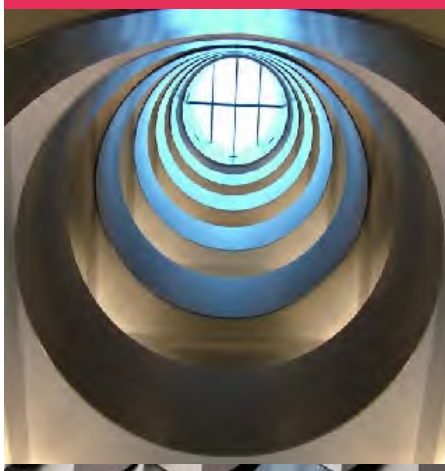








London Road Fire Station

Listed Building
Structural Report

Curtins Ref: 060270

Revision: 04

Issue Date: 27 November 2019

Client Name: ALLIED LONDON FIRE STATION DEVELOPMENTS LIMITED

Client Address: No.1 Spinningfields, Level 12, 1 Hardman Square, Manchester M3 3EB

Site Address: London Road, Manchester

Curtins
Merchant Exchange,
17-19 Whitworth Street West
Manchester, M1 5WG.
Tel: 0161 236 2394
www.curtins.com

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Author	Signature	Date
		26/11/19

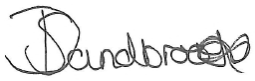
Reviewed	Signature	Date
David Sandbrook MEng (Hons) MIStructE MICE Associate		26/11/19

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1.0 Introduction

London Road Fire Station is a Grade II* listed building in Manchester. The building was originally designed by Woodhouse Willoughby & Langham in the Edwardian Baroque style as a purpose-built state of the art facility and was completed 1906. Original design plans for the building date back to 1904. The building consists of 4 storeys in total, including a basement level.

In addition to a fire station, the building housed a police station, ambulance station, bank, coroner's court and a gas-meter testing station. The fire station operated for 80 years housing the firemen, their families and appliances. The fire station closed in 1986 and has been largely unused since despite several redevelopment proposals. The building was placed on English Heritage's Buildings at Risk Register in 2001.

The building sits on a site surrounded by London Road, Fairfield Street, Minshull Street South and Whitworth Street and is triangular on plan, with a large central courtyard.

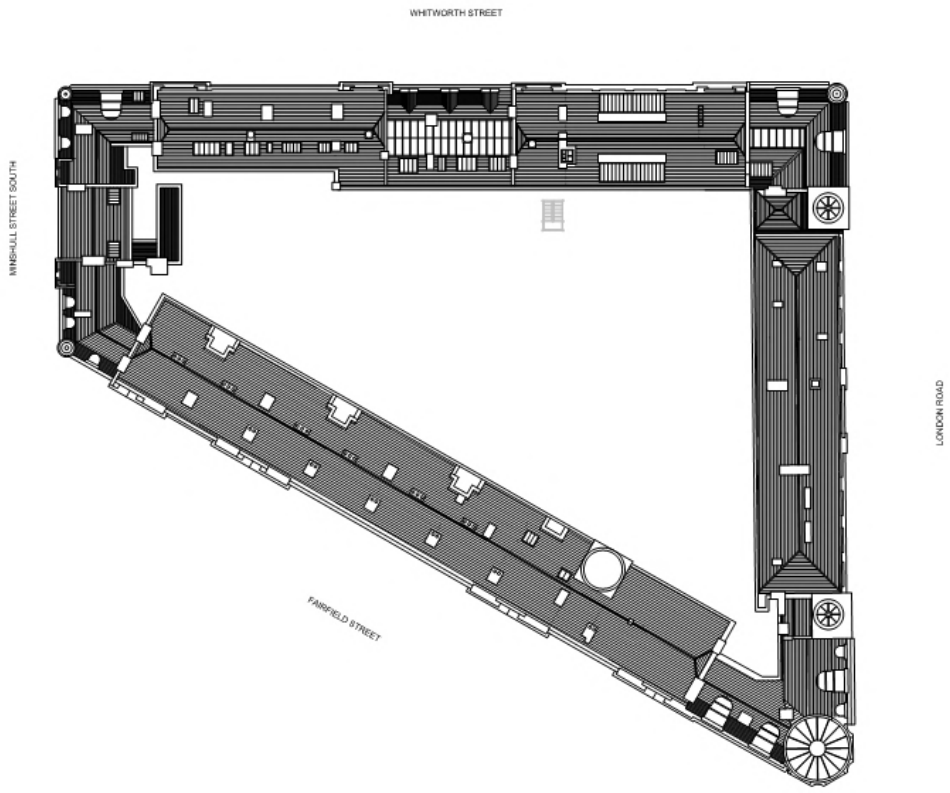


Figure 1.1 – Roof plan of existing Fire Station Building

It is proposed to bring this building back in to use through remedial and refurbishment works as well as new extensions. These works will consist of

- repairs carried out to the external envelope and structure to create shell space for letting operators
- alterations to the original structure to make the internal spaces more usable
- construction of new above-ground extensions

This report sets out the structural implications on the existing building fabric, with respect to attaining listed building consent for the proposed works.

Due to the constraints provided by the building's age and listed status, we have explored structural options which will have the least impact on the existing structure, whilst still providing as much useable space as possible. The proposed structural works are based on assessments made during visual surveys and our assumptions based on experience with structures of similar age and construction.

2.0 Structural Repairs and Alterations

This section outlines the structural repairs that may be required to the existing building. Please read these in conjunction with the appended Structural GA's and Typical Repair Detail drawings. Reference should also be made to the architect's drawings.

Structural investigations have been undertaken historically and repairs to the envelope are currently being undertaken on site and as such the extent and location of structural repairs will be need to confirmed following completion of an updated survey following the repair works being completed.

The following repairs may be required to ensure that the building is safe and suitable for use during the proposed design life of the building. Given the Grade II* listed status of the building, the repairs have been designed and detailed so that they have as little impact on the existing structure as possible.

2.1 Timber Repairs

The roof is currently undergoing some repair works however this will not address all the internal structural repairs required to the timber structure that supports it. He below gives a good indication of the type of repairs that may be required elsewhere in the roof following the initial repair works. These are detailed below.

It should be noted that new timber sections, timber treatment and timber connections are to be designed by a specialist. In addition, any temporary works required to prop the existing structure are to be designed by a specialist.

2.1.1 T01 - Roof Purlin Repair

Where existing roof purlins are showing signs of deterioration, repairs will be required. Temporary propping should be provided as necessary above the area of degradation. This allows the lower (degraded) portion of timber to be removed and replaced with new timber. The extent of removal is to be determined by a timber specialist. The timber can then be replaced.

A new channel section is to be fixed to the existing treated timber section. Fixings should then be made through the channel, existing treated timber, replaced timber to a channel on the opposite face. This connection detail is to be confirmed by a specialist.

Following completion of remedial works, the temporary props can be removed.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-600 (Timber Details Sheet 1) in Appendix A for further details.

2.1.2 T02 - Roof Truss Repair

Where truss ends need to be repaired due to degradation of the existing timber, temporary props should be positioned away from the degraded section of timber allowing the degraded timber to be carefully removed and replaced with new timber – the extent of removal is to be advised by a timber specialist.

The masonry local to the truss support should be carefully removed as required and lined with new damp proof membrane (to Architect's details) to prevent moisture ingress to the truss ends. The new timber can be connected to the existing together with any steel strengthening that may be required. Following completion of the remedial works, temporary props can be removed.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-600 (Timber Details Sheet 1) in Appendix A for further details.

2.1.3 T03 - Mansard Rafter Repair

Areas of the mansard roof show visible signs of degradation with some temporary props already in place on site (corner of Whitworth Street and Minshull Street) and remedial works are required to repair / replace the degraded timber.

Temporary props should be provided above the area of degraded timber allowing the careful removal of lower degraded portion of timber. The extent of removal is to be advised by a timber repair specialist. The new and existing timber is to be treated as required and advised by a specialist.

New timber is to be connected to the existing timber with the connection being designed by a specialist. Finally, the new timber can be connected to the floor, again connection details to be confirmed. Once the remedial works are complete, the temporary props can be removed.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-600 (Timber Details Sheet 1) in Appendix A for further details.

2.2 Masonry Repairs / Alterations

There are several masonry defects throughout the building and typical repair details for each type of defect has been provided below.

There are areas of the elevations around the building that will require re-pointing. Existing mortar joints will need to be carefully raked out and suitable mortar reinstated.

In addition to the areas of re-pointing, there are also isolated locations where vegetation has seeded in the open masonry joints and the vegetation is to be removed. Local repointing will be required following removal of the vegetation. Most of this work will be undertaken during the works being done on site currently however some will still be required as part of the main scheme.

2.2.1 M01 - Corner Restraint Strap

There are instances around the building where internal partition walls perpendicular to the external wall are not tied or keyed in and the joint is opening up. In order for the internal wall to provide restraint to the external wall and likewise for the external wall to provide restraint to the internal wall new restraint straps should be installed.

Existing wall finishes should be removed locally, and any broken masonry units should be removed and reset. Holes for should then be marked and drilled carefully in the centre of masonry units. The restraint strap can then be installed.

Once the repair details are complete, the wall finishes can be reinstated in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-606 (Masonry Details Sheet 1) in Appendix A for further details.

2.2.2 M02 - Masonry Crack Repair

A number of walls show signs of diagonal cracking within masonry walls that either follow the mortar lines, or in some instances go through masonry units.

Existing wall finishes should be removed locally, and any broken masonry units should be removed and reset. Rake out the masonry joints along the crack and slate pack prior to grouting. Install stainless steel bars in bed joints and allow grout to cure.

Once the repair details are complete, the wall finishes can be reinstated in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-606 (Masonry Details Sheet 1) in Appendix A for further details.

2.2.3 M03 - Stitch Repair

There are instances around the building where internal partition walls perpendicular to the external wall are not tied or keyed in and the joint is opening up. To prevent any further movement, the external wall should be 'stitched' to the perpendicular internal wall.

Any broken masonry units should be removed and reset. Holes can then be drilled at 45° to vertical at 900mm vertical centres. The holes should be formed through the perp joint and not through the masonry unit. The hole can then be filled with grout and reinforcing anchor installed. Any damage should be made good.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-606 (Masonry Details Sheet 1) in Appendix A for further details.

2.2.4 M04 - New Concrete Lintel

Various new openings are being formed through existing masonry walls and many existing openings are being widened. Each opening will need to be reviewed on a case-by-case basis and lintel requirements will vary depending on size of proposed opening, location, loading from above and any adjacent openings.

The acceptability of all new openings is to be confirmed by the Engineer. The requirement for pad stones, and their sizes are to be confirmed for each proposed opening. Reference should be made to drawing 060270-CUR-XX-XX-DR-S-28-606 (Masonry Details- Sheet 1) in Appendix A for the typical detail and suggested method statement.

Refer to architectural demolition drawings for positions of new and modified wall openings.

2.2.5 M05 - New Steel Lintel

Various new openings are being formed through existing masonry walls and many existing openings are being widened. Each opening will need to be reviewed on a case-by-case basis and lintel requirements will vary depending on size of proposed opening, location, loading from above and any adjacent openings. In some locations sections of walls are being removed and a similar approach to forming a new opening will be used.

The acceptability of all new openings is to be confirmed by the Engineer. The requirement for pad stones, and their sizes are to be confirmed for each proposed opening. Reference should be made to drawing 060270-CUR-XX-XX-DR-S-28-606 (Masonry Details- Sheet 1) in Appendix A for the typical detail and suggested method statement.

Refer to architectural demolition drawings for positions of new and modified wall openings.

2.3 Steelwork Repairs / Alterations

Paint testing has been carried out to a number of beams and columns throughout the building which has shown that some layers of paint are lead based. Fire protection will be required to the existing structure to ensure the building complies with modern standards and codes of practice. If the steelwork is to remain exposed, then the existing paint will need to removed and new paint protection applied to the existing steelwork. Alternatively, if the existing paint is to remain due to historical significance then the fire protection would need to be provided in alternative ways – potentially through providing fire board encasement.

2.3.1 S01 - Walkway Propping

The existing walkways are cantilevered from the existing load bearing masonry walls with the ends of the cantilever built in to the walls.

Over time, the steel cantilever beams have deteriorated and are no longer safe. To minimise the impact on the existing building, it is proposed that permanent props are put in place to support the outer edge of the walkways.

To avoid intrusive repair details at the support of the existing cantilever beams it is proposed to fix new steel brackets fixed to the existing masonry.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-608 (Steelwork Details Sheet 1) in Appendix A for further details.

2.3.2 S02 - New / Existing Interfaces

Details have been provided which indicate the relationship between the proposed hotel extension and the existing building adjacent to London Road. Details S02a and S02b on drawing 060270-CUR-XX-XX-DR-S-28-608 (Steelwork Details Sheet 1) show the proposed interface details at the level of the existing roofs over the Coroner's Court and the old Gas Meter Testing Room, respectively. The locations of these details are shown on 060270-CUR-00-XX-DR-S-21-703 (Sections Sheet 1).

Where the existing walkway structures are being removed, the condition and location of the removed structural elements should be carefully noted as they are removed as they will give a good indication of the condition of the remainder of the walkways and may inform any remedial work that may be required.

The hotel extension has been designed to have minimal impact on the existing structure. However to achieve the required floor level above, the existing roof structure (currently forming an external walkway) will have to be removed. This level will be replaced by a concrete floor slab supported by the steelwork of the new extension structure. In neither case, however, will the existing structure carry more load than it does in its current form.

2.3.3 S03 – New Infill Floor Detail

There are various areas around the building that require new infill sections of floor to be installed – either as new sections of floor to improve circulation routes or replacement floors where existing stairs or lifts have been removed.

Timber infill floors will be considered on a case-by-case basis once intrusive investigations have been completed allowing the existing structural arrangement to be determined. Where loadbearing walls are available to support the new floor structure, thin concrete slabs will be used. To minimise impact on the

existing structure and to limit intrusive works, steel angles are to be fixed to existing load bearing masonry walls using resin anchors. Reference should be made to drawing 060270-CUR-XX-XX-DR-S-28-609 (Steelwork Details sheet 2) in Appendix A for a suggest method statement.

Refer to architectural demolition drawings and General Arrangement drawings for extents of new infill floors.

2.3.4 S04 – New Hotel Structure Connecting to Existing

To minimise the impact on the existing external wall and to limit any additional load being applied to the existing structure, the hotel extension has been designed to be a standalone structure. However, to prevent differential deflection between the new and existing floors the existing structure provides support to the cantilever ends.

Brickwork should be removed locally to allow a pocket to be formed. A pad stone can then be placed within the pocket with mortar of sufficient strength and the beam then seated on the pad stone. Reference should be made to drawing 060270-CUR-XX-XX-DR-S-28-609 (Steelwork details Sheet 2) in Appendix A for further details.

The locations of Detail S04 are shown on 060270-CUR-00-XX-DR-S-21-703 (Sections Sheet 1).

2.3.5 S05 – New Hotel Structure Abutting Existing

To minimise the impact on the existing external wall and limit any additional load being applied to the existing structure the hotel extension has been designed to be a standalone structure. Where beams run parallel to the existing structure an isolation joint is to be provided between the new and existing structure. Reference should be made to drawing 060270-CUR-XX-XX-DR-S-28-609 (Steelwork Details Sheet 2) in Appendix A for further details.

The locations of Detail S04 are shown on 060270-CUR-00-XX-DR-S-21-703 (Sections Sheet 1).

2.4 Typical Underpinning Details

2.4.1 U02 - Underpinning to form New lift pits

It is proposed to form a new lift pits adjacent to the existing basement and this may require underpinning to adjacent foundations.

The ground should be excavated down to the existing basement level, where an adjacent basement is present. Where there is no adjacent basement present, the excavation should be taken down to the underside of existing foundation level.

Underpinning of the existing foundation would then be required to extend the existing foundation level to match the proposed founding level of adjacent lift pit. The lift pit can then be constructed. The

underpinning is to be carried out in a hit and miss sequence in maximum section widths of 750mm and maximum depths of 1000mm to minimise any risk of the settlement and any damage to the fabric of the existing building.

Following sufficient curing, the new pit and shaft can be constructed with an isolation joint between the new pad and existing footing.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-610 (Underpinning Details Sheet 1) in Appendix A for further details.

2.4.2 F01 - Filler Joist Investigation

It is proposed to only intrusively investigate filler joists that we suspect have deteriorated. These joists can be identified relatively easily as there are signs of damage to the existing finishes. Where there is no sign of any damage to the existing finishes there is no need to investigate further however, these locations should be inspected on a regular basis looking for any signs of deterioration.

To enable investigation of the bottom flange of the filler joists, temporary propping should be installed either side of the filler joist. Once the propping is in place, the concrete encasing the bottom flange of the filler joist can be carefully broken out using hand tools to allow further visual inspection.

If required, the exposed steel should be blast cleaned. Once cleaned the thickness of the web and flange can be measure and assessed to determine the total section loss. Following assessment, the filler joist can be repaired, strengthened or replaced as necessary in accordance with the Engineers details.

Following the remedial works, concrete can be reinstated using a suitable patching mortar and temporary propping can be removed after allowing sufficient time for the mortar to cure.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-604 (Floor Details Sheet 1) in Appendix A for further details.

2.4.3 F02 - Filler Joist Repair (Expose, Clean & Protect)

Following careful exposure, blast cleaning and assessment a suitable primer should be applied to the exposed filler joists which show minimal to no section loss and allowed to dry in accordance with the manufacturers details. A suitable bonding agent should then be applied to the steel and concrete.

Following the remedial works, concrete can be reinstated using a suitable patching mortar and temporary propping can be removed after allowing sufficient time for the mortar to cure.

Fire protection to the soffit of the slab is to be provided in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-604 (Floor Details Sheet 1) in Appendix A for further details.

2.4.4 F03 - Filler Joist Repair (Expose, Clean & Strengthen)

If section loss is deemed to be significant following careful exposure, blast cleaning and assessment a new steel plate shall be welded to the bottom flange of the existing filler joist. A suitable bonding agent should then be applied to the steel and concrete.

Following the remedial works, concrete can be reinstated using a suitable patching mortar and temporary propping can be removed after allowing sufficient time for the mortar to cure.

Fire protection to the soffit of the slab is to be provided in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-604 (Floor Details Sheet 1) in Appendix A for further details.

2.4.5 F04 - Filler Joist Replacement

If section loss is deemed to be significant following careful exposure, blast cleaning and assessment the existing filler joist. Concrete encasing the filler joist should be broken out carefully using hand tools and only breaking out as much as is necessary to remove the existing filler joist. The concrete above the filler joist should also be broken out.

Concrete should also be broken out carefully, locally around the existing primary / secondary beam supporting the filler joist in order to form a new connection. Once primary / secondary beam has been exposed and blast cleaned a new cleat can be welded to the beam enabling a replacement joist to be connected. The replacement joist should be introduced from below and bolted to the cleat plate. The new steel beam is to be provided with a suitable primer prior to installation.

Mortar pack between the bottom flange of the new beam and soffit of slab as necessary to ensure good bearing.

Following the remedial works, concrete can be reinstated using a suitable patching mortar and temporary propping can be removed after allowing sufficient time for the mortar to cure.

Fire protection to the soffit of the slab is to be provided in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-604 (Floor Details Sheet 1) in Appendix A for further details.

2.4.6 F05 & F06 - Filler Joist Floor Strengthening (New additional beams)

Filler joists should be repaired and remediated wherever possible. If section loss is greater than 25% for a number of adjacent joists then the introduction of a permanent prop is required.

Concrete should also be broken out carefully, locally around the existing primary beam in order to form a new connection. Once the primary beam has been exposed and blast cleaned a new cleat can be

welded to the beam enabling a permanent prop beam to be connected. A new padstone should be constructed in the existing masonry wall for the new beam to be seated on. The new steel beam is to be provided with a suitable primer prior to installation.

Mortar pack between the bottom flange of the new beam and soffit of slab as necessary to ensure good bearing.

Following the remedial works, concrete can be reinstated using a suitable patching mortar and temporary propping can be removed after allowing sufficient time for the mortar to cure.

Fire protection to the soffit of the slab is to be provided in accordance with the Architect's details.

Refer to drawing 060270-CUR-XX-XX-DR-S-28-605 (Floor Details Sheet 2) in Appendix A for further details.

3.0 Structural Proposals

This section outlines the structural proposals for the building, with a particular emphasis on the interface between the new and existing structure. Please read in conjunction with the appended Structural GA's and Typical Detail drawings.

3.1 Mezzanine to Old Gas Meter Testing Room

The old Gas Meter Testing Room is located adjacent to London Road and is a large internal double height space. Columns are located centrally which support large transfer beams that in turn support load bearing walls to the floor above. It is unclear if columns are located within the external perimeter walls or if the walls are of load bearing masonry construction. Intrusive investigation is required to confirm presence of columns.

To increase tenable area, it is proposed to form a new mezzanine structure within the old Gas Meter Testing Room. Refer to Zone 2 structural GA in Appendix B for more information:

- 060270-CUR-Z2-01-DR-S-20-202

New steel beams are required to support the lightweight mezzanine floor construction. The new structure has been designed to minimise the impact on the existing structure and as such, new beams have been designed to span between the existing steel columns and require connecting to the existing structure and the perimeter load bearing masonry walls as can be seen in Figure 3.1. Where the steel beams span to the load bearing masonry walls, masonry units will be removed to form pockets to allow a new pad stone to be installed and the beam to be seated on the padstone.

A loading takedown will be carried out together with intrusive investigations to determine the size and required bearing strata for of the existing foundations to see if the loading from the proposed mezzanine floor does not overstress the existing foundations. In addition to this, intrusive structural investigations are required to the existing columns to determine their load carrying capacity and as such the existing columns may require strengthening. Strengthening would be in the form of additional steel plates / PFC sections fixed to the existing section. Where new beams are supported by the existing masonry walls, a pocket will need to be formed within the masonry to enable a concrete padstone to be installed and beam to sit on the padstone.

A new platform lift is proposed to run from basement level up to the proposed mezzanine floor level. Being a platform lift, the foundation requirements should be minimal and not require a sunken lift pit.

3.2 Extension of existing Stair

An existing stair is located within the Police Station, adjacent to the old Ambulance Bay. The stair currently extends from basement level up to second floor level. To improve the circulation routes it is

proposed to extend the existing stair up to 3rd floor level. Refer to Zone 1 structural GA in Appendix B for more information:

- 060270-CUR-Z1-02-DR-S-20-103

Surveys on site suggest that the existing stair has previously extended up to 3rd floor but has been removed during the historical alterations of the building and the void at 3rd floor level has been infilled.

In order to extend the existing stair up to third floor level, the existing infill section of floor needs to be carefully removed, a new half landing beam installed and new staircase constructed. The new half landing beam will span parallel to Minshull Street and span between the existing load bearing masonry walls either side of the existing stair. The existing masonry will be locally removed to allow installation of a new pad stone for the new half landing steel beam to be seated on. The pad stone will be sized appropriately to avoid overstressing the existing wall locally.

Although the form of construction of the original stair is not known, the proposals minimise the overall dead weight of new structure and the historic load paths are reinstated. Intrusive investigations are planned to determine if the existing masonry walls are suitable under the proposed loadings. Appropriately sized pad stones will be provided at beam ends to prevent overstressing the existing brick locally.

3.3 Propping of the Existing Walkways / New Covered Walkway

Access from the courtyard to the various offices, accommodation and other station facilities was via a central stairwell in the Courtyard which extended up 3 storeys and allowed access to walkways that provided horizontal circulation to each area of the building. The walkways are cantilevered from the existing load bearing masonry walls with the ends of the cantilever built in to the walls.

Over time, the steel cantilever beams have deteriorated and are not adequate for the proposed loading. To minimise the impact on the existing building and retain the existing balconies, it is proposed that permanent props are put in place to support the outer edge of the walkways. To further minimise the impact on the overall façade, the new props have been positioned either side of existing doorways to maintain access to the building for future users and to try and be sympathetic to the façade.

With the props introduced the cantilever beams become simply supported and are suitable for continued use. Vertical props are spaced at 4-5m centres, depending on door locations, and have horizontal members that span between the props at each level. There are small angles that project from the horizontal member to support the existing cantilever beams.

To avoid intrusive repair details at the support of the existing cantilever beams it is proposed to fix new steel brackets to the existing masonry. This provides both support to the existing beams and allows lateral loads to be transferred back to the existing building. Consideration was given to repair the

existing walkways however any repair would involve significant intrusive works that can be avoided through the introduction of permanent props.

To improve circulation routes, some of the existing walkways are to be extended. The new sections of walkway are to be constructed using steel members supporting thin concrete decks. sitting on and composite concrete decks. The new steel structure is either supported of the existing structure (pad stones built in to the existing masonry or steel angles fixed to the existing masonry) or the new structure used for propping the existing walkways.

Some areas of walkway are to be enclosed within a glazing system to provide protection from the weather. The enclosures will generally consist of lightweight steel frames fixed at the base (to new or existing structure) and also fixed to existing external walls. Glazing will be fixed to the exterior of these new frames.

The existing access stair is to be taken down during the works, repaired and reinstated. Temporary propping will be required to support the adjacent existing walkways whilst the stair is undergoing repair.

In addition to the above propping works, the existing balustrade is also to be retained. Load testing will need to be carried out to determine its suitability under modern loading requirements. Prior to testing being carried out, a section of the balustrade should be repaired and finished to the standard required under the current proposals. Temporary propping should also be in place to replicate the proposed props being in place. The balustrade will need to withstand a line load of 1.5kN/m length applied at a height of 1.1m above finished floor level. A uniform load of 1.5kN/m^2 should be applied to the balustrade infill. In addition to this a point load of 1.5kN should be applied to the infill. The loads stated are characteristic (unfactored) loads and should be considered as two separate load cases.

See structural GA's (all Zones) in Appendix B and associated details in Appendix A for further information.

3.4 Proposed Lift in Hose Tower

There is an existing lift shaft located in the main stairwell adjacent to the hose tower, however the dimensions of the shaft do not meet modern standards. To allow circulation to all floors, including the basement, it is proposed to form a new lift within the existing Hose Tower.

The new lift will be positioned towards the rear of the Hose Tower. The setting out will depend on the extent of the existing foundations to the Hose Tower. The existing masonry walls are suitable to fix the lift rails to.

Infill floors are required at each level to allow access to the lift from the walkways. This will be provided by trimming the lift void using new steel beams that sit on pad stones built in to the Hose Tower walls.

angles will also be fixed to the perimeter of the Hose Tower to support all edges of new concrete slab that forms the floor construction to each lobby.

Refer to Zone 3 structural GA's in Appendix B for more information:

- 060270-CUR-Z3-B0-DR-S-20-300
- 060270-CUR-Z3-00-DR-S-20-301
- 060270-CUR-Z3-01-DR-S-20-302
- 060270-CUR-Z3-02-DR-S-20-303
- 060270-CUR-Z3-03-DR-S-20-304

3.5 Hotel Extension

It is proposed to extend the existing building to the rear of the London Road elevation within the Courtyard space to increase the number of hotel rooms within the scheme. The positioning of the new structure, in particular the columns, was carefully considered together with the Architect to ensure that the new structure aligned with the existing structure beyond.

The primary structure consists of a steel frame founded on concrete pad foundations stabilised by a combination of vertical bracing and moment frames. The foundation elements are typically formed on the underlying weathered sandstone strata.

New columns extend down to the central Courtyard and have been set away from the face of the existing building to avoid interacting with the existing foundations. The new columns that extend through the old Gas Meter Testing Room (Curtins Zone 2) have been positioned to minimise the impact on the existing structure and will have new foundations within the basement area.

The floor plates are typically formed from cast in-situ concrete composite decking with the depth of this deck varying between the hotel floors and the plant deck at roof level to suit the imposed loading.

The building envelope is to be formed using a combination of curtain wall glazing, architectural cladding and internal blockwork partitions.

The current proposals require new columns to project through the Gas Meter Testing Room (Curtins Zone 2) down to the basement level. These columns also provide support to the new mezzanine structure (discussed in Section 3.1). Columns have been positioned so that they do not impart any additional loading on the existing structure.

The existing walkways to the rear elevation of London Road are to be removed. The hotel extension will provide new structure which reinstates circulation routes to the hotel rooms. Columns are set away from the face of the existing masonry façade and new steel beams cantilever towards the existing structure to form the corridor. The cantilevers are propped by the existing masonry façade discussed

in Sections 2.3.2, 2.3.4 and 2.3.5). Refer to the Zone 5 Structural GA's in Appendix B for further information:

- 060270-CUR-Z5-XX-DR-S-20-500
- 060270-CUR-Z5-XX-DR-S-20-501
- 060270-CUR-Z5-XX-DR-S-20-502

The 1st floor of the extension also includes a new terrace area which is to be formed with a steel frame supporting a concrete floor slab. Its columns also support a glazed canopy structure for the ground floor of the courtyard. An additional row of columns is provided from the front of the canopies.

3.6 New platform lift to Old Police Station

It is proposed to provide a new platform lift to allow access between the Old Police Station and the existing basement below. The lift is positioned between load bearing walls and as such the floor at ground level can be removed locally for the lift to be installed. As a platform lift is proposed, a minimal lift pit or recess will be required which is unlikely to affect the existing foundations. As an alternative, a small ramp up to the platform lift could be installed to avoid forming any recesses in the existing floor construction.

The approximate proposed location is show on Zone 1 structural GA:

- 060270-CUR-Z1-B0-DR-S-20-100

Refer to architectural drawings for precise position and further details.

3.7 Infill Floor at corner of Fairfield Street and Minshull Street

There is an existing stair located in the corner of Fairfield Street and Minshull Street that allows access from basement level up to third floor. At first floor and above it is proposed that this corner of the building provides workspace or living space and as such the existing stair at each level is to be removed. It is proposed to fix steel angles to the existing load bearing masonry walls and span concrete composite deck between the angles. The composite deck would be positively fixed to the angles by studs or rivets. The proposed steel angles would be fixed to the existing load bearing masonry walls using resin anchor fixings. This has minimal impact on the existing structure and allows decking to be removed easily should the stair be reinstated in the future.

Refer to Zone 1 structural GA's which show the position of the stair to be retained at lower levels, and the extent of new infill floors at upper levels where the stair is to be removed.

3.8 Works to the Training Tower & Underlying Ambulance Station

The existing Training Tower is in poor condition with obvious visible defects. The steel grillage at 1st floor supporting the tower is also in a severe state and has been propped.

There are cracks above the existing window openings to the front of the Training Tower. These localised sections of masonry will need to be repaired or rebuilt.

In addition to the cracks above the window openings, there are also large cracks towards the top of the tower side and rear elevations. Due to the large visible cracks and displacement of masonry, this section will also need to be repaired or rebuilt. Any other cracks in the masonry require stitch repairs as per the details appended – refer to the masonry repair details shown on drawing 060270-CUR-00-XX-DR-S-28-606 (Masonry Details Sheet 1) in Appendix A.

There are 3 existing tie rods and associated pattress plates located at intervals up the tower which appear to be ineffective in their current state – it is unclear why these have been installed but it is likely to be a historical remedial detail. The existing pattress plates appear to have loosened over time and in some instances are no longer in contact with the masonry wall.

Due to the unsafe condition of the tower, we have been unable to assess the condition of the floor structure at 4th & 5th levels (roof). Given the poor condition at 1st,2nd, 3rd slabs and obvious wall movement, they are assumed to be in poor condition and it is proposed to replace all floor slabs – Replacement floor slabs would be formed of a composite metal deck slab which may also serve to tie the walls together in place of the existing patress plates.

New openings through the walls are required at each level to allow access from the new walkways to the tower. New lintels will be required to form the new openings. Refer to drawing 060270-CUR-00-XX-DR-S-28-606 (Masonry Details Sheet 1) in Appendix A for details relating to forming new openings.

The dimensional survey that has been carried out has confirmed that the existing chimney is out of plumb and is twisting on plan. A verticality survey has been undertaken to confirm how much out of alignment the chimney is. The chimney cracks are to be stitched and the chimney should be monitored to determine if the chimney is still moving during subsequent works. Further movement could require the introduction of new structure within the chimney or rebuilding the chimney.

The ambulance station steelwork supporting the tower is to be replaced or strengthened due to its severe state and the increased loading imposed by the additional elevated walkways. Its construction sequencing shall need to be planned to avoid damage to the brittle training tower.

The training tower is shown on the Zone 1 structural GA's in Appendix B.

3.9 Infill Structure behind Training Tower

To improve the circulation it is proposed that new floor is introduced at 2nd and 3rd floor and a new roof over the new circulation spaces.

New floor construction will consist of composite concrete deck supported on steel beams or steel angles fixed to the existing load bearing masonry walls. Steel angles will be fixed to the masonry units using resin anchors. Where new steel beams are required, local pockets are to be made in the existing masonry façade and pad stones installed for the steel beams to be seated on.

The extent of the new infill floors and roof structure are shown on the Zone 1 structural GA's in Appendix B:

- 060270-CUR-Z1-02-DR-S-20-103
- 060270-CUR-Z1-03-DR-S-20-104
- 060270-CUR-Z1-RF-DR-S-20-106

3.10 Lifts 1 and 2 within Hotel Demise

To allow DDA access to all hotel floors, it is proposed to provide 2No. new lifts within the existing old workshop located behind the main Courtyard stair on the Whitworth Street side of the Courtyard. Lift No. 1 enables access from the new basement level up to 3rd floor whilst Lift No. 2 enables access from ground floor up to the 3rd floor.

A new lift pit will need to be formed within the new basement as such the existing foundations may require underpinning locally to ensure the new lift pit construction does not undermine the existing foundations. The lift pits are to be positioned outside the zone of influence of the existing foundations – if this is not possible then local underpinning of the existing foundations will be required. Once the underpinning has been carried out, the ground can be dug out and lift pit constructed.

The existing floor structure will need to be partially removed at each level to allow the lift shafts to be constructed. New infill floor structure is required between the existing load bearing masonry wall and the new lift shaft wall – it is proposed to fix an angle to both the lift shaft wall and existing load bearing masonry wall using resin anchor fixings and to span concrete composite decking between the walls. The decking will be positively fixed to the angles and act as permanent formwork at each level. Where steel beams are required, pockets will be formed in the existing masonry wall and pad stone installed to allow the new steel beam to be installed – this has minimal impact on the existing structure and reinstates the load paths of the existing floor structure.

Lifting beams will be required at the top of the proposed lift shaft – these will be supported by the new lift shaft structure and will be designed in accordance with the lift manufacturers requirements.

3.11 Lifts 3 and 4 within Hotel Demise

To improve the vertical circulation to the hotel demise it is proposed to introduce 2No. new lifts near to the corner of Whitworth Street and London Road. Consideration was given to retaining the existing lift near to the proposed lift location – this had insufficient transport capacity and the lift over run requirement would have projected through the existing roof.

It is proposed that the existing lift shaft is demolished so that 2No. new lifts can be formed in the space immediately adjacent. To enable this, portions of existing load bearing masonry wall need to be removed. It is proposed to provide new steel beams that sit on pad stones built in to the wall to support the remaining wall and adjacent floor structure.

With the new lifts positioned adjacent to the existing lift shaft it means that the lift over-run does not affect any of the existing roofs and the roofline remains unaltered.

New lift pits will need to be formed in the existing basement and the lifts are positioned so that they do not interfere with the existing foundations. Local underpinning may be required to the existing foundations to allow the lift pit to be formed without affecting the existing structure.

The proposed positions of Lifts 1,2,3 and 4 are indicated on the Zone 2 structural GA's in Appendix B.

3.12 Access to Roof Terrace / Hotel Extension Roof

It is proposed to use the new roof of the Hotel Extension (see Section 3.9) for plant equipment and to have a section for use as a roof terrace for guests. Access to the roof terrace is to be made via the existing turret on the London Road elevation closest to Whitworth Street as this was deemed the least intrusive way of creating the access. Other options were explored with the Architect which included creating a new stair up from the existing 3rd floor balcony however this was ruled out due to visual impact when viewed from the Courtyard.

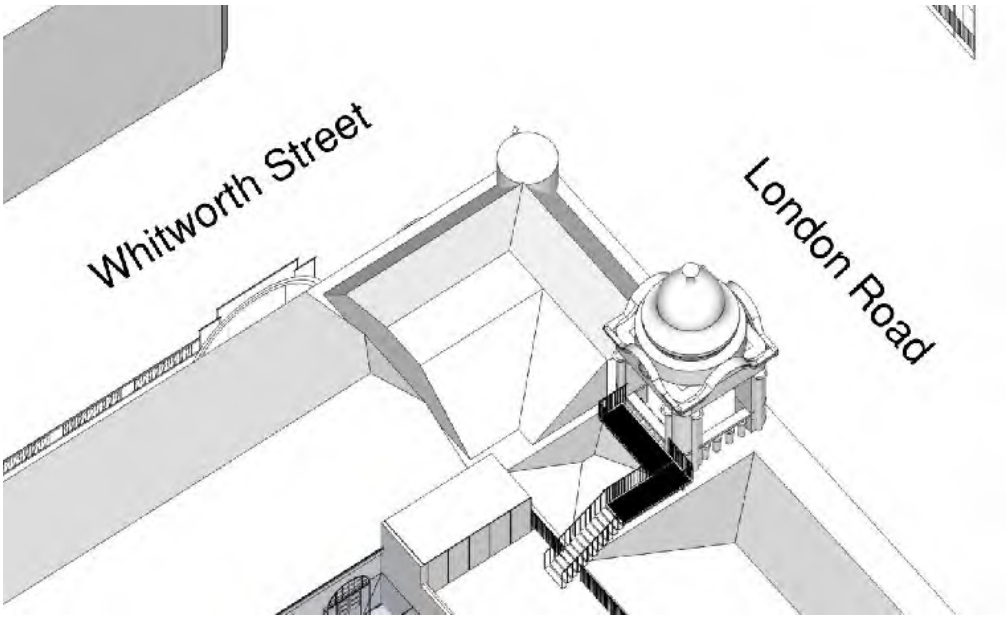


Figure 3.1 – Perspective view showing access from turret to hotel extension roof

A new stair is required from the space immediately below the turret at 3rd floor up to roof level. From roof level a link bridge and stair is to be provided to enable access from the turret to the roof area.

The link bridge will clear span between the two load bearing walls at either end of the link bridge. New steel beams will sit on pad stones built into the existing load bearing masonry wall. The landing and access stair down to the hotel roof takes support from the link bridge and new hotel extension roof.

A loading down exercise has been carried out to ensure that the new bridge does not overstress the existing foundations.

Appendix A Structural Repair Details

Drawing Number	Drawing Title
060270-CUR-00-XX-DR-S-28-600	Timber Details – Sheet 1
060270-CUR-00-XX-DR-S-28-604	Floor Details – Sheet 1
060270-CUR-00-XX-DR-S-28-605	Floor Details – Sheet 2
060270-CUR-00-XX-DR-S-28-606	Masonry Details – Sheet 1
060270-CUR-00-XX-DR-S-28-608	Steelwork Details – Sheet 1
060270-CUR-00-XX-DR-S-28-609	Steelwork Details – Sheet 2
060270-CUR-00-XX-DR-S-28-610	Underpinning Details – Sheet 1

Appendix B Structural GA's and Typical Details

Drawing Number	Drawing Title
060270-CUR-Z1-B0-DR-S-20-100	Zone 1 – Basement General Arrangement
060270-CUR-Z1-00-DR-S-20-101	Zone 1 – Ground Floor General Arrangement
060270-CUR-Z1-01-DR-S-20-102	Zone 1 – First Floor General Arrangement
060270-CUR-Z1-02-DR-S-20-103	Zone 1 – Second Floor General Arrangement
060270-CUR-Z1-03-DR-S-20-104	Zone 1 – Third Floor General Arrangement
060270-CUR-Z1-RF-DR-S-20-106	Zone 1 – Roof General Arrangement
060270-CUR-Z2-B0-DR-S-20-200	Zone 2 – Basement General Arrangement
060270-CUR-Z2-00-DR-S-20-201	Zone 2 – Ground Floor General Arrangement
060270-CUR-Z2-01-DR-S-20-202	Zone 2 – First Floor General Arrangement
060270-CUR-Z2-02-DR-S-20-203	Zone 2 – Second Floor General Arrangement
060270-CUR-Z2-03-DR-S-20-204	Zone 2 – Third Floor General Arrangement
060270-CUR-Z2-RF-DR-S-20-206	Zone 2 – Roof General Arrangement
060270-CUR-Z3-B0-DR-S-20-300	Zone 3 – Basement General Arrangement
060270-CUR-Z3-00-DR-S-20-301	Zone 3 – Ground Floor General Arrangement
060270-CUR-Z3-01-DR-S-20-302	Zone 3 – First Floor General Arrangement
060270-CUR-Z3-02-DR-S-20-303	Zone 3 – Second Floor General Arrangement
060270-CUR-Z3-03-DR-S-20-304	Zone 3 – Third Floor General Arrangement
060270-CUR-Z3-RF-DR-S-20-306	Zone 3 – Roof General Arrangement
060270-CUR-Z4-00-DR-S-20-401	Zone 4 – Ground Floor General Arrangement (NO WORKS)
060270-CUR-Z5-XX-DR-S-20-500	Zone 5 – Basement & Ground Floor General Arrangement
060270-CUR-Z5-XX-DR-S-20-501	Zone 5 – First & Second Floor General Arrangement
060270-CUR-Z5-XX-DR-S-20-502	Zone 5 – Third Floor & Roof General Arrangement
060270-CUR-00-XX-DR-S-21-700	Elevations – Sheet 1
060270-CUR-00-XX-DR-S-21-701	Elevations – Sheet 2
060270-CUR-00-XX-DR-S-21-702	Elevations – Sheet 3
060270-CUR-00-XX-DR-S-21-703	Sections – Sheet 1
060270-CUR-00-XX-DR-S-21-704	Sections – Sheet 2
060270-CUR-00-XX-DR-S-21-705	Sections – Sheet 3

Appendix C Curtins Report: 060270 – London Road Fire Station – Detailed Visual Inspection Report

Appendix D **Curtins Drawing: 060270 – 90-00-01 – Ground Floor Investigation Engine Room Floor**

Appendix E **Curtins Report: 060270 – London Road Fire Station – Proposed Schedule of Intrusive Investigations**

Our Locations

Birmingham
2 The Wharf
Bridge Street
Birmingham B1 2JS
T. 0121 643 4694
birmingham@curtins.com

Bristol
3/8 Redcliffe Parade West
Bristol
BS1 6SP
T. 0117 925 2825
bristol@curtins.com

Cardiff
3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 029 2068 0900
cardiff@curtins.com

Douglas
Varley House
29-31 Duke Street
Douglas Isle of Man
IM1 2AZ
T. 01624 624 585
douglas@curtins.com

Edinburgh
35 Manor Place
Edinburgh
EH3 7EB
T. 0131 225 2175
edinburgh@curtins.com

Kendal
28 Lower Street
Kendal
Cumbria LA9 4DH
T. 01539 724 823
kendal@curtins.com

Leeds
Woodside Mews
Clayton Wood Close
Leeds LS16 6QE
T. 0113 274 8509
leeds@curtins.com

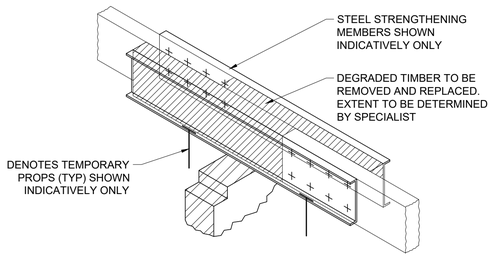
Liverpool
Curtin House
Columbus Quay
Riverside Drive
Liverpool L3 4DB
T. 0151 726 2000
liverpool@curtins.com

London
Units 5/6
40 Compton Street
London
EC1V 0BD
T. 020 73242240
london@curtins.com

Manchester
Merchant Exchange
17-19 Whitworth Street west
Manchester
M1 5WG
T. 0161 236 2394
manchester@curtins.com

Nottingham
56 The Ropewalk
Nottingham
NG1 5DW
T. 0115 941 5551
nottingham@curtins.com

Registered in England and Wales number: 2054159
Registered office: Curtin House, Columbus Quay, Riverside Drive, Liverpool L3 4DB



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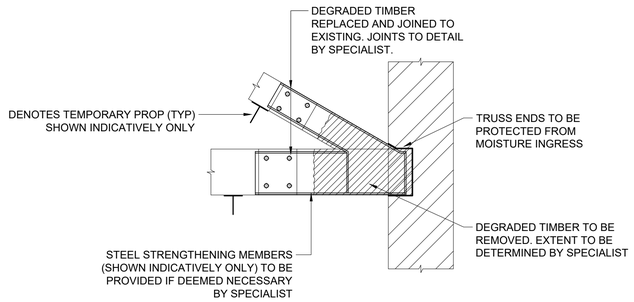
1. NEW TIMBER SECTION, TIMBER TREATMENT AND TIMBER CONNECTIONS TO BE DESIGNED AND DETAILED BY SPECIALIST
2. TEMPORARY WORKS TO BE DESIGNED BY OTHERS

SUGGESTED METHOD STATEMENT

1. TEMPORARY PROPS TO BE PROVIDED ADJACENT TO AREA OF DEGRADED TIMBER
2. CAREFULLY REMOVE DEGRADED PORTION OF TIMBER, EXTENT TO BE DETERMINED BY SPECIALIST. TIMBER TO BE REPLACED BEYOND SUPPORT
3. NEW CHANNEL SECTION TO BE FIXED TO EXISTING TREATED TIMBER SECTION AND REPLACED TIMBER SECTION. CONNECTION TO FIX THROUGH CONNECTING OPPOSITE CHANNELS. CONNECTION DETAILS TBC BY SPECIALIST
4. REMOVE PROPPING

T01 - ROOF PURLIN DETAIL

N.T.S.



