1.04 This report has been based on the followings drawings and documents by MSMR Architects:
- | | |
|---------------------------|--|
| Existing Plans | 11024/009, 010, 011, 012, 013, 014, 015 |
| Demolition Plans | 11024/019, 020A, 021, 022, 023, 024, 025 |
| Existing Sections | 11024/040 & 041 |
| Demolition Sections | 11024/050 & 051 |
| Proposed Plans | 11024/109C, 110C, 111A, 112A, 113A, 114B, 115A |
| Proposed Sections | 11024/140 & 141A |
| Design & Access Statement | Planning Issue 22/09/11 |
- 1.05 This document provides a summary of the structural works, which will be required for the proposals and includes an Outline Method Statement for the construction of the Works, which will be developed in detail by the appointed Contractor.

2.00 EXISTING BUILDING & SITE

- 2.01 The building is on the corner of Tower Street & Upper St Martin's Lane. It shares a Party Wall to the south with Guild House, Upper St Martin's Lane, and to the North West by the Grade II listed St Martin's Theatre, West Street.
- 2.02 For details of the history of the building refer MSMR Architect's Design and Access Statement.
- 2.03 The building was originally two separate properties, which have been subsequently combined, with openings made through the internal dividing wall.

- 2.04 The building appears to be generally to be of traditional construction, with timber floors and solid load-bearing masonry walls.
- 2.05 The building has been extended previously, with sections of new brickwork evident to the rear elevation and a new roof over; it is evident that the two mansarded upper floors (fourth and fifth floors) are not original. There is also a steel framed extension to the rear with toilets at each level and projecting plant platforms. The planning history suggests that the extensions were granted planning permission in 1990-91.
- 2.06 It is understood that local ground conditions are likely to be the River Terrace Deposits (i.e. sands and gravels). The existing foundations are therefore assumed to be stepped brick strip foundations founded on the underlying subsoil.
- 2.07 A number of defects were identified in the existing building. These are outlined in detail in Michael Alexander Consulting Engineer's report 'Pre-Acquisition Structural Survey Report' Issue 2.

In summary, these included: -

1. Two damp areas within the basement
2. Rotten window frames, particularly at first, second and third floors
3. A leaning and cracked parapet wall at fourth floor
4. Water ingress under a small flat roof above the fifth floor
5. Ponding on the flat roof at first floor level
6. Cracking to the rear wall adjacent to the main staircase at all of the upper levels
7. Possible sagging of a beam over part of the shop front
8. Cracking to spandrel panels within the front elevation.

3.00 STRUCTURAL REVIEW OF PROPOSALS

The effects of the proposals on the structure are indicated on the plans, included in Appendix A.

3.01 Lower Ground/Ground Floor within proposed Retail Area

The works at lower ground and ground floor include the removal of non-load bearing internal partitions to open up the floors for retail use. In addition to this a number of structural alterations will be required.

- 3.01.1 It is proposed to remove internal masonry walls to the rear of the building, at both lower ground and ground floor level. Steel beams will be installed to support the existing joists; this will be subject to confirmation by opening up works.
- 3.01.2 It is proposed to remove sections of the existing wall at both lower ground floor and ground floor, under the line of the rear elevation over. New steel frames will be installed to support the walls and floors above and to redistribute the loads to the existing foundations.

- 3.01.3 A new retail stair is to be installed, as part of the retail fit out, between basement and ground floor. It is assumed that a knock-out panel will be formed in the ground floor structure to accommodate the future installation of a straight flight of stairs.
- 3.01.3 At the rear of the building the secondary staircase is to be demolished; the stair well infilled with a timber floor.
- 3.01.4 It is proposed to enlarge the opening in the existing party wall at ground floor level. A steel frame will be installed to distribute the loads to the lower ground floor walls under. The adjoining section of floor will be infilled, where the wall has been removed.
- 3.01.5 The roof of the existing two storey extension to the rear of the building is to be reconstructed in timber with reconfigured rooflights.

3.02 Residential Floors First, Second and Third Floors

The first, second and third floors are to be converted from office to residential use. New partition walls will be in lightweight construction to ensure that the overall loading on the floors will not be increased.