NOTES

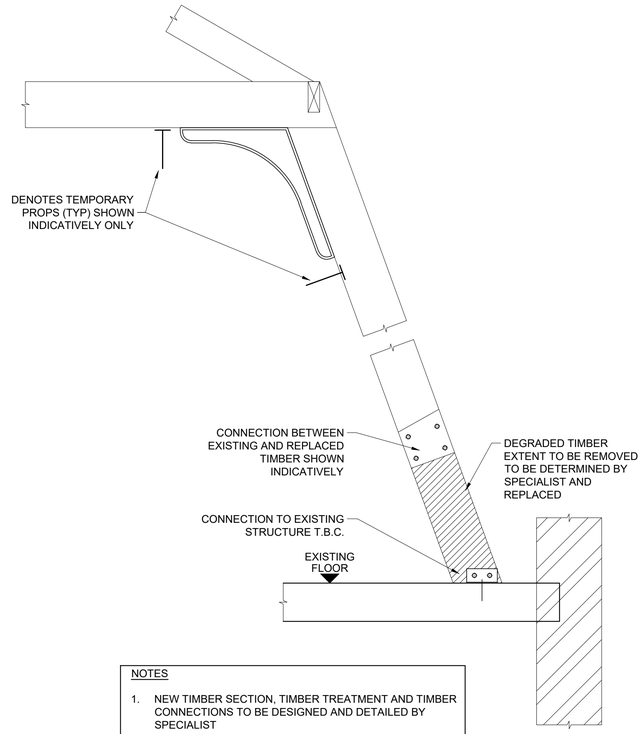
1. DPM TO BE SPECIFIED BY ARCHITECT
2. TEMPORARY WORKS TO BE DESIGNED BY OTHERS
3. NEW TIMBER SECTION, TIMBER TREATMENT AND TIMBER CONNECTIONS TO BE DESIGNED AND DETAILED BY SPECIALIST

SUGGESTED METHOD STATEMENT

1. TEMPORARY PROPS TO BE PROVIDED AS NECESSARY AWAY FROM DEGRADED TIMBER
2. CAREFULLY REMOVE DEGRADED PORTION OF TIMBER, EXTENT TO BE REMOVED TO BE DETERMINED BY SPECIALIST
3. NEW AND EXISTING TIMBER TO BE TREATED AS REQUIRED BY SPECIALIST
4. MASONRY TO BE CAREFULLY REMOVED AS REQUIRED AND LINED WITH DPM AS REQUIRED
5. NEW TIMBER TO BE CONNECTED TO EXISTING, STEEL STRENGTHENING MEMBERS TO BE PROVIDED AS NECESSARY
6. REMOVE PROPPING

T02 - ROOF TRUSS DETAIL

N.T.S.



NOTES

1. NEW TIMBER SECTION, TIMBER TREATMENT AND TIMBER CONNECTIONS TO BE DESIGNED AND DETAILED BY SPECIALIST
2. TEMPORARY WORKS TO BE DESIGNED BY OTHERS

SUGGESTED METHOD STATEMENT

1. TEMPORARY PROPS TO BE PROVIDED ABOVE AREA OF DEGRADED TIMBER
2. CAREFULLY REMOVE DEGRADED PORTION OF TIMBER, EXTENT TO BE DETERMINED BY SPECIALIST
3. NEW AND EXISTING TIMBER TO BE TREATED AS REQUIRED BY SPECIALIST
4. NEW TIMBER TO BE CONNECTED TO EXISTING TIMBER, CONNECTION BETWEEN NEW AND EXISTING TIMBER TO SPECIALIST DETAIL
5. NEW TIMBER TO BE CONNECTED TO EXISTING FLOOR, CONNECTION TBC
6. REMOVE PROPPING

T03 - MANSARD ROOF REPAIR DETAIL

N.T.S.

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWING AND SPECIFICATIONS
2. DO NOT SCALE FROM THIS DRAWING
3. ALL DETAILS AND DIMENSIONS TO BE CHECKED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION
4. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE

Rev:	Description:	Date:	By:	Chkd:
P02	UPDATED FOR PLANNING 2019	27.11.19	MH	KG
P01	ISSUED FOR PLANNING	19.12.16	GP	TJM

curtins

Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth St West, Manchester, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

Structures - Civils - Environmental - Infrastructure - Transport Planning - Sustainability - Expert Advisory Services
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Client: AlliedLondon

Status: PLANNING

Project: LONDON ROAD MANCHESTER

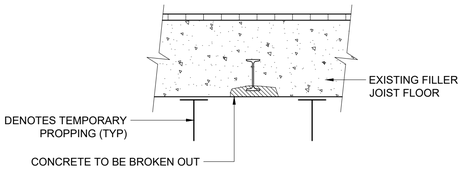
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Scale:	Size:	First Issue:	Drawn:	Checked:
AS SHOWN	A1	09.12.16	GP	TJM

Drg No: 060270-CUR-00-XX-DR-S-28-600

Rev: P02

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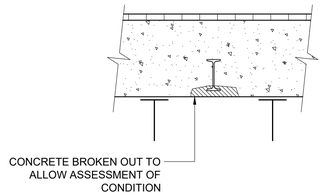
1. FILLER JOISTS WILL BE ASSESSED ON A CASE BY CASE BASIS
2. THE CONDITION OF THE TOP FLANGE WILL BE ASSESSED BY DETERMINING THE CONDITION OF THE BOTTOM FLANGE AND BY INSPECTION OF FILLER JOISTS REMOVED FROM OTHER AREAS OF EXISTING FLOORS
3. REFER TO TYPICAL REPAIR DETAILS

SUGGESTED METHOD STATEMENT

1. INSTALL TEMPORARY PROPPING AS NECESSARY
2. CAREFULLY BREAK OUT CONCRETE ENCASING THE BOTTOM FLANGE OF THE FILLER JOIST USING HAND TOOLS
3. INSPECT EXPOSED FILLER JOIST FOR CORROSION OR OTHER SIGNS OF DISTRESS
4. BLAST CLEAN THE EXPOSED STEEL
5. MEASURE SECTION THICKNESSES (FLANGE AND WEB) AND ASSESS SECTION LOSS
6. REPAIR/STRENGTHEN/REPLACE FILLER JOIST AS NECESSARY IN ACCORDANCE WITH ENGINEER'S DETAILS
7. REINSTATE THE REMOVED CONCRETE WITH A SUITABLE PATCHING MORTAR
8. REMOVE TEMPORARY PROPPING

F01 - FILLER JOIST INVESTIGATION

N.T.S.



NOTES

1. REFER TO DETAIL FOR INVESTIGATION OF TYPICAL FILLER JOIST
2. APPROPRIATE RECTIFICATION DETAIL IS TO BE AGREED BY THE ENGINEER
3. IF SECTION LOSS IS DEEMED TO BE MINIMAL, RECTIFICATION SHALL BE IN ACCORDANCE WITH THE SUGGESTED METHOD STATEMENT BELOW

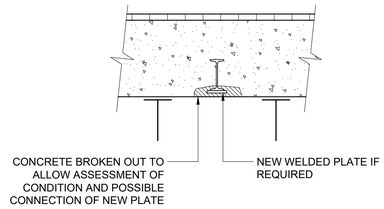
SUGGESTED METHOD STATEMENT

1. FOLLOWING BLAST CLEANING, APPLY A SUITABLE PRIMER TO EXPOSED STEELWORK AND ALLOW TO DRY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS
2. APPLY A SUITABLE BONDING AGENT TO THE STEEL AND EXPOSED CONCRETE
3. REINSTATE THE REMOVED CONCRETE WITH A SUITABLE PATCHING MORTAR
4. FIRE PROTECTION TO THE SLAB SOFFIT TO BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S DETAILS

F02 - FILLER JOIST REPAIR DETAILS
A : MINIMAL OR NO SECTION LOSS

N.T.S.

B: SIGNIFICANT SECTION LOSS



NOTES

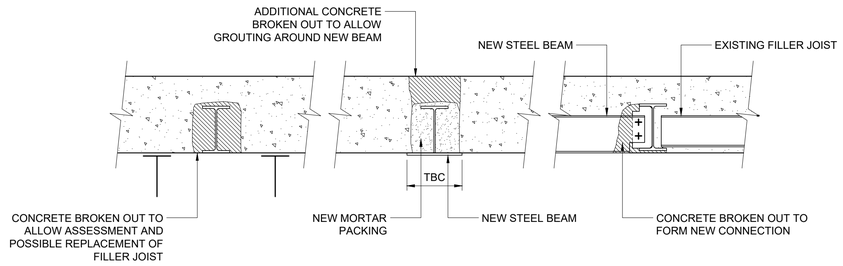
1. REFER TO DETAIL FOR INVESTIGATION OF TYPICAL FILLER JOIST
2. APPROPRIATE RECTIFICATION DETAIL IS TO BE AGREED BY THE ENGINEER
3. IF SECTION LOSS IS DEEMED TO BE SIGNIFICANT, RECTIFICATION SHALL BE IN ACCORDANCE WITH THE SUGGESTED METHOD STATEMENT BELOW
4. IF SECTION LOSS IS DEEMED TO BE TOO GREAT TO ALLOW REPAIR, FILLER JOIST SHALL BE REPLACED. REFER TO TYPICAL DETAIL FOR FILLER JOIST REPLACEMENT
5. SIZE AND THICKNESS OF ANY PLATE(S) REQUIRED FOR REPAIR ARE TO BE CONFIRMED

SUGGESTED METHOD STATEMENT

1. FOLLOWING BLAST CLEANING, ASSESS THE SUITABILITY OF THE REMAINING STEEL SECTION FOR WELDING
2. IF THE REMAINING STEEL IS DEEMED SUFFICIENT, A NEW STEEL PLATE SHALL BE WELDED TO THE BOTTOM FLANGE OF THE EXISTING FILLER JOIST
3. APPLY A SUITABLE PRIMER TO THE EXPOSED STEELWORK AND ALLOW TO DRY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS
4. APPLY A SUITABLE BONDING AGENT TO THE STEEL AND EXPOSED CONCRETE
5. REINSTATE THE REMOVED CONCRETE WITH A SUITABLE PATCHING MORTAR
6. FIRE PROTECTION TO THE SLAB SOFFIT SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S DETAILS

F03 - FILLER JOIST REPAIR DETAILS
B : SIGNIFICANT SECTION LOSS

N.T.S.



NOTES

1. REFER TO DETAIL FOR INVESTIGATION OF TYPICAL FILLER JOIST
2. APPROPRIATE RECTIFICATION DETAIL IS TO BE AGREED BY THE ENGINEER
3. IF REPLACEMENT OF EXISTING FILLER JOIST(S) IS DEEMED NECESSARY, THE SUGGESTED REPLACEMENT SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE METHOD STATEMENT BELOW

SUGGESTED METHOD STATEMENT

1. CAREFULLY BREAK OUT THE CONCRETE ENCASING THE FILLER JOIST(S) USING HAND TOOLS. BREAK OUT ONLY AS MUCH AS IS NECESSARY TO REMOVE THE EXISTING FILLER JOIST(S). BREAK OUT ABOVE THE EXISTING BEAM ALSO
2. CAREFULLY BREAK OUT LOCALLY AROUND THE EXISTING PRIMARY/SECONDARY BEAM SUPPORTING THE FILLER JOISTS IN ORDER TO FORM A NEW CONNECTION
3. WELD NEW CLEAT TO EXISTING PRIMARY/SECONDARY BEAM
4. INTRODUCE NEW STEEL BEAM FROM BELOW AND BOLT TO NEW CLEAT PLATE. NEW STEEL BEAM IS TO BE PROVIDED WITH A SUITABLE PRIMER PRIOR TO INSTALLATION
5. GROUT PACK AROUND THE NEW BEAM WITH A SUITABLE MORTAR
6. MORTAR PACK AS NECESSARY BETWEEN BOTTOM FLANGE OF NEW BEAM AND SOFFIT OF SLAB AS NECESSARY TO ENSURE GOOD BEARING
7. REINSTATE CONCRETE LOCALLY AROUND PRIMARY/SECONDARY BEAM USING A SUITABLE PATCHING MORTAR
8. FIRE PROTECTION TO THE SLAB SOFFIT IS TO BE PROVIDED IN ACCORDANCE WITH ARCHITECT'S DETAILS

F04 - FILLER JOIST REPLACEMENT

N.T.S.

NOTES

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Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth St West, Manchester, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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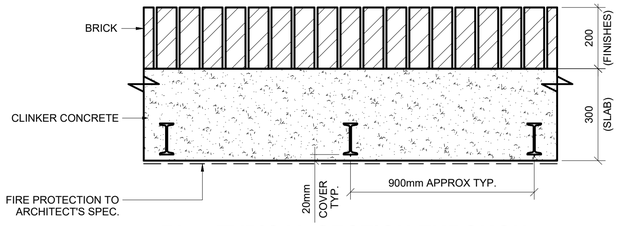
Drg Title: FLOOR DETAILS SHEET 1

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Drg No: 060270-CUR-00-XX-DR-S-28-604

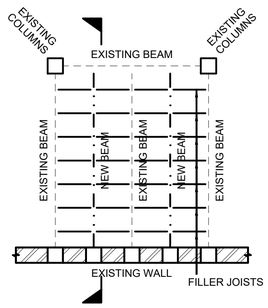
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F05 - TYPICAL SECTION THROUGH FILLER JOIST FLOOR TO GROUND FLOOR LEVEL

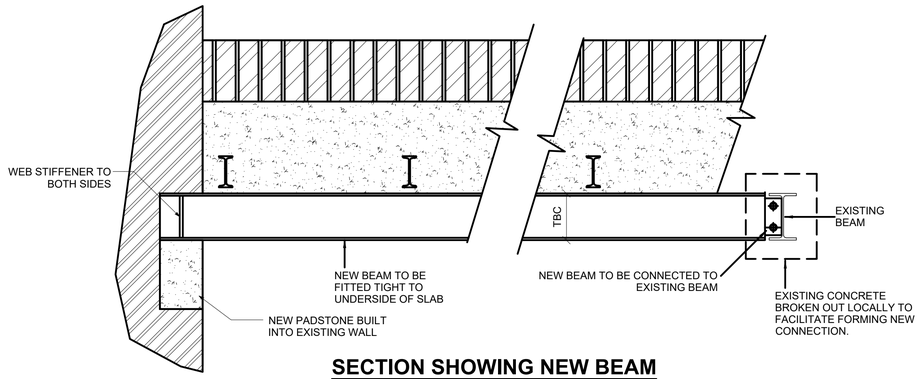
N.T.S.



NOTES:

1. CAREFULLY BREAK OUT LOCALLY TO FULLY REVEAL EXTENT OF CORROSION TO FILLER JOISTS
2. REPAIR AND REMEDIATE FILLER JOISTS IF POSSIBLE (SEE TYPICAL REPAIR DETAILS).
   IF GREATER THAN 25% SECTION LOSS THEN NEW ADDITIONAL BEAM IS REQUIRED (SEE PLAN). REINSTATE CONCRETE AND FINISHES TO UNDERSIDE OF SLAB.
3. CONCRETE ENCASEMENT AROUND EXISTING BEAM BROKEN OUT LOCALLY TO ENABLE CONNECTION OF NEW BEAM.
4. NEW PADSTONE TO BE INSTALLED IN EXISTING WALL.
5. NEW BEAM TO BE INSTALLED TIGHT TO UNDERSIDE OF EXISTING CEILING. PROVIDE PACKING-TO PADSTONE AS REQUIRED.

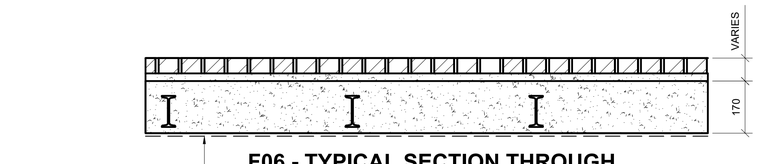
PLAN ON TYPICAL BAY SHOWING PROPOSED STRENGTHENING



SECTION SHOWING NEW BEAM

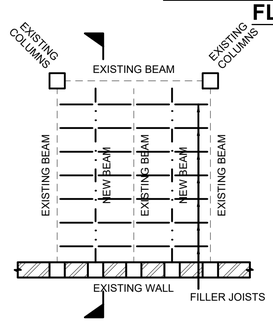
SUGGESTED METHOD STATEMENT FOR F05 & F06

1. EXISTING CONCRETE TO BE BROKEN OUT CAREFULLY BELOW EXISTING FILLER JOISTS
2. FILLER JOISTS TO BE REPAIRED AND REMEDIATED AS REQUIRED, CONCRETE BELOW FILLER JOISTS & FINISHES TO BE REINSTATED, FINISHES TO ARCHITECTS SPECIFICATION
3. CONCRETE TO EXISTING TRANSFER BEAM TO BE REMOVED TO ALLOW CONNECTION OF NEW BEAM TO EXISTING, AND EXISTING WALL TO BE CAREFULLY BROKEN OUT TO ALLOW NEW BEAM AND PADSTONE
4. NEW BEAM LIFTED INTO PLACE AND PROPPED
5. NEW BEAM TO BE CONNECTED TO EXISTING TRANSFER BEAM, NEW PADSTONE TO BE INSTALLED WITH MORTAR BED ABOVE MIN 50Nmm²



F06 - TYPICAL SECTION THROUGH FILLER JOIST FLOOR AT UPPER FLOOR LEVELS

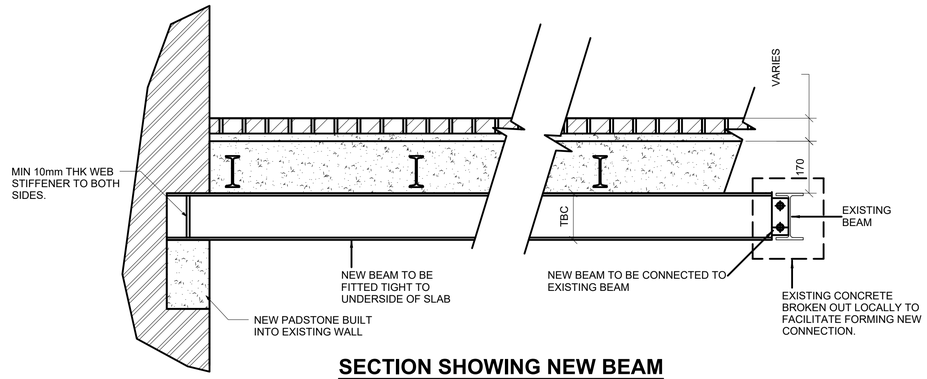
N.T.S.



NOTES:

1. CAREFULLY BREAK OUT CONCRETE LOCALLY TO FULLY REVEAL EXTENT OF CORROSION TO FILLER JOISTS
2. REPAIR AND REMEDIATE FILLER JOISTS IF POSSIBLE (SEE TYPICAL REPAIR DETAILS)
   IF GREATER THAN 25% SECTION LOSS THEN NEW ADDITIONAL BEAM IS REQUIRED (SEE PLAN). REINSTATE CONCRETE AND FINISHES TO UNDERSIDE OF SLAB.
3. CONCRETE ENCASEMENT AROUND EXISTING BEAM BROKEN OUT LOCALLY TO ENABLE CONNECTION OF NEW BEAM.
4. NEW PADSTONE TO BE INSTALLED IN EXISTING WALL.
5. NEW BEAM TO BE INSTALLED TIGHT TO UNDERSIDE OF EXISTING CEILING. PROVIDE PACKING-TO PADSTONE AS REQUIRED.

PLAN ON TYPICAL BAY SHOWING PROPOSED STRENGTHENING



SECTION SHOWING NEW BEAM

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Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth St West, Manchester, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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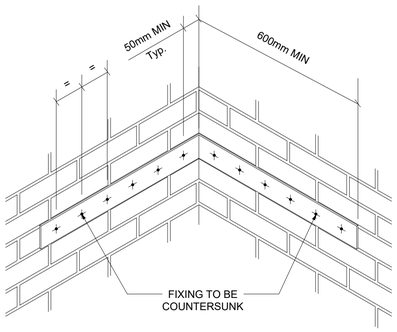
Drg Title: FLOOR DETAILS SHEET 2

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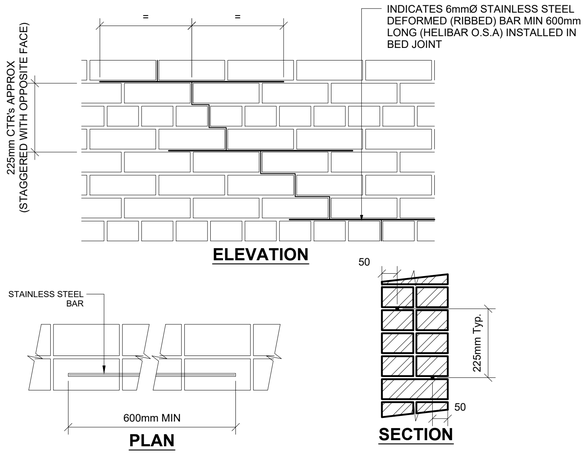
1. STRAP TO BE 1200mm MIN OVERALL. 75mm WIDE X 5mm THICK MILD STEEL GRADE S275 OR HIGHER WITH 2x6N°. HOLES AS SHOWN TO SUIT 8mmØ COUNTERSUNK RAWLBOLTS OR SIMILAR APPROVED. STRAPS TO BE HOT DIP GALVANISED FOLLOWING FABRICATION.
2. M.S. STRAP TO BE POSITIONED AT THE CENTRE OF BRICK COURSES AT 1200mm VERTICAL CENTRES WHERE POSSIBLE
3. LENGTH OF STRAP MAY BE ALTERED TO SUIT SITE CONDITIONS
4. PROVISION TO BE MADE FOR CHECKING THAT BRICKWORK IS SUITABLE TO TAKE FIXINGS. (ie FULLY BONDED IN GOOD CONDITION)
5. THIS DETAIL ONLY APPLIES WHERE WALL FINISHES WILL BE REAPPLIED. REFER TO ARCHITECTS DRAWINGS.

SUGGESTED METHOD STATEMENT

1. STRIP WALL FINISHES LOCALLY TO ALLOW INSTALLATION OF STRAP.
2. REMOVE AND RESET ANY BROKEN MASONRY UNITS.
3. MARK POSITION FOR HOLES AND DRILL CAREFULLY.
4. FIX STRAP WITH 8mmØ CONUTERSUNK RAWL BOLTS OR SIMILAR APPROVED.
5. REINSTATE WALL FINISHES, IN ACCORDANCE WITH ARCHITECTS DETAILS.

M01 - CORNER RESTRAINT STRAP

N.T.S.



NOTES:

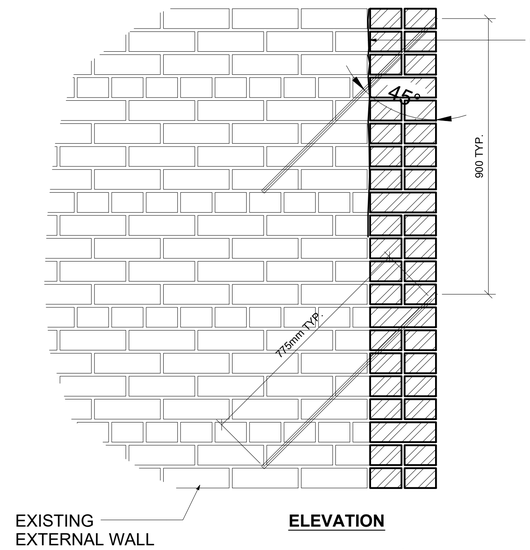
1. THIS DETAIL APPLIES TO MODERATE AND SEVERE CRACKS.
2. STAINLESS STEEL DEFORMED BARS, MIN 600mm LONG (HELIBAR O.S.A) TO BE INSTALLED IN BED JOINTS AT 225mm VERTICAL CENTRES ON OPPOSITE FACES, BARS TO BE POSITIONED CENTRALLY ACROSS THE CRACK AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALLOW MIN. 1 DAY CURING FOR ONE SIDE PRIOR TO WORK COMMENCING ON THE OTHER SIDE.
3. ANY LOOSE OR BROKEN MASONRY UNITS ARE TO BE REPLACED AND RESET.
4. THE MASONRY JOINT ALONG THE CRACK ARE TO BE RAKED OUT AND SLATE PACKED PRIOR TO GROUTING WITH SUITABLE MORTAR TO ARCHITECT'S SPECIFICATION

SUGGESTED METHOD STATEMENT

1. STRIP WALL FINISHES LOCALLY TO ALLOW RAKING OF MORTAR JOINTS ADJACENT TO THE CRACK AND INSTALLATION OF THE DEFORMED BARS.
2. REMOVE AND RESET ANY BROKEN MASONRY UNITS.
3. RAKE OUT MASONRY JOINTS ALONG THE CRACK AND SLATE PACK PRIOR TO GROUTING.
4. INSTALL STAINLESS STEEL BARS IN THE POSITIONS SHOWN, AND ALLOW GROUT TO CURE.
5. REINSTATE WALL FINISHES IN ACCORDANCE WITH ARCHITECTS DETAILS.

M02 - MASONRY CRACK REPAIR DETAIL

N.T.S.



NOTES:

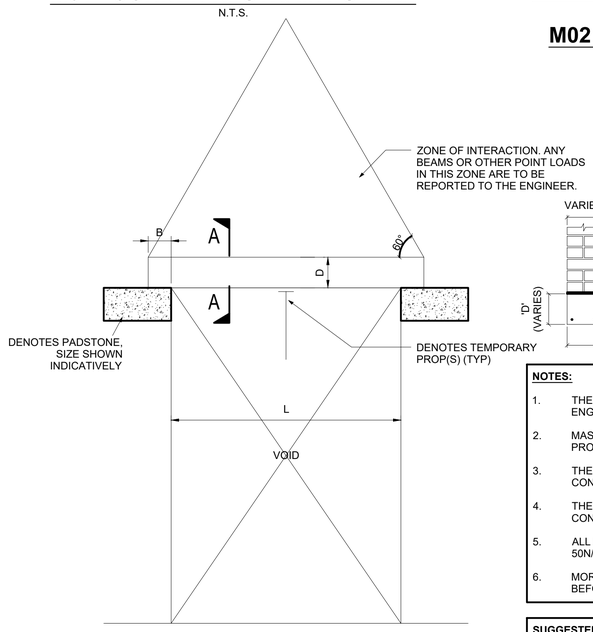
1. ANY LOOSE OR BROKEN MASONRY UNITS ARE TO BE REPLACED AND RESET PRIOR TO INSTALLATION OF ANCHORS.
2. HOLES TO BE DRILLED INTO EXISTING WALL AT 45° TO VERTICAL CENTRES, AT 900mm VERTICAL CENTRES. HOLE TO BE FORMED INTO PERP JOINT (NOT THROUGH MASONRY UNIT ON FACE OF WALL)
3. GRADE A4 STAINLESS STEEL REINFORCING ANCHOR MIN 750mm LONG HEILBAR (O.S.A) TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. DRILL HOLES AND ANY ASSOCIATED MORTAR LOSS TO BE MADE GOOD AFTER INSTALLATION OF ANCHORS.

SUGGESTED METHOD STATEMENT

1. REMOVE AND RESET ANY BROKEN MASONRY UNITS.
2. DRILL HOLES AT 45° TO VERTICAL AT SHOWN.
3. INSTALL AND GROUT REINFORCING ANCHOR.
4. MAKE GOOD DRILL HOLES AND ANY ASSOCIATED DAMAGE.

M03 - STITCH REPAIR DETAIL TO EXTERNAL WALL

N.T.S.



L (mm)	B (mm)	D (mm)
<1000	100mm MIN	TBC
1000<L<3000	150mm MIN	TBC
>3000	200mm MIN	TBC

NOTES:

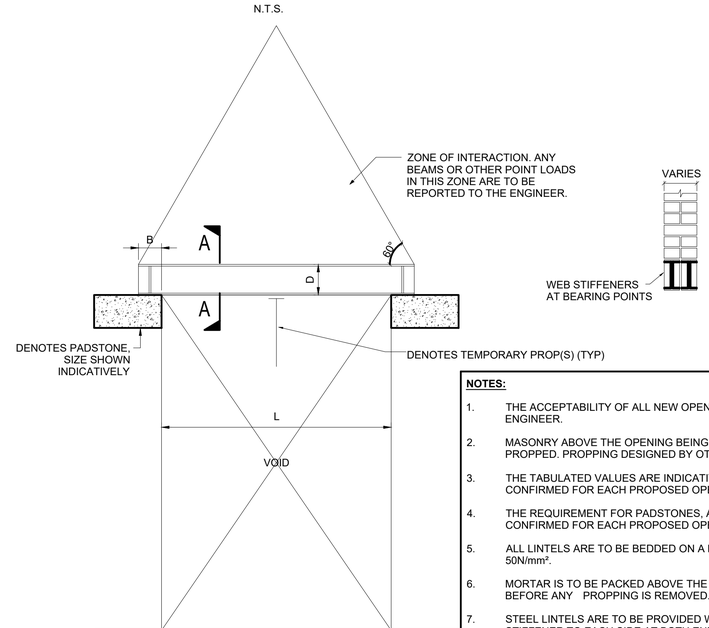
1. THE ACCEPTABILITY OF ALL NEW OPENINGS IS TO BE CONFIRMED BY THE ENGINEER.
2. MASONRY ABOVE THE OPENING BEING FORMED IS TO BE SUITABLY PROPPED. PROPPING DESIGNED BY OTHERS.
3. THE TABULATED VALUES ARE INDICATIVE ONLY AND ARE TO BE CONFIRMED FOR EACH PROPOSED OPENING.
4. THE REQUIREMENT FOR PADSTONES, AND THEIR SIZES ARE TO BE CONFIRMED FOR EACH PROPOSED OPENING.
5. ALL LINTELS ARE TO BE BEDDED ON A LEVEL MORTAR BED OF MIN 50N/mm².
6. MORTAR IS TO BE PACKED ABOVE THE LINTEL AND ALLOWED TO CURE BEFORE ANY PROPPING IS REMOVED.

SUGGESTED METHOD STATEMENT

1. NEEDLE THROUGH EXISTING WALL TO TEMPORARILY SUPPORT MASONRY ABOVE NEW OPENING.
2. CAREFULLY REMOVE MASONRY UNITS TO FORM OPENING, TAKING CARE NOT TO DAMAGE ADJACENT UNITS.
3. INSTALL PADSTONES IF NEEDED.
4. INSTALL LINTEL AND TEMPORARILY PROP IF REQUIRED.
5. REMOVE PROP AFTER MORTAR PACKING ABOVE LINTEL HAS CURED.

M04 - NEW OPENING FORMED WITH PRECAST CONCRETE LINTELS.

N.T.S.



L (mm)	B (mm)	D (mm)
<1000	100mm MIN	TBC
1000<L<3000	150mm MIN	TBC
>3000	200mm MIN	TBC

NOTES:

1. THE ACCEPTABILITY OF ALL NEW OPENINGS IS TO BE CONFIRMED BY THE ENGINEER.
2. MASONRY ABOVE THE OPENING BEING FORMED IS TO BE SUITABLY PROPPED. PROPPING DESIGNED BY OTHERS.
3. THE TABULATED VALUES ARE INDICATIVE ONLY AND ARE TO BE CONFIRMED FOR EACH PROPOSED OPENING.
4. THE REQUIREMENT FOR PADSTONES, AND THEIR SIZES ARE TO BE CONFIRMED FOR EACH PROPOSED OPENING.
5. ALL LINTELS ARE TO BE BEDDED ON A LEVEL MORTAR BED OF MIN 50N/mm².
6. MORTAR IS TO BE PACKED ABOVE THE LINTEL AND ALLOWED TO CURE BEFORE ANY PROPPING IS REMOVED.
7. STEEL LINTELS ARE TO BE PROVIDED WITH A MIN. 1No. 12mm WEB STIFFENER TO EACH SIDE AT BOTH ENDS.

SUGGESTED METHOD STATEMENT

1. NEEDLE THROUGH EXISTING WALL TO TEMPORARILY SUPPORT MASONRY ABOVE NEW OPENING.
2. CAREFULLY REMOVE MASONRY UNITS TO FORM OPENING, TAKING CARE NOT TO DAMAGE ADJACENT UNITS. IF A LINTEL ABOVE AN EXISTING OPENING IS BEING REPLACED, REMOVE EXISTING LINTEL
3. INSTALL PADSTONES IF NEEDED.
4. INSTALL NEW LINTEL AND TEMPORARILY PROP IF REQUIRED.
5. REMOVE PROP AFTER MORTAR PACKING ABOVE LINTEL HAS CURED.

M05 - NEW OPENING FORMED WITH STEEL BEAMS

N.T.S.

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Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth St West, Manchester, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
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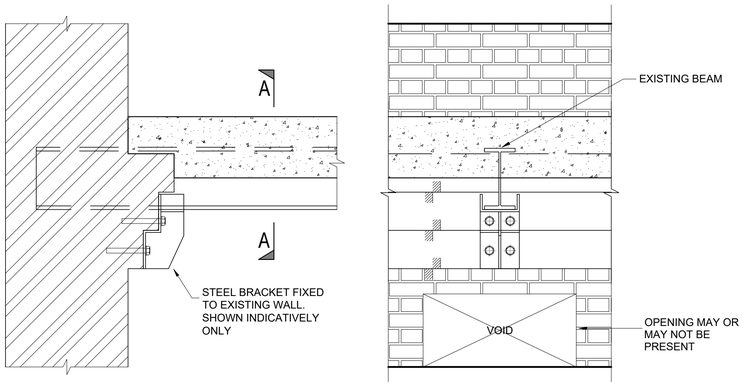
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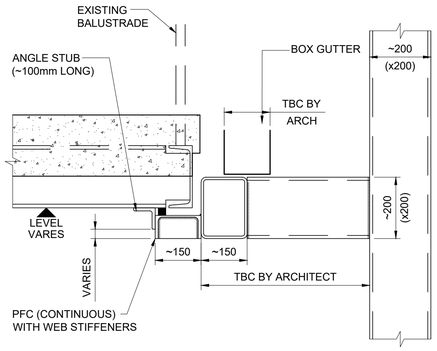
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Rev: P01

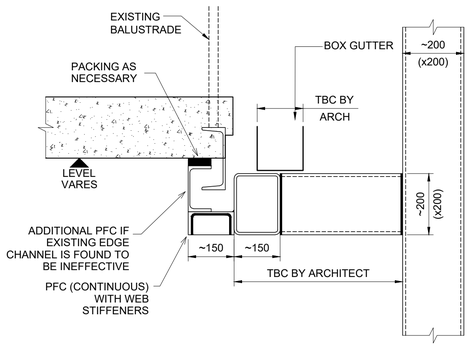
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S01a - WALKWAY PROPPING
N.T.S.



S01b - WALKWAY PROPPING
N.T.S.



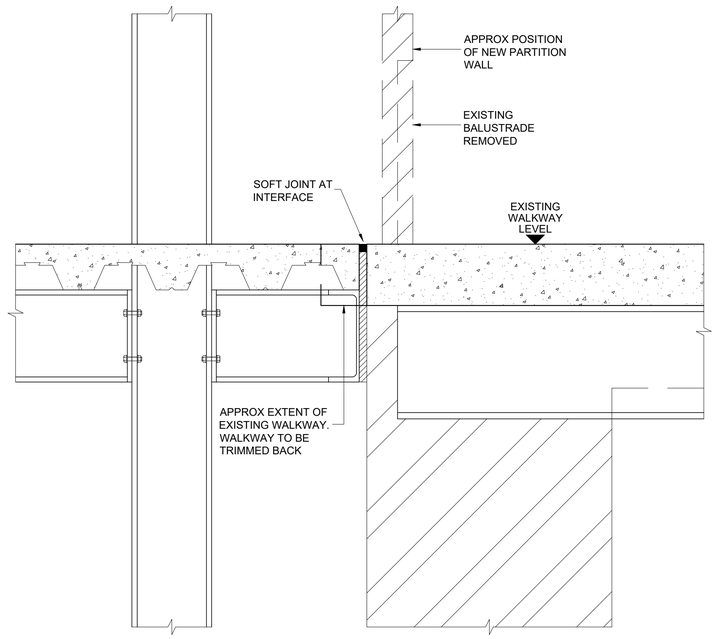
S01c - WALKWAY PROPPING
N.T.S.

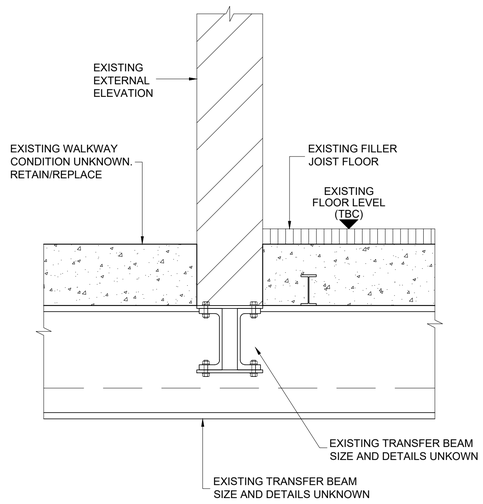
NOTES (S01a/b/c)

1. ALL MEMBER SIZES (NEW AND EXISTING) ARE SHOWN INDICATIVELY ONLY
2. CONNECTIONS AND CONSTRUCTION DETAILS TO BE VERIFIED FOLLOWING INTRUSIVE INVESTIGATIONS

SUGGESTED METHOD STATEMENT (S01a/b/c)

1. TEMPORARILY PROP EXISTING WALKWAYS AT TIP AND AT EXISTING WALL
2. CAREFULLY REMOVE MASONRY UNITS LOCALLY AROUND EXISTING BEAM CONNECTION INTO WALL
3. INSPECT CONDITION OF BEAM AND ASSOCIATED ELEMENTS
4. BLAST CLEAN STEEL
5. PROVIDE SUITABLE PAINTED CORROSION PROTECTION SYSTEM
6. REPLACE PREVIOUSLY REMOVED MASONRY UNITS AND BED WITH MORTAR SPECIFIED BY ARCHITECT
7. INSTALL NEW PERMANENT PROPPING STRUCTURE
8. REMOVE TEMPORARY PROPS

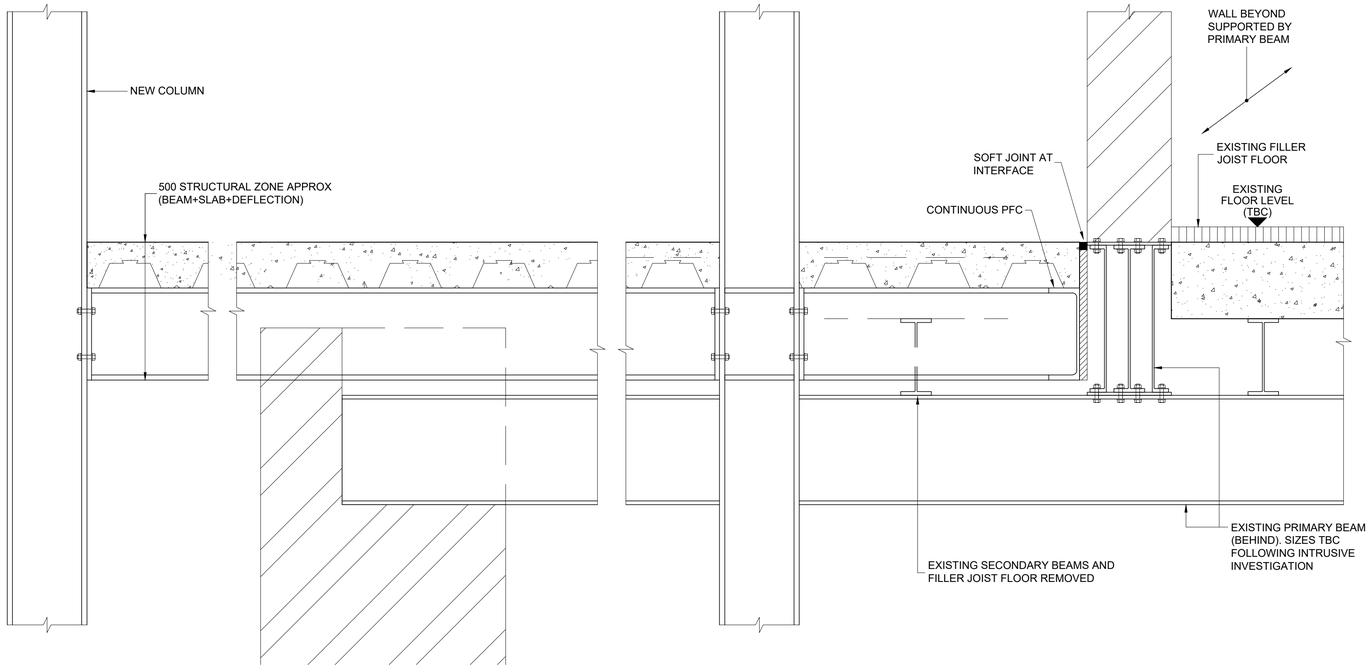




S02a - EXISTING/NEW INTERFACE
N.T.S.

NOTES

1. ALL MEMBER SIZES (NEW AND EXISTING) ARE SHOWN INDICATIVELY ONLY
2. CONNECTIONS AND CONSTRUCTION DETAILS TO BE VERIFIED FOLLOWING INTRUSIVE INVESTIGATIONS



S02b - EXISTING/NEW INTERFACE
N.T.S.

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Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth St West, Manchester, M1 5WG
t: 0161 236 2394
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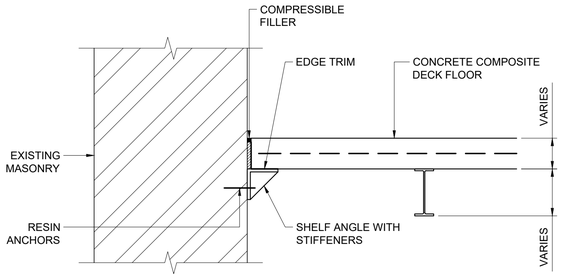
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NOTES

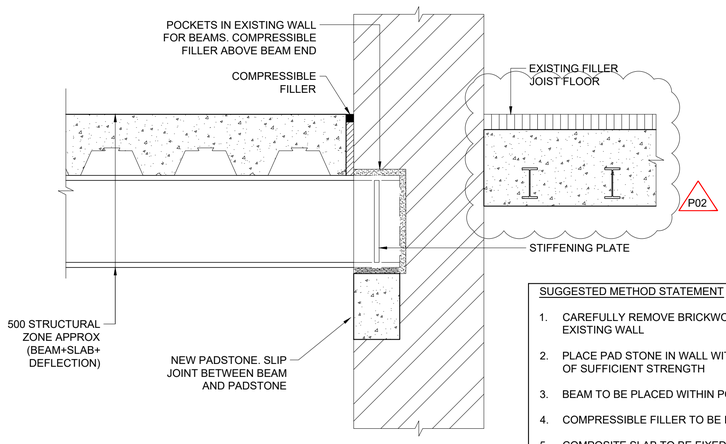
1. MEMBER SIZES SHOWN ARE INDICATIVE ONLY
2. RESIN ANCHORS INTO EXISTING WALL AT 450 CTRS TYPICAL

SUGGESTED METHOD STATEMENT

1. INSPECT THE EXISTING WALL IN THE AREA WHERE FIXINGS ARE TO BE PROVIDED
2. ANY LOOSE MASONRY UNITS ARE TO BE REMOVED AND RESET USING AN APPROPRIATE MORTAR (REFER TO ARCHITECT'S SPECIFICATION). ANY BROKEN MASONRY UNITS ARE TO BE REPLACED
3. DRILL HOLES TO THE REQUIRED DEPTH FOR THE RESIN ANCHORS (REFER TO MANUFACTURER'S RECOMMENDATIONS)
4. FIX SHELF ANGLE TO WALL USING SUITABLE RESIN ANCHORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMEDATIONS AND ALLOW TO CURE
5. INSTALL NEW COMPOSITE FLOOR

S03 - NEW INFILL FLOOR DETAIL

N.T.S.

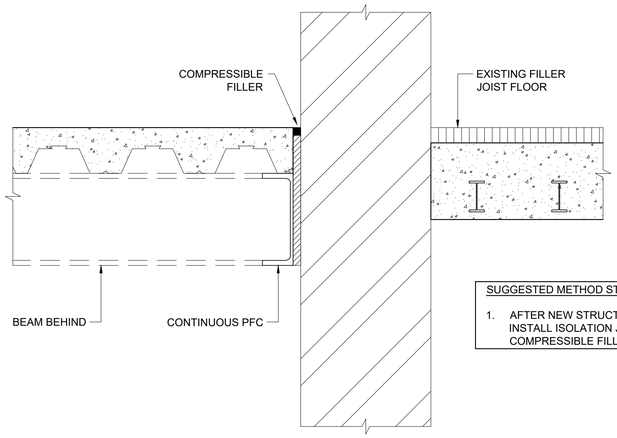


SUGGESTED METHOD STATEMENT

1. CAREFULLY REMOVE BRICKWORK FROM EXISTING WALL
2. PLACE PAD STONE IN WALL WITH MORTAR OF SUFFICIENT STRENGTH
3. BEAM TO BE PLACED WITHIN POCKET
4. COMPRESSIBLE FILLER TO BE INSERTED
5. COMPOSITE SLAB TO BE FIXED AND POURED

S04 - NEW HOTEL STRUCTURE CONNECTING TO EXISTING

Scale 1:10



SUGGESTED METHOD STATEMENT

1. AFTER NEW STRUCTURE IS COMPLETE INSTALL ISOLATION JOINT WITH COMPRESSIBLE FILLER

S05 - NEW HOTEL STRUCTURE ABUTTING EXISTING

Scale 1:10

NOTES

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5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE

Rev:	Description:	Date:	By:	Chkd:
P02	REVISED AS NOTED	31.03.17	GP	TJM
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Client: AlliedLondon

Status: PLANNING

Project: LONDON ROAD MANCHESTER

Drg Title: STEELWORK DETAILS SHEET 2

Scale:	Size:	First Issue:	Drawn:	Checked:
AS SHOWN	A1	09.12.16	GP	TJM

Drg No: 060270-CUR-00-XX-DR-S-28-609

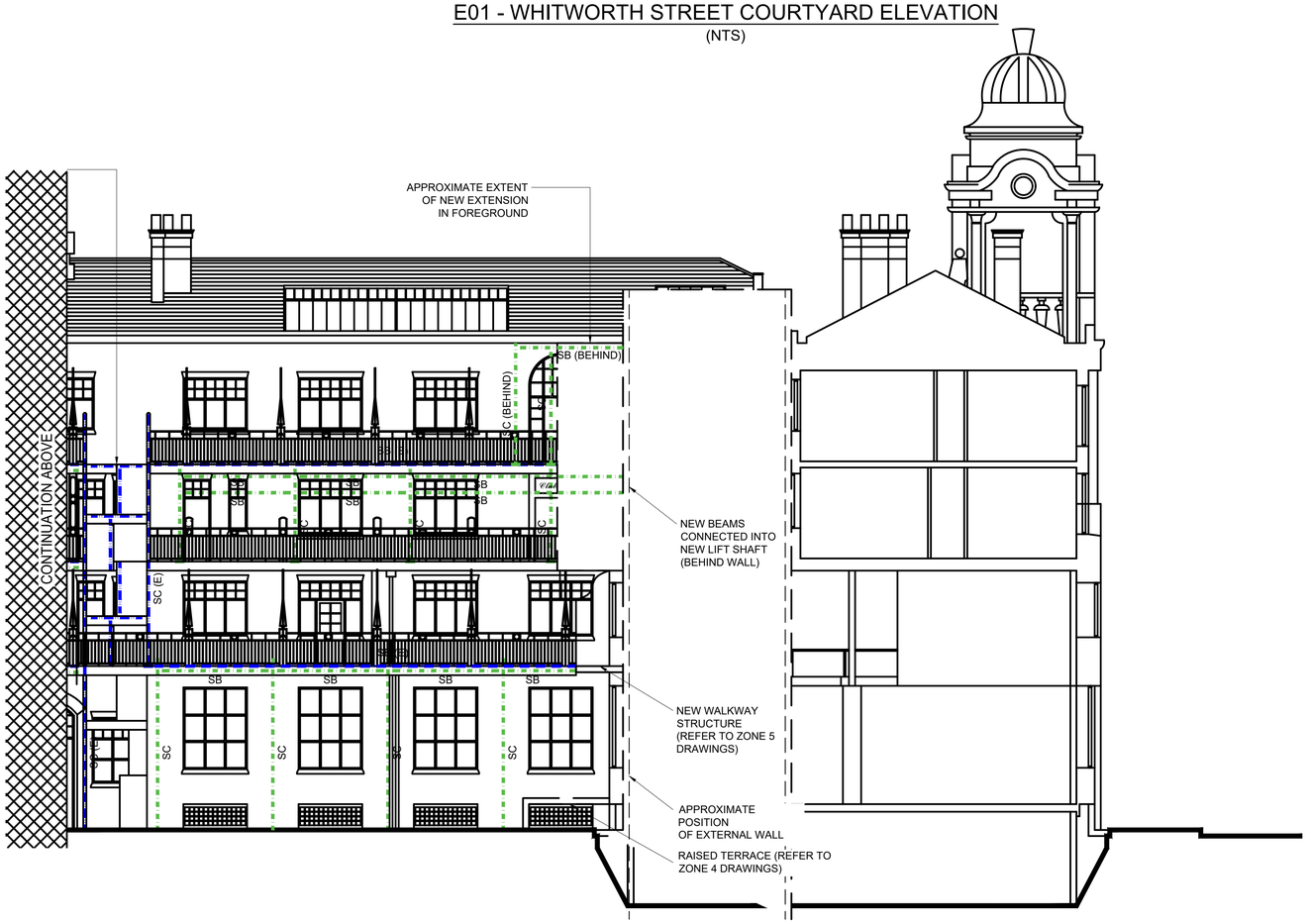
Rev: P02

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E01 - WHITWORTH STREET COURTYARD ELEVATION

(NTS)



E01 - CONTINUATION

(NTS)

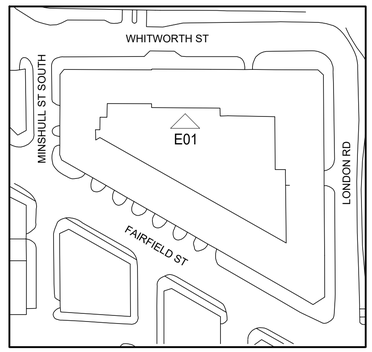
KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150Thk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
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- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

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C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U)	UNDER ONLY
(O)	OVER ONLY
(E)	EXISTING
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KEY PLAN

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Project: LONDON ROAD MANCHESTER

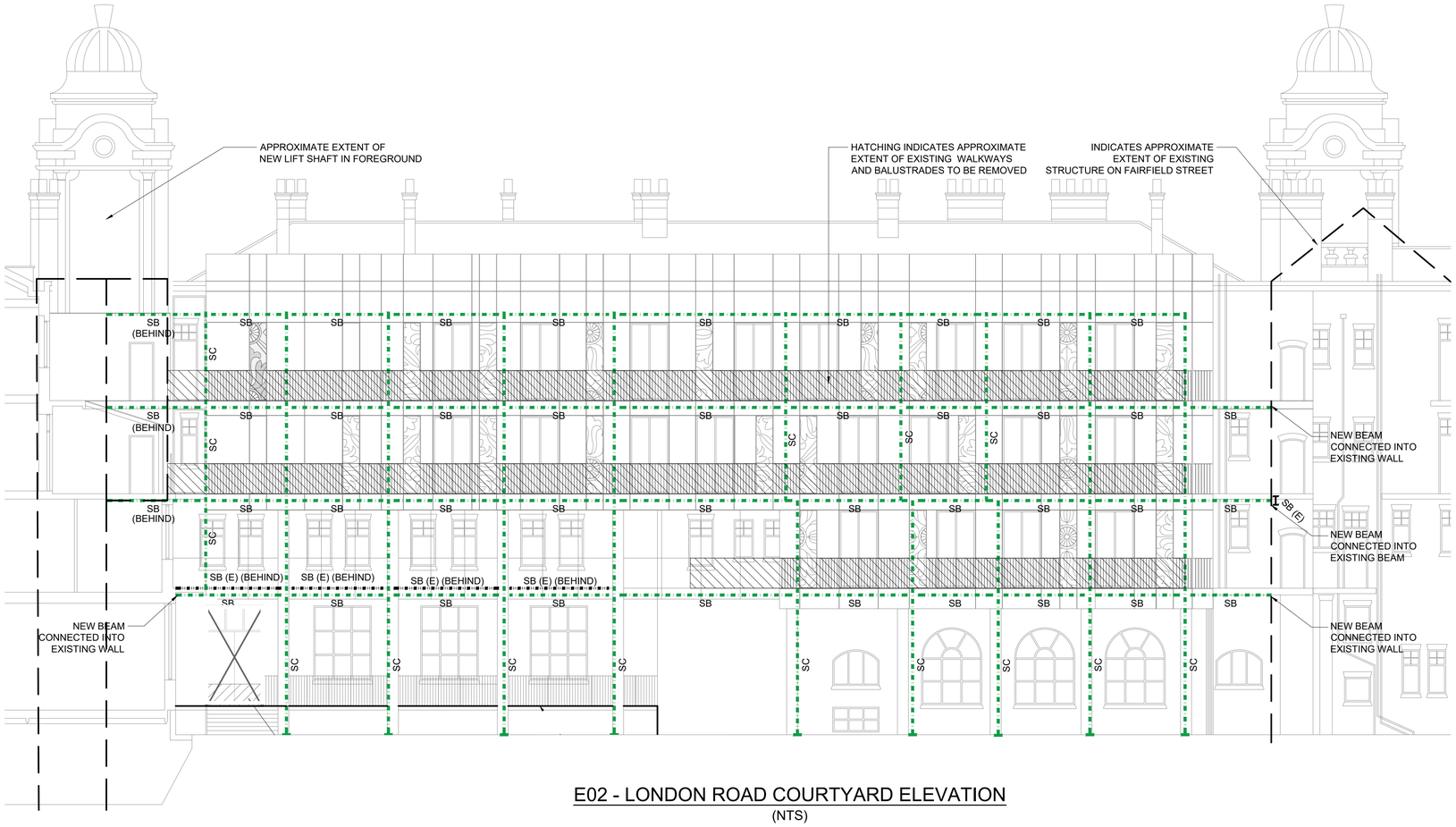
Drg Title: ELEVATIONS SHEET 1

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E02 - LONDON ROAD COURTYARD ELEVATION

(NTS)

KEY

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- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

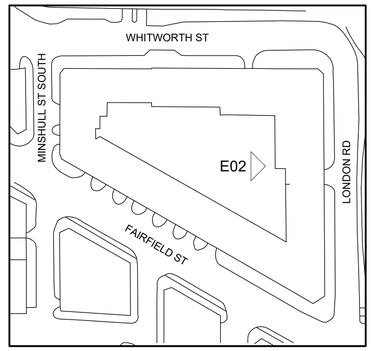
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C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
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SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
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TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

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Drg Title: ELEVATIONS SHEET 2

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Rev: P03

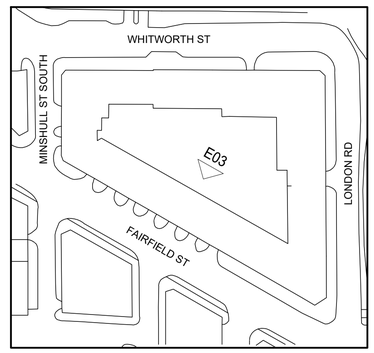
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E03 - FAIRFIELD STREET COURTYARD ELEVATION
(NTS)



E03 - CONTINUATION
(NTS)



KEY PLAN

KEY

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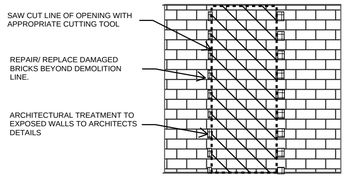
Drg Title: ELEVATIONS SHEET 3

Scale:	Size:	First Issue:	Drawn:	Checked:
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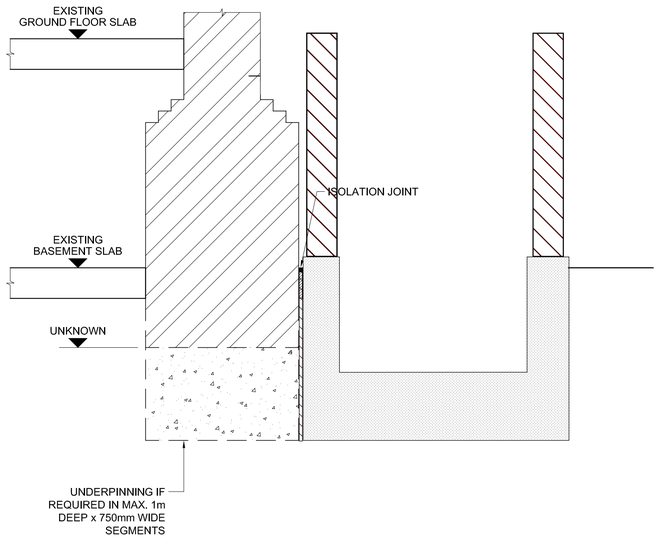


SUGGESTED METHOD STATEMENT
1. SAW CUT LINE OF OPENING WITH APPROPRIATE CUTTING TOOL

2. REPAIR/ REPLACE LOOSE BRICKS BEYOND DEMOLITION LINE.

3. FINISH EXPOSED WALLS TO ARCHITECTS DETAILS

MASONRY WALL PANEL REMOVAL
(SCALE N.T.S)



NOTES
1. SEQUENCING OF ANY UNDERPINNING IS TO BE AGREED PRIOR TO WORKS COMMENCING.

2. TANKING TO ARCHITECTS SPECIFICATION.

SUGGESTED METHOD STATEMENT
1. EXCAVATE GROUND DOWN TO EXISTING WALL BEARING LEVEL.

2. UNDERPIN AREA OF EXISTING WALL ADJACENT TO PROPOSED LIFT PIT. BUILD IN 0.75m SEGMENTS & UP TO 1m DEPTH.

3. CONSTRUCT NEW LIFT PIT WITH ISOLATION JOINT BETWEEN EXISTING AND NEW FOOTINGS.

4. REINSTATE FLOOR SLAB AROUND NEW LIFT PIT.

U01 - UNDERPINNING MASONRY WALL FOR NEW BASEMENT LIFT PIT
N.T.S

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Client:
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Status:
PLANNING

Project:
LONDON ROAD
MANCHESTER

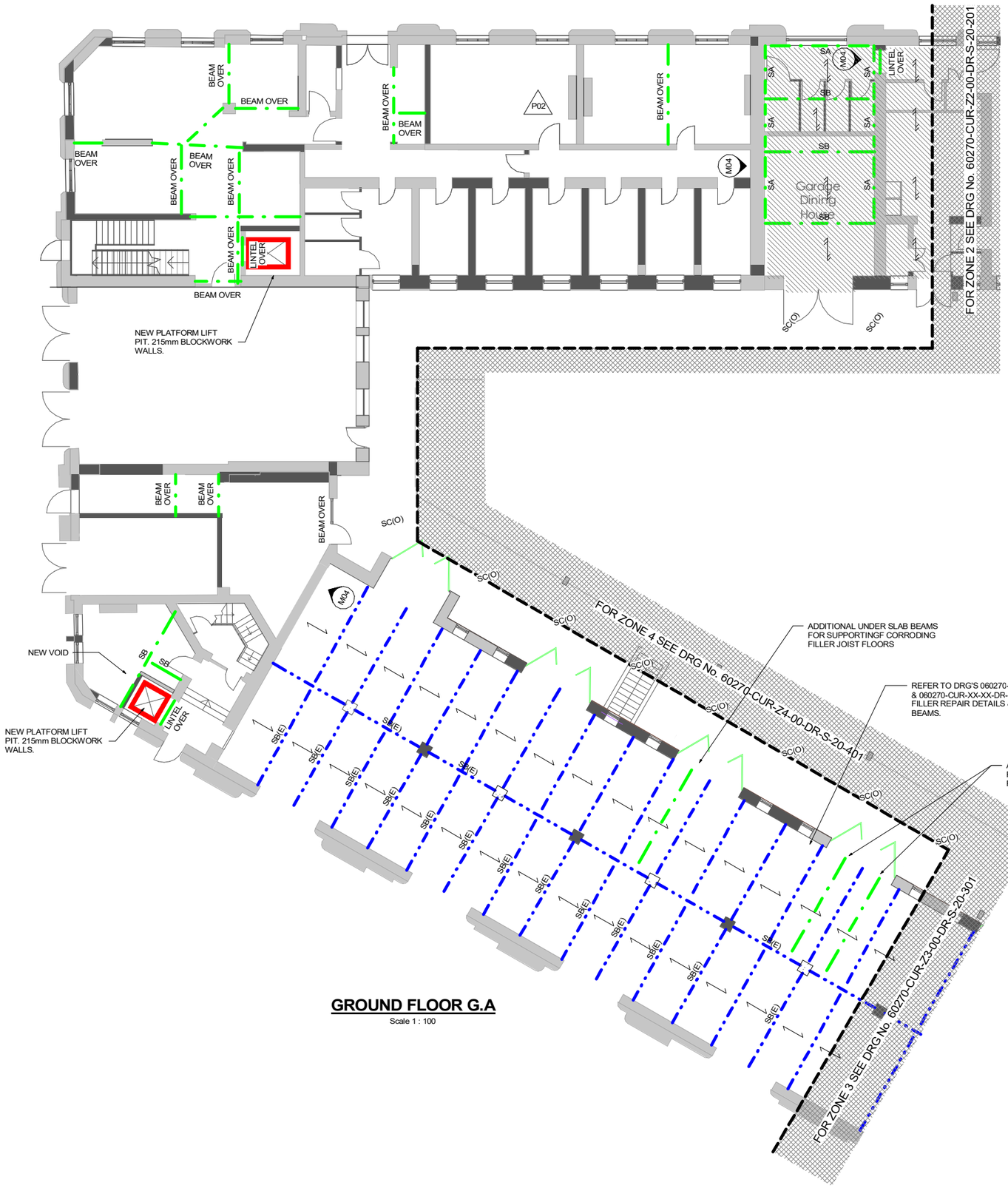
Drg Title:
STRUCTURAL DETAILS
SHEET 3

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GROUND FLOOR G.A

Scale 1 : 100

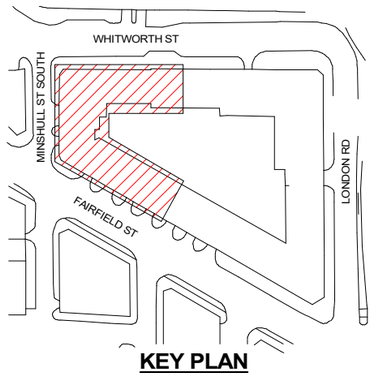
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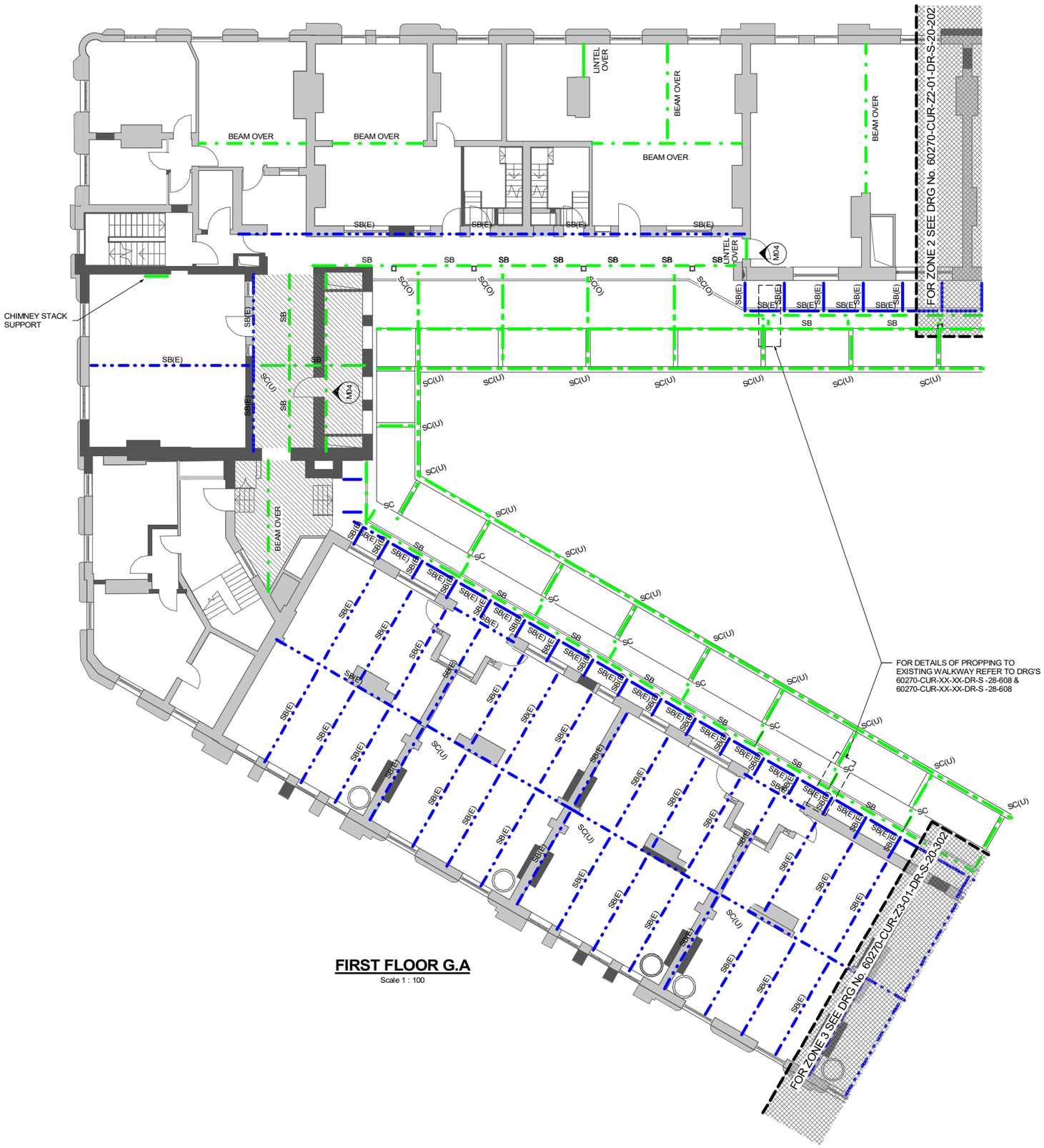
Drg. Title : ZONE 1 GROUND FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
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Drg No: 060270- CUR- Z1- 00- DR- S- 20- 101

Rev : P03

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FIRST FLOOR G.A

Scale 1 : 100

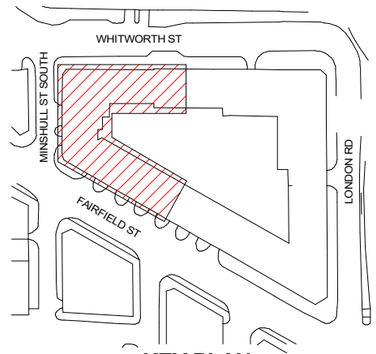
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P03	UPDATED FOR PLANNING 2019	27.11.19	MH	KG
P02	REVISED AS NOTED	31.03.17	TR	TJM
P01	ISSUED FOR PLANNING	19.12.16	TR	TJM

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t: 0161 236 2394
e: manchester@curtins.com www.curtins.com
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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 1 FIRST FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z1- 01- DR- S- 20- 102

Rev : P03

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SECOND FLOOR G.A

Scale 1 : 100

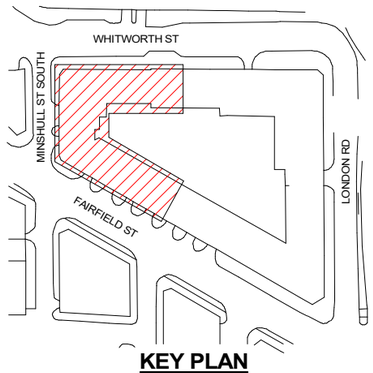
KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U)	UNDER ONLY
(O)	OVER ONLY
(D)	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE



KEY PLAN

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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

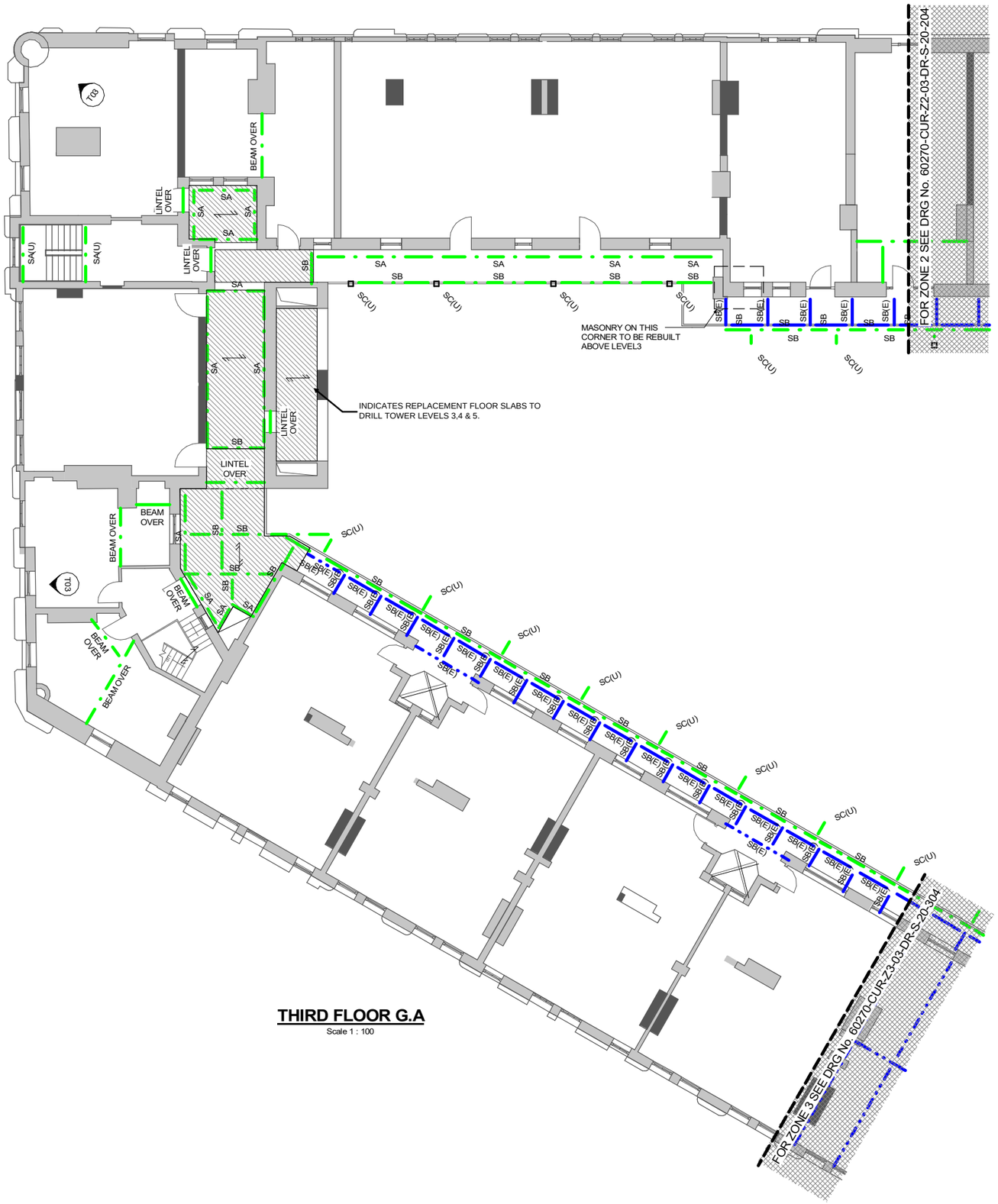
Drg. Title : ZONE 1 SECOND FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z1- 02- DR- S- 20- 103

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THIRD FLOOR G.A

Scale 1 : 100

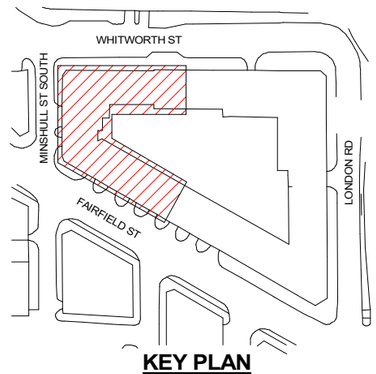
KEY

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- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
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- INDICATES DIRECTION OF SPAN FOR NEW 150 Thk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U)	UNDER ONLY
(O)	OVER ONLY
(D)	DEMOLISHED
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KEY PLAN

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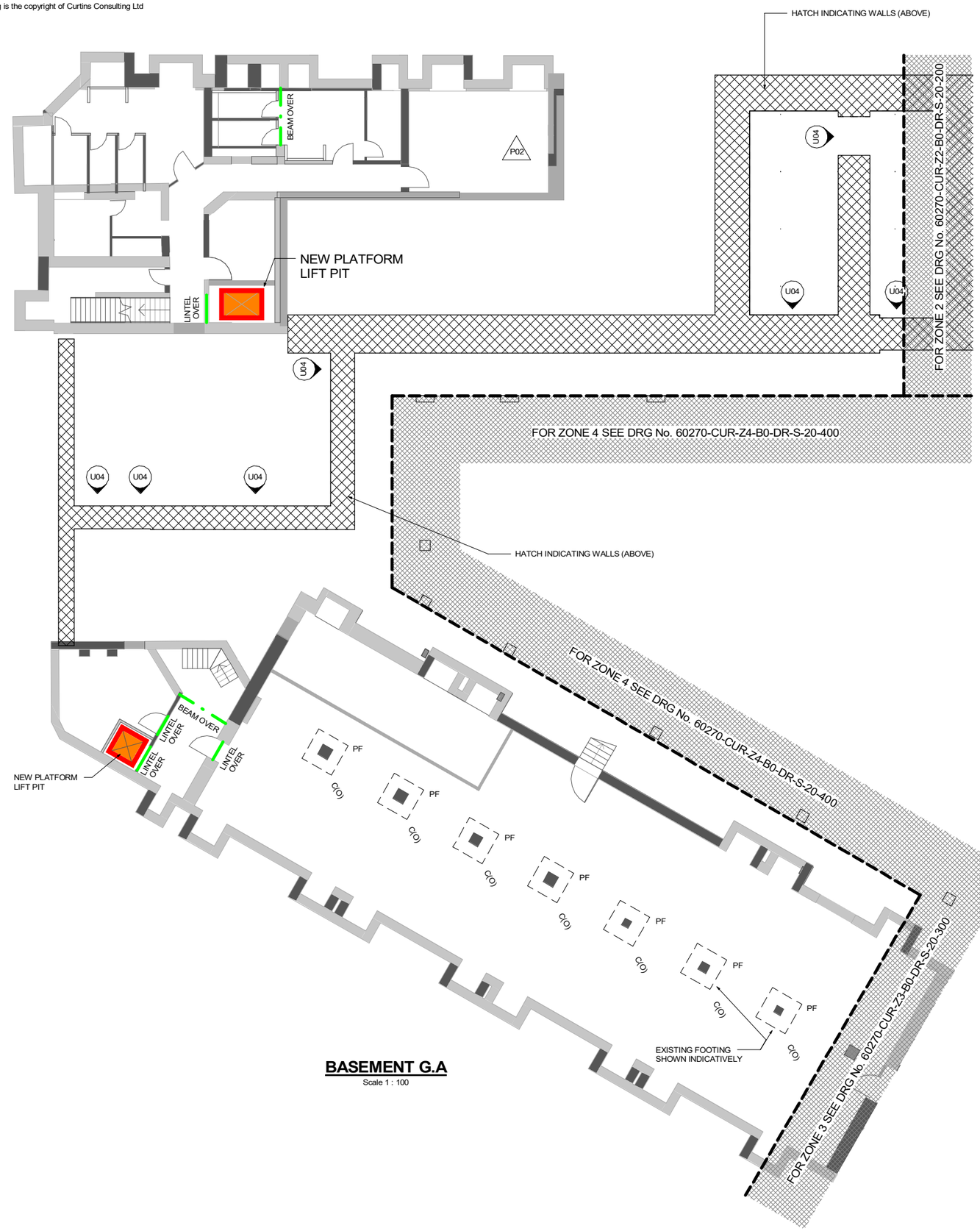
Drg. Title : ZONE 1 THIRD FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z1- 03- DR- S- 20- 104

Rev : P03

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BASEMENT G.A
Scale 1 : 100

KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

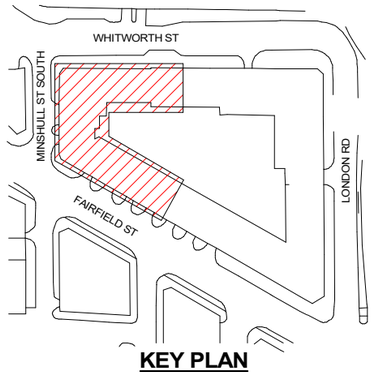
B	BEAM
C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
(O	OVER ONLY
(D	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE

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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

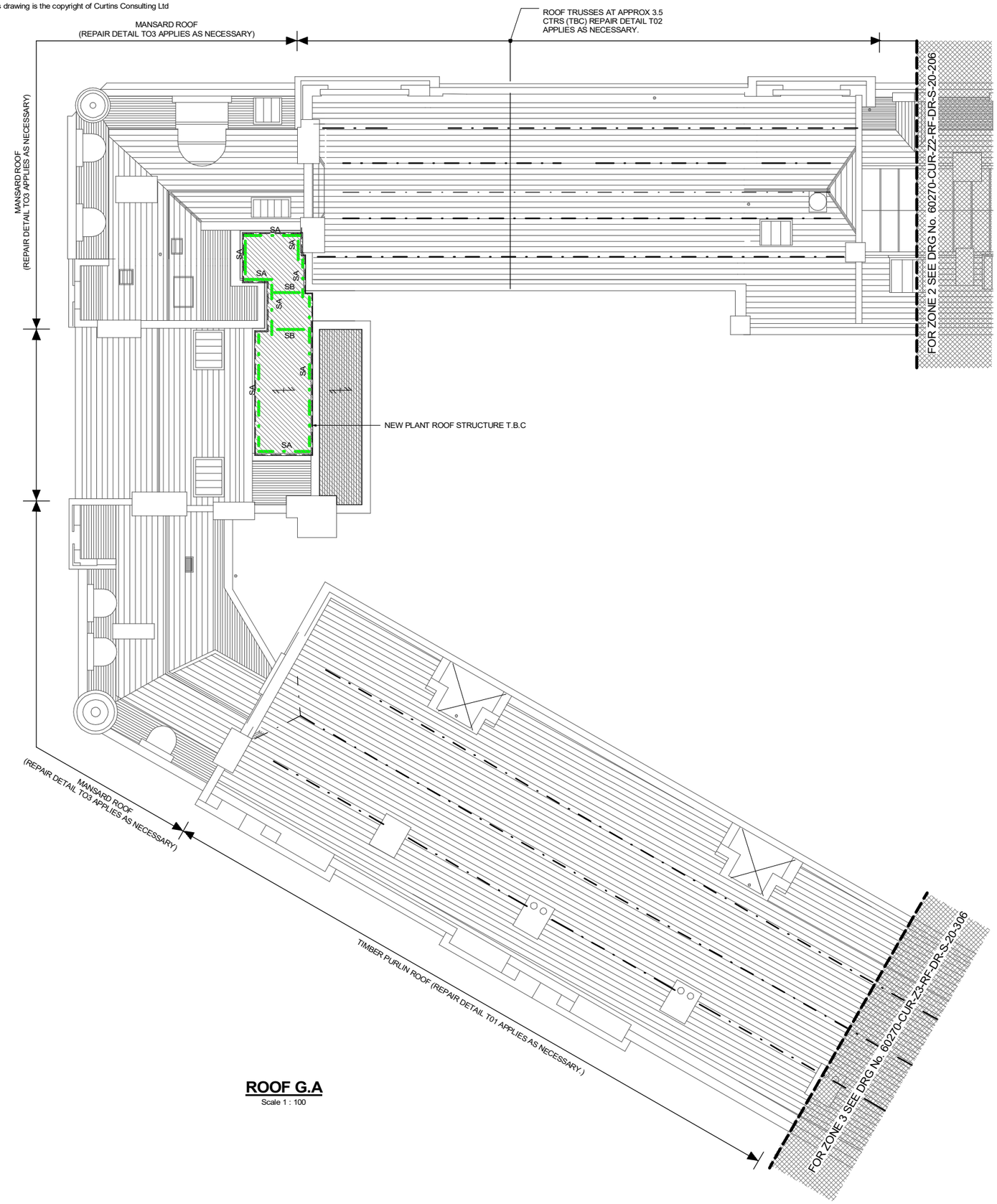
Drg. Title : ZONE 1 BASEMENT GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z1- B0- DR- S- 20- 100

Rev : P03

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ROOF G.A

Scale 1 : 100

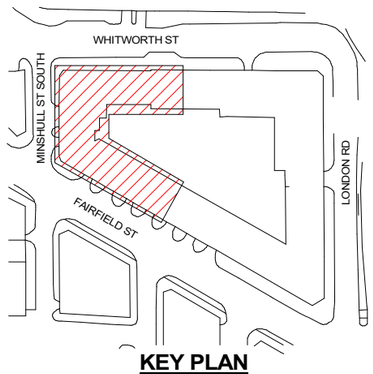
KEY

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- MASONRY / CONCRETE ELEMENT BELOW
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- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
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(D	DEMOLISHED
(E)	EXISTING
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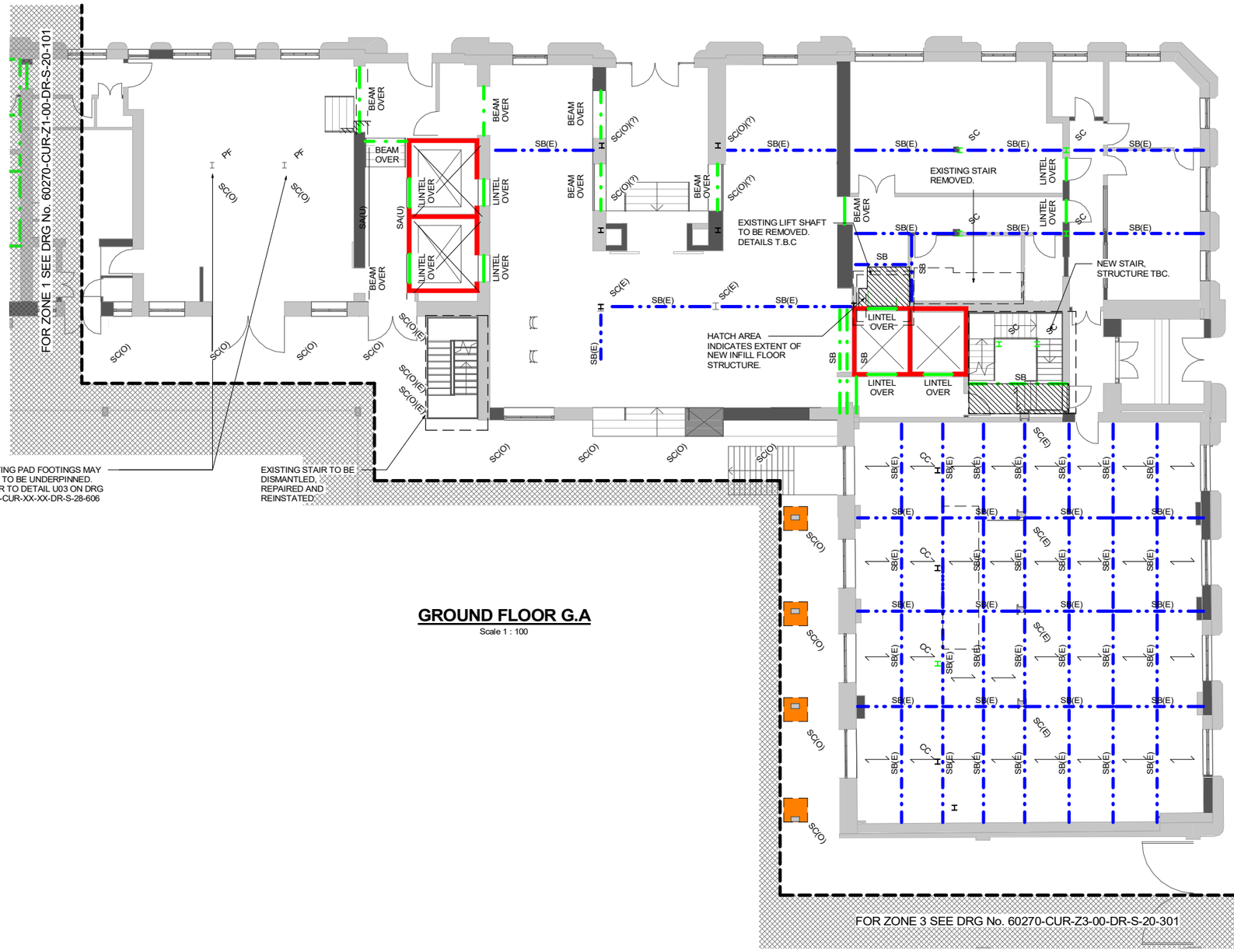
Drg. Title : ZONE 1 ROOF GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
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Drg No: 060270- CUR- Z1- RF- DR- S- 20- 106

Rev : P03

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GROUND FLOOR G.A

Scale 1 : 100

KEY

- MASONRY / CONCRETE ELEMENT OVER
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- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
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- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

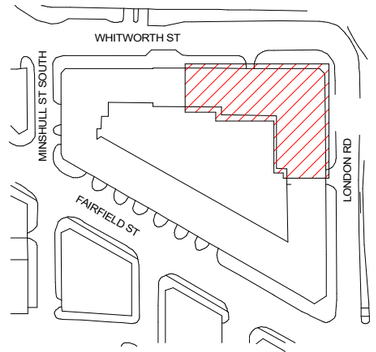
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C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
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CC	CONCRETE COLUMN
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SUFFIX

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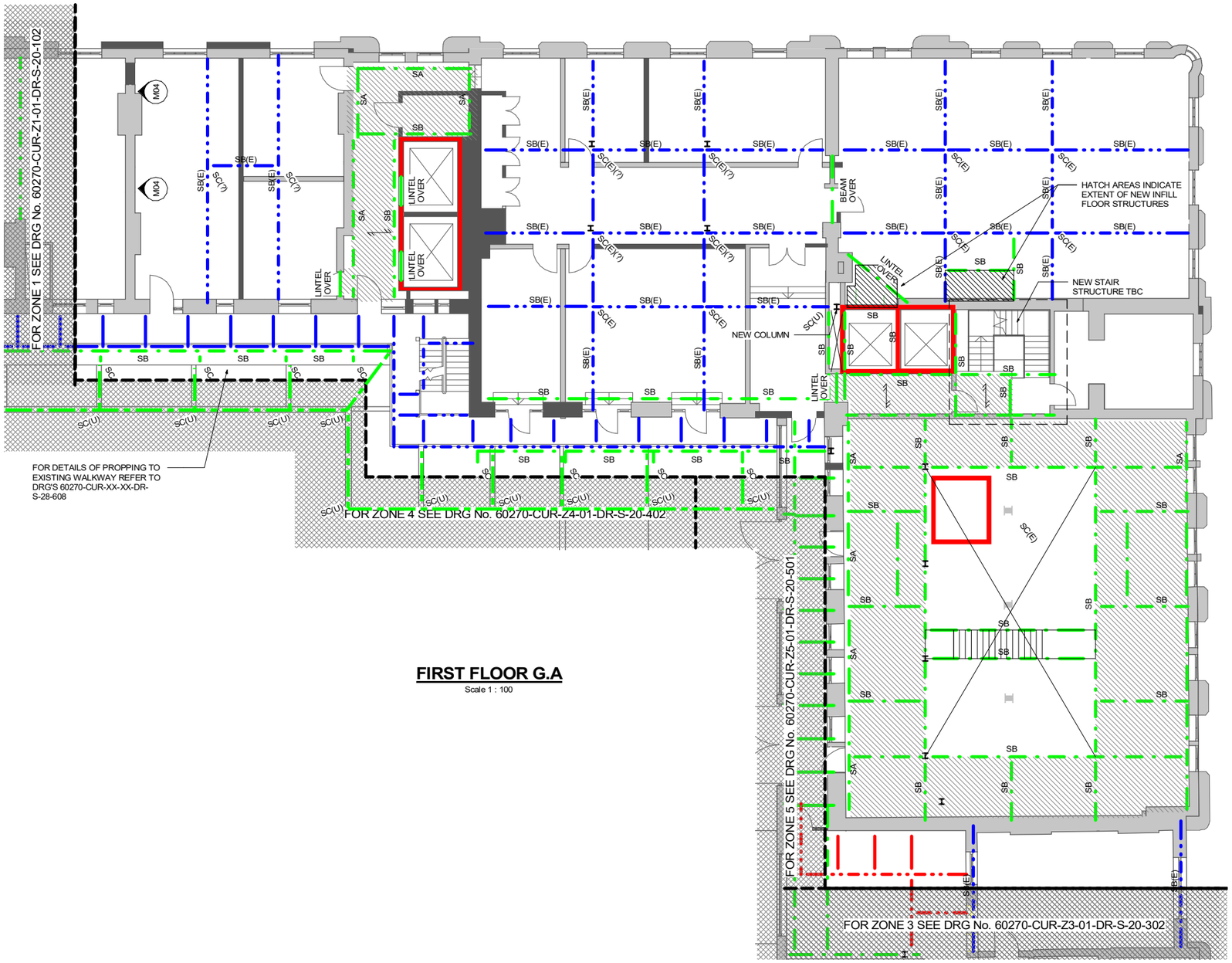
Drg. Title : ZONE 2 GROUND FLOOR GENERAL GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked
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Drg No: 060270- CUR- Z2- 00- DR- S- 20- 201