- 3.02.1 Steel frames will be installed where the opening in the party wall is to be widened. The adjoining section of floor will be infilled where the wall has been removed.
- 3.02.2 The wall between the rear staircase and the toilet extension is to be removed at each level. Steel beams will be installed along the line of the former wall, with new floors installed adjacent.
- 3.02.3 The main stair shall be altered at all levels and access to the floors will be at the former half landing locations. New flights and landings will be constructed in steelwork with concrete-filled trays. The new flights should be tied to the rear elevation wall to maintain, and improve, the stability of the wall.
- 3.02.4 The rear staircase is also infilled at the upper levels. It is proposed to alter the fenestration to suit the revised floor levels adjacent to the rear elevation, so it assumed that this elevation will need to be reconstructed.
- 3.02.5 An external area for plant adjacent to the rear elevation is proposed at first, second, third and fourth floors. At first floor this will be over the existing rear extension, so the roof in this location will need to be strengthened to accommodate the additional load. At second, third and fourth floors the plant platform will be constructed in steel between the rear elevation and a new steel beam running along the external edge and supported off the adjacent walls.

3.03 Penthouse Duplex Apartment

- 3.03.1 The penthouse apartment shall be constructed within the two-storey 1990s mansarded extension. Since the upper floors are additions to the original building, their structural configuration is not known, and will need to be confirmed following strip out works. The partition walls, to be demolished, will be checked to ensure that they do not conceal structure. New partition walls shall be of lightweight construction, to avoid the need to strengthen the existing floors.