Rev : P03

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FIRST FLOOR G.A

Scale 1 : 100

KEY

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- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
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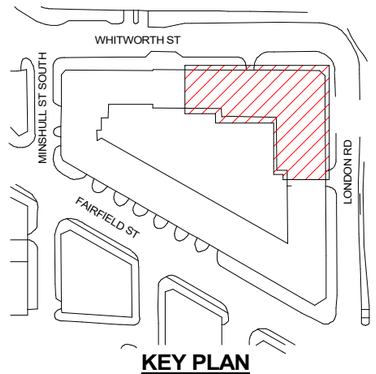
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TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U)	UNDER ONLY
(O)	OVER ONLY
(D)	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE

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KEY PLAN

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P03	UPDATED FOR PLANNING 2019	27.11.19	MH	KG
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e: manchester@curtins.com www.curtins.com
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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

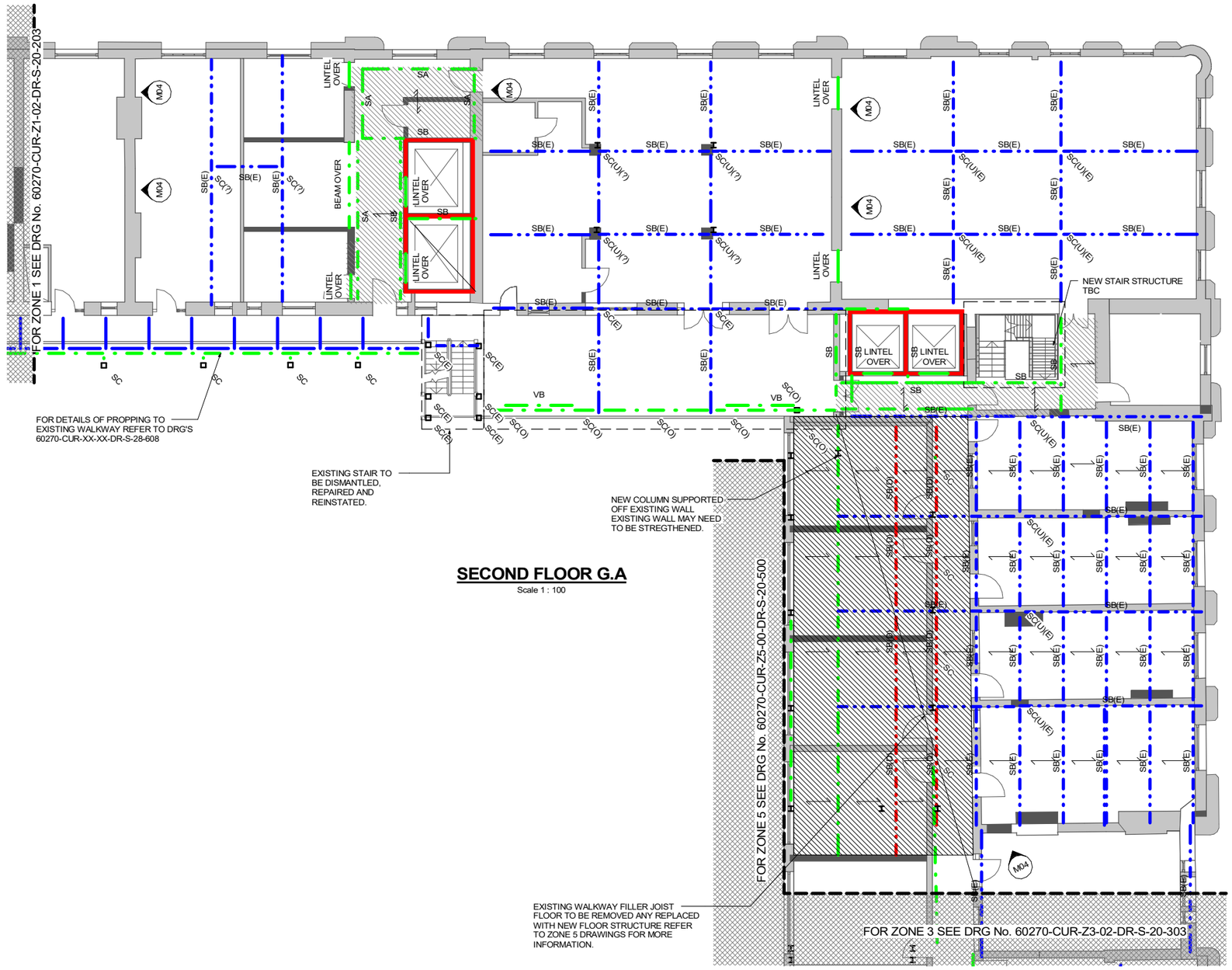
Drg. Title : ZONE 2 FIRST FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z2- 01- DR- S- 20- 202

Rev : P03

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SECOND FLOOR G.A

Scale 1 : 100

KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

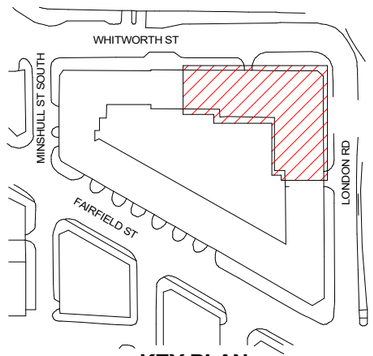
B	BEAM
C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
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(D	DEMOLISHED
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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

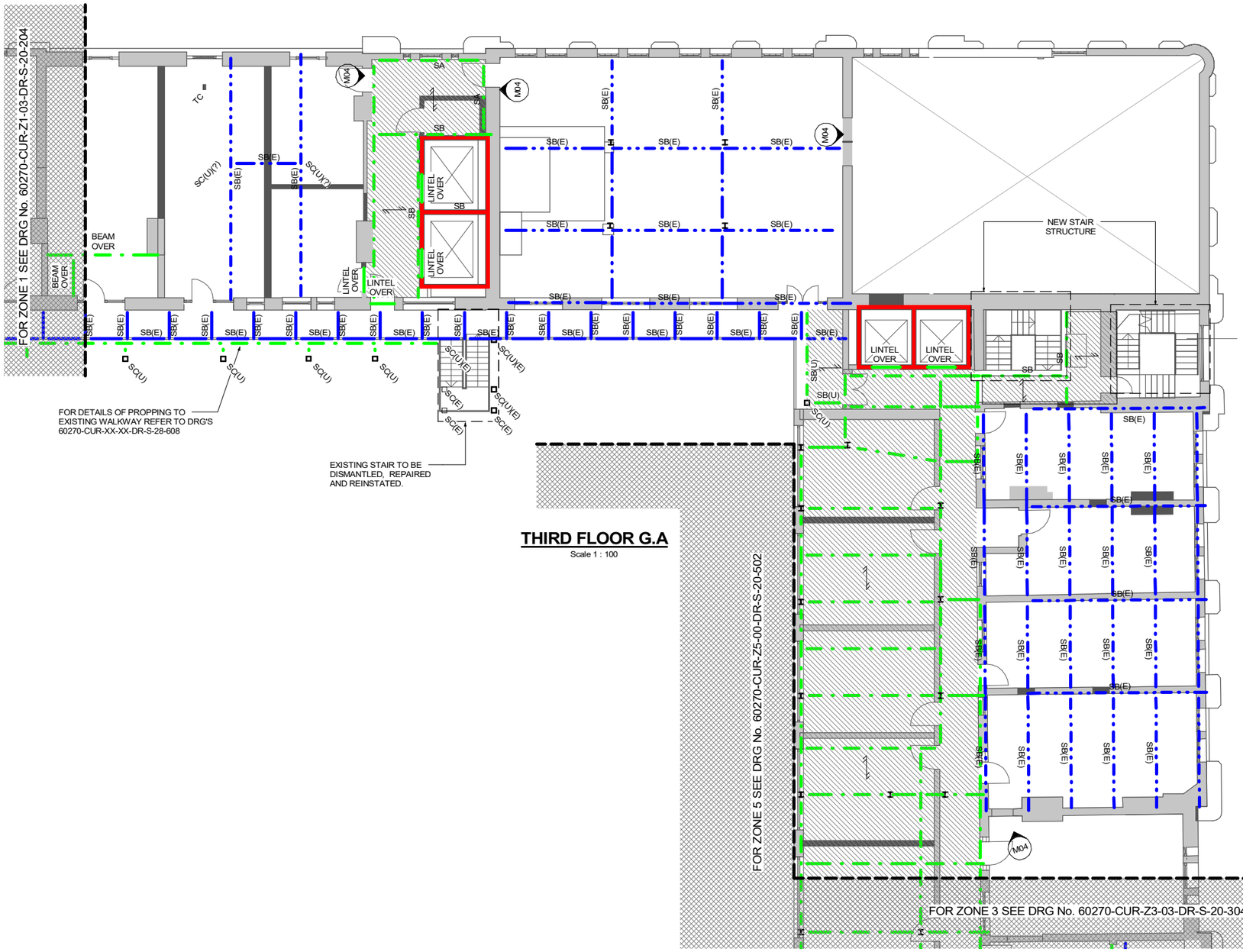
Drg. Title : ZONE 2 SECOND FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z2- 02- DR- S- 20- 203

Rev : P03

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THIRD FLOOR G.A

Scale 1 : 100

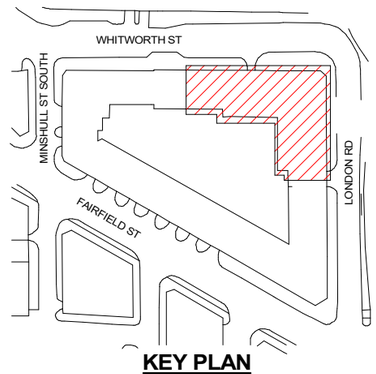
KEY

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- MASONRY / CONCRETE ELEMENT BELOW
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- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
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C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

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KEY PLAN

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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 2 THIRD FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z2- 03- DR- S- 20- 204

Rev : P03

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BASEMENT G.A

Scale 1 : 100

KEY

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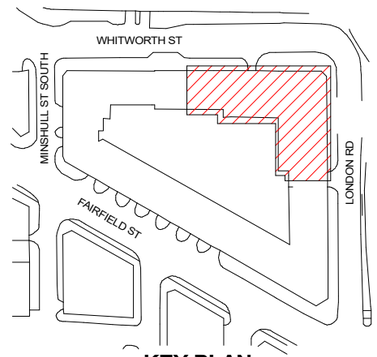
B	BEAM
C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
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SUFFIX

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Client : AlliedLondon

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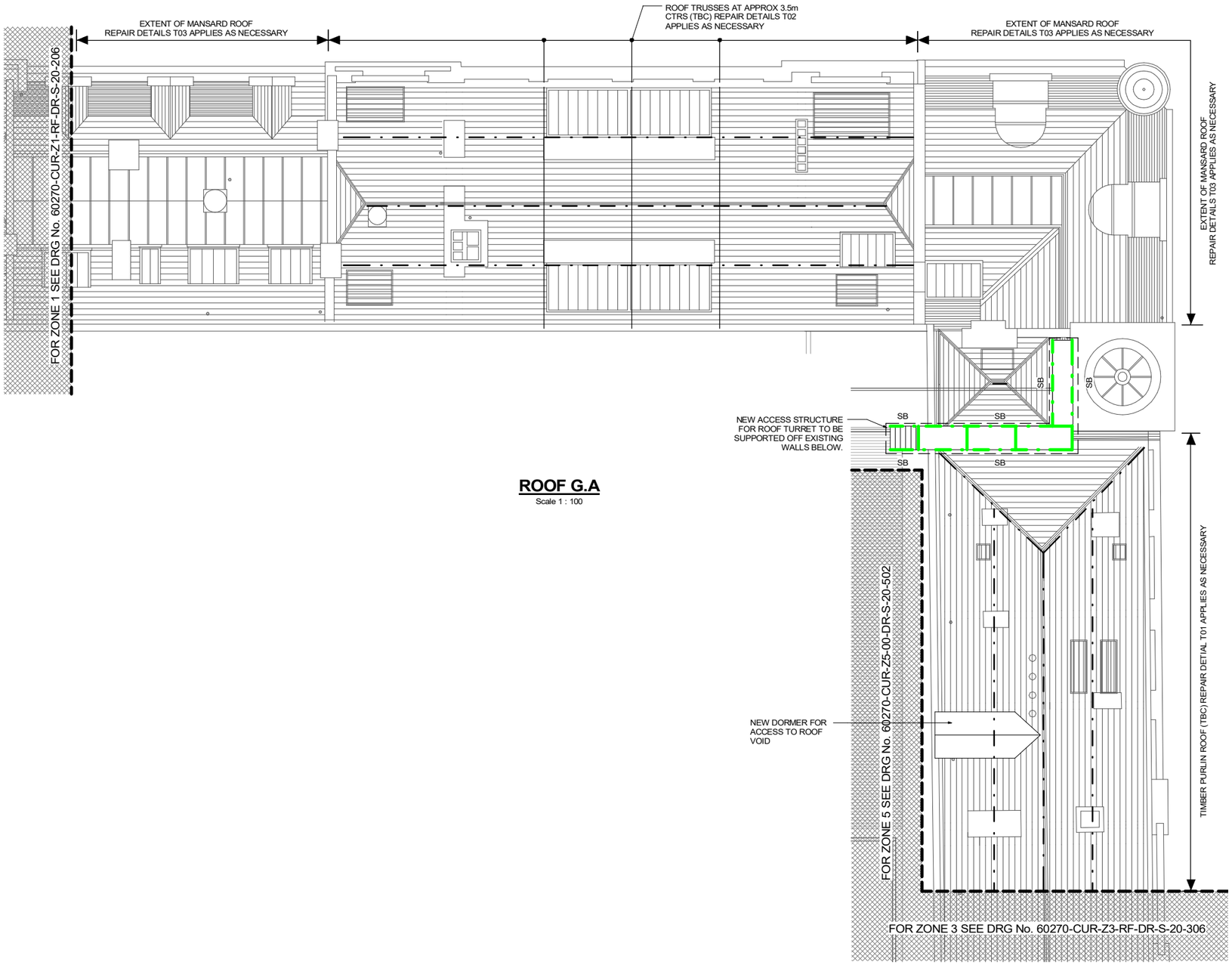
Drg. Title : ZONE 2 BASEMENT GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z2- B0- DR- S- 20- 200

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ROOF G.A

Scale 1 : 100

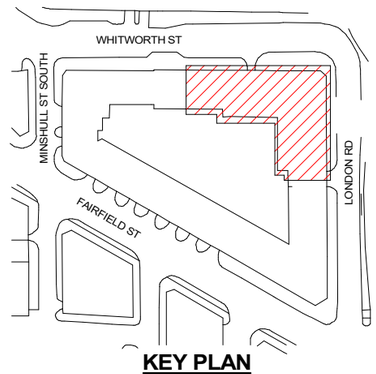
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- EXISTING ELEMENT TO BE DEMOLISHED
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C	COLUMN
PF	PAD FOUNDATION
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SC	STEEL COLUMN
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SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
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SUFFIX

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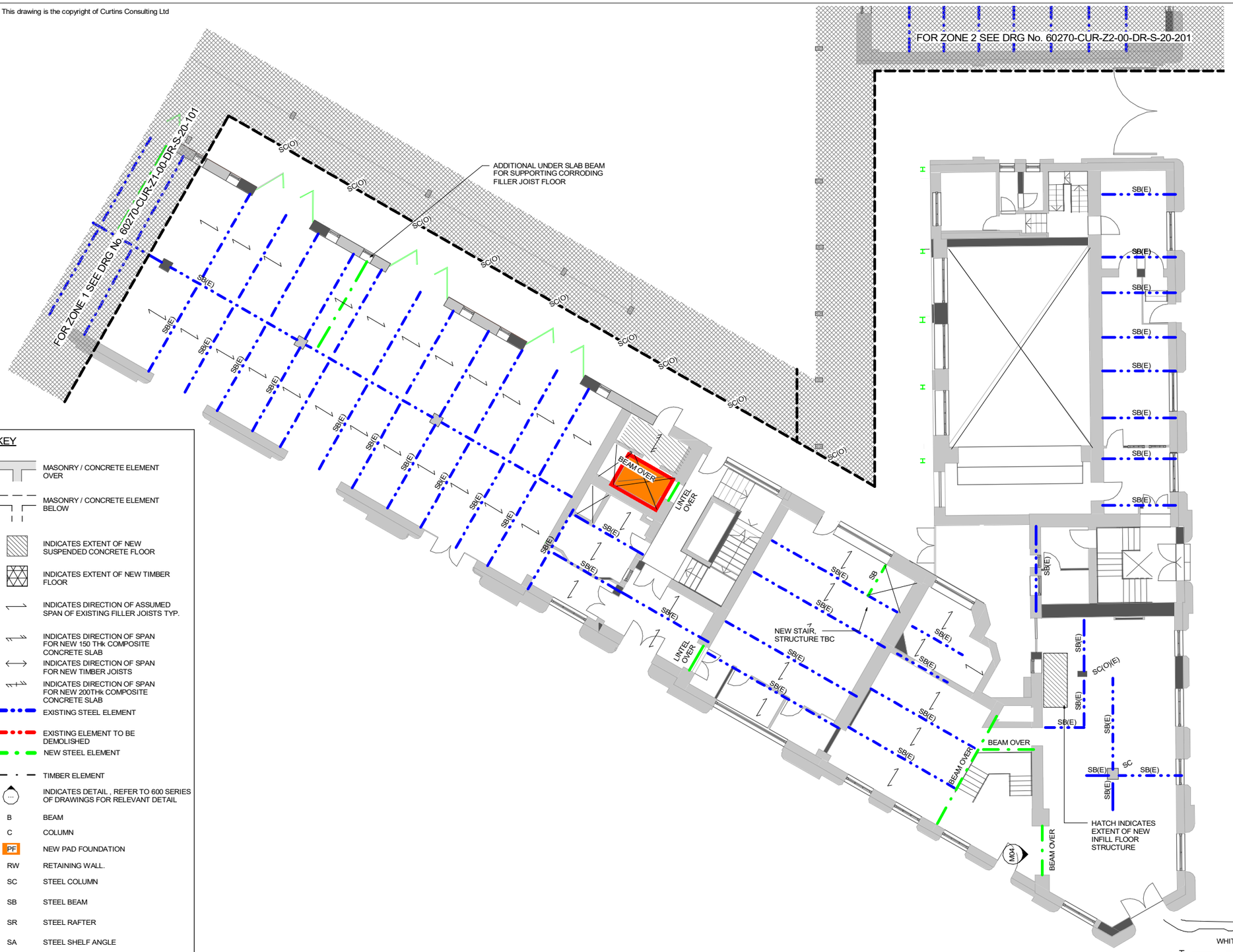
Drg. Title : ZONE 2 ROOF GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
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Drg No: 060270- CUR- Z2- RF- DR- S- 20- 206

Rev : P03

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GROUND FLOOR G.A

Scale 1 : 100

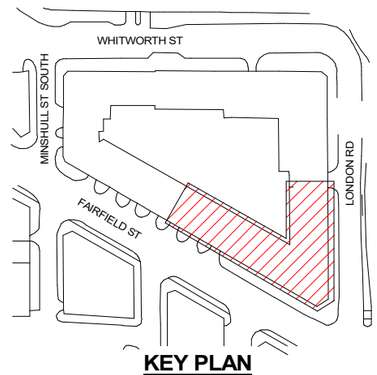
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Status : PLANNING

Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 3 GROUND FLOOR GENERAL GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z3- 00- DR- S- 20- 301

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FIRST FLOOR G.A

Scale 1 : 100

KEY

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PF	PAD FOUNDATION
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SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
(O	OVER ONLY
(D	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE

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Rev:	Description:	Date:	By:	Chkd:
P03	UPDATED FOR PLANNING 2019	27.11.19	MH	KG
P02	REVISED AS NOTED	31.03.17	TR	TJM
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Client : AlliedLondon

Status : PLANNING

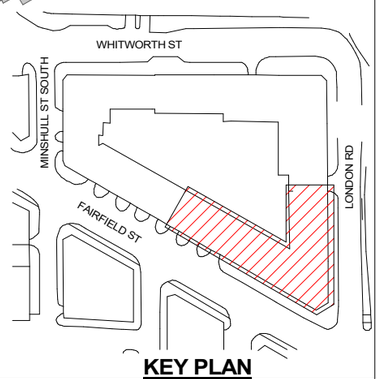
Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 3 FIRST FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

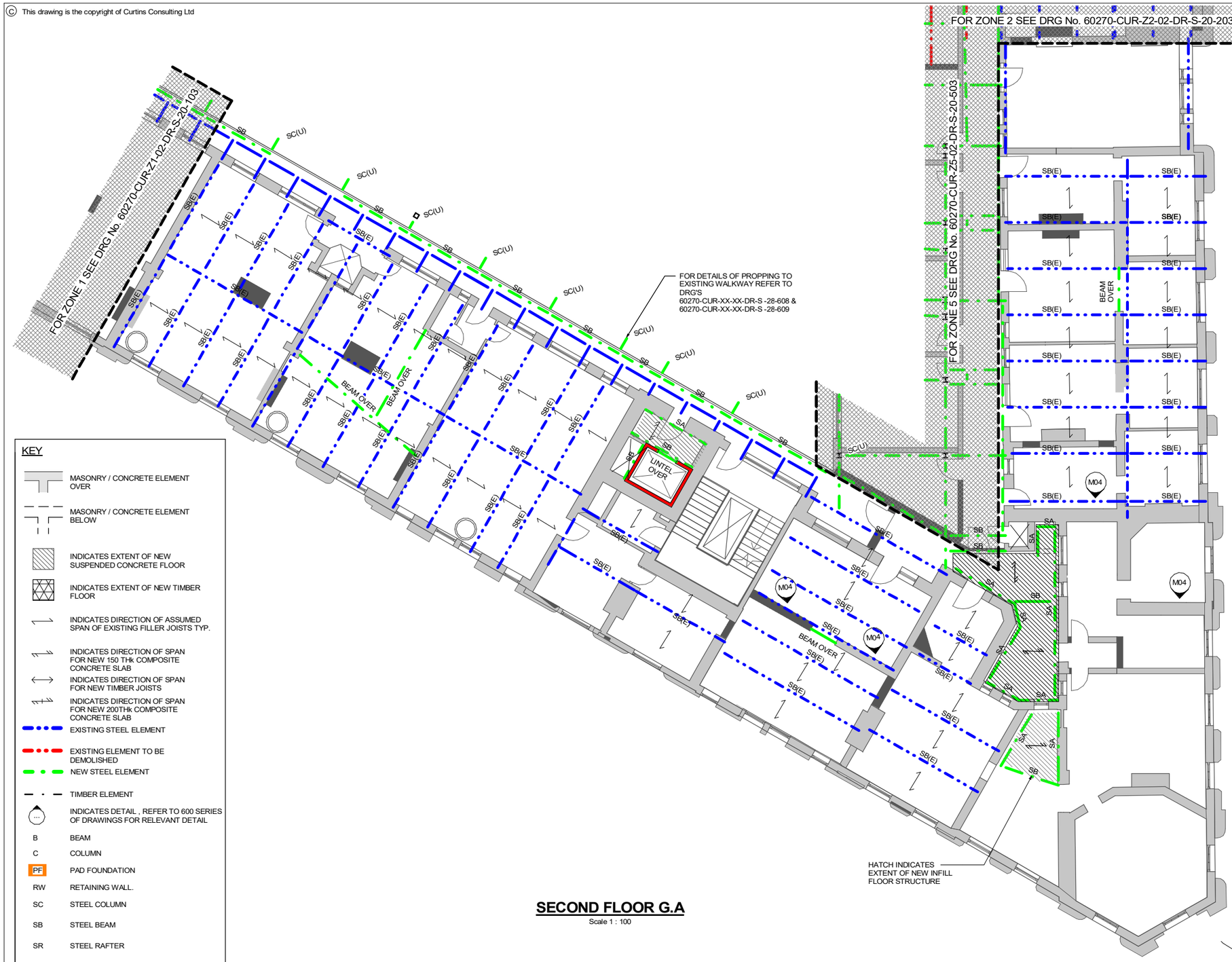
Drg No: 060270- CUR- Z3- 01- DR- S- 20- 302

Rev : P03



KEY PLAN

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SECOND FLOOR G.A

Scale 1 : 100

KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
(O	OVER ONLY
(D	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE

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Client : AlliedLondon

Status : PLANNING

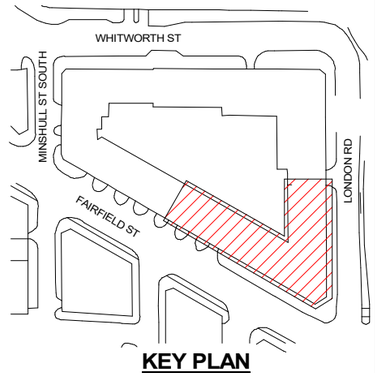
Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 3 SECOND FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

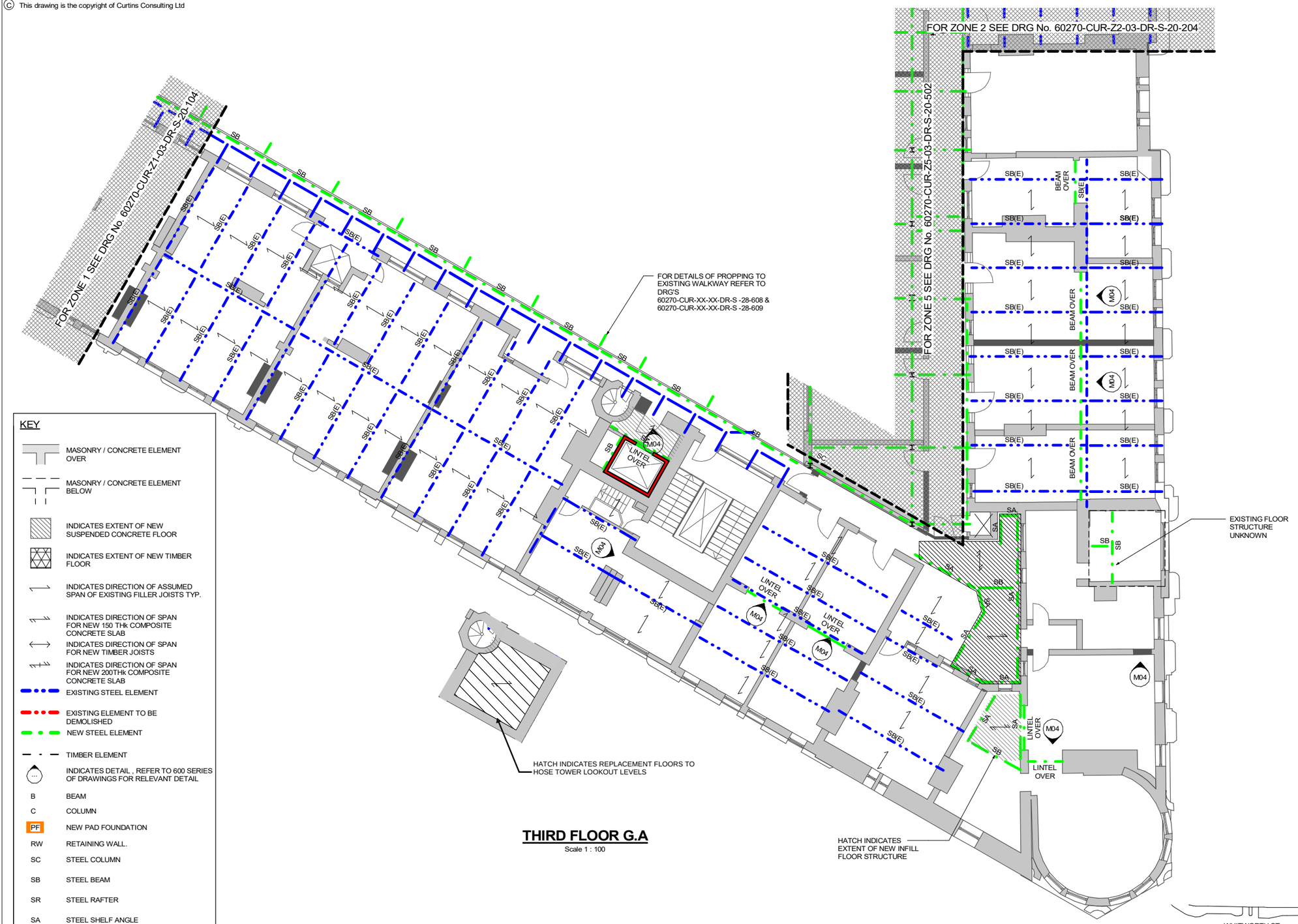
Drg No: 060270- CUR- Z3- 02- DR- S- 20- 303

Rev : P03



KEY PLAN

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THIRD FLOOR G.A

Scale 1 : 100

KEY

- MASONRY / CONCRETE ELEMENT OVER
- MASONRY / CONCRETE ELEMENT BELOW
- INDICATES EXTENT OF NEW SUSPENDED CONCRETE FLOOR
- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

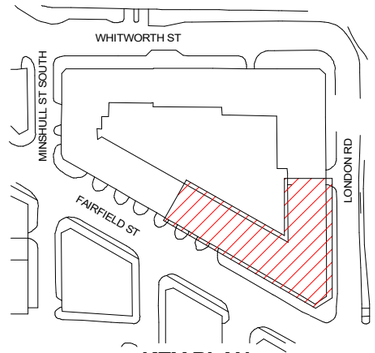
B	BEAM
C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
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(D	DEMOLISHED
(E)	EXISTING
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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

Drg. Title : ZONE 3 THIRD FLOOR GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
1:100	A1	09/12/16	TR	TJM

Drg No: 060270- CUR- Z3- 03- DR- S- 20- 304

Rev : P03

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BASEMENT G.A

Scale 1 : 100

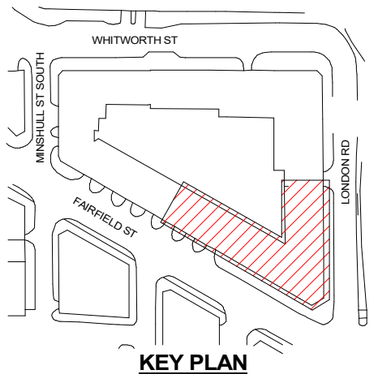
KEY

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- MASONRY / CONCRETE ELEMENT BELOW
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- INDICATES EXTENT OF NEW TIMBER FLOOR
- INDICATES DIRECTION OF ASSUMED SPAN OF EXISTING FILLER JOISTS TYP.
- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
- INDICATES DIRECTION OF SPAN FOR NEW TIMBER JOISTS
- INDICATES DIRECTION OF SPAN FOR NEW 200THk COMPOSITE CONCRETE SLAB
- EXISTING STEEL ELEMENT
- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

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Client : AlliedLondon

Status : PLANNING

Project : LONDON ROAD MANCHESTER

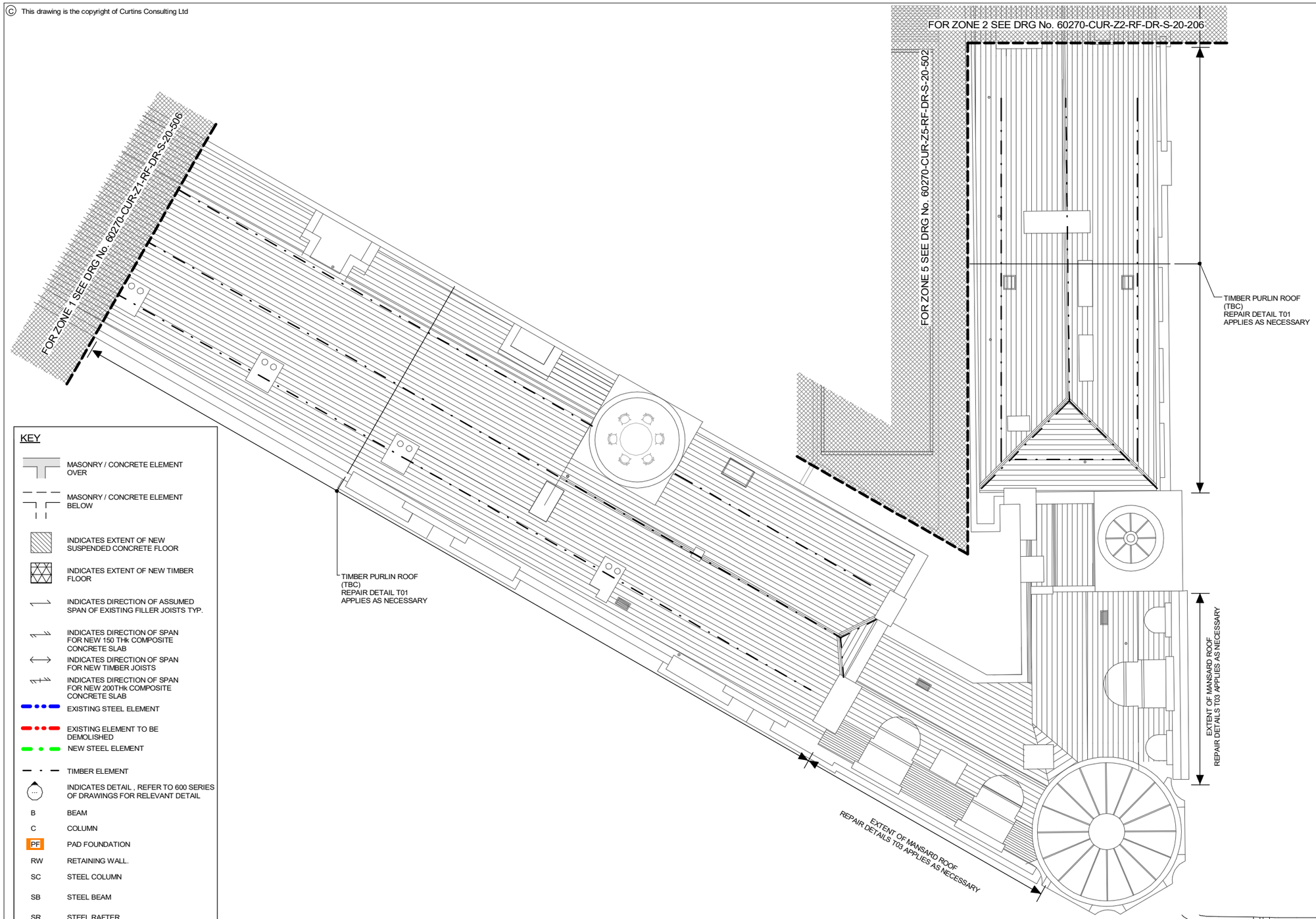
Drg. Title : ZONE 3 BASEMENT GENERAL ARRANGEMENT

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Drg No: 060270- CUR- Z3- B0- DR- S- 20- 300

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ROOF G.A
Scale 1 : 100

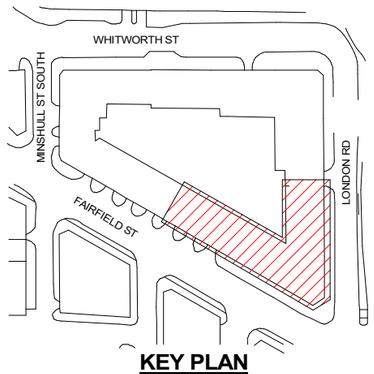
KEY

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- INDICATES DIRECTION OF SPAN FOR NEW 150 THk COMPOSITE CONCRETE SLAB
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- EXISTING STEEL ELEMENT
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- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

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PF	PAD FOUNDATION
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SUFFIX

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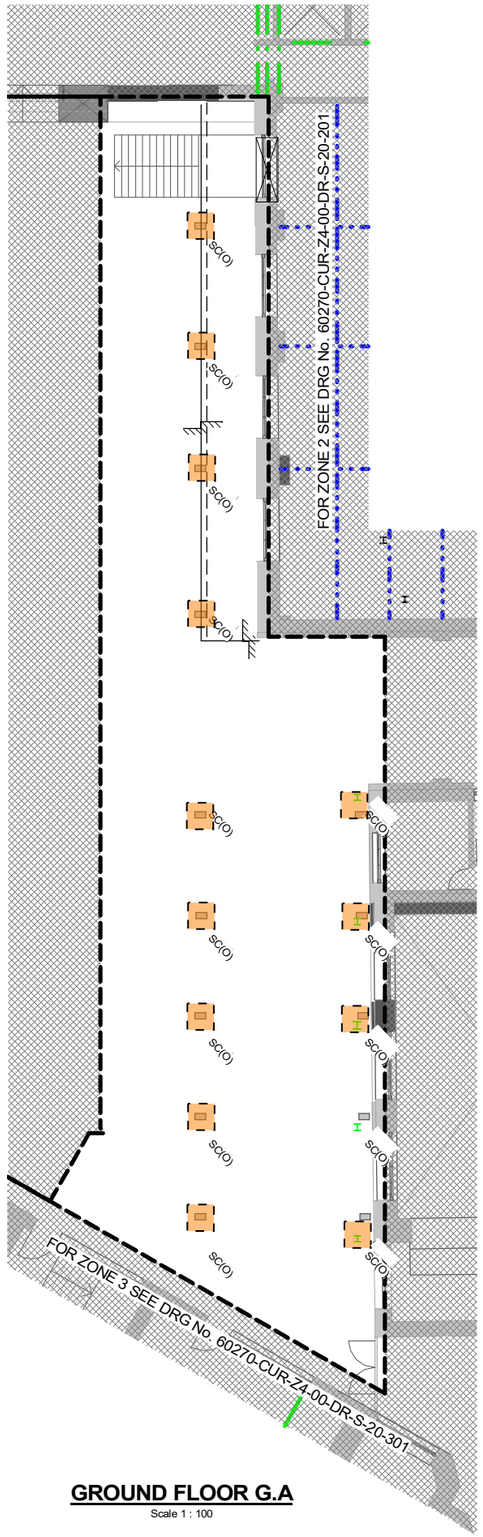
Project :
LONDON ROAD MANCHESTER

Drg. Title
ZONE 3 ROOF GENERAL ARRANGEMENT

Scale.	Size:	First Issue:	Drawn:	Checked :
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GROUND FLOOR G.A

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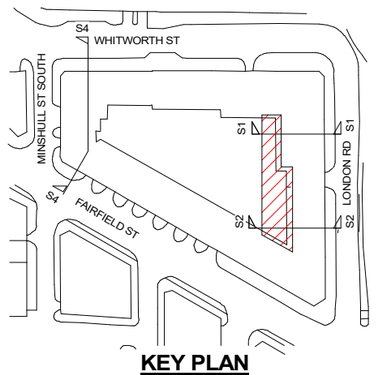
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Status :

PLANNING

Project :

LONDON ROAD MANCHESTER

Drg. Title

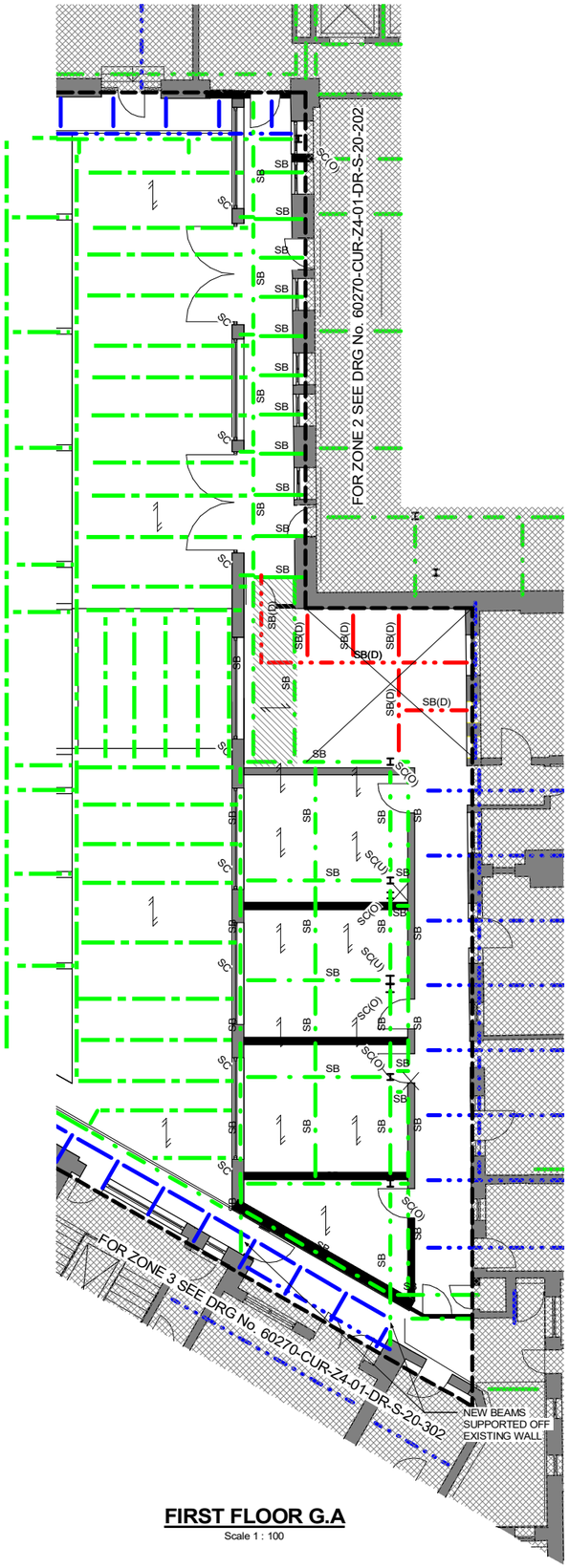
ZONE 5 BASEMENT & GROUND FLOOR GENERAL ARRANGEMENT

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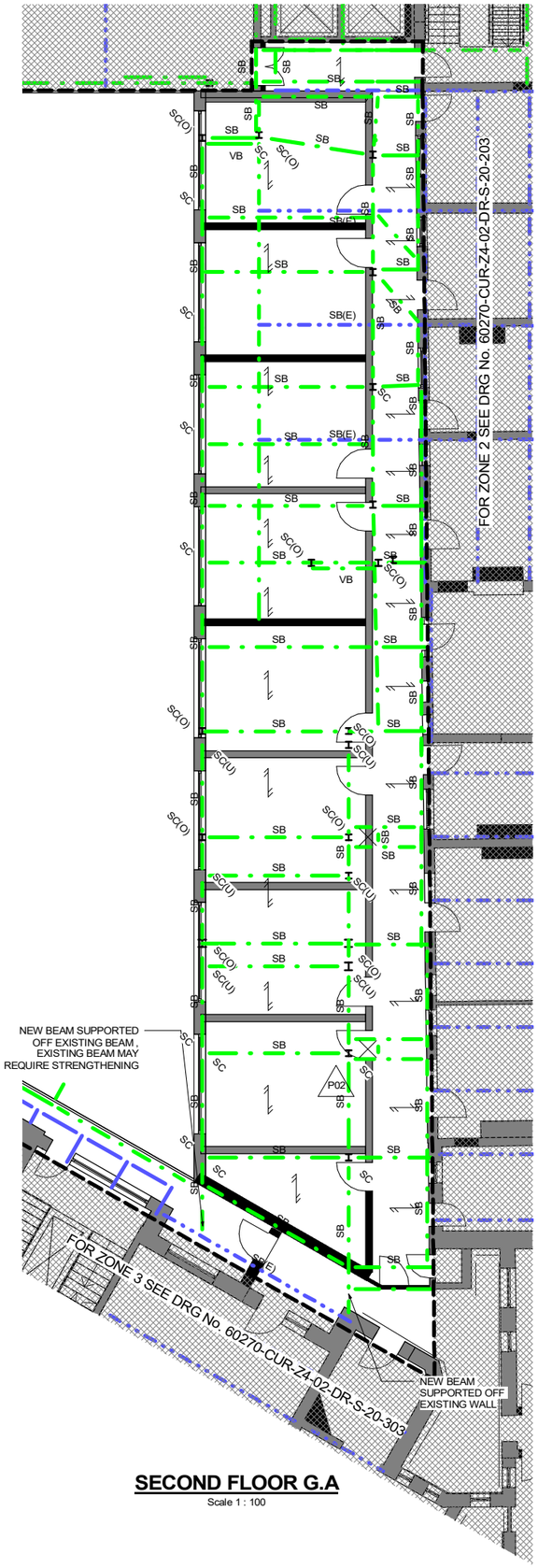
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FIRST FLOOR G.A
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SECOND FLOOR G.A
Scale 1 : 100

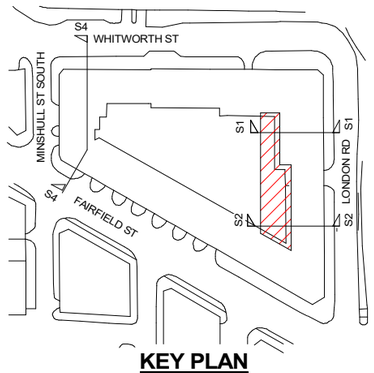
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- MASONRY / CONCRETE ELEMENT BELOW
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- INDICATES EXTENT OF NEW TIMBER FLOOR
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- EXISTING ELEMENT TO BE DEMOLISHED
- NEW STEEL ELEMENT
- TIMBER ELEMENT
- INDICATES DETAIL , REFER TO 600 SERIES OF DRAWINGS FOR RELEVANT DETAIL

B	BEAM
C	COLUMN
PF	NEW PAD FOUNDATION
RW	RETAINING WALL.
SC	STEEL COLUMN
SB	STEEL BEAM
SR	STEEL RAFTER
SA	STEEL SHELF ANGLE
CC	CONCRETE COLUMN
CB	CONCRETE BEAM
TB	TIMBER BEAM
TC	TIMBER COLUMN
TR	TIMBER RAFTER
VB	VERTICAL BRACING

SUFFIX

(U	UNDER ONLY
(O	OVER ONLY
(D	DEMOLISHED
(E)	EXISTING
(?)	PRESENCE TO BE CONFIRMED ON SITE



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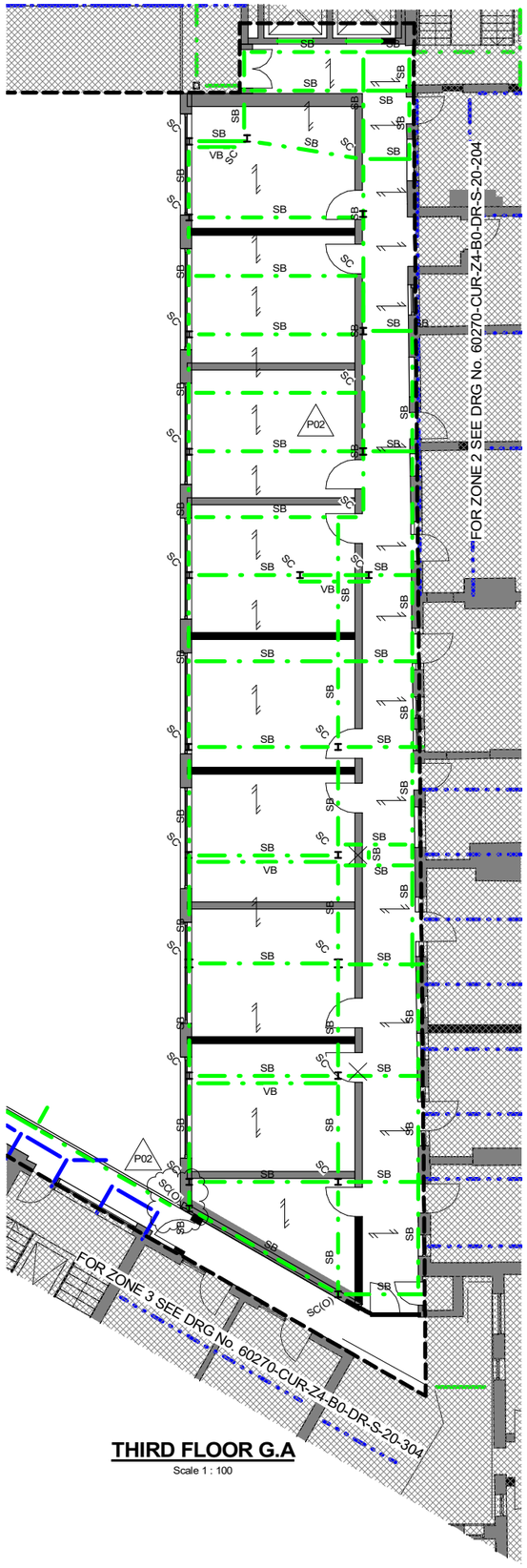
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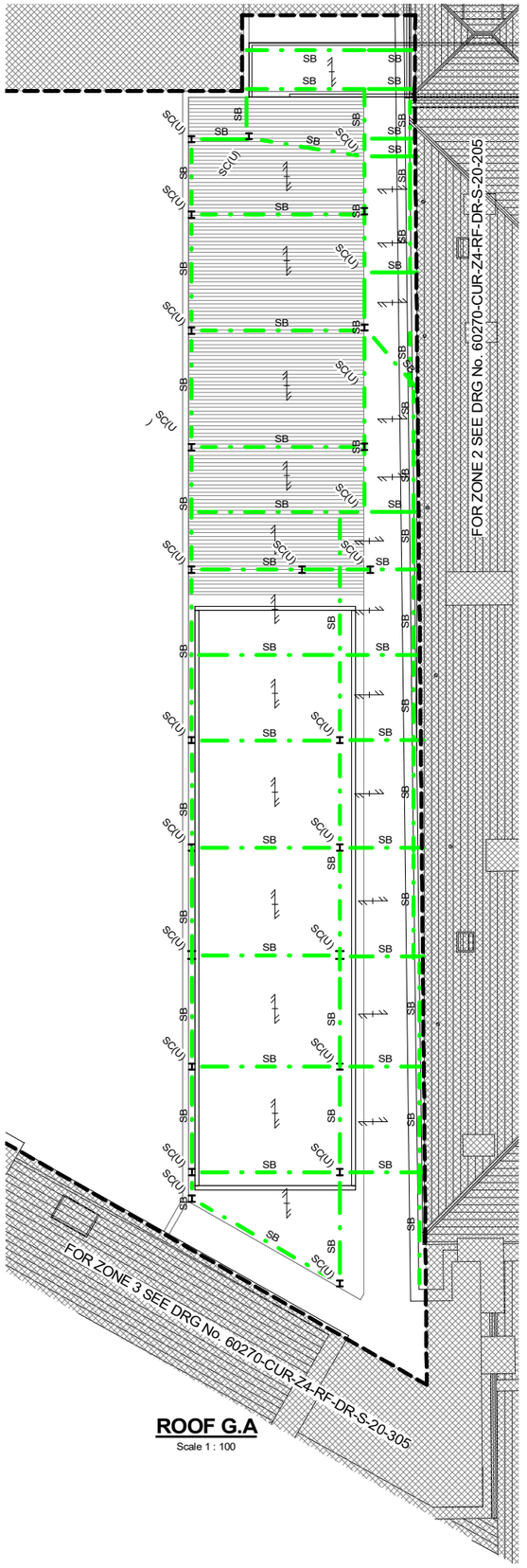
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THIRD FLOOR G.A
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ROOF G.A
Scale 1 : 100

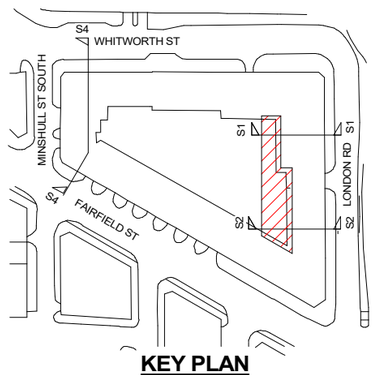
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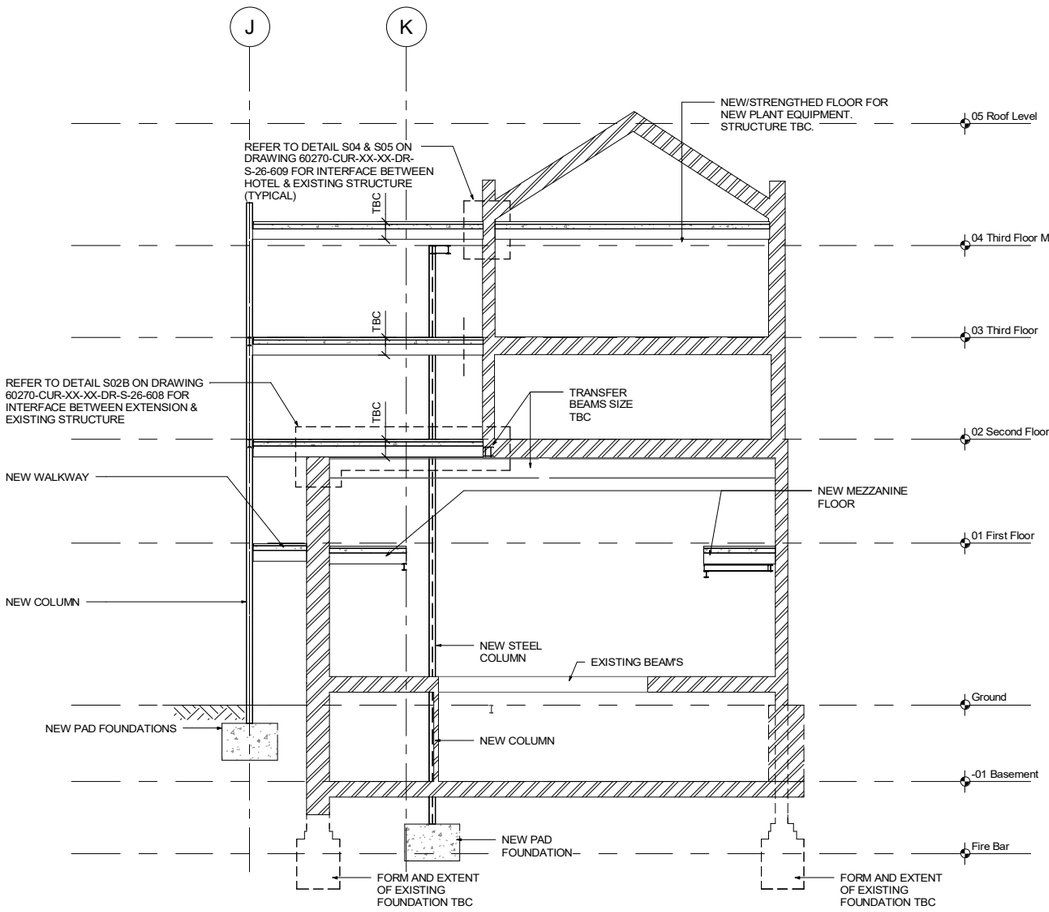
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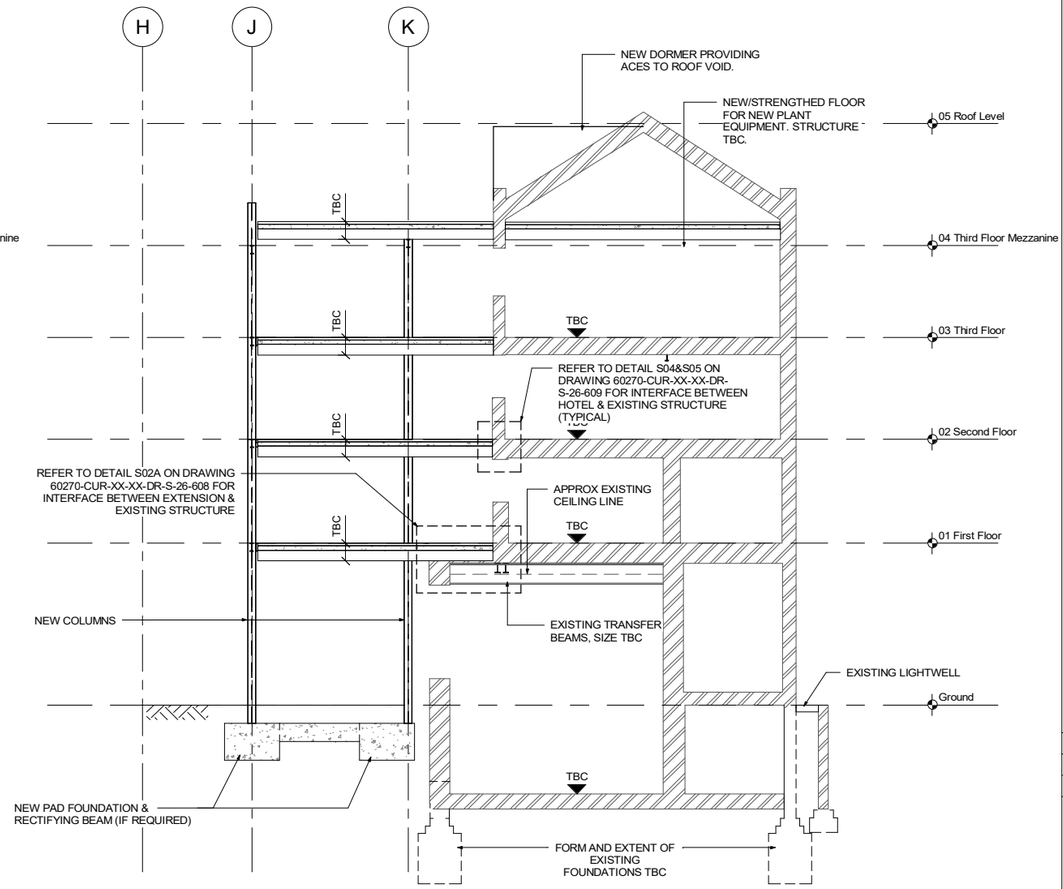
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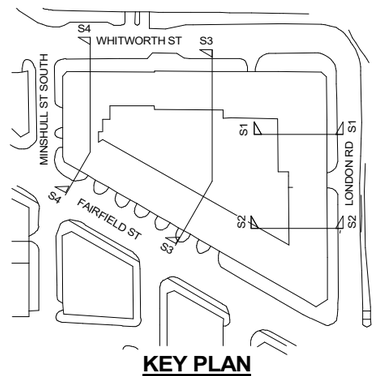
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Scale 1 : 100



S2 - SECTION THROUGH CORONERS COURT

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INDICATES LOCATION OF NEW FLOOR, STRUCTURE TBC

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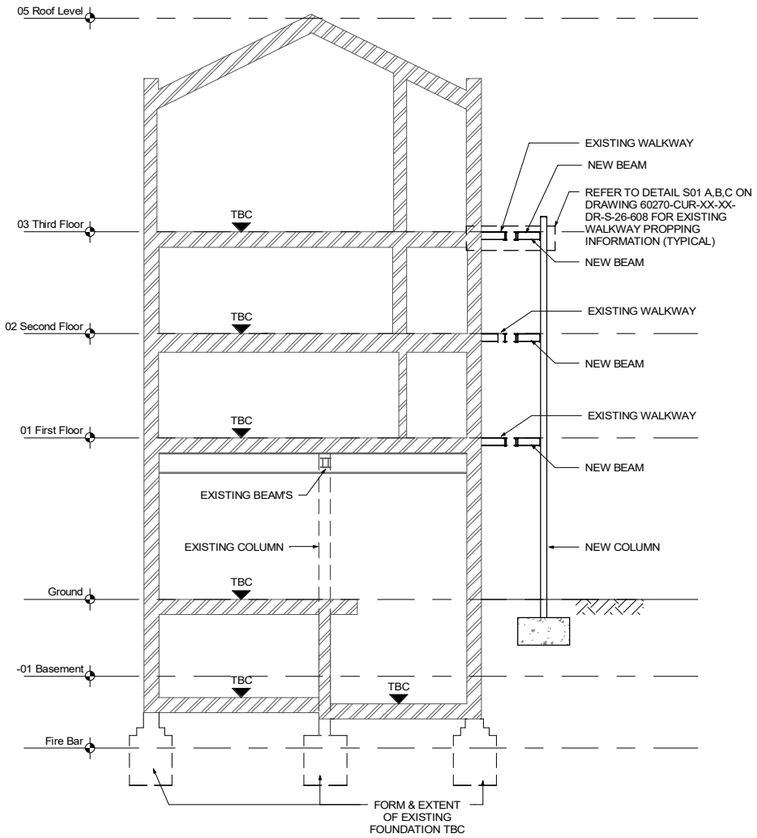
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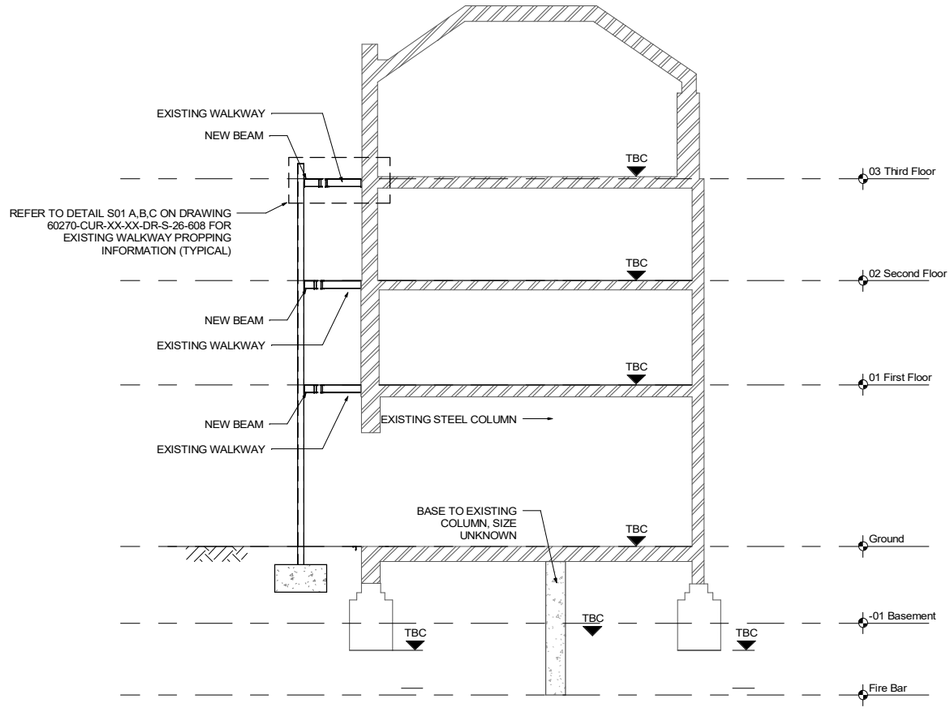
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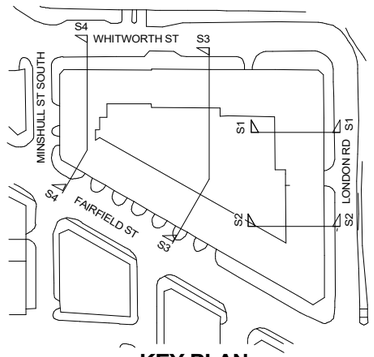
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S3 - SECTION 3
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S3 - SECTION 3 (CONTINUATION)
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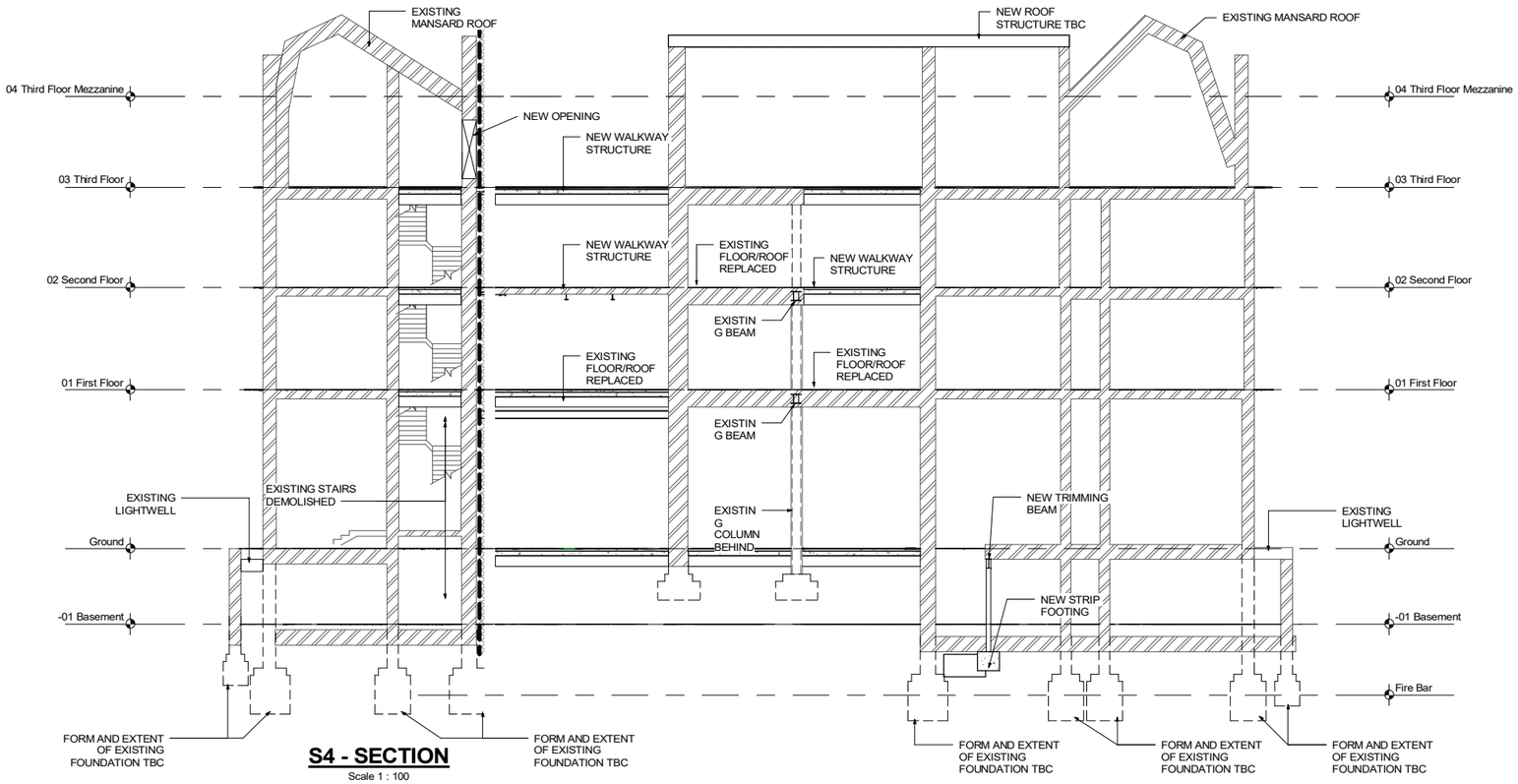
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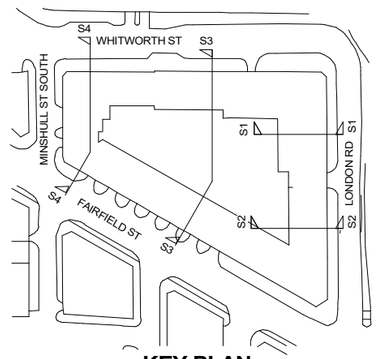
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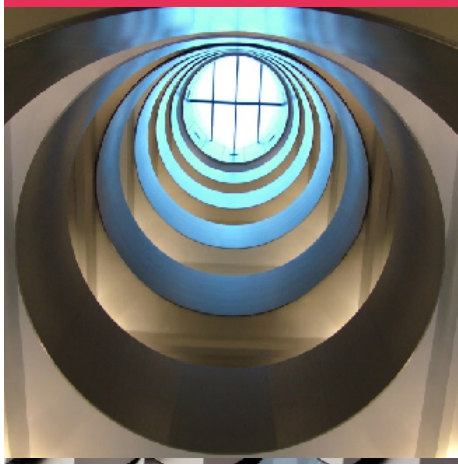
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Rev : P02











London Road Fire Station

Detailed Visual Inspection Report

Curtins Ref: O60270

Revision: - 00

Issue Date: 08 April 2016

Client Name: Allied London

Client Address: HQ, Atherton St Manchester

Site Address: London Road/Fairfield St, Manchester

Rev	Description	Issued by	Checked	Date
00	First Issue	PB	KM	08.04.2016
01				

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Author	Signature	Date
Patrick Barton MEng (Hons) CEng MIStructE Senior Engineer		08.04.2016

Reviewed	Signature	Date
Kev Mitchell MBA (Manc) CEng MIStructE Design Director		08.04.2016

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1.0 Introduction

1.1 This document has been prepared for Allied London in connection with the Former Fire Station at London Road, Manchester. The fire station is a Grade II* listed structure.

1.2 This is a summary of the detailed visual inspection performed by the Curtins survey team w/c 14th March 2016. It should be read in conjunction with the previous 'Initial Structural Considerations' report by Curtins dated 01/03/2016.

1.3 This report is part of a stepped approach to surveying and assessing an existing structure. For this project, Curtins Consulting has been commissioned by Allied London to ascertain the potential works associated with refurbishing this building in two phases:

1.3.1 Phase 1 - Repairs to external envelope and structure to create shell space for letting to operators)

1.3.2 Phase 2 - new works by Landlord and fit out by Tenants

1.4 The document highlights the significant structural observations made during the survey, and summarizes the key issues in connection with the refurbishment and regeneration of the former London Road Fire Station utilising the Client's preferred approach outlined above. As always with this type of process there will be some overlap and we have adopted a methodology that is designed to ensure that the first Phase is covered adequately whilst making due allowance for elements of phase 2 that take advantage of scale economy.

1.5 This report will also form the basis for scoping the invasive and intrusive survey requirements for repair and regeneration of the structure for phase 1.

1.6 Due to the listed status of the building, it is essential that the relevant procedures are followed, and relevant authorities consulted regarding any intrusive, invasive or remedial works are proposed.

1.7 This report has been prepared in the absence of a detailed tactile survey or invasive sampling and testing regime. We were unable to open up the structure or utilise specialist access equipment. No access was available into the roof space or onto external roof surfaces.

1.8 For the purposes of this report Intrusive means the removal of materials to gain access to the structure that needs to be examined. Invasive refers to elements of structure that are required to be removed to enable us to assess the mechanical or section properties.

1.9 This report does not include detailed commentary in respect of timber and damp issues or the presence of asbestos containing material.

1.10 For the purposes of this report the following geographical reference has been adopted:

London Road – North	Whitworth St - West
Minshull St South – South	Fairfield St – East

1.11 The observations and recommendations made in this report are not definitive or exhaustive, and the full extent of required investigation and remediation will evolve as the building is opened up further and assessed.

2.0 Executive Summary

The following section provides an Executive Summary of the key issues observed during the detailed visual survey, and the strategy for taking the project forward

2.1 There are a number of key issues which have arisen following the survey. Whilst water ingress is often fundamentally the root cause of the majority of these, the issues listed below are specific areas that require assessment and potential remediation. They are arranged in order of priority.

2.1.1 Courtyard Balconies
2.1.2 Masonry walls to Training Tower / South West Corner
2.1.3 Roof Timber Structure Condition and Restraint
2.1.4 Internal Lintels
2.1.5 Corrosion of Existing Steelwork
2.1.6 Movement and Cracking of Masonry Crosswalls

Further information on the above is included in Section 4.0, although it should be noted that these issues require further investigation and assessment to confirm the cause, validate the structure and scope the remediation.

2.2 Recommendations for further work are made in section 5.0 and summarized below:

2.2.1 Asbestos R&D survey
2.2.2 Temporary propping to balconies
2.2.3 Tactile Structural Survey (Invasive and Intrusive Investigations)
2.2.4 Specialist Access Survey
2.2.5 Timber Condition Survey
2.2.6 Specialist Corrosion Advice
2.2.7 Provision of results of previous structural investigations

3.0 Observations

This section provides a summary of the structural observations made during the survey. The full schedule is provided on the drawings series 10-xx-xx, included in Appendix I, which provide photos and descriptions of all observations with relevant locations annotated.

These drawings and observations will form the basis of the invasive and intrusive investigation schedules over the next period.

3.1 General Observations

3.1.1 The structure was found to be of a fairly typical construction for the time period in which it was built.

3.1.2 There is a slate roof supported by timber rafters and trusses. The roof is a mixture of flat and mansard areas, with a number of small towers, upstands and masonry statues.

3.1.3 The upper floors are typically filler joist floors supported by steel beams, which in turn span onto a mixture of loadbearing masonry walls and steel columns. The term ‘filler joist’ refers to a slab whereby steel joists are embedded within concrete at close centres.

3.1.4 Large column free spaces at ground floor are generated by the provision of steel transfer beams at 1st floor level.

3.1.5 The majority of the building footprint has a basement floor, which consists of a concrete base slab and masonry walls. The building has lightwells into the basement for the entire perimeter where a basement is present.

3.1.6 During the inspection the building was noted to be generally dry and well ventilated. There were some areas which showed historic evidence of water ingress. There have been protection measures and management systems put in place to achieve these conditions, but it can be seen that the inherent issues associated with past damp still remain.

3.1.7 As one would expect, the upper floors and roof areas have been most affected by the weather and water ingress. Issues associated with exposure such as rot and corrosion are less evident at the more sheltered, lower floors.

4.0 Key Structural Issues

This sections highlights the key issues which have arisen following the survey. They are listed in order of priority.

4.1 Courtyard Balconies

Balconies to the internal elevations provide access to the majority of the accommodation on the upper floors. Inspection suggest the balconies are of filler joist slab construction spanning onto steel beams.

The balconies have been exposed to the elements for a number of years, and this is evident in the condition of the structure.

The underside of the steel members are showing signs of corrosion and lamination in all locations, and the infill balcony floor slabs have cracked and spalled in a number of locations. This is likely due to a combination of exposure to the weather, and deflection of the steel support structure.



Figure 4.1 – Underside of Third Floor Balcony

There are cast iron railings present to all balconies. It is difficult to ascertain whether these were designed to be load-bearing, but there is evidence that there is some element of load sharing between the balconies due to the movement of the structure at each level.

There was no visual evidence of backspan beams into the building, and the masonry surrounding the members at support locations meant inspection was not possible. It is assumed that some part of the balcony structure spans back within the filler joist floor slab.

One aspect of this which requires further investigation is that there is some significant movement of the masonry around the balcony supports. This could be caused by deflection of the balconies, or corrosion and expansion of the steel beams (or a combination of the two).

It is recommended that these areas are investigated further, likely requiring some local removal of brickwork around the supports.



Figure 4.2 – Masonry movement at balcony support

The above points aside, it was generally observed on site that the balconies can support access loads from people without significant deflection. Although, due to the extent of corrosion, the future likelihood of higher loading, and the need to inspect all balconies further, it is recommended that the balconies are propped until suitable validation and/or repairs can be carried out.

4.2 Training Tower / South West Corner

The masonry walls to the training tower and the courtyard elevation to the South West corner have severe cracks throughout the height of the building. The tower has been tied using steel rods and plates but the masonry itself bulges and deforms in a number of locations.

The deposition of salts to the face of the brickwork is evidence of water penetration to these elevations, and some instances where there is little to no mortar left between bricks. This water ingress could explain the majority of the movement to these elevations.

This may be by direct washing out of mortar, causing local deformations, or there may be internal steel elements such as lintels and columns which have corroded and expanded, causing movement of the external façade.



Figure 4.3 – Masonry movement to Training Tower

However, when viewed from the courtyard, discrete vertical cracks can be traced all the way up the building, typically emanating from the centre of walls beneath cills, the corner of lintels, and the head of arches. This could be

evidence that the return walls have pulled away from the main elevations, due to thermal movement, foundation settlement or the aforementioned water ingress.

Due to the length of the walls and lack of movement joints, the thermal issue is the more likely of these. As the wall has expanded and contracted, the crack has formed at the least loaded points of the wall, such as under the cill and at the head of the arch.

Further investigation and monitoring is required to ascertain whether these cracks are longstanding or evidence of progressive movement. Remediation methods can then be determined to control the movement and locally fix the defects.

4.3 Roof Timber Condition and Structural Restraint

The majority of roof timbers observed showed some evidence of water damage or fungal decay (dry rot). The extent and effect of this means that there will likely need to be widespread remediation or replacement of the existing roof structure.





Figure 4.4 – Water damage to timber roof structures

There look to have been some remedial works performed previously. This includes temporary propping to damaged areas, as well as some local rebuilding and remediation.

The subsequent drying out of the roof space has meant the roof is generally in a temporarily safe condition, but further works will require careful consideration, and the effectiveness of these new members to provide long-term restraint needs to be assessed.





Figure 4.5 – Temporary propping and remedial works to existing structure



Figure 4.6 – Recently installed replacement ceiling

Rather than just being a function of the deterioration of the structure, the issue of structural restraint to the timber roof trusses looks to be inherent with the original design. It is often the case that more traditional construction methods were not as robust as newer techniques with regards to limiting horizontal spreading and deflection. This may help to explain some of the movement in the masonry below, and should be considered as part of the ongoing assessment and repair works.

4.4 Corrosion of Existing Steelwork

As is typical with any steelwork structure of this age, many parts of the steel frame shows signs of corrosion. Corrosion is more pronounced in areas which have had significant water ingress, and it is typically evident that the steelwork is exposed a result of water damage to the finishes local to the steelwork.



Figure 4.7 – Visible corrosion to steel floor beam

Whilst the extent is widespread, the majority of the steelwork beams are in sound condition, and should be suitable for cleaning and re-protecting. Now that the water ingress has ceased, and the environment will be controlled in terms of temperature and humidity, further corrosion to the steelwork should be negligible once protected.

However there are some areas that show significant corrosion, including lamination/exfoliation of the flanges, which have influenced some of the other issues mentioned in this report. In particular the balcony steelwork, lintels to external walls, and the steelwork to the training tower all require further investigation before recommendations can be made on the required course of action.

4.5 Internal Lintels

The majority of steel lintels to the courtyard elevations show signs of corrosion. The lamination of steel has caused displacement of finishes and brickwork local to the lintels in many locations.



Figure 4.8 – Cracking to 3rd floor lintel above window

In a number of locations, the lintels show severe signs of failure, exhibiting large deflections, leading to the movement of the surrounding masonry and spalling of finishes. The extent of the damage needs to be fully assessed, but it is likely that these lintels will require replacing.



Figure 4.9 – Cracking to 3rd floor lintel above doorway

4.6 Movement and Cracking of Internal Masonry Walls

In a number of locations where finishes have been removed, it is possible to determine the makeup of the internal walls. The crosswalls are typically of two types.

The thicker walls between apartments are fully built into returns at both the external and courtyard elevations. It is within these walls that fireplaces are typically positioned.

The thinner walls between rooms within apartments are timber and masonry partition walls where visibly exposed. An example of this can be seen in Figure 4.10 below.



Figure 4.10 – Exposed masonry partition wall

Cracking to the larger masonry crosswalls occurs at all floors, but is particularly evident on upper floors. There is a pattern of occurrence at the junction between the crosswalls and the internal elevations, with diagonal cracks emanating from the floor at the return, to the nearest ceiling, fireplace or door frame internally.

The cause of this is currently unknown, but is likely due to deflection of the transfer structure at 1st floor level, the effect of the courtyard balconies, or a combination of the two.

The cracking to the internal partition walls is more sporadic, tending to crack in either straight lines at wall boundaries or in a hazing pattern on the face of the wall. This is likely due to shrinkage of the plaster finishes and/or damp to the timber elements of the walls. Remediation of these partition walls is likely to be limited to locally making good the finishes once the full extent and cause of the cracking is confirmed.

Crack monitoring to some of the larger cracks in the main crosswalls was established by Clancy Consulting in 2010, and monitored for the following 5 years. In all locations the cracks have opened up, with a maximum of 1.7mm over the monitoring period. The monitoring points are still available to measure, and these will be measured again as part of the tactile survey to help determine the nature and severity of the cracks.



Figure 4.11 – Diagonal cracking to main masonry crosswalls

4.7 Internal Floors

The internal suspended floors are, in the most part, filler joist floor slabs spanning between steel beams. Where exposed it can be seen that the concrete has a rough texture with large pieces of clinker-type aggregate.

Throughout the building it can be seen that the filler joists have a small amount of concrete cover to the underside. A combination of this and the water ingress to the upper floors has meant that the steel filler joists have corroded, leading to expansion of the section through exfoliation and spalling of the concrete.



Figure 4.12 – Corrosion to filler joists and steel in basement

This phenomenon is visible in nearly every location where the ceilings have been removed or a soffit is otherwise visible. The severity of the corrosion and spalling varies throughout. The worst areas are the underside of the third floor and ground floor slabs. This is likely due to these being the areas which have previously been most exposed to water ingress.



Figure 4.13 – Visible corrosion to filler joists within 3rd floor slab

It is difficult to assess the full extent due to the presence of the ceilings in the remaining apartments. Although it could be said that the nature of the ceilings is such that the corrosion may have been the defining factor in their previous removal (due to visible damp, spalling etc.).

This does not guarantee that the filler joists have not corroded in areas where the ceilings are intact, but in a controlled environment, the rate of corrosion should be slowed, and remediation should be limited to areas which show visible signs of corrosion.

Throughout the structure it can be seen that the surface of the floor slabs have cracked. In some cases the pattern of cracking can be attributed directly down to shrinkage of the floor screeds, although there are some cracks which may be an indication of movement of the structure below. Lines of cracks such as those in Figure 4.14 are indicative of beam deflections or corrosion from the filler joists below.



Figure 4.14 – Typical cracking to floor finishes

It will be recommended that selected areas of floor local to these cracks are broken out to determine the cause and severity of movement and/or corrosion, and so determine the extent of any remediation.

5.0 Recommendations

As can be seen from this report, there are a number of structural issues to address when considering the restoration and redevelopment of the London Road Fire Station.

Below is a summary of our recommendations for further investigations. These will be formally incorporated into a full scope of investigations in due course. It should be noted that these investigations are recommended with a view to the Phase 1 works. The scope will be widened to include the likely Phase 2 activities, but it is likely that the scope will be modified to suit the proposed redevelopment scheme as it is progressed.

5.1 Asbestos R&D Survey and Remediation

A number of areas of the building were inaccessible due to the presence of, or potential for, asbestos containing materials. There is evidence that a previous Asbestos survey has been performed, and recommendations made for areas to be closed off.

We recommend that a full asbestos register is provided for inclusion within the investigation scope. If a full and current register is not available it is recommended that a further R&D survey is performed.

Once the full extent of asbestos is ascertained and removed/remediated, further investigation can be made into the inaccessible areas, including loft spaces and some basement areas.

5.2 Temporary Propping

Due to the poor condition and unknown structural form of the external balconies, it is recommended that these be propped from the ground, through to the top storey balconies. This will ensure the balconies are safe whilst further investigations can be carried out.

It was seen in a number of places that there is already temporary propping to some parts of the roof structure. The purpose and adequacy of these props should be assessed prior to performing further works in these areas. No previous

documentation of these works is currently available, but the works look to have performed relatively recently and so this may be obtainable. This would be the first recommended action prior to performing back-analysis of the propping arrangements.

5.3 Tactile Structural Investigations

As discussed both in this and previous reports, it is recommended that a series of tactile structural investigations is performed. These investigations will be scoped out using the observations made in this detailed visual inspection as a basis.

The investigations will be scoped with a view to both assessing the condition of the existing structure, and gathering information to allow analysis of the structure.

Assessment of the condition will inform the extent and type of any remediation works required as part of the Phase 1 works.

Analysis of the structure will allow determination of the likely previous use of the critical areas, and thus inform the reuse of the structure for both remediation and redevelopment.

It will be important for the design team to agree areas suitable for intrusive exploratory works that fit with the aspirations for retained finishes. The intrusive tactile survey will need to be conducted in advance of the invasive sampling and testing works as this exercise will better inform the sampling rates and spread

For continuity and efficiency it is recommended that the same competent contractor is used for the opening up and invasive investigations where possible.

5.4 Specialist Access Survey

With regards to the roof and external elevations where access is difficult, the investigations will be performed by a specialist access team based on scope and specification provided by Curtins.

5.5 Timber Condition Survey

Due to the extent of the water damage to the roof areas, and evidence of widespread rot to the existing timber structures, it is recommended that specialist advice is

sought from a timber and damp specialist. This should take the form of a full survey of all exposed timber members. The scope and proposed findings should be controlled as part of the tactile investigations mentioned above, with particular reference to the required works rather than a wide-ranging commentary on the general condition.

5.6 Corrosion Specialist Advice

As with the timber discussed above, the water ingress to the structure has caused widespread corrosion to the structural metalwork in the building. There is evidence of both cast iron and early mild steel in the building. Dependant on the results of the initial investigations, it may be recommended that specialist corrosion advice is sought with regards to the most effective ways of testing, assessing and remediating the effects of the corrosion in a way that is sympathetic to the building's heritage.

5.7 Results of Previous Investigations

Throughout the building there is evidence of previous structural investigations. This includes concrete cores through floors, exploratory opening up of ceilings and floors, and crack monitoring of walls.

A number of these investigations will be included in the proposed scope of investigations. If the results of the previous investigations could be obtained and verified, this may go some way to reducing the required scope, and therefore cost, of further intrusive investigations.

It is recommended that the scope and results of these investigations be obtained if possible.

Appendix I – Observation drawings

Drawing	Title
10-03-01	Third Floor Observations Sheet 1 of 3
10-03-02	Third Floor Observations Sheet 2 of 3
10-03-03	Third Floor Observations Sheet 3 of 3
10-02-01	Second Floor Observations Sheet 1 of 3
10-02-02	Second Floor Observations Sheet 2 of 3
10-02-03	Second Floor Observations Sheet 3 of 3
10-01-01	First Floor Observations Sheet 1 of 3
10-01-02	First Floor Observations Sheet 2 of 3
10-01-03	First Floor Observations Sheet 3 of 3
10-00-01	Ground Floor Observations Sheet 1 of 3
10-00-02	Ground Floor Observations Sheet 2 of 3
10-00-03	Ground Floor Observations Sheet 3 of 3
10-B01-01	Basement Observations Sheet 1 of 3
10-B01-02	Basement Observations Sheet 2 of 3
10-B02-03	Basement Observations Sheet 3 of 3

DRAFT



3.1.11



3.1.10



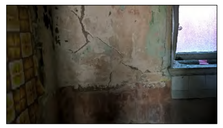
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3.1.8



3.1.9



3.1.16



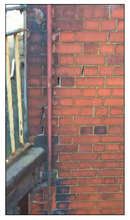
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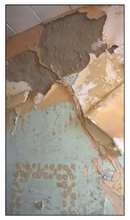
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3.1.6



3.1.4



3.1.3



3.1.1





3.1.5



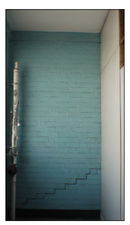
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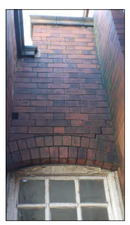
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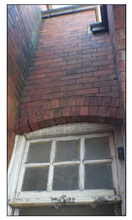
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3.1.23



3.1.24

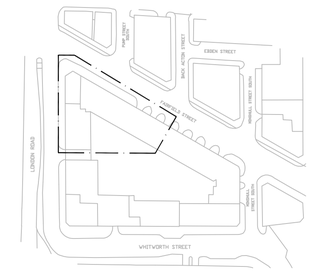
REF	OBSERVATION
3.1.1	RAINWATER PIPE CUT INTO WALL.
3.1.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.1.3	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.1.4	EXPOSED PARTITION WALL.
3.1.5	DIAGONAL CRACK BETWEEN DOOR FRAME AND CEILING.
3.1.6	MULTIPLE LARGE DIAGONAL CRACKS TO PLASTER INTERNALLY. UNABLE TO VIEW EXTERNAL FACE.
3.1.7	OPEN JOINTS IN MASONRY ADJACENT BALCONY TRACING PARTLY UP WALL.
3.1.8	EVIDENCE OF WATER DAMAGE TO TIMBER RAFTERS TO MANSARD.
3.1.9	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL.
3.1.10	LARGE STRAIGHT CRACK TO CEILING FINISHES
3.1.11	HIGH LEVEL CRACK TO PLASTER
3.1.12	EVIDENCE OF WATER DAMAGE TO EXPOSED TIMBER
3.1.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.

REF	OBSERVATION
3.1.14	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.1.15	CEILING JOISTS AND MASONRY EXPOSED ABOVE CEILING LEVEL.
3.1.16	MINOR DIAGONAL CRACKING TO PLASTER TO ONE SIDE ONLY.
3.1.17	CRACKING TO FLOOR SCREED.
3.1.18	EXPOSED LINTEL AND MASONRY IN GOOD CONDITION.
3.1.19	HATCH INTO ROOF SPACE. UNABLE TO ACCESS (ASBESTOS).
3.1.20	CRACK TO WALL (ONLY ONE SIDE ACCESSIBLE, ASSUME EVIDENT ON BOTH SIDES) EXISTING MONITORING POINTS 36-37.
3.1.21	EXISTING HOLES IN FLOOR. BOARDED OVER.
3.1.22	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.
3.1.23	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.
3.1.24	EXISTING HOLES IN FLOOR. BOARDED OVER.

PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

NOTES:

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curtins
Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com
Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: THIRD FLOOR OBSERVATIONS
SHEET 1 OF 3

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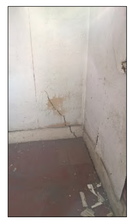




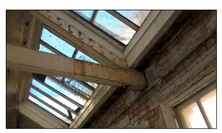












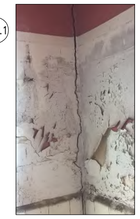














FOR CONTINUATION REFER TO DRG 10-03-01

FOR CONTINUATION REFER TO DRG 10-03-03

VACANT
FP
BALCONY
VOID OVER OLD GYMNASIUM AREA
OLD DRYING ROOM
MACHINERY OLD DRYER
UP 1.00
UP
DN
TOILETS
POST

PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

REF	OBSERVATION
3.2.1	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.
3.2.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT BETWEEN COURTYARD WALL AND CHIMNEY.
3.2.3	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.2.4	CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.2.5	CRACK NEAR HEAD OF WALL RETURN
3.2.6	PREVIOUS REPAIR TO TIMBER ROOF TRUSS. STEEL PLATES BOLTED TO TRUSS AT BEARING.
3.2.7	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.2.8	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.