- 3.03.2 There is an existing column at fourth floor, above the party wall line, which shall be removed. A new column will be required in its place, offset in position along the line of the former party wall, to redistribute the loads.
- 3.03.3 It is proposed to create a door access to the roof terrace at fifth floor level. This roof is due to be reconstructed as per the floors below, and will be designed for appropriate imposed loads. Balustrading will also be provided around the perimeter of the roof terrace.

3.04 Other Repairs

- 3.04.1 Many of the defects, identified in our Pre-Acquisition Report (and summarised in 2.07 above) will be addressed during the works. Reconstruction of the main staircase and reconstruction of parts of the rear elevation will enable defects in these areas to be rectified.
- 3.04.2 It is proposed to carry out the repairs to the front facade, particularly in respect of the leaning and cracked parapet at fourth floor and cracking to brickwork at lower levels.

4.00 CONSTRUCTION METHOD STATEMENT

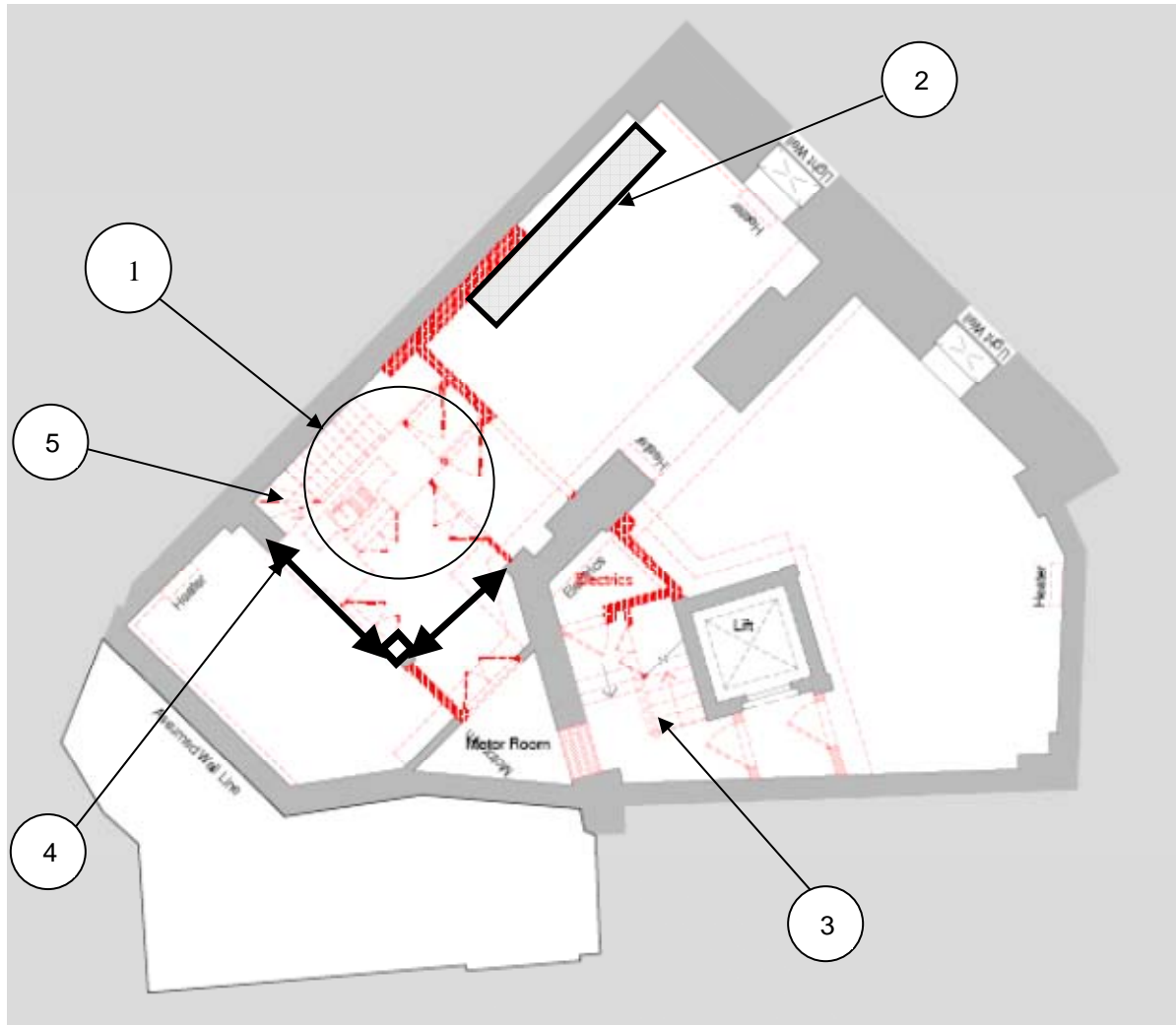
- 4.01 The following provides an outline Method Statement for the structural alterations and repairs. This will be developed and finalised in conjunction with the appointed Contractor.
- 4.02 Due to the nature and extent of the works the property will be vacated prior to the works commencing.
- 4.03 Before the main construction works commence, intrusive investigations will be carried out to confirm the existing floor spans and the location of existing steel beams. The detailed structural design will be developed to reflect the findings of the exploratory works.
- 4.04 The works will be sequenced to minimise the requirement for temporary works. Frames will be constructed on a floor by floor basis from the top down to avoid the need to unnecessarily support masonry on temporary works, where it is ultimately to be removed. The new frames, under the rear elevation, will be constructed when the rear elevation has been taken down to ground floor level and prior to its reconstruction.