REF	OBSERVATION
3.2.9	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.2.10	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
3.2.11	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY. CRACK EXTENDS FROM COURTYARD WALL TO DOOR FRAME.
3.2.12	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 18-19.
3.2.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 18-19.
3.2.14	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.
3.2.15	VISIBLE DAMP TO CEILING.
3.2.16	CRACKS TO PLASTER CEILING

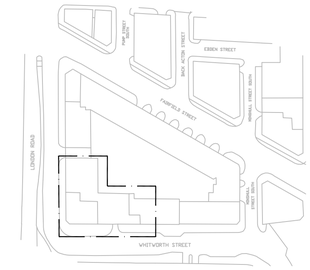
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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: THIRD FLOOR OBSERVATIONS
SHEET 2 OF 3

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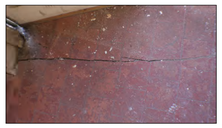






















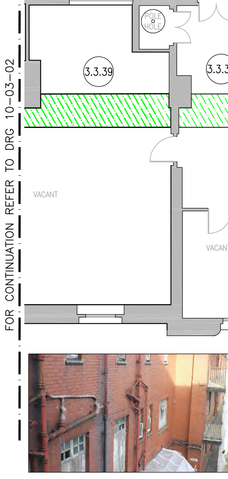




















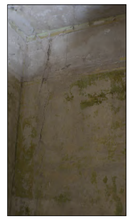










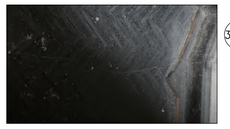






















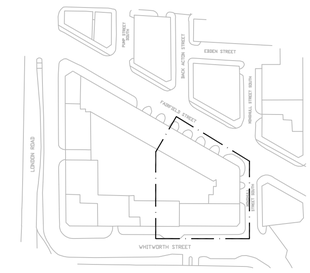
PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

REF	OBSERVATION
3.3.1	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 28–30.
3.3.2	CEILING JOISTS EXPOSED. EVIDENCE OF WATER DAMAGE.
3.3.3	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.
3.3.4	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 31–33.
3.3.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 31–33.
3.3.6	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.
3.3.7	STRAIGHT LINE CRACK THROUGH FLOOR TILES.
3.3.8	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.
3.3.9	EVIDENCE OF MOVEMENT TO MASONRY LOCAL TO BALCONY SUPPORT.
3.3.10	STRAIGHT LINE CRACK THROUGH FLOOR TILES.
3.3.11	CRACKING TO SURFACE FINISH TO BALCONY.
3.3.12	OPEN JOINTS/CRACKING TO HIGH LEVEL MASONRY PARAPET EMINATING FROM WINDOW HEAD.

REF	OBSERVATION
3.3.13	CRACKING TO SURFACE FINISH TO BALCONY.
3.3.14	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.
3.3.15	DIAGONAL CRACK FULL HEIGHT THROUGH PLASTER OF CHIMNEY BREAST.
3.3.16	CRACKS AND UNDULATIONS TO SCREED FLOOR. CRACKS GENERALLY STRAIGHT.
3.3.17	EVIDENCE OF WATER INGRESS TO CEILING AND CRACKS TO PLASTER.
3.3.18	EVIDENCE OF WATER INGRESS TO CEILING AND CRACKS TO PLASTER.
3.3.19	CRACKS TO PLASTER ON PARTITION WALL.
3.3.20	CRACK IN LANDING FLOOR.
3.3.21	EVIDENCE OF PREVIOUS REMEDIAL WORKS TO WATER DAMAGED TIMBER.
3.3.22	TEMPORARY PROPS PRESENT TO SUPPORT ROOF TRUSS.
3.3.23	STEEL AND CONCRETE LINTELS TO 4no. WINDOWS CRACKED AND/OR SPALLED.
3.3.24	CRACKING TO FLOOR SCREED.
3.3.25	OPEN JOINTS TO MASONRY AND DROPPING TO BRICKWORK LINTEL.
3.3.26	OPEN JOINTS TO MASONRY AT PREVIOUS DOOR POSITION. SALT DEPOSITION AND MORTAR WASH–OUT EVIDENT.
3.3.27	OPEN JOINTS TO MASONRY NEAR WINDOW. SALT DEPOSITION AND MORTAR WASH–OUT. CRACKS TO FLOOR FINISH.
3.3.28	RECENTLY REPLACED CEILING.
3.3.29	CRACKING TO FLOOR SCREED.
3.3.30	EVIDENCE OF PREVIOUS REMEDIAL WORKS TO WATER DAMAGED TIMBER.
3.3.31	TEMPORARY PROPS PRESENT TO SUPPORT MASARD ROOF TIMBERS WHICH SHOW SEVERE WATER DAMAGE.
3.3.32	OPEN JOINTS TO MASONRY, SIGNIFICANT MOVEMENT OF BRICKWORK AND MORATER WASH–OUT.
3.3.33	OPEN JOINTS TO MASONRY, SIGNIFICANT MOVEMENT OF BRICKWORK AND MORATER WASH–OUT.
3.3.34	STRAIGHT LINE FULL HEIGHT CRACK THROUGH EXTERNAL WALL. DAYLIGHT VISIBLE THROUGH CRACK.
3.3.35	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK LINTELS, BULGING OF WALL.
3.3.36	LARGE CRACK IN EXTERNAL MASONRY.
3.3.37	OPEN JOINTS IN MASONRY, EVIDENCE OF MOVEMENT.
3.3.38	STRAIGHT CRACKS TO FLOOR SCREED.
3.3.39	STRAIGHT CRACKS TO FLOOR SCREED.

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: THIRD FLOOR OBSERVATIONS SHEET 3 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
AS SHOWN	A1	05.04.16	CH	PB

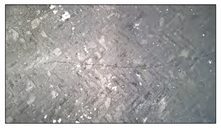
Drg No: 060270 / 10-03-03

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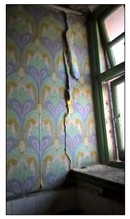
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TYPE	OBSERVATION
2.1.1	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 25–27.
2.1.2	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
2.1.3	LONG STRAIGHT CRACK TO FLOOR SCREED.
2.1.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
2.1.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 46–48.
2.1.6	CRACK TO SOFFIT
2.1.7	CRACKING TO WINDOW FRAME AND EVIDENCE OF WATER INGRESS
2.1.8	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL
2.1.9	CRACKS TO FLOOR SCREED
2.1.10	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
2.1.11	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.
2.1.12	LOW LEVEL CRACK BETWEEN WALL AND DOOR EVIDENT TO ONE SIDE ONLY.
2.1.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 38–39.

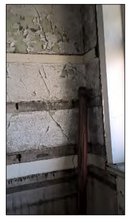

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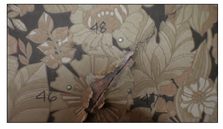

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2.1.5

PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

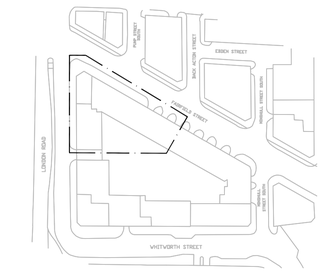
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t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com
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Project:
LONDON ROAD FIRE STATION

Drg Title:
SECOND FLOOR OBSERVATIONS
SHEET 1 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
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Drg No: 060270 / 10-02-01
Rev: /

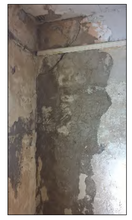
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REF	OBSERVATION
2.2.1	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL.
2.2.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.3	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.4	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.6	STRAIGHT LINE CRACK TO PARTITION WALL
2.2.7	BRICKWORK HAS BEEN BROKEN OUT TO INSTALL TOILETS

REF	OBSERVATION
2.2.8	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.9	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL.
2.2.10	MINOR CRACKING TO PLASTER AT HIGH LEVEL. SOME EVIDENCE OF PREVIOUS WATER INGRESS.
2.2.11	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.
2.2.12	DAMP PATCH VISIBLE ON PADSTONE FOR BEAM.
2.2.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES
2.2.14	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.15	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.
2.2.16	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.17	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.
2.2.18	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.19	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.
2.2.20	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.
2.2.21	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY.



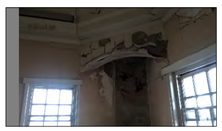


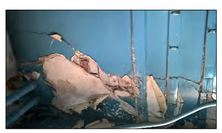




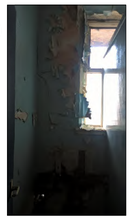


















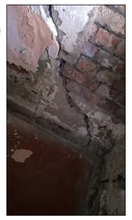
















PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

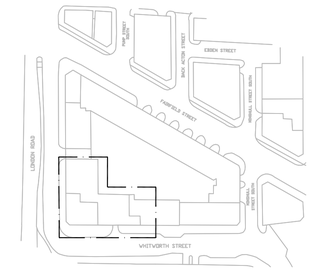
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t: 0161 236 2394
e: manchester@curtins.com
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Status:
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Project:
LONDON ROAD FIRE STATION

Drg Title:
SECOND FLOOR OBSERVATIONS
SHEET 2 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
AS SHOWN	A1	05.04.16	CH	PB

Drg No: 060270 / 10-02-02

Rev: /

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REF	OBSERVATION
2.3.1	CRACKING TO SOFFIT OF BALCONY (UNDERSIDE OF 3rd FLOOR)
2.3.2	CRACK IN MASONRY, EVIDENCE OF MOVEMENT.
2.3.3	SIGNIFICANT CRACKING AROUND BALCONY SUPPORT POINT.
2.3.4	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY
2.3.5	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK LINTELS, BULGING OF WALL.
2.3.6	EXPOSED FILLER JOIST STEELS. CORROSION TO ALL JOISTS AND STEEL BEAMS.
2.3.7	CRACK TO PLASTER FULL HEIGHT AROUND WINDOW
2.3.8	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK ARCHES, BULGING OF WALL.

REF	OBSERVATION
2.3.9	CORROSION TO BALCONY SUPPORT STEEL
2.3.10	CORROSION TO STEEL BEAMS ABOVE
2.3.11	CRACK TO FLOOR SCREED
2.3.12	CONCRETE LINTELS CRACKED AND BROKEN FOR WIDTH OF WALL
2.3.13	CRACK TO FLOOR SCREED
2.3.14	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
2.3.15	CORROSION TO BALCONY SUPPORT STEEL
2.3.16	CORROSION TO STEEL LINTEL AND FLOOR STEEL. NO EVIDENCE OF BALCONY BACKSPAN.
2.3.17	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 23–24.
2.3.18	CORROSION TO BALCONY SUPPORT STEEL
2.3.19	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 34,35.
2.3.20	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.



PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

2.3.18

2.3.15

2.3.16

2.3.17

2.3.1

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2.3.19

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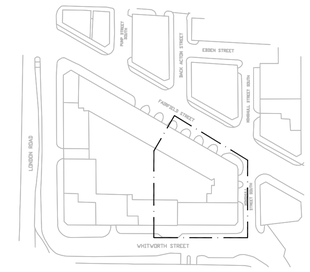

2.3.4


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Project: LONDON ROAD FIRE STATION

Drg Title: SECOND FLOOR OBSERVATIONS SHEET 3 OF 3

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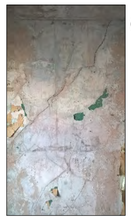
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REF	OBSERVATION
1.1.1	CRACK ABOVE DOOR. EXISTING MONITORING POINTS 40–42.
1.1.2	HIGH LEVEL CRACK BETWEEN WALL AND DOOR HEAD.
1.1.3	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.
1.1.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
1.1.5	CRACK TO PLASTER AT CORNER OF CEILING.
1.1.6	CRACK TO PLASTER AT CORNER OF CEILING.
1.1.7	CRACK TO SOFFIT
1.1.8	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
1.1.9	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.
1.1.10	CRACK TO PLASTER ABOVE ARCH.
1.1.11	EVIDENCE OF MOVEMENT TO MASONRY LOCAL TO BALCONY SUPPORT.
1.1.12	OPEN JOINTS AND DROPPING OF BRICKWORK ARCH ABOVE DOOR.
1.1.13	CORROSION TO STEEL TRANSFER BEAM.

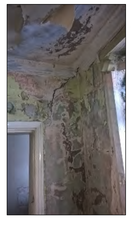

1.1.9


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PLAN ON EXISTING FIRST FLOOR
SCALE 1:100

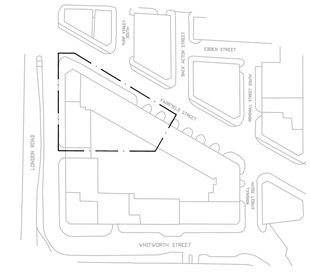
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Project:
LONDON ROAD FIRE STATION

Drg Title:
FIRST FLOOR OBSERVATIONS
SHEET 1 OF 3

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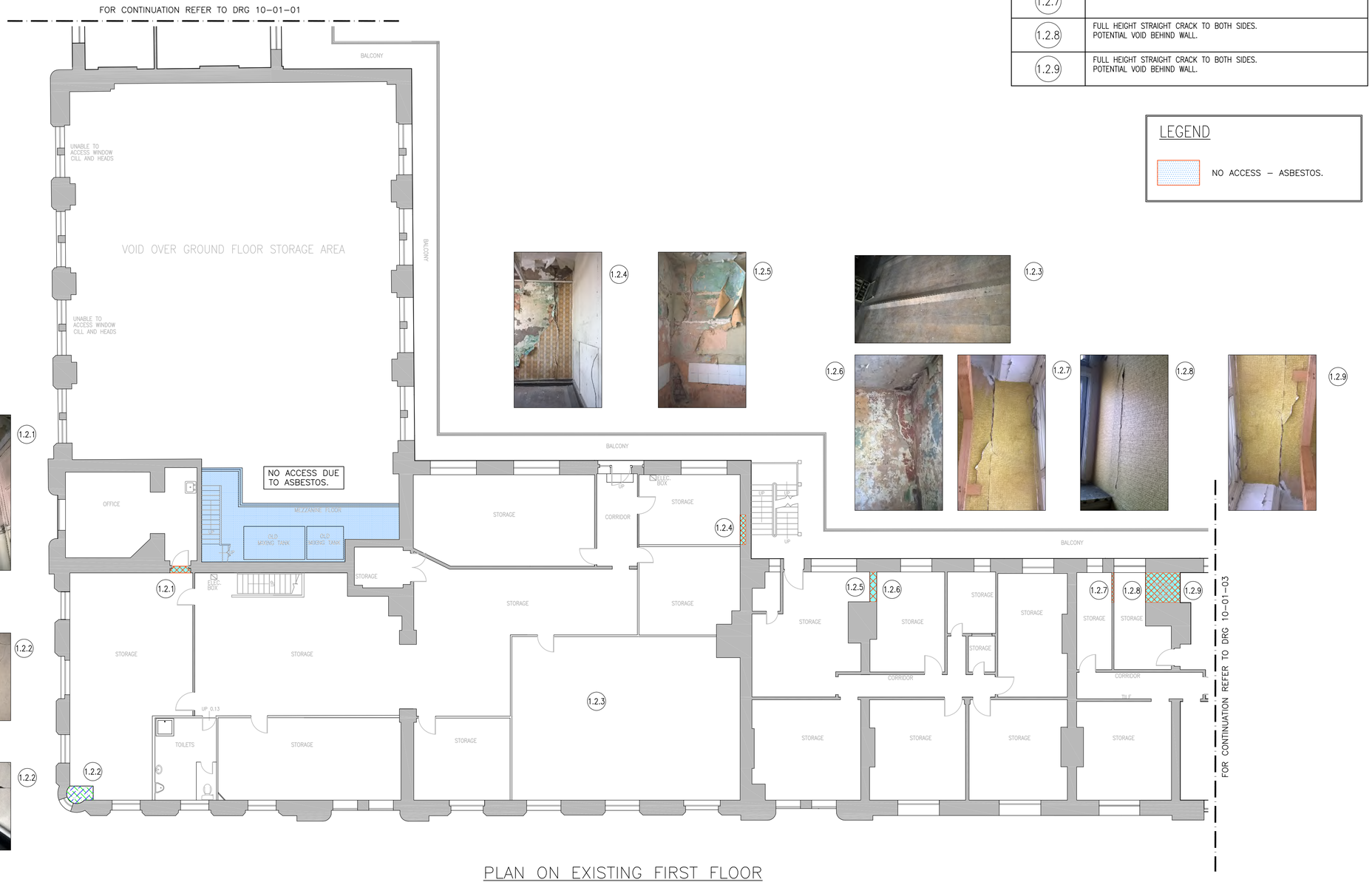
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REF	OBSERVATION
1.2.1	DIAGONAL CRACK TO PLASTER ABOVE DOOR.
1.2.2	CRACK TO CORNER OF CEILING AND EVIDENCE OF WATER DAMAGE TO TIMBER FLOOR.
1.2.3	TIMBER FLOOR WARPED DUE TO PREVIOUS DAMP.
1.2.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
1.2.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
1.2.6	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.
1.2.7	FULL HEIGHT STRAIGHT CRACK TO PLASTER TO PARTITION WALL.
1.2.8	FULL HEIGHT STRAIGHT CRACK TO BOTH SIDES. POTENTIAL VOID BEHIND WALL.
1.2.9	FULL HEIGHT STRAIGHT CRACK TO BOTH SIDES. POTENTIAL VOID BEHIND WALL.

LEGEND

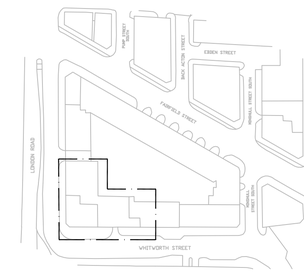
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PLAN ON EXISTING FIRST FLOOR
SCALE 1:100

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Drg Title:
FIRST FLOOR OBSERVATIONS
SHEET 2 OF 3

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REF	OBSERVATION
1.3.1	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.
1.3.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 46–48.
1.3.3	OPEN JOINTS TO MASONRY, SALT DEPOSITION AND MORTAR WASHOUT.
1.3.4	CORROSION TO STEEL TRANSFER BEAM ABOVE.
1.3.5	CRACKING TO PLASTER AROUND FIREPLACE.
1.3.6	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY.



PLAN ON EXISTING FIRST FLOOR
SCALE 1:100

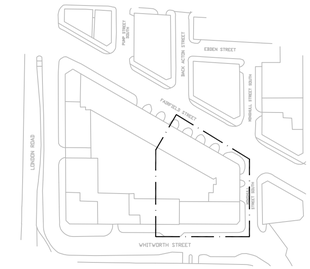
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FIRST FLOOR OBSERVATIONS
SHEET 3 OF 3

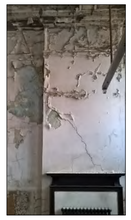
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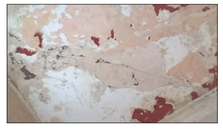




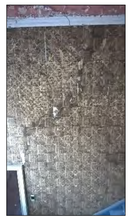






















PLAN ON EXISTING GROUND FLOOR
SCALE 1:100

REF	OBSERVATION
0.1.1	CORROSION TO STEEL BEAMS AND FILLER JOISTS.
0.1.2	CRACKING TO PLASTER CEILING.
0.1.3	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.
0.1.4	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.
0.1.5	EVIDENCE OF WATER DAMAGE TO CEILING AND TIMBER JOISTS.
0.1.6	CRACK EMINATING FROM DOOR HEAD UP WALL ON BOTH SIDES.
0.1.7	DIAGONAL CRACKING TO WALL.
0.1.8	DIAGONAL CRACKING TO WALL AT FIREPLACE LOCATION.
0.1.9	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.
0.1.10	HAZING CRACKS TO PLASTER, NO DISCERNABLE PATTERN.
0.1.11	HAZING CRACKS TO PLASTER, NO DISCERNABLE PATTERN.
0.1.12	CRACK EMINATING FROM WINDOW CILL.
0.1.13	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.
0.1.14	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.

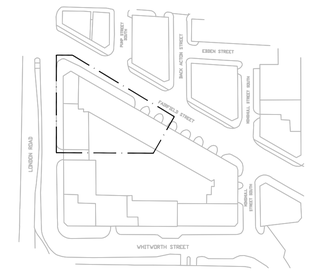
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Drg Title:
GROUND FLOOR OBSERVATIONS
SHEET 1 OF 3

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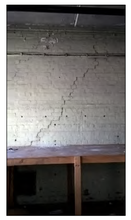
REF	OBSERVATION
0.2.1	FULL HEIGHT CRACK IN WALL IN LINE WITH TRANSFER BEAM ABOVE.
0.2.2	CRACKING TO FINISHES.
0.2.3	CRACKING TO FLOOR SCREED.
0.2.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.
0.2.5	STRAIGHT FULL HEIGHT CRACK IN MASONRY.
0.2.6	DIAGONAL CRACK THROUGH MASONRY PARTITION WALL EVIDNET FROM BOTH SIDES.



0.2.1



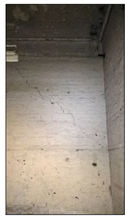
0.2.5



0.2.4



0.2.3



0.2.6

PLAN ON EXISTING GROUND FLOOR
SCALE 1:100

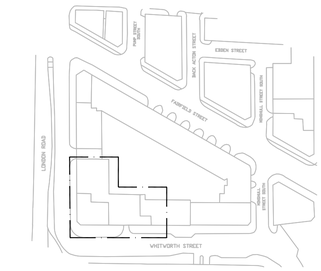
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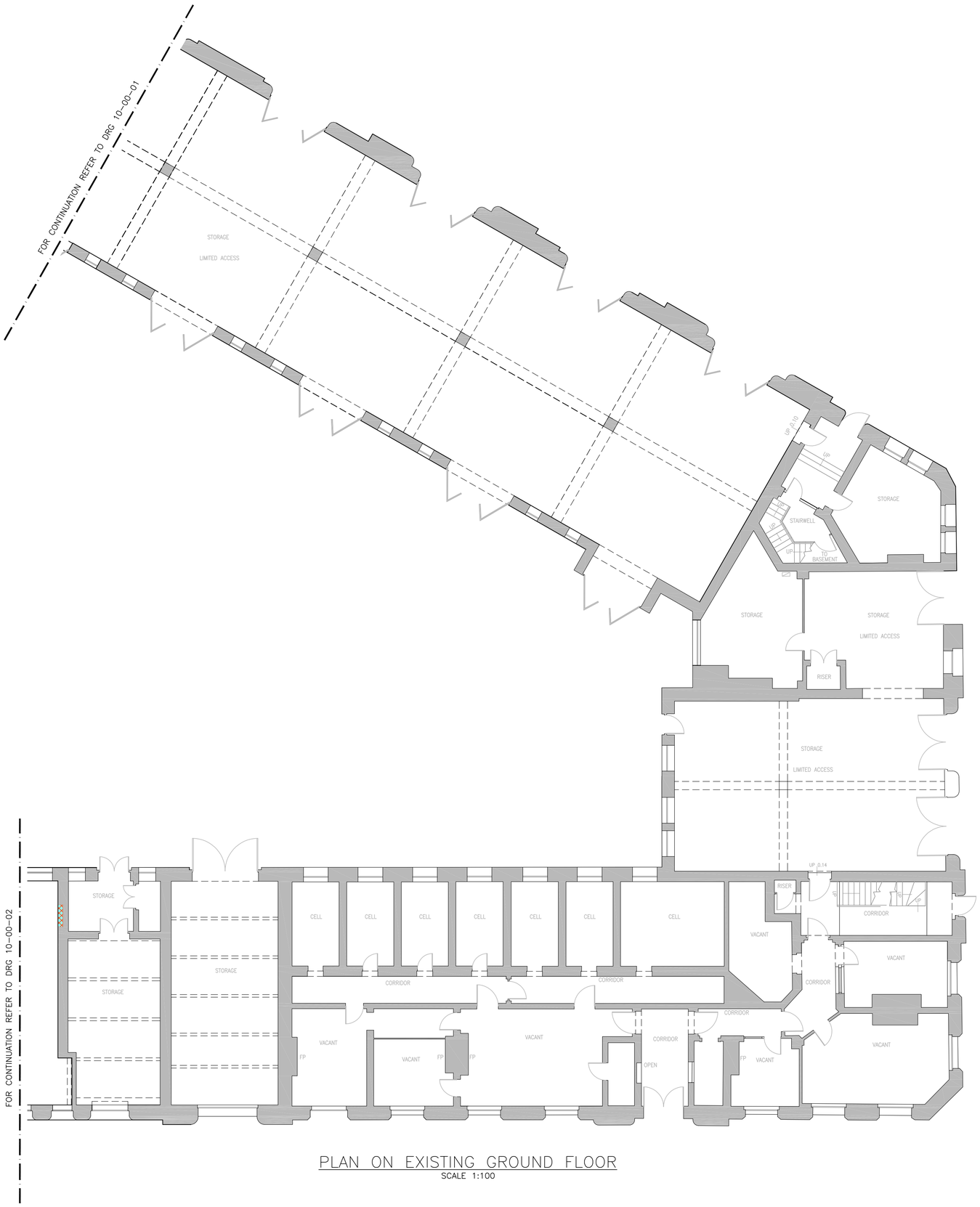
Project:
LONDON ROAD FIRE STATION

Drg Title:
GROUND FLOOR OBSERVATIONS
SHEET 2 OF 3

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PLAN ON EXISTING GROUND FLOOR
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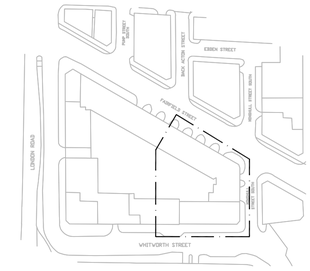
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SHEET 3 OF 3

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B.1.6


B.1.7


B.1.8


B.1.9


B.1.10


B.1.12


B.1.5


B.1.4


B.1.3



B.1.2


B.1.1

PLAN ON EXISTING BASEMENT
SCALE 1:100

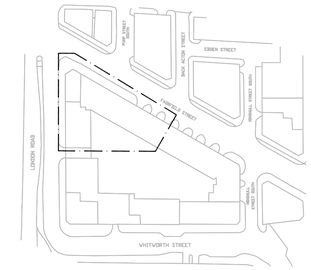
REF	OBSERVATION
B.1.1	PREVIOUS INVESTIGATION TO COLUMN. CONCRETE BROKEN OUT AND DRILLED TO FIND WEB OF COLUMN.
B.1.2	BEAM CORRODED AND CONCRETE SPALLED.
B.1.3	DIAGONAL CRACK TO MASONRY EVIDENT ON ONE SIDE ONLY.
B.1.4	CORROSION TO STEEL BEAM AND LOCAL CRACKS TO MASONRY.
B.1.5	CRACKING TO MASONRY AROUND OPENING.
B.1.6	COLUMN EXPOSED IN GOOD CONDITION.
B.1.7	CORROSION TO STEEL BEAM.
B.1.8	COAL CHUTE IN GOOD CONDITION.
B.1.9	EVIDENCE OF WATER INGRESS TO LIGHTWELL.
B.1.10	MINOR SPALLING TO CONCRETE SOFFIT.
B.1.11	BASEMENT WALL EXPOSED, NO EVIDENCE OF DAMP.
B.1.12	CRACKING TO CEILING FINISHES.

LEGEND

- BASEMENT IN GENERALLY DRY, SOUND CONDITION
- NO ACCESS – ASBESTOS.
- EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.

NOTES:

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Drg Title: BASEMENT OBSERVATIONS SHEET 1 OF 3

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REF	OBSERVATION
B.2.1	EVIDENCE OF WATER INGRESS TO LIGHTWELL

LEGEND

- BASEMENT IN GENERALLY DRY, SOUND CONDITION
- NO ACCESS – ASBESTOS.
- EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.

FOR CONTINUATION REFER TO DRG 10-B01-01



FOR CONTINUATION REFER TO DRG 10-B01-03

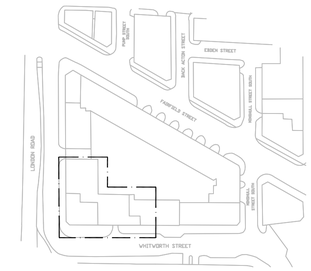


B.2.1

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REF	OBSERVATION
B.3.1	ASBESTOS LABELS ON WALL
B.3.2	EXPOSED FILLER JOIST STEELS. CORROSION TO STEEL AND SPALLING OF CONCRETE.
B.3.3	CORROSION TO STEEL BEAM

LEGEND

- BASEMENT IN GENERALLY DRY, SOUND CONDITION
- NO ACCESS – ASBESTOS.
- EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.



B.3.3

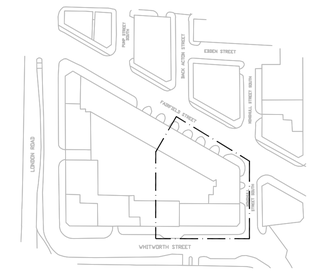
B.3.2

PLAN ON EXISTING BASEMENT

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060270 – LRFS –

EXTENTS OF PROPPING REQUIRED FOR 'MADE HERE' EVENT.

NOTE:

CRACKING TO SOFFIT IS LIKELY INDICATION OF CORROSION, LAMINATION AND EXPANSION OF FILLER JOISTS. WHERE NO CRACK IS VISIBLE THIS DOES NOT NECESSARILY MEAN CORROSION IS NOT PRESENT

NOTE:

PLAN INDICATES CONDITION OF FILLER JOIST FLOOR AS PER CURTINS SURVEY 18.05.2016

NOTE:

SECTION LOSS COULD NOT BE ACCURATELY MEASURED BUT IS ESTIMATED TO BE 2–3mm ON EXPOSED FILLER JOISTS

NOTE:

PROPPING OF FIRST FLOOR BALCONIES IS REQUIRED ABOVE ENTRANCE / EXIT TO ALLOW SAFE ACCESS TO ENGINE ROOM.

LEGEND

- INDICATES FULLY EXPOSED FILLER JOISTS WITH SECTION LOSS. PROPPING IS REQUIRED.
- INDICATES FILLER JOIST WITH DAMAGE TO EXISTING FINISHES – UNABLE TO DETERMINE SECTION LOSS. PROPPING IS REQUIRED.
- INDICATES FILLER JOIST WITH CRACK VISIBLE TO SOFFIT. JOISTS TO BE INSPECTED PERIODICALLY TO MONITOR ANY DETERIORATION. CURRENTLY NO PROPPING IS REQUIRED.
- INDICATES FILLER JOIST LOCATION. JOISTS TO BE INSPECTED PERIODICALLY TO MONITOR ANY DETERIORATION. CURRENTLY NO PROPPING IS REQUIRED.

01/08/16

SJS





EXISTING BEAM BEARING HAS BEEN REPAIRED AT BEARING



CONCRETE SPALLING OFF MAIN BEAM AT BEARING





MAIN STEEL BEAM EXPOSED BUT IN RELATIVELY GOOD CONDITION



COLUMN HEAD EXPOSED, MINOR CORROSION BUT RELATIVELY GOOD CONDITION



FILLER JOISTS EXPOSED (BY DESIGN). SOME EVIDENCE OF CORROSION TO BOTTOM FLANGES











INDICATES EXTENTS OF PROPPING REQUIRED TO EXHIBITION SPACE

INDICATES EXTENTS OF PROPPING REQUIRED TO ALLOW SAFE ACCESS AND EGRESS.

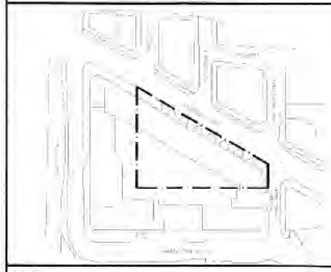
INDICATES EXTENTS OF BARRIERS REQUIRED IN ENGINE ROOM TO RESTRICT ACCESS.

PLAN ON BASEMENT SHOWING GROUND FLOOR STRUCTURE (BENEATH ENGINE ROOM)

SCALE 1:100

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.



KEY

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REFERENCE DRAWINGS

GROUND FLOOR OBSERVATIONS – 060270/10–00–01
BASEMENT OBSERVATIONS – 060270/10–B01–01

GROUND FLOOR ACCESS PLAN – 060270/10–00–20

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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: GROUND FLOOR INVESTIGATION ENGINE ROOM FLOOR

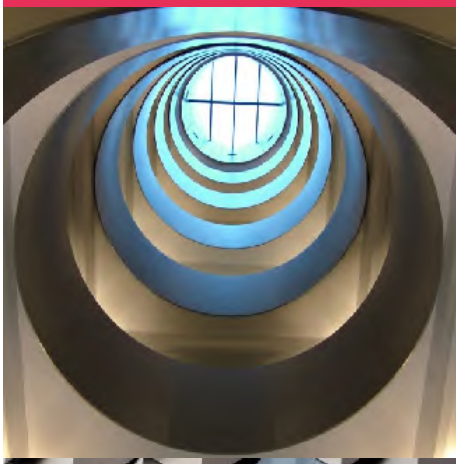
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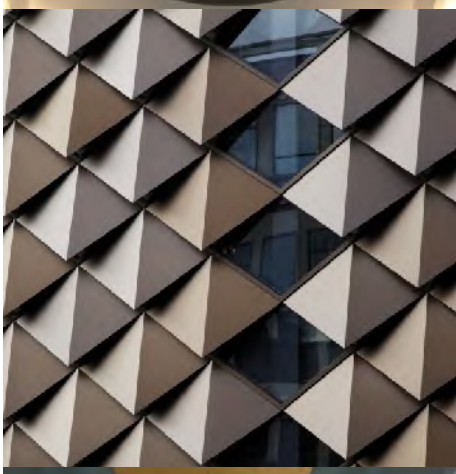
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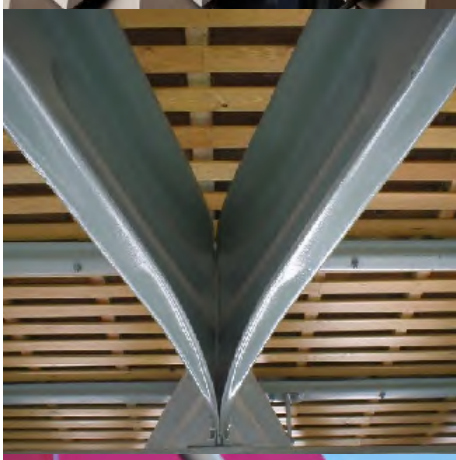
Rev: A

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London Road Fire Station

Proposed Schedule of Intrusive Investigations

Curtins Ref: O60270

Revision: - 01

Issue Date: 09 April 2016

Client Name: Allied London

Client Address: HQ, Atherton St Manchester

Site Address: London Road/Fairfield St, Manchester

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00	First Issue	PB	KM	12.04.2016
01	Updated to reference suggested methodology	PB	KM	09.05.2016

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Author	Signature	Date
Patrick Barton MEng (Hons) CEng MIStructE Senior Engineer		09.05.2016

Reviewed	Signature	Date
Kev Mitchell MBA (Manc) CEng MIStructE Design Director		09.05.2016

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Appendix I – Proposed Intrusive Investigation Drawings

1.0 Introduction

1.1 This document has been prepared for Allied London in connection with the Former Fire Station at London Road, Manchester. The fire station is a Grade II* listed structure.

1.2 This report is part of a stepped approach to surveying and assessing an existing structure. For this project, Curtins Consulting has been commissioned by Allied London to ascertain the potential works associated with refurbishing this building in two phases:

1.3.1 Phase 1 - Repairs to external envelope and structure to create shell space for letting to operators)

1.3.2 Phase 2 - New works by Landlord and fit out by Tenants

1.3 The document details out the initial intrusive investigations in relation to Phase 1 of this process. These investigations and opening up works will enable a Full Tactile Structural Inspection to be conducted.

1.4 This tactile inspection will then inform a further set of intrusive exploratory works, used to determine the condition and suitability of the structure for future use, and inform any remedial works.

1.5 This staggered approach has been devised to ensure that the proposed investigations and invasive works fit with the aspirations for retained finishes at all stages, with minimal detriment to the building fabric.

1.6 As always with this type of process there will be some overlap and we have adopted a methodology that is designed to ensure that Phase 1 is covered adequately whilst making due allowance for elements of Phase 2 that take advantage of scale economy.

1.7 The full extent of required investigations will evolve as the building is opened up further and assessed. As such this document should be considered as a benchmark document which will develop alongside the live *Investigations and*

Repairs Schedule. This schedule is included in Section 2.0, and will be updated as the investigations progress.

1.8 Due to the listed status of the building, it is essential that the relevant procedures are followed, and relevant authorities consulted regarding any intrusive, invasive or remedial works are proposed.

1.9 For the purposes of this report the following geographical reference has been adopted:

London Road – North	Whitworth St - West
Minshull St South – South	Fairfield St – East

2.0 Schedule of Investigations

2.1 This section should be read in conjunction with Curtins drawing series 060270/SPEC-10-xx-xx included in Appendix I. Reference should also be made to Levitt Bernstein significance plans.

2.2 The basis for defining the investigations has been based on the Detailed Visual Inspection by Curtins. As such, each investigation relates to an observation made in this survey.

2.3 There a number of different investigations proposed, each with a description and location. For ease these have been organised into categories of similar works, listed on the schedule and drawings. These categories have been incorporated into a separate 'Suggested Methodology' report, which outlines suggested methods of work for the investigations. Contractors will provide detailed task method statements, but the suggested methodology will provide the design team, client and relevant authorities with an idea of the work involved.

2.4 Further to the intrusive investigations shown on the itemized schedule and drawings, it is likely that a number of additional similar investigations will be required as the structure is opened up. As such it is recommended that each investigation type has a rate defined, which will allow a nominal cost can be assigned to a set of further investigations. The extent and location of these can then be determined as the works progress.

2.5 Outside of the itemized intrusive investigation schedule, below is a summary of other required surveys to be included in the Phase 1 Investigation works.

- 2.5.1 Asbestos R&D survey – This will be required before any access is permitted into certain areas of the building.
- 2.5.2 Specialist Survey to Roof to be included as part of façade investigation. Specification to be developed with Architect and specialist access contractor.
- 2.5.3 Timber Condition Survey – Scope and Extent to be determined alongside specialist.
- 2.5.4 CCTV Drainage Survey of existing drainage to courtyard and building perimeter.

060270 London Road Fire Station - Investigation and Repair Schedule

(REV C) - 09.05.2016

This is a LIVE document to be read in conjunction with the following:

- **Curtins Observation Drawings Series 10-XX-XX**
- **Curtins Proposed Intrusive Investigations Drawings Series SPEC/10-XX-XX**
- **Curtins Detailed Visual Inspection Report**
- **Curtins Intrusive Investigations Report**
- **Curtins Intrusive Structural Investigation Suggested Methodology Report**
- **Levitt Bernstein Significance Plans**

** This schedule is not exhaustive or definitive, and the full extent of investigation and repairs will evolve as the building is opened up**
** All relevant authorities should be consulted prior to any intrusive, invasive or remedial works are performed**
** It is essential that safe access is provided to all personnel performing investigate or repair works at height, in confined spaces or awkward working positions. **
** All intrusive and invasive survey methods should be appropriate for use on Grade II* Listed Strucutre. All investigations to be approved by relevant authorities **