- 4.05 Appropriate temporary works will be installed throughout to ensure the lateral stability of masonry walls, where adjacent floors and/or staircases are to be removed.
- 4.06 Repairs to the facades will generally be addressed after the remainder of structural works are complete. The parapet at fourth floor level, will be repaired at an early stage of the works.

5.00 SUMMARY AND CONCLUSIONS

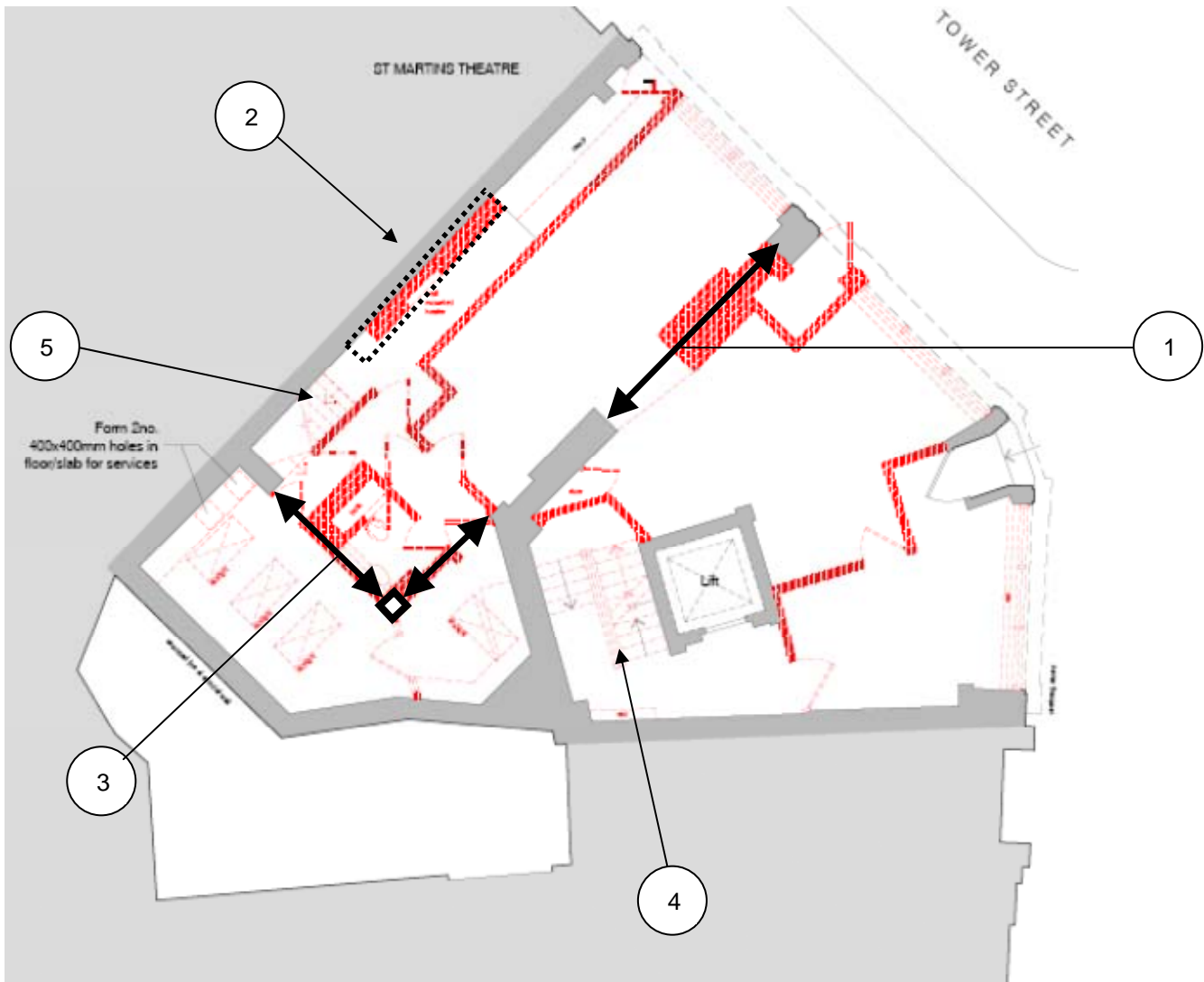
- 5.01 The existing building is generally of robust and conventional construction. The proposed alterations to the existing building have been reviewed in detail and are structurally feasible.
- 5.02 Intrusive investigations will be carried out to confirm the assumptions in respect of the existing building structure. The detailed design will be developed, incorporating the findings of the investigations.
- 5.03 The structural integrity of the building will be maintained during refurbishment with detailed sequencing of the works and provision of appropriate temporary works. Where part of the existing “internal” party wall is to be removed, the new steel frames, with rigid connections, will maintain the wall stiffness and structural stability of the building.
- 5.04 The existing structural defects, identified in the Michael Alexander ‘Pre Acquisition Report’, will be addressed.

APPENDIX A
ANNOTATED PROPOSAL DRAWINGS



BASEMENT LEVEL PROPOSALS

| | | | |
|---|--|---|--|
| 1 | Removal of internal masonry walls will result in requirement for steel beams | 4 | New Beams to support rear elevations over, supported on new column |
| 2 | New stair will require trimming steels at ground floor over | 5 | Existing staircase infilled |
| 3 | Staircase altered | | |



GROUND FLOOR PROPOSALS

| | | | |
|---|--|---|-----------------------------|
| 1 | Steel frame required for widened party wall opening | 4 | Staircase reconstructed |
| 2 | Existing boxing to corridor to be removed – check for concealed services/structure | 5 | Existing staircase infilled |
| 3 | New beams to support rear elevations over, supported on new column | | |



FIRST FLOOR PROPOSALS

| | | | |
|---|--|---|--|
| 1 | Steel frame required for widened party wall opening | 4 | Staircase re-constructed to switch half landing location |
| 2 | Existing staircase infilled and rear facade reconstructed | 5 | Roof reconstructed in timber with new roof lights |
| 3 | Steel structure required to support floors on line of former elevation | 6 | Roof strengthened to accommodate plant |