		REF	Observation	Intrusive/Invasive Investigation	Type	Potential Further Invasive Investigation (TBC)	Potential Cause (TBC)	Potential Repair Detail (TBC)	Further Considerations
THIRD FLOOR	10-03-01, 10-03-04	3.1.1	RAINWATER PIPE CUT INTO WALL.	NONE	N/A	N/A		BOX IN	
		3.1.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	NONE	N/A		DEFLECTION OF TRANSFER STRUCTURE AT 1ST FLOOR		
		3.1.3	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	NONE	N/A		DEFLECTION OF TRANSFER STRUCTURE AT 1ST FLOOR		
		3.1.4	EXPOSED PARTITION WALL.	NONE	N/A	N/A	PREVIOUS INVESTIGATION	MAKE GOOD	
		3.1.5	DIAGONAL CRACK BETWEEN DOOR FRAME AND CEILING.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.1.6	MULTIPLE LARGE DIAGONAL CRACKS TO PLASTER INTERNALLY. UNABLE TO VIEW EXTERNAL FACE.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.1.7	OPEN JOINTS IN MASONRY ADJACENT BALCONY TRACING PARTLY UP WALL.	REMOVE BRICKWORK LOCAL TO BALCONY SUPPORT (AFTER PROPPING)	12		BALCONY DEFLECTION/CORROSION	CRACK STITCH, RE-POINT	
		3.1.8	EVIDENCE OF WATER DAMAGE TO TIMBER RAFTERS TO MANSARD.	TIMBER CONDITION SURVEY	3		WATER INGRESS		
		3.1.9	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.1.10	LARGE STRAIGHT CRACK TO CEILING FINISHES	REMOVE CEILING FINISHES LOCAL TO CRACK	6				
		3.1.11	HIGH LEVEL CRACK TO PLASTER	REMOVE PLASTER LOCAL TO CRACK	2				
		3.1.12	EVIDENCE OF WATER DAMAGE TO EXPOSED TIMBER	TIMBER CONDITION SURVEY	3				
		3.1.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	NONE	N/A	TBC	NONE	TBC	
		3.1.14	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	NONE	N/A	TBC	TBC	TBC	
		3.1.15	CEILING JOISTS AND MASONRY EXPOSED ABOVE CEILING LEVEL.	TIMBER CONDITION SURVEY	3				
		3.1.16	MINOR DIAGONAL CRACKING TO PLASTER TO ONE SIDE ONLY.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.1.17	CRACKING TO FLOOR SCREED.	NONE	N/A	N/A	SHRINKAGE		
		3.1.18	EXPOSED LINTEL AND MASONRY IN GOOD CONDITION.	NONE	N/A	N/A			
		3.1.19	HATCH INTO ROOF SPACE. UNABLE TO ACCESS (ASBESTOS).	ASBESTOS R&D FOLLOWED BY INSPECTION	4				
		3.1.20	CRACK TO WALL (ONLY ONE SIDE ACCESSIBLE, ASSUME EVIDENT ON BOTH SIDES) EXISTING MONITORING POINTS 36-37.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.1.21	EXISTING HOLES IN FLOOR. BOARDED OVER.	REMOVE BOARDS TO ALLOW INSPECTION	5				
		3.1.22	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.	NONE	N/A	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		3.1.23	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.	NONE	N/A	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		3.1.24	EXISTING HOLES IN FLOOR. BOARDED OVER.	REMOVE BOARDS TO ALLOW INSPECTION	5				
		3.3.40	STRUCTURAL ASSESSMENT OF SOFFIT REQUIRED	REMOVE CEILING FINISHES TO ALLOW ASSESSMENT	6				
		3.3.41	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		3.3.44	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
THIRD FLOOR	10-03-02, 10-03-05	3.2.1	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.	NONE	N/A	N/A	PARTITION WALL SHRINKAGE	MAKE GOOD FINISHES ONLY	
		3.2.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT BETWEEN COURTYARD WALL AND CHIMNEY.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1		PARTITION WALL SHRINKAGE	POTENTIAL CRACK STITCH. MAYBE SIMPLE MAKE GOOD.	
		3.2.3	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.4	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.5	CRACK NEAR HEAD OF WALL RETURN	REMOVE BOARDING TO STRUCTURE TO INVESTIGATE EXTENT OF CRACK	6				
		3.2.6	PREVIOUS REPAIR TO TIMBER ROOF TRUSS. STEEL PLATES BOLTED TO TRUSS AT BEARING.	TIMBER CONDITION SURVEY OF TRUSSES IN GYM INC. EXPOSURE OF BEARINGS.	3		PREVIOUS WATER INGRESS, ROT		
		3.2.7	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.8	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.9	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.10	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.11	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY. CRACK EXTENDS FROM COURTYARD WALL TO DOOR FRAME.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.12	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 18-19.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 18-19.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.2.14	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.2.15	VISIBLE DAMP TO CEILING.	REMOVE FINISHES LOCAL TO DAMP PATCH	6				
		3.2.16	CRACKS TO PLASTER CEILING	REMOVE PLASTER TO INVESTIGATE CAUSE OF CRACK	6		SHRINKAGE OF PLASTER	MAKE GOOD	
		3.2.17	STRUCTURAL ASSESSMENT REQUIRED	CEILING/PLASTER TO SLAB SOFFIT TO BE REMOVED TO ALLOW INSPECTION	6				
		3.2.18	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
THIRD FLOOR	10-03-03, 10-03-06	3.3.1	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 28-30.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.3.2	CEILING JOISTS EXPOSED. EVIDENCE OF WATER DAMAGE.	TIMBER CONDITION SURVEY	3				
		3.3.3	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.	NONE	N/A	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		3.3.4	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 31-33.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.3.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 31-33.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		3.3.6	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.	NONE	N/A	NONE	PARTITION WALL SHRINKAGE	MAKE GOOD FINISHES ONLY	
		3.3.7	STRAIGHT LINE CRACK THROUGH FLOOR TILES.	REMOVE FLOOR TILES TO INVESTIGATE FLOOR	11		CRACKING TO CONCRETE FLOOR SLAB/CORROSION OF FILLER JOISTS	MAKE GOOD LOCALLY	
		3.3.8	OPEN JOINTS TO MASONRY AND DROPPING TO ARCH BRICKWORK.	NONE	N/A	N/A	THERMAL MOVEMENT? MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		3.3.9	EVIDENCE OF MOVEMENT TO MASONRY LOCAL TO BALCONY SUPPORT.	BREAK OUT MASONRY ADJACENT TO BALCONY SUPPORT (AFTER PROPPING)	12				
		3.3.10	STRAIGHT LINE CRACK THROUGH FLOOR TILES.	REMOVE FLOOR TILES TO INVESTIGATE FLOOR	11		CRACKING TO CONCRETE FLOOR SLAB/CORROSION OF FILLER JOISTS	MAKE GOOD LOCALLY	
		3.3.11	CRACKING TO SURFACE FINISH TO BALCONY.	REMOVE FINISHES LOCAL TO CRACKS TO DETERMINE CAUSE, THICKNESS AND FORM	11		SHRINKAGE. DEFLECTION OF BALCONIES.	MAKE GOOD LOCALLY	
		3.3.12	OPEN JOINTS/CRACKING TO HIGH LEVEL MASONRY PARAPET EMINATING FROM WINDOW HEAD.	REMOVE FINISHES INTERNALLY TO REVIEW EXTENT OF CRACK	2		THERMAL MOVEMENT. FOUNDATION SETTLEMENT.	CRACK STITCH. REPOINT	
		3.3.13	CRACKING TO SURFACE FINISH TO BALCONY.	NONE	N/A		SHRINKAGE. DEFLECTION OF BALCONIES.	MAKE GOOD LOCALLY	
		3.3.14	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.3.15	DIAGONAL CRACK FULL HEIGHT THROUGH PLASTER OF CHIMNEY BREAST.	REMOVE PLASTER LOCAL TO CRACK	2				
		3.3.16	CRACKS AND UNDULATIONS TO SCREED FLOOR. CRACKS GENERALLY STRAIGHT.	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS FROM ABOVE AND DETERMINE FINISHES	11		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		3.3.17	EVIDENCE OF WATER INGRESS TO CEILING AND CRACKS TO PLASTER.	REMOVE CEILING FINISHES	6			WATER INGRESS	
		3.3.18	EVIDENCE OF WATER INGRESS TO CEILING AND CRACKS TO PLASTER.	REMOVE CEILING FINISHES	6			WATER INGRESS	
		3.3.19	CRACKS TO PLASTER ON PARTITION WALL.	NONE	N/A		PARTITION WALL SHRINKAGE	MAKE GOOD	
		3.3.20	CRACK IN LANDING FLOOR.	EXPOSE STEEL SUPPORTS BELOW AND MEASURE (REVIEW ACCESS REQUIREMENTS)	6		DEFLECTION OF CANTILEVER LANDING		
		3.3.21	EVIDENCE OF PREVIOUS REMEDIAL WORKS TO WATER DAMAGED TIMBER.	TIMBER CONDITION SURVEY	3		WATER INGRESS/PREVIOUS WORKS		
		3.3.22	TEMPORARY PROPS PRESENT TO SUPPORT ROOF TRUSS.	TIMBER CONDITION SURVEY	3		WATER INGRESS/PREVIOUS WORKS	REPAIRS TO ROOF TRUSS	
		3.3.23	STEEL AND CONCRETE LINTELS TO 4no. WINDOWS CRACKED AND/OR SPALLED.	NONE	N/A		WATER INGRESS/CORROSION	LINTEL REPLACEMENT	
		3.3.24	CRACKING TO FLOOR SCREED.	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		3.3.25	OPEN JOINTS TO MASONRY AND DROPPING TO BRICKWORK LINTEL.	NONE	N/A	N/A	THERMAL MOVEMENT? MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		3.3.26	OPEN JOINTS TO MASONRY AT PREVIOUS DOOR POSITION. SALT DEPOSITION AND MORTAR WASH-OUT EVIDENT.	NONE	N/A		EXPOSURE TO RAIN, POOR BRICKWORK	REPOINT/REMEDIAL WORKS TO MASONRY	
		3.3.27	OPEN JOINTS TO MASONRY NEAR WINDOW. SALT DEPOSITION AND MORTAR WASH-OUT. CRACKS TO FLOOR FINISH.	NONE	N/A		EXPOSURE TO RAIN, POOR BRICKWORK		
		3.3.28	RECENTLY REPLACED CEILING.	NONE	N/A	NONE	N/A	N/A	
		3.3.29	CRACKING TO FLOOR SCREED.	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		3.3.30	EVIDENCE OF PREVIOUS REMEDIAL WORKS TO WATER DAMAGED TIMBER.	TIMBER CONDITION SURVEY	3		WATER INGRESS/PREVIOUS WORKS		
		3.3.31	TEMPORARY PROPS PRESENT TO SUPPORT MASARD ROOF TIMBERS WHICH SHOW SEVERE WATER DAMAGE.	TIMBER CONDITION SURVEY	3		WATER INGRESS/PREVIOUS WORKS		
		3.3.32	OPEN JOINTS TO MASONRY, SIGNIFICANT MOVEMENT OF BRICKWORK AND MORTER WASH-OUT.	NONE	N/A		EXPOSURE TO RAIN, POOR BRICKWORK	REPOINT/REMEDIAL WORKS TO MASONRY	
		3.3.33	OPEN JOINTS TO MASONRY, SIGNIFICANT MOVEMENT OF BRICKWORK AND MORTER WASH-OUT.	NONE	N/A		EXPOSURE TO RAIN, POOR BRICKWORK	REPOINT/REMEDIAL WORKS TO MASONRY	
		3.3.34	STRAIGHT LINE FULL HEIGHT CRACK THROUGH EXTERNAL WALL. DAYLIGHT VISIBLE THROUGH CRACK.	NONE	N/A		EXPOSURE TO RAIN, POOR BRICKWORK	REPOINT/REMEDIAL WORKS TO MASONRY	
		3.3.35	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK LINTELS, BULGING OF WALL.	FAÇADE SURVEY	8	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT, REPLACE LINTEL	
		3.3.36	LARGE CRACK IN EXTERNAL MASONRY.	FAÇADE SURVEY	8	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT, REPLACE LINTEL	
		3.3.37	OPEN JOINTS IN MASONRY, EVIDENCE OF MOVEMENT.	NONE	N/A	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT, REPLACE LINTEL	
		3.3.38	STRAIGHT CRACKS TO FLOOR SCREED.	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		3.3.39	STRAIGHT CRACKS TO FLOOR SCREED.	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		3.3.42	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		3.3.43	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
SECOND FLOOR	10-02-01, 10-02-04	2.1.1	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 25-27.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.1.2	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		2.1.3	LONG STRAIGHT CRACK TO FLOOR SCREED.	REMOVE FINISHES TO SOFFIT BELOW TO INVESTIGATE FILLER JOISTS	6	POTENTIALLY REMOVE SCREED	CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		2.1.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER) OF WALL	1				
		2.1.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 46-48.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.1.6	CRACK TO SOFFIT	BREAK OUT LOCAL TO CRACK	6		FILLER JOIST CORROSION		
		2.1.7	CRACKING TO WINDOW FRAME AND EVIDENCE OF WATER INGRESS	REMOVE FINISHES TO WALL TO INVESTIGATE CRACK	2			REPAIR WINDOW AND MAKE GOOD FINISHES	
		2.1.8	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL	REMOVE PLASTER TO REVEAL CRACK	2				
		2.1.9	CRACKS TO FLOOR SCREED	TAKE UP FLOOR FINISH TO EXPOSE FILLER JOISTS	11	POTENTIALLY REMOVE SCREED	CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		2.1.10	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER TO REVEAL CRACK	2				
		2.1.11	FULL HEIGHT STRAIGHT CRACK TO PLASTER AT ROOM CORNER.	NONE	N/A	NONE	PARTITION WALL SHRINKAGE	MAKE GOOD FINISHES ONLY	
		2.1.12	LOW LEVEL CRACK BETWEEN WALL AND DOOR EVIDENT TO ONE SIDE ONLY.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.1.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 38-39.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.1.14	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		2.1.15	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		2.1.16	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		2.1.17	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
SECOND FLOOR	10-02-02, 10-02-05	2.2.1	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL	REMOVE PLASTER	2				
		2.2.2	DIAGONAL CRACK TO WALL EVIDENT ON BOTH SIDES	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.3	DIAGONAL CRACK TO WALL EVIDENT ON BOTH SIDES	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.4	DIAGONAL CRACK TO WALL EVIDENT ON BOTH SIDES	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.6	STRAIGHT LINE CRACK TO PARTITION WALL	NONE	N/A	NONE	SHRINKAGE	MAKE GOOD	
		2.2.7	BRICKWORK HAS BEEN BROKEN OUT TO INSTALL TOILETS	NONE	N/A	NONE	PRECIOUS BRICK CORING	MAKE GOOD	
		2.2.8	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.9	CRACK TO PLASTER BETWEEN WINDOW CILL AND WALL.	REMOVE PLASTER LOCAL TO CRACK	2				
		2.2.10	MINOR CRACKING TO PLASTER AT HIGH LEVEL. SOME EVIDENCE OF PREVIOUS WATER INGRESS.	REMOVE FINISHES LOCAL TO CRACKS AND DAMP	6		DAMP/WATER DAMAGE, SHRINKAGE TO PLASTER		
		2.2.11	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.	REMOVE FINISHES LOCAL TO LINTEL	9		WATER INGRESS	REPLACE LINTEL	
		2.2.12	DAMP PATCH VISIBLE ON PADSTONE FOR BEAM.	NONE	N/A	NONE	WATER INGRESS/INTERNAL LEAKAGE	NONE	
		2.2.13	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.14	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.15	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.	REMOVE FINISHES LOCAL TO LINTEL	9		WATER INGRESS	REPLACE LINTEL	
		2.2.16	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.17	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.	REMOVE FINISHES LOCAL TO LINTEL	9		WATER INGRESS	REPLACE LINTEL	
		2.2.18	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.19	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.20	CORROSION TO STEEL LINTEL AND SPALLING OF SURROUNDING CONCRETE.	NONE	N/A		WATER INGRESS	REPLACE LINTEL	
		2.2.21	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.2.22	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		2.2.23	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		2.3.1	CRACKING TO SOFFIT OF BALCONY (UNDERSIDE OF 3rd FLOOR)	REMOVE FINISHES LOCAL TO CRACK	6				
		2.3.2	CRACK IN MASONRY, EVIDENCE OF MOVEMENT.	REMOVE FINISHES INTERNALLY	2	NONE	THERMAL MOVEMENT	CRACK STITCH, REPOINT	
		2.3.3	SIGNIFICANT CRACKING AROUND BALCONY SUPPORT POINT.	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12		DEFLECTION/CORROSION OF BALCONY STEEL	REMEDIATE CORROSION, PROP BALCONY, MAKE GOOD BRICKWORK	

SECOND FLOOR	10-02-03, 10-02-06	2.3.4	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY	REMOVE FINISHES LOCAL TO CRACK	2				
		2.3.5	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK LINTELS, BULGING OF WALL.	LINE AND LEVEL SURVEY	8	N/A	THERMAL MOVEMENT? MORTAR WASHOUT	LOCALLY REBUILD, REPOINT, REPLACE LINTEL	
		2.3.6	EXPOSED FILLER JOIST STEELS. CORROSION TO ALL JOISTS AND STEEL BEAMS.	BREAK OUT CONCRETE TO UNDERSIDE OF FILLER JOISTS	6	STEEL AND CONCRETE TESTING	WATER INGRESS	CLEAN OFF,TREAT AND RE-PAINT. MAKE GOOD	
		2.3.7	CRACK TO PLASTER FULL HEIGHT AROUND WINDOW	REMOVE PLASTER	2				
		2.3.8	OPEN JOINTS TO MASONRY, DROPPING OF BRICKWORK ARCHES, BULGING OF WALL.	LINE AND LEVEL SURVEY	8	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT, REPLACE LINTEL	
		2.3.9	CORROSION TO BALCONY SUPPORT STEEL	NONE	N/A	STEEL TESTING	WEATHERING	PROP, STRIP, TREAT AND REPAINT.	
		2.3.10	EXPOSED FILLER JOIST STEELS. CORROSION TO ALL JOISTS AND STEEL BEAMS.	BREAK OUT CONCRETE TO UNDERSIDE OF FILLER JOISTS	6	STEEL TESTING	WATER INGRESS	STRIP, TREAT AND REPAINT.	
		2.3.11	CRACK TO FLOOR SCREED	REMOVE FINISHES TO SOFFIT BELOW TO INVESTIGATE FILLER JOISTS	6	POTENTIALLY REMOVE SCREED	CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		2.3.12	CONCRETE LINTELS CRACKED AND BROKEN FOR WIDTH OF WALL	NONE	N/A	NONE	WATER INGRESS, OVERLOADING	REPLACE LINTELS	
		2.3.13	CRACK TO FLOOR SCREED (AS PER FLOOR ABOVE)	REMOVE FINISHES TO SOFFIT TO INVESTIGATE FILLER JOISTS ABOVE	6		CORROSION OF FILLER JOISTS, SHRINKAGE OF SCREED	LOCALLY MAKE GOOD SCREED, REMEDIATE FILLER JOIST CORROSION	
		2.3.14	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		2.3.15	CORROSION TO BALCONY SUPPORT STEEL	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12	STEEL TESTING	WEATHERING	PROP, STRIP, TREAT AND REPAINT.	
		2.3.16	CORROSION TO STEEL LINTEL AND FLOOR STEEL. NO EVIDENCE OF BALCONY BACKSPAN.	REMOVE FINISHES LOCAL TO LINTEL	9		WATER INGRESS	REPLACE LINTEL	
		2.3.17	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 23-24.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.3.18	CORROSION TO BALCONY SUPPORT STEEL	NONE	N/A	STEEL TESTING	WEATHERING	PROP, STRIP, TREAT AND REPAINT.	
		2.3.19	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 34,35.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		2.3.20	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.	NONE	N/A	NONE	WATER INGRESS	REPLACE LINTEL	
		2.3.21	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		2.3.22	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		2.3.23	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
FIRST FLOOR	10-01-01, 10-01-04	1.1.1	CRACK ABOVE DOOR. EXISTING MONITORING POINTS 40-42.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		1.1.2	HIGH LEVEL CRACK BETWEEN WALL AND DOOR HEAD.	REMOVE PLASTER	2				
		1.1.3	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.	REMOVE FINISHES LOCAL TO LINTEL	9		WATER INGRESS	REPLACE LINTEL	
		1.1.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		1.1.5	CRACK TO PLASTER AT CORNER OF CEILING.	NONE	N/A			MAKE GOOD	
		1.1.6	CRACK TO PLASTER AT CORNER OF CEILING.	REMOVE CEILING PLASTER	6			MAKE GOOD	
		1.1.7	CRACK TO SOFFIT	BREAK OUT LOCAL TO CRACK	6		FILLER JOIST CORROSION		
		1.1.8	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		1.1.9	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.	REMOVE PLASTER LOCAL TO CRACK	2				
		1.1.10	CRACK TO PLASTER ABOVE ARCH.	REMOVE PLASTER TO REVEAL CRACK	2				
		1.1.11	EVIDENCE OF MOVEMENT TO MASONRY LOCAL TO BALCONY SUPPORT.	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12		DEFLECTION/CORROSION OF BALCONY STEEL	REMEDIATE CORROSION, PROP BALCONY, MAKE GOOD BRICKWORK	
		1.1.12	OPEN JOINTS AND DROPPING OF BRICKWORK ARCH ABOVE DOOR.	NONE	N/A	N/A	THERMAL MOVEMENT, MORTAR WASHOUT	LOCALLY REBUILD, REPOINT	
		1.1.13	CORROSION TO STEEL TRANSFER BEAM.	NONE	N/A	NONE	WATER INGRESS	STRIP, TREAT AND REPAINT	
		1.1.14	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		1.1.15	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		1.1.16	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		1.1.17	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
FIRST FLOOR	10-01-02, 10-01-05	1.2.1	DIAGONAL CRACK TO PLASTER ABOVE DOOR.	REMOVE PLASTER	2				
		1.2.2	CRACK TO CORNER OF CEILING AND EVIDENCE OF WATER DAMAGE TO TIMBER FLOOR.	REMOVE CEILING FINISH AND FLOOR BOARDS TO INVESTIGATE WATER INGRESS	6		SHRINKAGE		
		1.2.3	TIMBER FLOOR WARPED DUE TO PREVIOUS DAMP.	TIMBER CONDITION SURVEY	3		WATER INGRESS/DAMP ENVIRONMENT		
		1.2.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		1.2.5	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		1.2.6	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		1.2.7	FULL HEIGHT STRAIGHT CRACK TO PLASTER TO PARTITION WALL.	NONE	N/A	NONE	PARTITION WALL SHRINKAGE	MAKE GOOD FINISHES ONLY	
		1.2.8	FULL HEIGHT STRAIGHT CRACK TO WALL. POTENTIAL VOID BEHIND WALL.	REMOVE FINISH LOCAL TO CRACK	2				
		1.2.9	FULL HEIGHT STRAIGHT CRACK TO WALL. POTENTIAL VOID BEHIND WALL.	REMOVE FINISH LOCAL TO CRACK	2				
		1.2.10	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		1.2.11	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
FIRST FLOOR	10-01-00, 10-01-06	1.3.1	CORROSION TO STEEL LINTEL. SIGNIFICANT EXFOLIATION AND SPALLING OF CONCRETE.	REMOVE FINISHES TO EXPOSE LINTEL	9				
		1.3.2	DIAGONAL CRACK TO WALL EVIDENT TO BOTH SIDES. CRACK EXTENDS FULL HEIGHT. EXISTING MONITORING POINTS 46-48.	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		1.3.3	OPEN JOINTS TO MASONRY, SALT DEPOSITION AND MORTAR WASHOUT.	NONE	N/A	NONE	WATER INGRESS	REPOINT	
		1.3.4	CORROSION TO STEEL TRANSFER BEAM ABOVE.	NONE	N/A	NONE	WATER INGRESS	STRIP, TREAT AND REPAINT	
		1.3.5	CRACKING TO PLASTER AROUND FIREPLACE.	REMOVE PLASTER	2				
		1.3.6	DIAGONAL CRACK TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE PLASTER	2				
		1.3.7	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		1.3.8	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		1.3.9	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		1.3.10	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
GROUND FLOOR	10-00-01, 10-00-04	0.1.1	CORROSION TO STEEL BEAMS AND FILLER JOISTS.	NONE	N/A				
		0.1.2	CRACKING TO PLASTER CEILING.	REMOVE PLASTER	6				
		0.1.3	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.1.4	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.1.5	EVIDENCE OF WATER DAMAGE TO CEILING AND TIMBER JOISTS.	SPECIALIST SURVEY OF SIGNIFICANT HERITAGE CEILING	13				
		0.1.6	CRACK EMINATING FROM DOOR HEAD UP WALL ON BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.1.7	DIAGONAL CRACKING TO WALL.	REMOVE PLASTER	2				
		0.1.8	DIAGONAL CRACKING TO WALL AT FIREPLACE LOCATION.	REMOVE PLASTER	2				
		0.1.9	CRACK TO PLASTER BETWEEN FLOOR AND WINDOW CILL.	REMOVE PLASTER LOCAL TO CRACK	2				
		0.1.10	HAZING CRACKS TO PLASTER, NO DISCERNABLE PATTERN.	REMOVE PLASTER	2	NONE	SHRINKAGE	MAKE GOOD	
		0.1.11	HAZING CRACKS TO PLASTER, NO DISCERNABLE PATTERN.	REMOVE PLASTER	2	NONE	SHRINKAGE	MAKE GOOD	
		0.1.12	CRACK EMINATING FROM WINDOW CILL.	REMOVE PLASTER	2	NONE	SHRINKAGE	MAKE GOOD	
		0.1.13	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.1.14	CRACK EMINATING FROM DOOR HEAD UP WALL VISIBLE ON BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.1.15	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		0.1.16	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
GROUND FLOOR	10-00-02, 10-00-05	0.2.1	FULL HEIGHT CRACK IN WALL IN LINE WITH TRANSFER BEAM ABOVE.	REMOVE PLASTER AND BREAKOUT BRICKWORK TO STEEL COLUMN BEHIND AT HIGH LEVEL	2		CORROSION OF COLUMN WITHIN WALL		
		0.2.2	CRACKING TO FINISHES.	NONE	N/A	NONE	SHRINKAGE	MAKE GOOD	
		0.2.3	CRACKING TO FLOOR SCREED.	REMOVE FINISHES TO CEILING BELOW	6	POTENTIALLY REMOVE SCREED	SHRINKAGE? POTENTIAL CORROSION TO STRUCTURE BELOW	MAKE GOOD	
		0.2.4	DIAGONAL CRACKING TO WALL EVIDENT TO ONE SIDE ONLY.	REMOVE FINISHES LOCAL TO CRACK	2				
		0.2.5	STRAIGHT FULL HEIGHT CRACK IN MASONRY.	NONE	N/A	NONE	THERMAL MOVEMENT	STITICH CRACK, REPOINT	
		0.2.6	DIAGONAL CRACK THROUGH MASONRY PARTITION WALL EVIDNET FROM BOTH SIDES.	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1				
		0.2.7	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		0.2.8	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
GROUND FLOOR	10-00-03 10-00-06	0.3.1	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		0.3.2	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		0.3.3	STRUCTURAL ASSESSMENT REQUIRED	STEEL SAMPLE FOR ANALYSIS FROM WEB OF CEILING JOIST	15				
		0.3.4	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		0.3.5	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
BASEMENT	10-B01-01 to 10-B01-06	B.1.1	PREVIOUS INVESTIGATION TO COLUMN. CONCRETE BROKEN OUT AND DRILLED TO FIND WEB OF COLUMN.	NONE	N/A	NONE	PREVIOUS INVESTIGATION	MAKE GOOD	
		B.1.2	BEAM CORRODED AND CONCRETE SPALLED.	BREAK OFF CONCRETE TO REVEAL BEAM.	6	NONE	WATER INGRESS	CLEAN, TREAT AND PAINT	
		B.1.3	DIAGONAL CRACK TO MASONRY EVIDENT ON ONE SIDE ONLY.	NONE	N/A				
		B.1.4	CORROSION TO STEEL BEAM AND LOCAL CRACKS TO MASONRY.	NONE	N/A	NONE	WATER INGRESS	CLEAN, TREAT AND PAINT	
		B.1.5	CRACKING TO MASONRY AROUND OPENING.	NONE	N/A	NONE	NO LINTEL, THERMAL MOVEMENT	PROVIDE LINTEL, STITCH CRACK	
		B.1.6	COLUMN EXPOSED IN GOOD CONDITION.	NONE	N/A	NONE	N/A	N/A	
		B.1.7	CORROSION TO STEEL BEAM.	NONE	N/A	NONE	WATER INGRESS	STRIP, TREAT AND REPAINT	
		B.1.8	COAL CHUTE IN GOOD CONDITION.	NONE	N/A	NONE	N/A	N/A	
		B.1.9	EVIDENCE OF WATER INGRESS TO LIGHTWELL.	CLEAN OFF LIGHTWELL AND FIND LEAK	10		WORN SEAL, CRACKED GLASS BRICK	MAKE GOOD	
		B.1.10	MINOR SPALLING TO CONCRETE SOFFIT.	NONE	N/A	NONE	N/A	MAKE GOOD	
		B.1.11	BASEMENT WALL EXPOSED, NO EVIDENCE OF DAMP.	NONE	N/A	NONE	N/A	N/A	
		B.1.12	CRACKING TO CEILING FINISHES.	REMOVE PLASTER	6				
		B.1.13	STRUCTURAL ASSESSMENT REQUIRED	REMOVE 3NO. BRICKS FOR TESTING	16				
		B.1.14	STRUCTURAL ASSESSMENT REQUIRED	REMOVE 3NO. BRICKS FOR TESTING	16				
		B.1.15	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		B.1.16	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		B.2.1	EVIDENCE OF WATER INGRESS TO LIGHTWELL	CLEAN OFF LIGHTWELL AND FIND LEAK	10		WORN SEAL, CRACKED GLASS BRICK	MAKE GOOD	
		B.2.2	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		B.2.3	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		B.3.1	ASBESTOS LABELS ON WALL	NONE	N/A	NONE	N/A	N/A	
		B.3.2	EXPOSED FILLER JOIST STEELS. CORROSION TO STEEL AND SPALLING OF CONCRETE.	NONE	N/A	NONE	PREVIOUS INVESTIGATIONS. CORROSION TO STEEL DUE TO WATER INGRESS	STRIP, TREAT AND REPAINT. MAKE GOOD	
		B.3.3	CORROSION TO STEEL BEAM	NONE	N/A	NONE	WATER INGRESS	STRIP, TREAT AND REPAINT	
		B.3.4	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		B.3.5	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				
		B.3.6	STRUCTURAL ASSESSMENT REQUIRED	REMOVE BRICKWORK TO PIER BASE TO EXPOSE STEEL BEHIND	12				
		B.3.7	STRUCTURAL ASSESSMENT REQUIRED	MASONRY SAMPLE FOR ANALYSIS FROM BASE MASONRY PIER	16				
		B.3.8	STRUCTURAL ASSESSMENT REQUIRED	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6				
		B.3.9	STRUCTURAL ASSESSMENT REQUIRED	CONCRETE CORE THROUGH FLOOR	14				

INTRUSIVE INVESTIGATION TYPES - REFER TO SUGGESTED METHODOLOGY REPORT FOR FURTHER DETAILS

1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
4	ASBESTOS SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO SLAB SOFFIT
8	FAÇADE SURVEY (INC.LINE AND LEVEL)
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION
10	LIGHTWELL INSPECTION (ARCHITECTURAL)
11	REMOVAL OF FLOOR FINISHES
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING)
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM
14	150mm CONCRETE CORE THROUGH FLOOR SLAB TO DETERMINE THICKNESS AND MATERIAL PROPERTIES
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FURTHER INTRUSIVE/INVASIVE INVESTIGATIONS (NOT INCLUDED ON SCHEDULE ABOVE, ALLOWANCE TO BE MADE FOR TENDER PURPOSES WITH LOCATION TBC)

8no. STEEL SAMPLES TO BE TESTED FOR TENSILE STRENGTH AND CHEMICAL COMPOSITION
12no. MASONRY SAMPLES TO BE TESTED FOR COMPRESSIVE STRENGTH AND MORTAR TESTING

24no. 150mm CONCRETE CORE SAMPLES TAKEN TO DETERMINE THICKNESS AND MATERIAL PROPERTIES. ALLOW FOR CHEMICAL TESTING, COMPRESSIVE STREGNTH AND CUBE STRENGTH TESTING TO ALL.
8no. FERROSCANS / GPR SCANS OF GROUND FLOOR AND BASEMENT SLABS (DEPENDANT ON CORE RESULTS)

OTHER INVESTIGATIONS (NOT INCLUDED ON SCHEDULE ABOVE. REQUIRED BUT TENDERED SEPARATELY TO INTRUSIVE/INVASIVE INVESTIGATIONS)

FULL TIMBER CONDITION SURVEY
EXTERNAL ELEVATION AND ROOF CONDITION SURVEY (INCLUDING TOWERS)
CCTV DRAINAGE SURVEY
MEASUREMENT OF SECTION LOSS TO FILLER JOISTS AND BEAMS (BY STRUCTURAL ENGINEER, REQUIRES ACCESS)
FULL DIMENSIONED STRUCTURAL SURVEY (INCLUDING SECTION SIZES, MASONRY THICKNESSES ETC)
PHASE 2 GROUND INVESTIGATION INCLUDING TRIAL PIT EXPOSURE OF BASEMENT WALLS

curtins

Appendix I – Proposed Intrusive Investigation drawings

Drawing	Title
SPEC-10-03-04	Third Floor Intrusive Investigations Sheet 1 of 3
SPEC-10-03-05	Third Floor Intrusive Investigations Sheet 2 of 3
SPEC-10-03-06	Third Floor Intrusive Investigations Sheet 3 of 3
SPEC-10-02-04	Second Floor Intrusive Investigations Sheet 1 of 3
SPEC-10-02-05	Second Floor Intrusive Investigations Sheet 2 of 3
SPEC-10-02-06	Second Floor Intrusive Investigations Sheet 3 of 3
SPEC-10-01-04	First Floor Intrusive Investigations Sheet 1 of 3
SPEC-10-01-05	First Floor Intrusive Investigations Sheet 2 of 3
SPEC-10-01-06	First Floor Intrusive Investigations Sheet 3 of 3
SPEC-10-00-04	Ground Floor Intrusive Investigations Sheet 1 of 3
SPEC-10-00-05	Ground Floor Intrusive Investigations Sheet 2 of 3
SPEC-10-00-06	Ground Floor Intrusive Investigations Sheet 3 of 3
SPEC-10-B01-04	Basement Intrusive Investigations Sheet 1 of 3
SPEC-10-B01-05	Basement Intrusive Investigations Sheet 2 of 3
SPEC-10-B01-06	Basement Intrusive Investigations Sheet 3 of 3
SPEC-20-00-01	Condition Survey Specification – External elevations Sheet 1 of 3
SPEC-20-00-02	Condition Survey Specification – External elevations Sheet 2 of 3
SPEC-20-00-03	Condition Survey Specification – External elevations Sheet 3 of 3

THE PURPOSE OF THIS STRUCTURAL SURVEY IS TO ESTABLISH THE CONDITION AND PHYSICAL CHARACTERISTICS OF THE EXISTING STRUCTURE AND ELEVATIONS IN RELATION TO PHASE 1 OF THE PROPOSED REFURBISHMENT WORKS (REPAIR TO EXTERNAL ENVELOPE AND STRUCTURE).

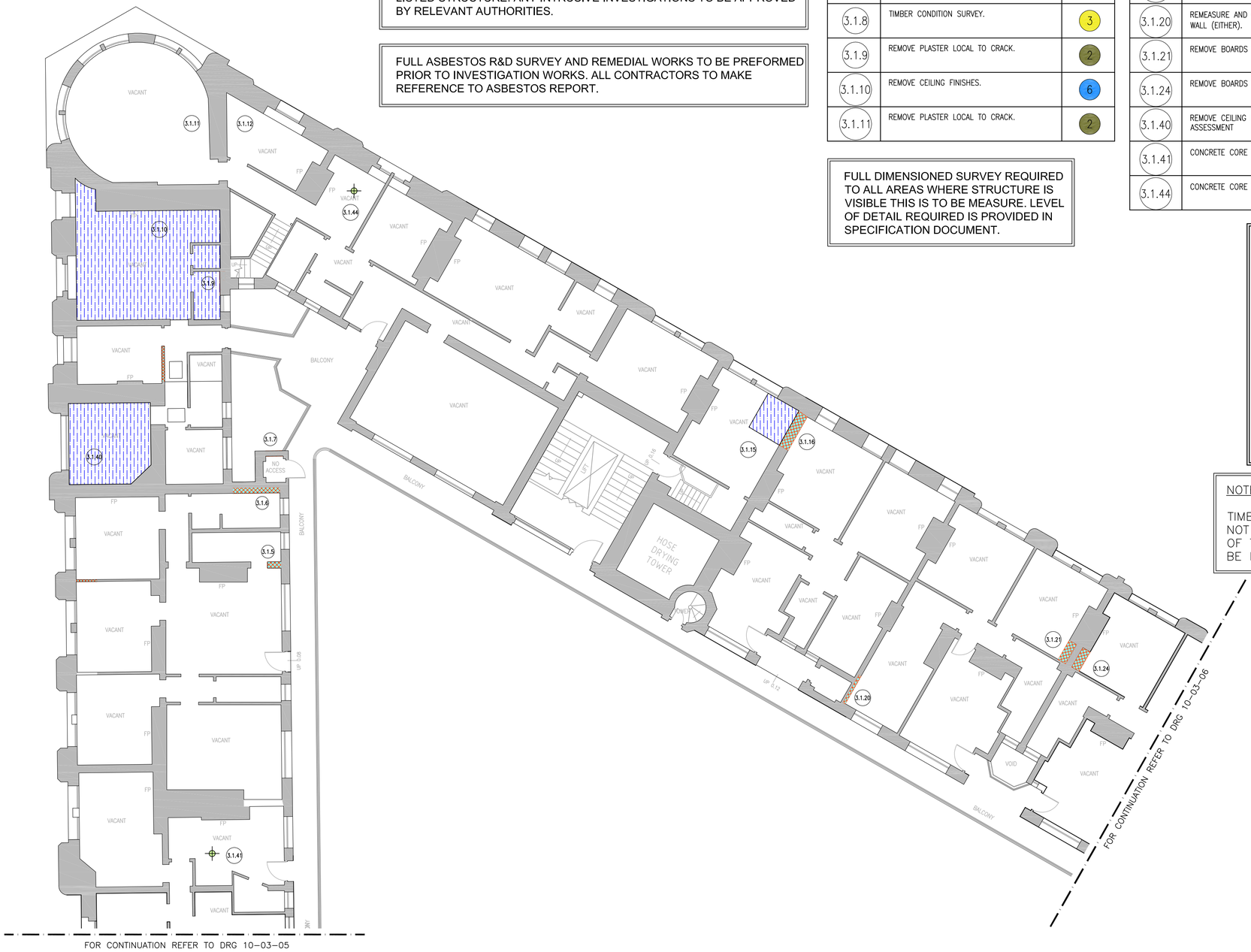
SURVEY METHODS SHOULD BE APPROPRIATE FOR USE ON GRADE II * LISTED STRUCTURE. ANY INTRUSIVE INVESTIGATIONS TO BE APPROVED BY RELEVANT AUTHORITIES.

FULL ASBESTOS R&D SURVEY AND REMEDIAL WORKS TO BE PREFORMED PRIOR TO INVESTIGATION WORKS. ALL CONTRACTORS TO MAKE REFERENCE TO ASBESTOS REPORT.

REF	INTRUSIVE INVESTIGATION	TYPE
3.1.5	REMOVE PLASTER LOCAL TO CRACK.	2
3.1.6	REMOVE PLASTER LOCAL TO CRACK.	2
3.1.7	REMOVE BRICKWORK LOCAL TO BALCONY SUPPORT. (AFTER PROPPING)	12
3.1.8	TIMBER CONDITION SURVEY.	3
3.1.9	REMOVE PLASTER LOCAL TO CRACK.	2
3.1.10	REMOVE CEILING FINISHES.	6
3.1.11	REMOVE PLASTER LOCAL TO CRACK.	2

REF	INTRUSIVE INVESTIGATION	TYPE
3.1.12	TIMBER CONDITION SURVEY.	3
3.1.15	TIMBER CONDITION SURVEY.	3
3.1.16	REMOVE PLASTER LOCAL TO CRACK.	2
3.1.20	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.1.21	REMOVE BOARDS TO ALLOW INSPECTION.	5
3.1.24	REMOVE BOARDS TO ALLOW INSPECTION.	5
3.1.40	REMOVE CEILING FINISHES TO ALLOW ASSESSMENT	6
3.1.41	CONCRETE CORE THROUGH FLOOR	14
3.1.44	CONCRETE CORE THROUGH FLOOR	14

FULL DIMENSIONED SURVEY REQUIRED TO ALL AREAS WHERE STRUCTURE IS VISIBLE THIS IS TO BE MEASURE. LEVEL OF DETAIL REQUIRED IS PROVIDED IN SPECIFICATION DOCUMENT.



PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

LEGEND

- INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

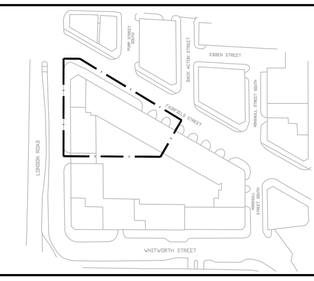
TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

NOTES:

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

THIRD FLOOR OBSERVATIONS – 060270/10-03-01

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
THIRD FLOOR INTRUSIVE INVESTIGATION
SHEET 1 OF 3

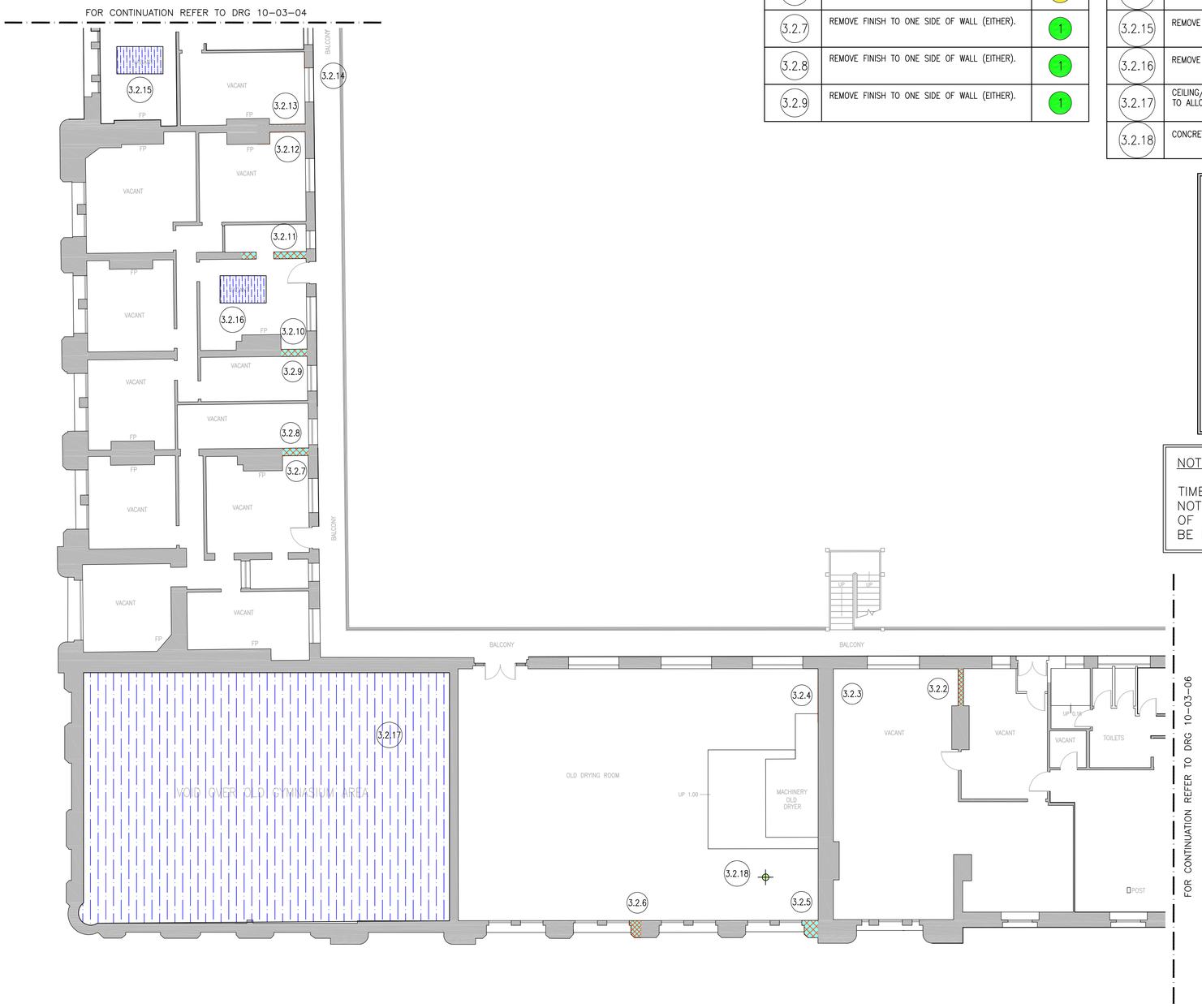
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Drg No: 060270 / SPEC-10-03-04
Rev: /

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PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
3.2.2	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.3	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.4	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.5	REMOVE BOARDING TO STRUCTURE TO INVESTIGATE EXTENT OF CRACK	6
3.2.6	TIMBER CONDITION SURVEY OF TRUSSES IN GYM INC. EXPOSURE OF BEARINGS.	3
3.2.7	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.8	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.9	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1

REF	INTRUSIVE INVESTIGATION	TYPE
3.2.10	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.11	REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
3.2.12	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
3.2.13	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
3.2.14	REMOVE PLASTER LOCAL TO CRACK	2
3.2.15	REMOVE FINISHES LOCAL TO DAMP PATCH	6
3.2.16	REMOVE PLASTER TO INVESTIGATE CAUSE OF CRACK	6
3.2.17	CEILING/PLASTER TO SLAB SOFFIT TO BE REMOVED TO ALLOW INSPECTION	6
3.2.18	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

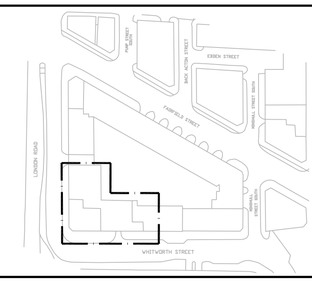
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INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE. (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

THIRD FLOOR OBSERVATIONS – 060270/10-03-02

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: THIRD FLOOR INTRUSIVE INVESTIGATION SHEET 2 OF 3

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Drg No: 060270 / SPEC-10-03-05

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PLAN ON EXISTING THIRD FLOOR
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
3.3.1	REMEASURE CRACK MONITORING POINTS. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
3.3.2	TIMBER CONDITION SURVEY	3
3.3.4	REMEASURE CRACK MONITORING POINTS. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
3.3.5	REMEASURE CRACK MONITORING POINTS. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
3.3.7	REMOVE FLOOR TILES TO INVESTIGATE FLOOR	11
3.3.9	BREAK OUT MASONRY ADJACENT TO BALCONY SUPPORT (AFTER PROPPING)	12
3.3.10	REMOVE FLOOR TILES TO INVESTIGATE FLOOR	11
3.3.11	REMOVE FINISHES LOCAL TO CRACK TO DETERMINE CAUSE THICKNESS + FORM OF SCREED.	11
3.3.12	REMOVE FINISHES INTERNALLY TO REVIEW EXTENT OF CRACK	2

REF	OBSERVATION	TYPE
3.3.14	REMOVE PLASTER LOCAL TO CRACK	2
3.3.15	REMOVE PLASTER LOCAL TO CRACK	2
3.3.16	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS FROM ABOVE AND DETERMINE FINISHES	11
3.3.18	REMOVE CEILING FINISHES.	6
3.3.20	EXPOSE STEEL SUPPORTS BELOW + MEASURE (REVIEW ACCESS REQUIREMENTS)	6
3.3.21	TIMBER CONDITION SURVEY	3
3.3.22	TIMBER CONDITION SURVEY	3
3.3.24	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11
3.3.29	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11
3.3.30	TIMBER CONDITION SURVEY	3
3.3.31	TIMBER CONDITION SURVEY	3
3.3.39	TAKE UP FLOOR FINISHES TO EXPOSE FILLER JOISTS	11
3.3.42	CONCRETE CORE THROUGH FLOOR	14
3.3.43	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

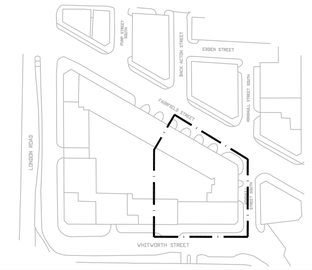
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INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

THIRD FLOOR OBSERVATIONS – 060270/10-03-03

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: THIRD FLOOR INTRUSIVE INVESTIGATION SHEET 3 OF 3

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Drg No: 060270 / SPEC-10-03-06 Rev: /

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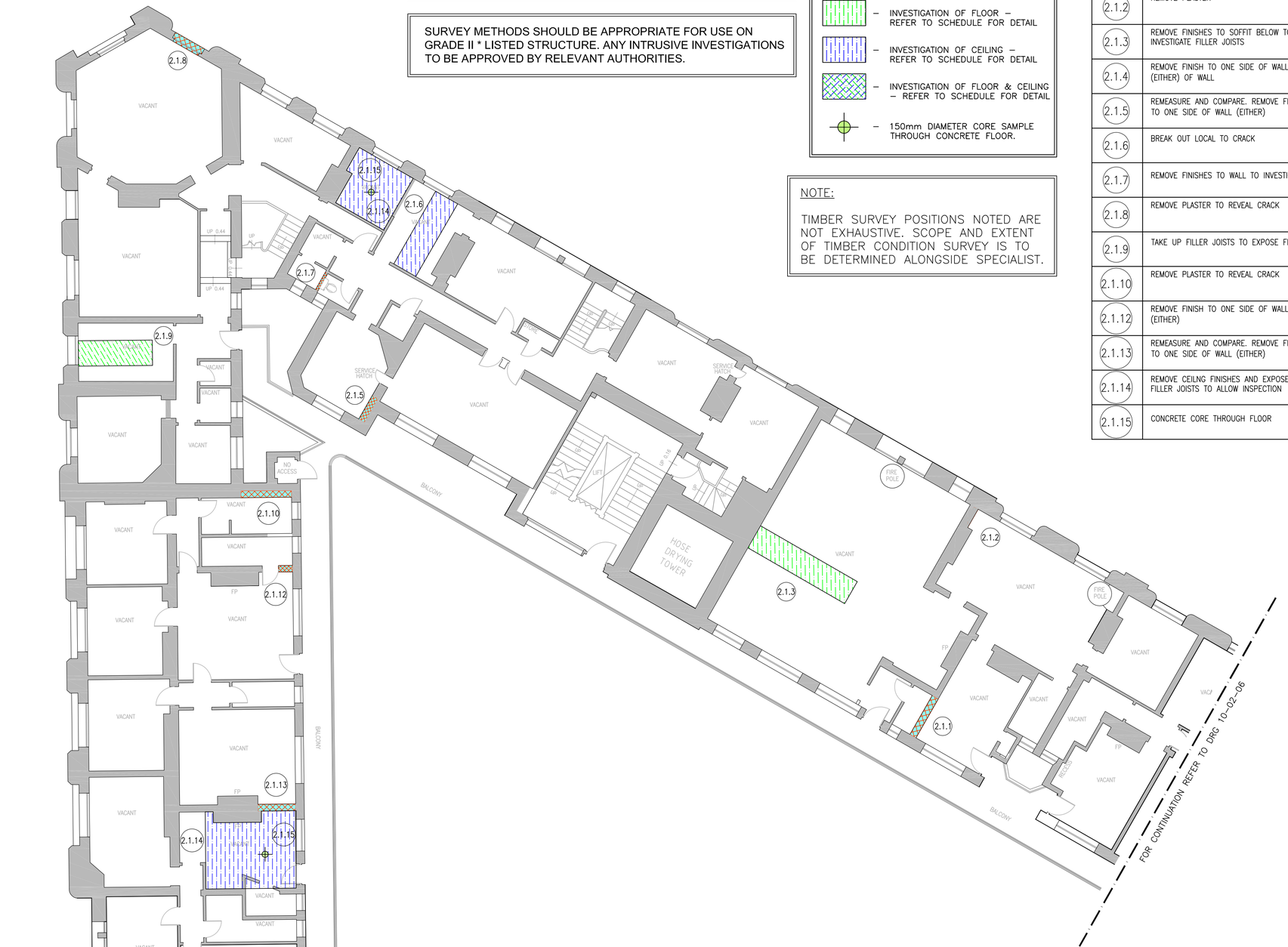
LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