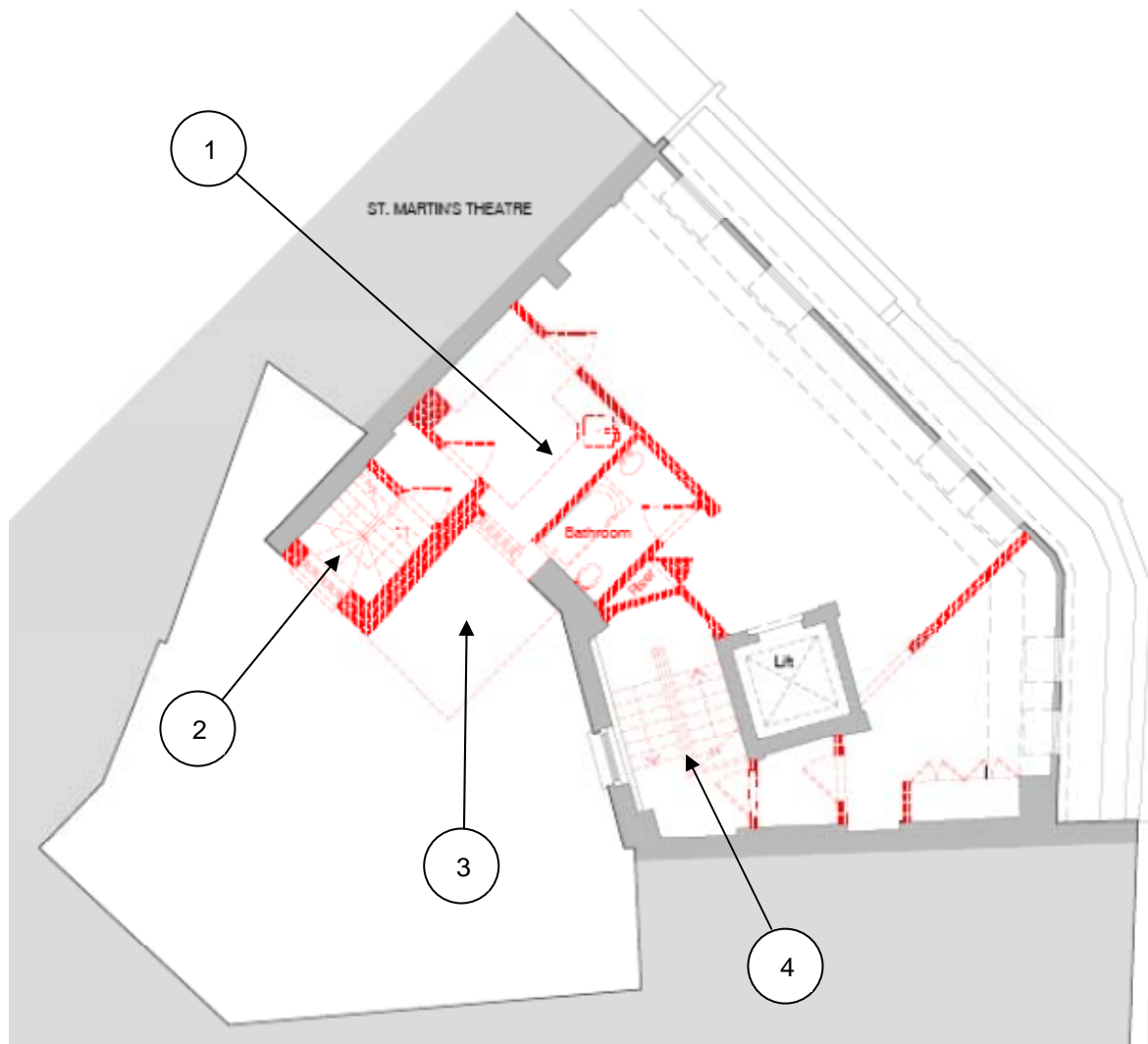
SECOND FLOOR PROPOSALS
(THIRD FLOOR SIMILAR)

| | | | |
|---|---|---|--|
| 1 | Steel frame required for widened party wall opening | 3 | Steel structure required to support floors on line of former elevation. Adjacent floor will be reconstructed |
| 2 | Existing staircase infilled and rear facade reconstructed | 4 | Staircase re-constructed to switch half landing location |
| 5 | New plant support platform in steelwork | | |



FOURTH FLOOR PROPOSALS

| | | | |
|---|---|---|--|
| 1 | Existing column removed - new column to support beam over | 4 | Steel structure required to support floors on line of former elevation. Adjacent floor will be reconstructed |
| 2 | Existing partition walls demolished | 5 | Staircase re-constructed to switch half landing location. |
| 3 | Existing staircase infilled and rear facade reconstructed | | |



FIFTH FLOOR PROPOSALS

| | | | |
|---|---|---|---|
| 1 | Existing partitions to be demolished. To be checked whether there are any concealed structural columns. | 3 | Terrace to be constructed to accommodate appropriate imposed loads for access |
| 2 | Existing staircase infilled and rear facade reconstructed | 4 | Staircase re-constructed to switch half landing location. |