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REF	INTRUSIVE INVESTIGATION	TYPE
2.1.1	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.1.2	REMOVE PLASTER	2
2.1.3	REMOVE FINISHES TO SOFFIT BELOW TO INVESTIGATE FILLER JOISTS	6
2.1.4	REMOVE FINISH TO ONE SIDE OF WALL (EITHER) OF WALL	1
2.1.5	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.1.6	BREAK OUT LOCAL TO CRACK	6
2.1.7	REMOVE FINISHES TO WALL TO INVESTIGATE CRACK	2
2.1.8	REMOVE PLASTER TO REVEAL CRACK	2
2.1.9	TAKE UP FILLER JOISTS TO EXPOSE FILLER JOISTS	11
2.1.10	REMOVE PLASTER TO REVEAL CRACK	2
2.1.12	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.1.13	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.1.14	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
2.1.15	CONCRETE CORE THROUGH FLOOR	14



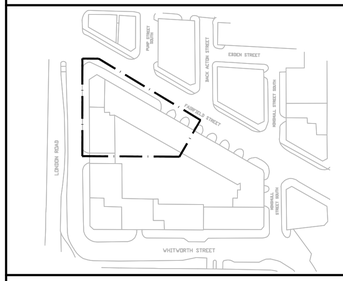
PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

NOTES:

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INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
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15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

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KEY
SCALE 1:1500

REFERENCE DRAWINGS

SECOND FLOOR OBSERVATIONS – 060270/10–02–01

CONDITION SURVEY SPEC – 060270/SPEC–20–00–01–03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: SECOND FLOOR INTRUSIVE INVESTIGATION SHEET 1 OF 3

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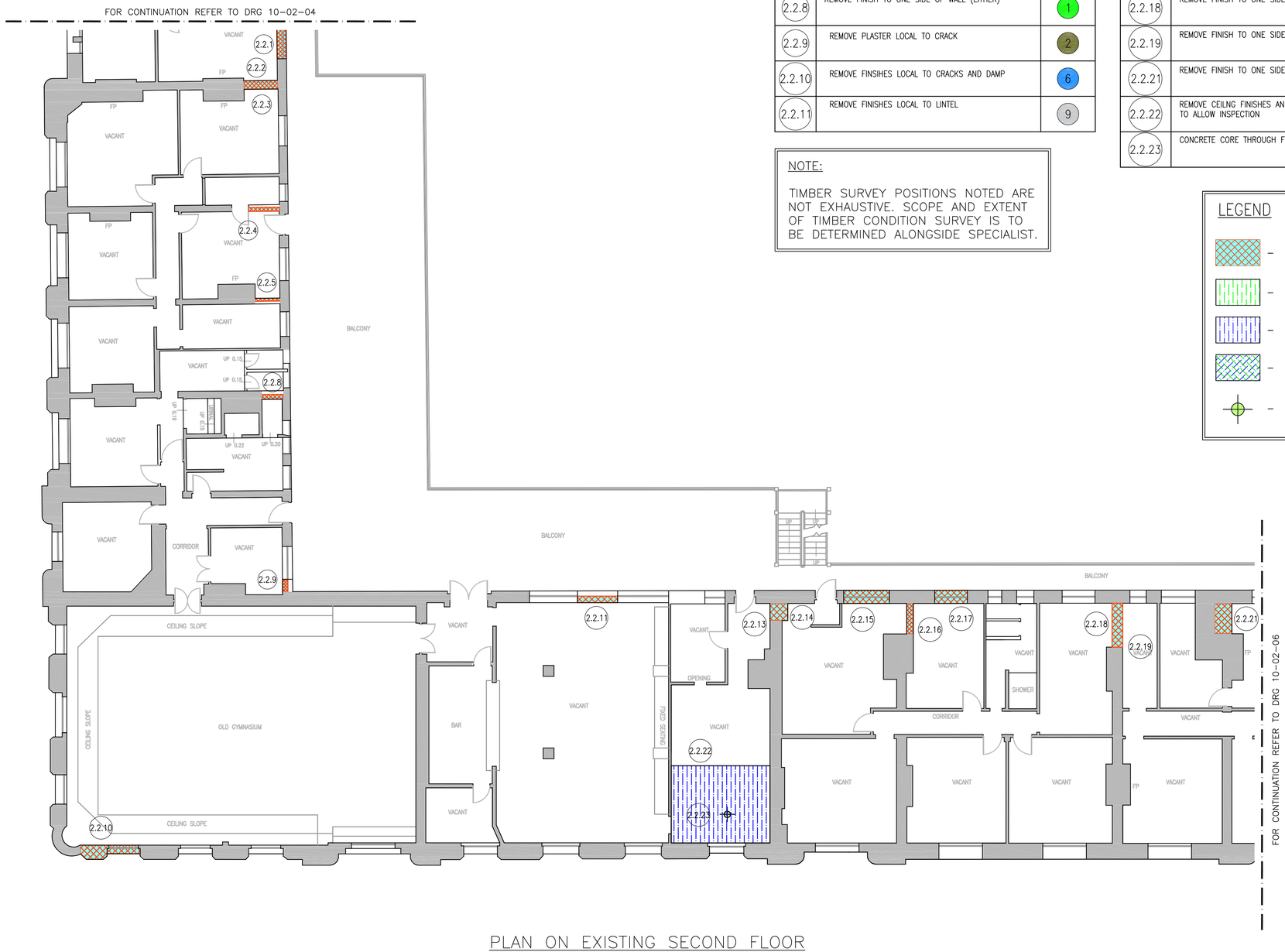
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PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
2.2.1	REMOVE PLASTER	2
2.2.2	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.3	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.4	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.5	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.8	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.9	REMOVE PLASTER LOCAL TO CRACK	2
2.2.10	REMOVE FINSIHES LOCAL TO CRACKS AND DAMP	6
2.2.11	REMOVE FINISHES LOCAL TO LINTEL	9

NOTE:

TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

REF	INTRUSIVE INVESTIGATION	
2.2.13	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.14	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.15	REMOVE FINISHES LOCAL TO LINTEL	9
2.2.16	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.17	REMOVE FINISHES LOCAL TO LINTEL	9
2.2.18	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.19	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.21	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.2.22	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
2.2.23	CONCRETE CORE THROUGH FLOOR	14

LEGEND

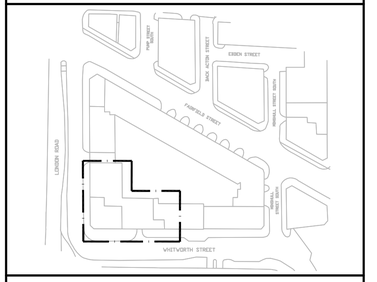
- INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTES:

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

SECOND FLOOR OBSERVATIONS – 060270/10-02-02

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
SECOND FLOOR INTRUSIVE INVESTIGATION
SHEET 2 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
AS SHOWN	A1	12.04.16	CH	PB

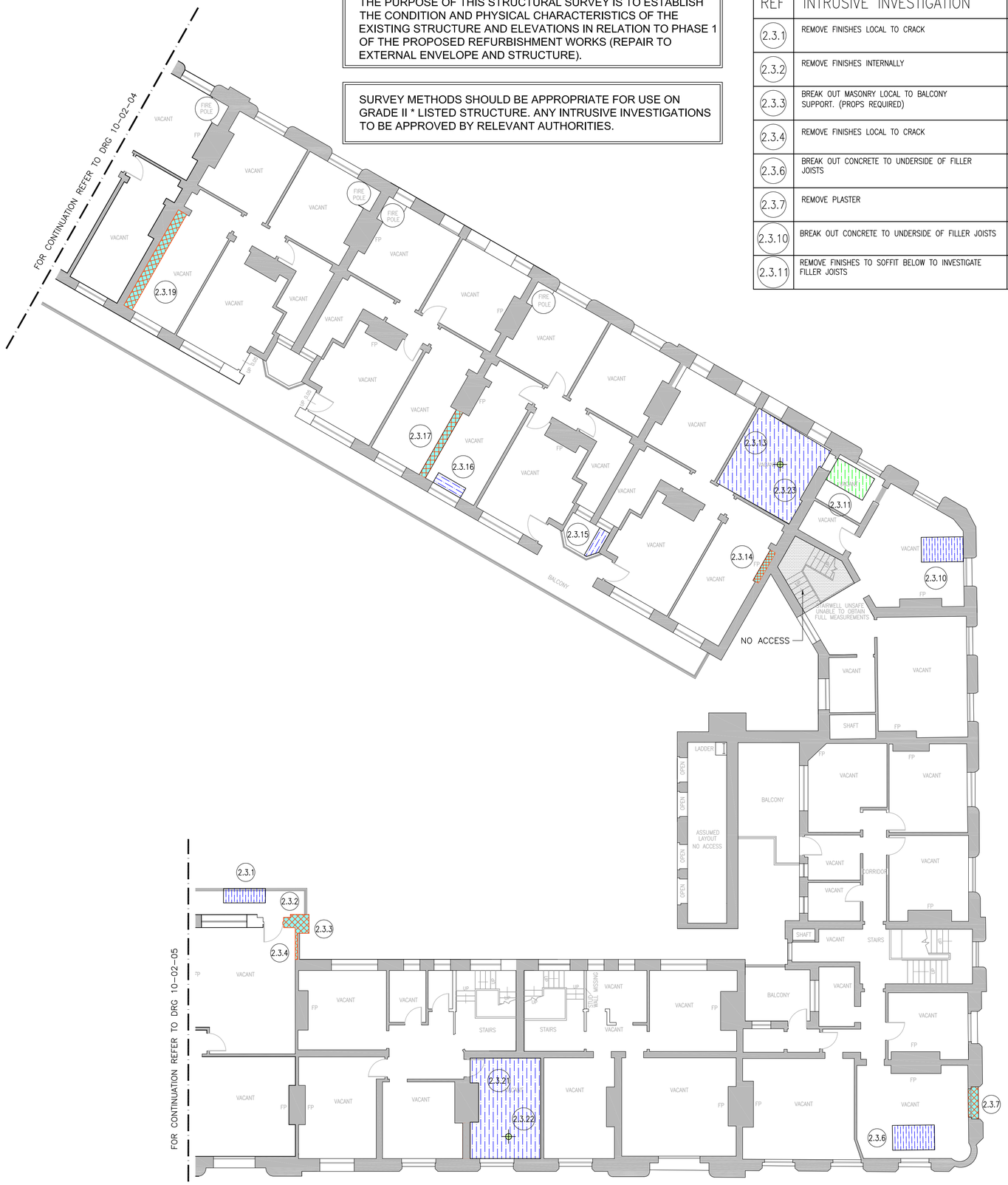
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THE PURPOSE OF THIS STRUCTURAL SURVEY IS TO ESTABLISH THE CONDITION AND PHYSICAL CHARACTERISTICS OF THE EXISTING STRUCTURE AND ELEVATIONS IN RELATION TO PHASE 1 OF THE PROPOSED REFURBISHMENT WORKS (REPAIR TO EXTERNAL ENVELOPE AND STRUCTURE).

SURVEY METHODS SHOULD BE APPROPRIATE FOR USE ON GRADE II * LISTED STRUCTURE. ANY INTRUSIVE INVESTIGATIONS TO BE APPROVED BY RELEVANT AUTHORITIES.



PLAN ON EXISTING SECOND FLOOR
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
2.3.1	REMOVE FINISHES LOCAL TO CRACK	6
2.3.2	REMOVE FINISHES INTERNALLY	2
2.3.3	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12
2.3.4	REMOVE FINISHES LOCAL TO CRACK	2
2.3.6	BREAK OUT CONCRETE TO UNDERSIDE OF FILLER JOISTS	6
2.3.7	REMOVE PLASTER	2
2.3.10	BREAK OUT CONCRETE TO UNDERSIDE OF FILLER JOISTS	6
2.3.11	REMOVE FINISHES TO SOFFIT BELOW TO INVESTIGATE FILLER JOISTS	6

REF	INTRUSIVE INVESTIGATION	TYPE
2.3.13	REMOVE FINISHES TO SOFFIT TO INVESTIGATE FILLER JOISTS ABOVE	6
2.3.14	REMOVE PLASTER	2
2.3.15	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12
2.3.16	REMOVE FINISHES LOCAL TO LINTEL	9
2.3.17	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.3.19	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
2.3.21	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
2.3.22	CONCRETE CORE THROUGH FLOOR	14
2.3.23	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

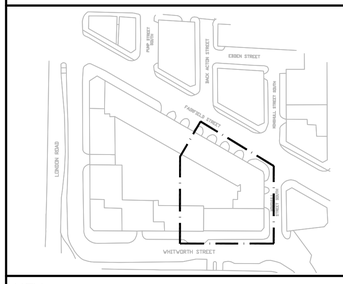
TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

SECOND FLOOR OBSERVATIONS – 060270/10-02-03

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
SECOND FLOOR INTRUSIVE INVESTIGATION
SHEET 3 OF 3

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Drg No: 060270 / SPEC-10-02-06

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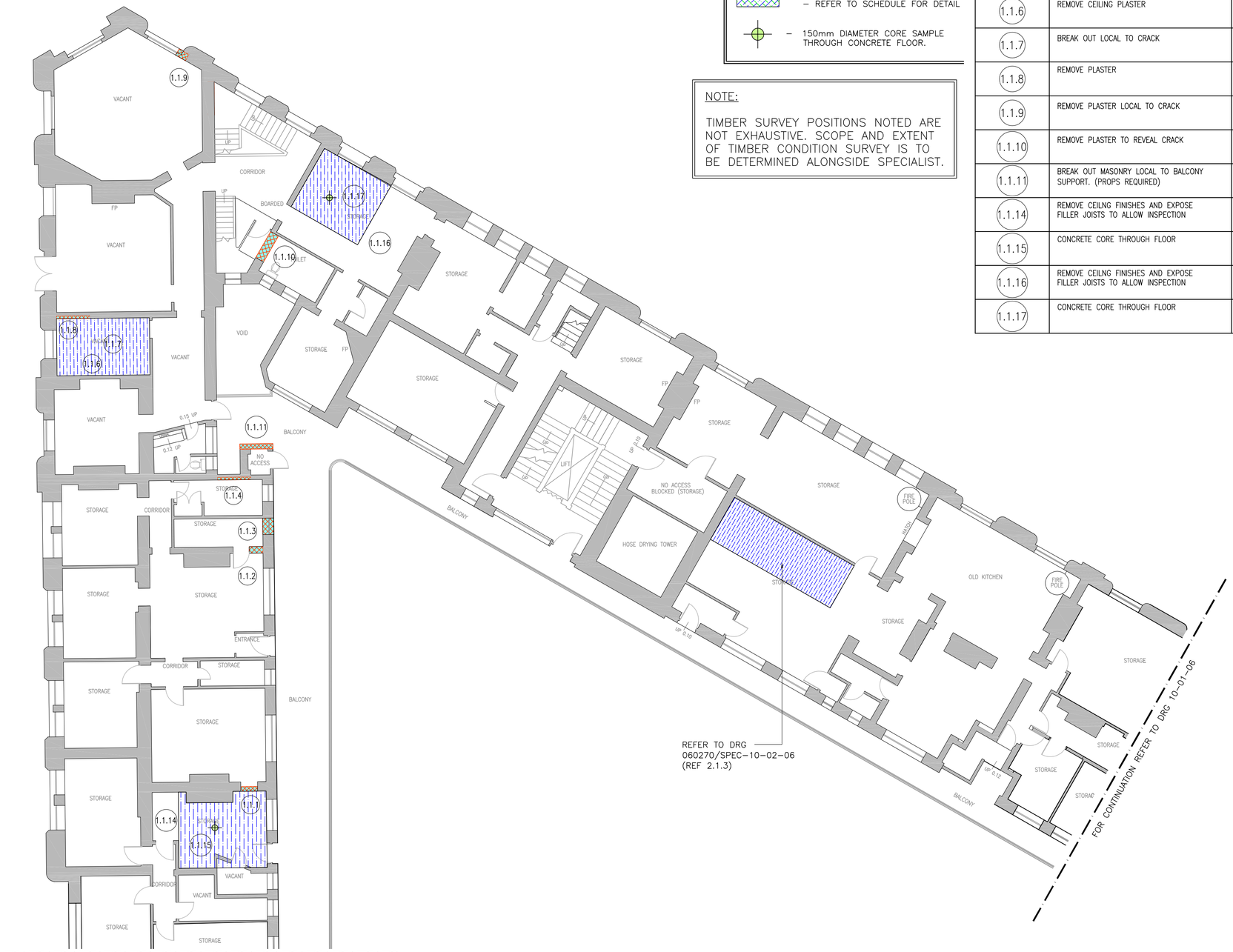
LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

REF	INTRUSIVE INVESTIGATION	TYPE
1.1.1	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER).	1
1.1.2	REMOVE PLASTER	2
1.1.3	REMOVE FINISHES LOCAL TO LINTEL	9
1.1.4	REMOVE PLASTER	2
1.1.6	REMOVE CEILING PLASTER	6
1.1.7	BREAK OUT LOCAL TO CRACK	6
1.1.8	REMOVE PLASTER	2
1.1.9	REMOVE PLASTER LOCAL TO CRACK	2
1.1.10	REMOVE PLASTER TO REVEAL CRACK	2
1.1.11	BREAK OUT MASONRY LOCAL TO BALCONY SUPPORT. (PROPS REQUIRED)	12
1.1.14	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
1.1.15	CONCRETE CORE THROUGH FLOOR	14
1.1.16	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
1.1.17	CONCRETE CORE THROUGH FLOOR	14



PLAN ON EXISTING FIRST FLOOR

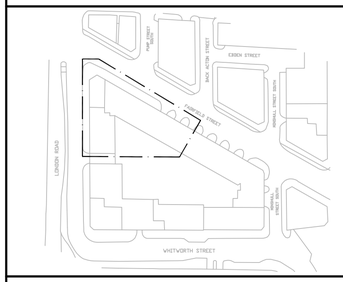
SCALE 1:100

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY

SCALE 1:1500

REFERENCE DRAWINGS

FIRST FLOOR OBSERVATIONS – 060270/10-01-01

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: FIRST FLOOR INTRUSIVE INVESTIGATION SHEET 1 OF 3

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Drg No: 060270 / SPEC-10-01-04

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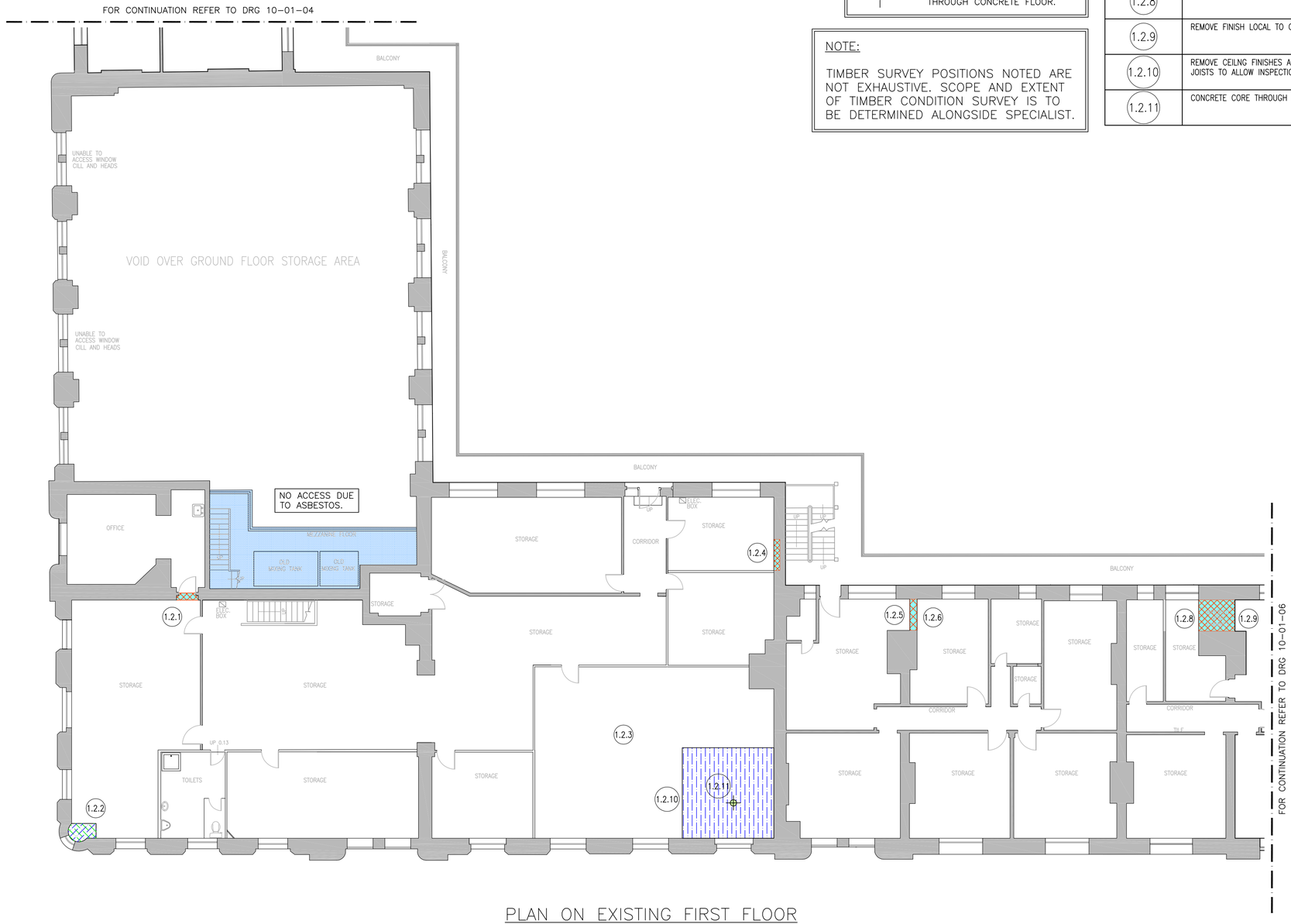
LEGEND

- – INVESTIGATION TO WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- NO ACCESS – ASBESTOS.
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

REF	INTRUSIVE INVESTIGATION	TYPE
1.2.1	REMOVE PLASTER	2
1.2.2	REMOVE CEILING FINISH AND FLOOR BOARDS TO INVESTIGATE WATER INGRESS	6
1.2.3	TIMBER CONDITION SURVEY	3
1.2.4	REMOVE PLASTER	2
1.2.5	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
1.2.6	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
1.2.8	REMOVE FINISH LOCAL TO CRACK	2
1.2.9	REMOVE FINISH LOCAL TO CRACK	2
1.2.10	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
1.2.11	CONCRETE CORE THROUGH FLOOR	14



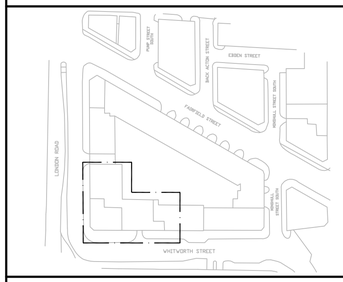
PLAN ON EXISTING FIRST FLOOR
SCALE 1:100

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
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9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

FIRST FLOOR OBSERVATIONS – 060270/10–01–02

CONDITION SURVEY SPEC – 060270/SPEC–20–00–01–03

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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
FIRST FLOOR INTRUSIVE INVESTIGATION
SHEET 2 OF 3

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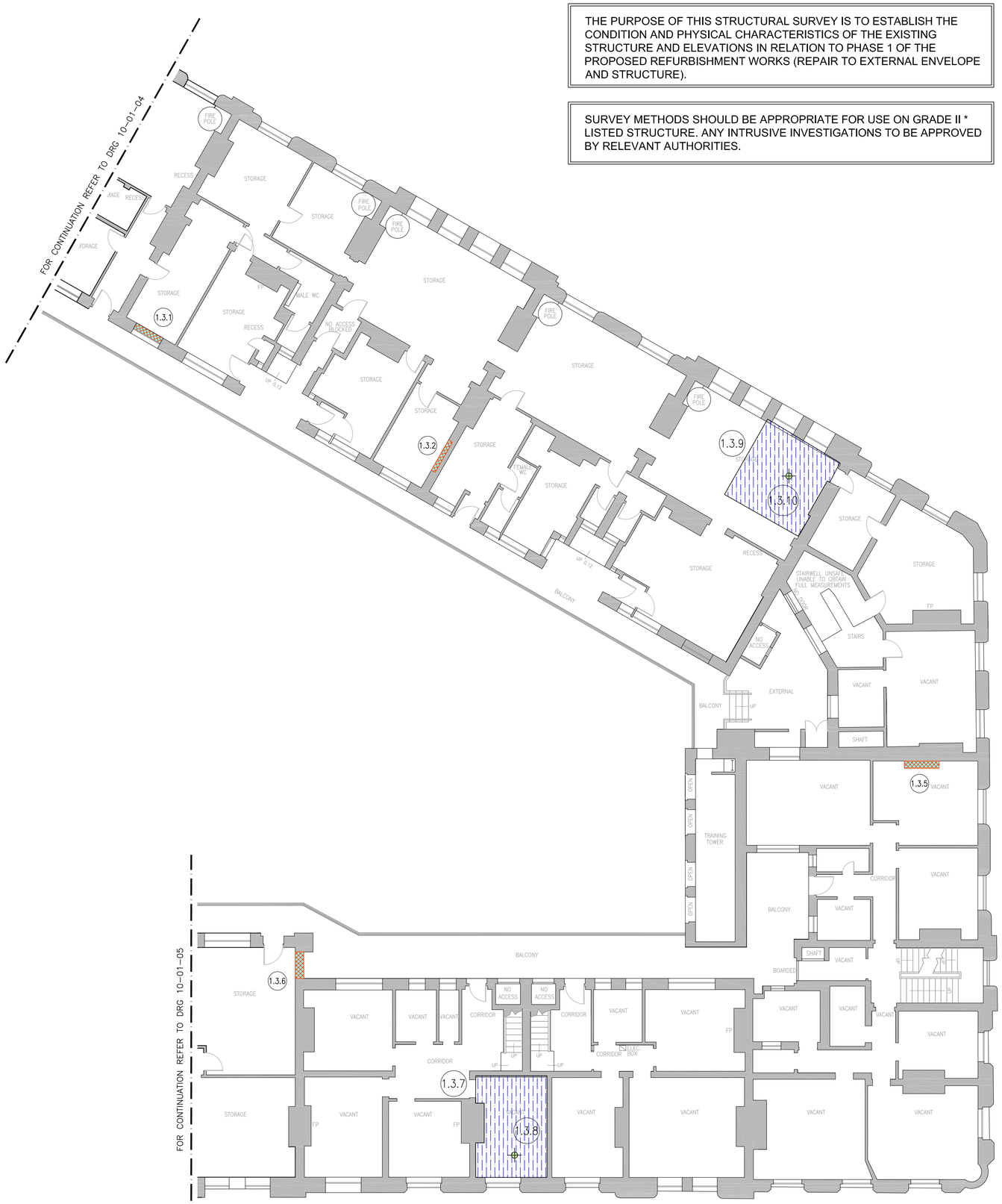
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PLAN ON EXISTING FIRST FLOOR
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
1.3.1	REMOVE FINISHES TO EXPOSE LINTEL	9
1.3.2	REMEASURE AND COMPARE. REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
1.3.5	REMOVE PLASTER	2
1.3.6	REMOVE PLASTER	2
1.3.7	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
1.3.8	CONCRETE CORE THROUGH FLOOR	14
1.3.9	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
1.3.10	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

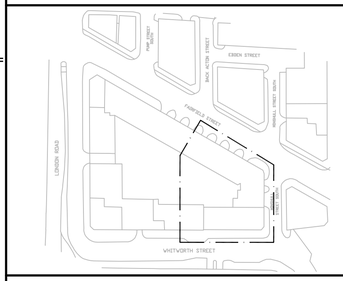
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INVESTIGATION TYPES	
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2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

FIRST FLOOR OBSERVATIONS – 060270/10-01-03

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
FIRST FLOOR INTRUSIVE INVESTIGATION
SHEET 3 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
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Drg No: 060270 / SPEC-10-01-06

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THE PURPOSE OF THIS STRUCTURAL SURVEY IS TO ESTABLISH THE CONDITION AND PHYSICAL CHARACTERISTICS OF THE EXISTING STRUCTURE AND ELEVATIONS IN RELATION TO PHASE 1 OF THE PROPOSED REFURBISHMENT WORKS (REPAIR TO EXTERNAL ENVELOPE AND STRUCTURE).

SURVEY METHODS SHOULD BE APPROPRIATE FOR USE ON GRADE II * LISTED STRUCTURE. ANY INTRUSIVE INVESTIGATIONS TO BE APPROVED BY RELEVANT AUTHORITIES.

LEGEND

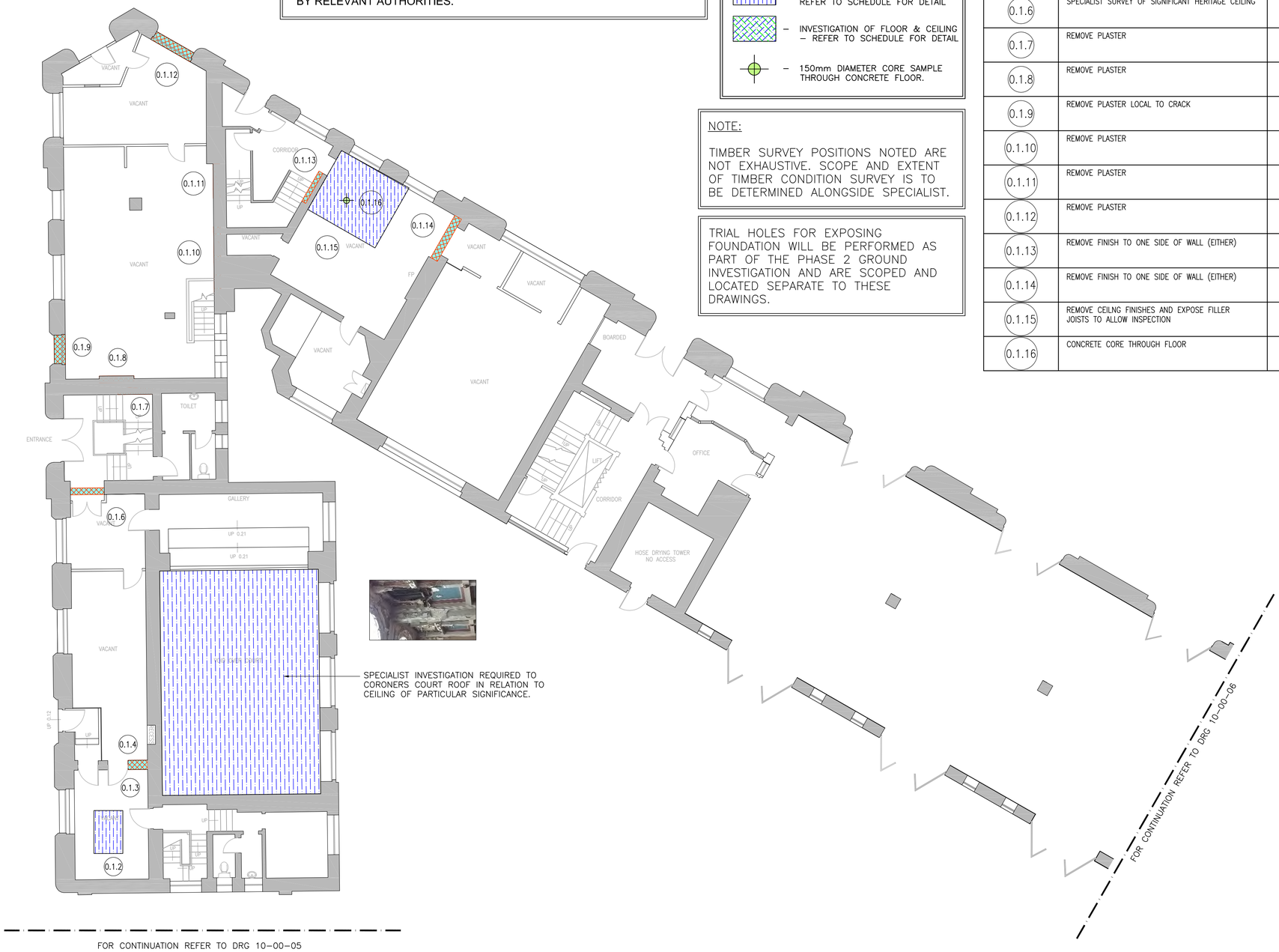
- INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

TRIAL HOLES FOR EXPOSING FOUNDATION WILL BE PERFORMED AS PART OF THE PHASE 2 GROUND INVESTIGATION AND ARE SCOPED AND LOCATED SEPARATE TO THESE DRAWINGS.

REF	INTRUSIVE INVESTIGATION	TYPE
0.1.2	REMOVE PLASTER	6
0.1.3	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
0.1.4	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
0.1.6	SPECIALIST SURVEY OF SIGNIFICANT HERITAGE CEILING	1
0.1.7	REMOVE PLASTER	2
0.1.8	REMOVE PLASTER	2
0.1.9	REMOVE PLASTER LOCAL TO CRACK	2
0.1.10	REMOVE PLASTER	2
0.1.11	REMOVE PLASTER	2
0.1.12	REMOVE PLASTER	2
0.1.13	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
0.1.14	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
0.1.15	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
0.1.16	CONCRETE CORE THROUGH FLOOR	14



SPECIALIST INVESTIGATION REQUIRED TO CORONERS COURT ROOF IN RELATION TO CEILING OF PARTICULAR SIGNIFICANCE.

PLAN ON EXISTING GROUND FLOOR

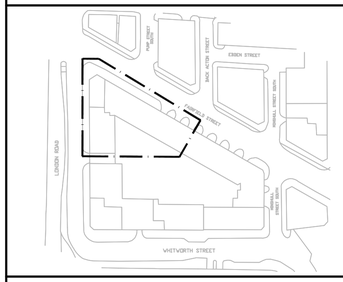
SCALE 1:100

NOTES:

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

GROUND FLOOR OBSERVATIONS – 060270/10-00-01

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: GROUND FLOOR INTRUSIVE INVESTIGATION SHEET 1 OF 3

Scale:	Size:	First Issue:	Drawn:	Checked:
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Drg No: 060270 / SPEC-10-00-04

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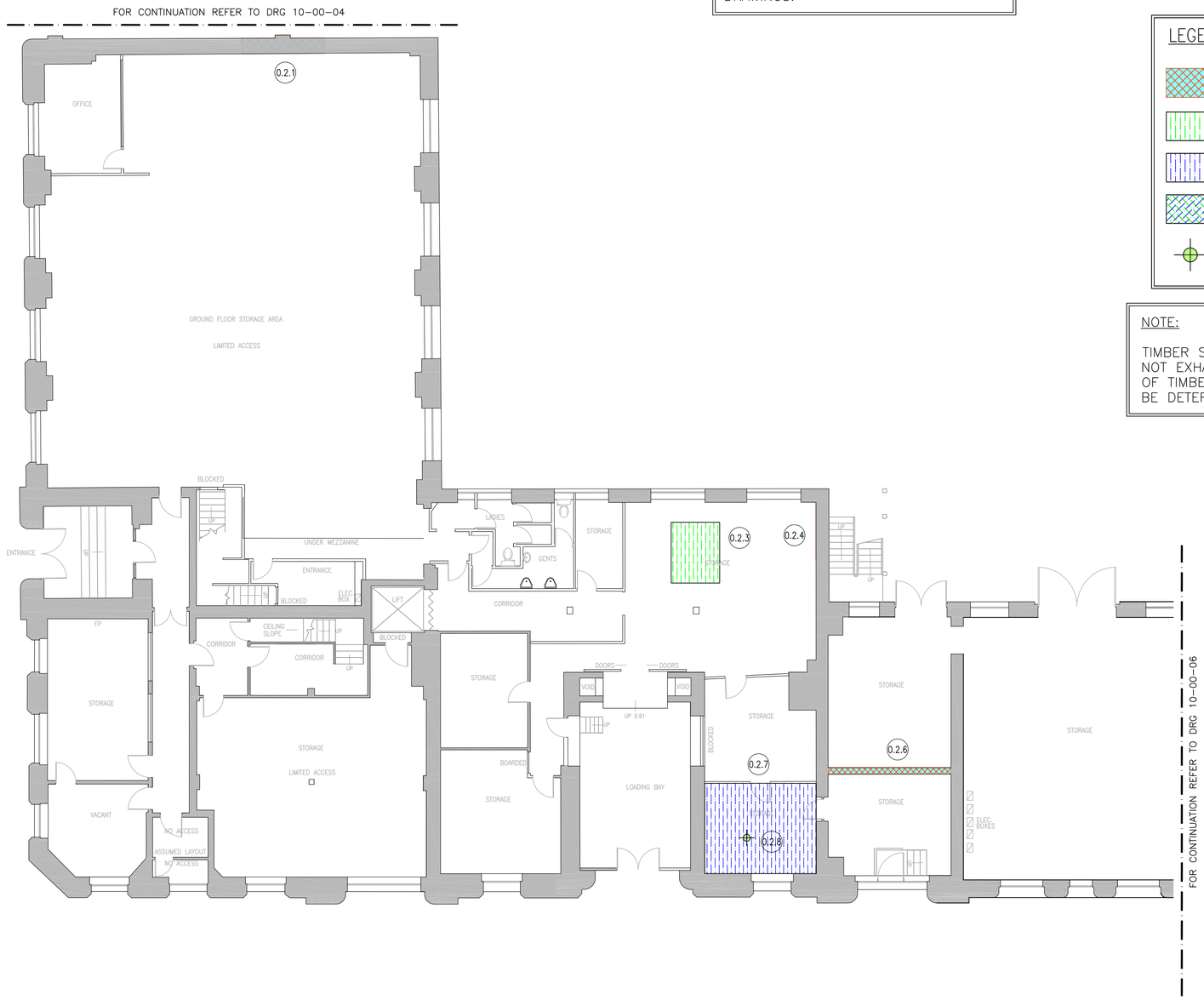
REF	INTRUSIVE INVESTIGATION	TYPE
0.2.1	REMOVE PLASTER AND BREAKOUT BRICKWORK TO STEEL COLUMN BEHIND AT HIGH LEVEL	2
0.2.3	REMOVE FINISHES TO CEILING BELOW	6
0.2.4	REMOVE FINISHES LOCAL TO CRACK	2
0.2.6	REMOVE FINISH TO ONE SIDE OF WALL (EITHER)	1
0.2.7	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
0.2.8	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.



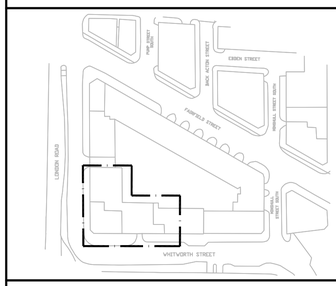
PLAN ON EXISTING GROUND FLOOR
SCALE 1:100

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INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
2	REMOVE PLASTER TO CRACKED SIDE OF WALL. INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
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14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

GROUND FLOOR OBSERVATIONS – 060270/10–00–02

CONDITION SURVEY SPEC – 060270/SPEC–20–00–01–03

Rev:	Description:	Date:	By:	Chkd:

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t: 0161 236 2394
e: manchester@curtins.com
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: GROUND FLOOR INTRUSIVE INVESTIGATION SHEET 2 OF 3

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Drg No: 060270 / SPEC-10-00-05

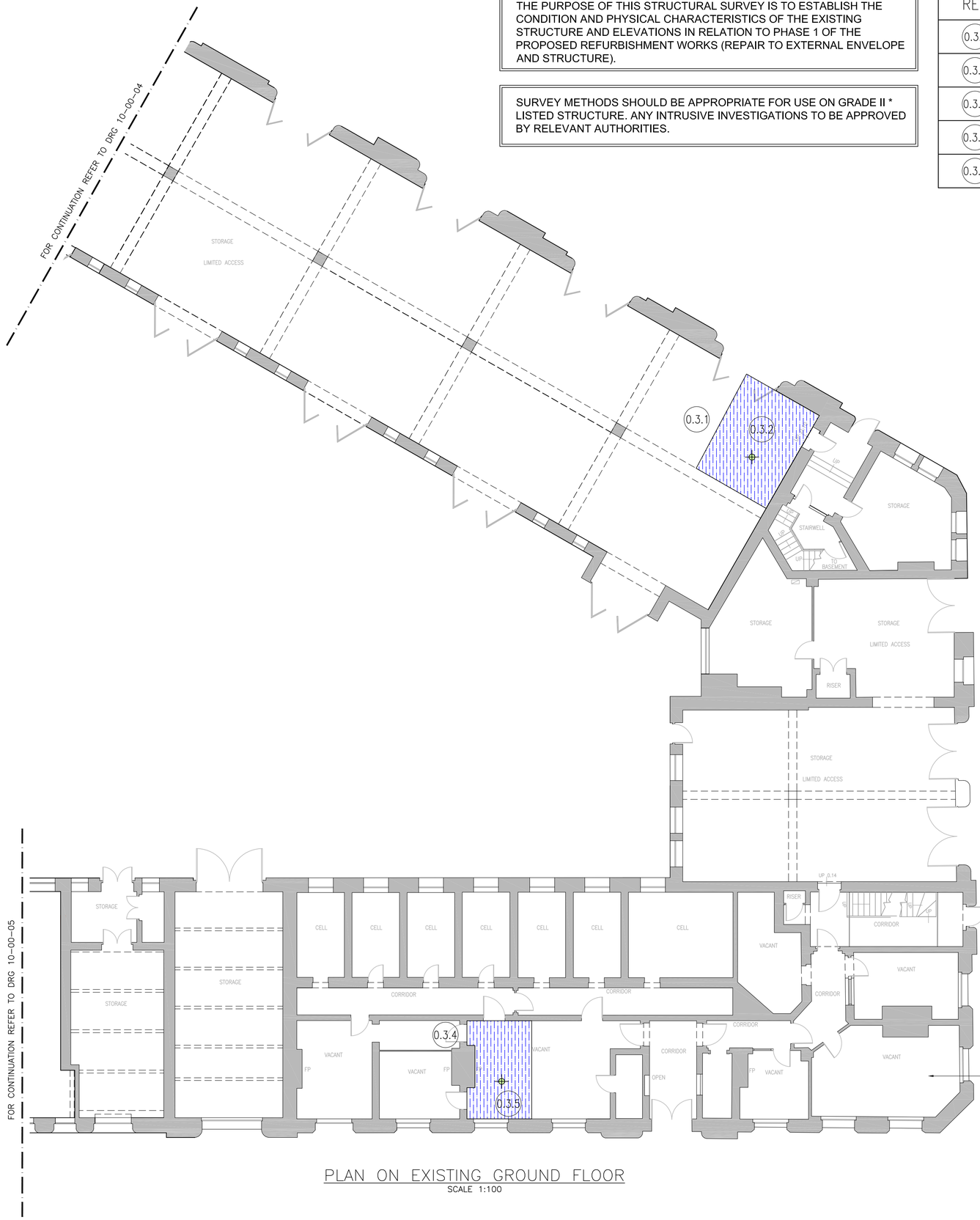
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REF	INTRUSIVE INVESTIGATION	TYPE
0.3.1	REMOVE CEILING FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
0.3.2	CONCRETE CORE THROUGH FLOOR	14
0.3.3	STEEL SAMPLE FOR ANALYSIS FROM WEB OF CEILING JOIST	15
0.3.4	CONCRETE CORE THROUGH FLOOR	6
0.3.5	CONCRETE CORE THROUGH FLOOR	14



PLAN ON EXISTING GROUND FLOOR
SCALE 1:100

LEGEND

- – INVESTIGATION OF WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION OF FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

NOTE:

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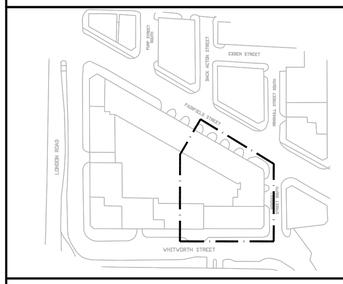
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INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
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3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
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15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

GROUND FLOOR OBSERVATIONS – 060270/10-00-03

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
GROUND FLOOR INTRUSIVE INVESTIGATION
SHEET 3 OF 3

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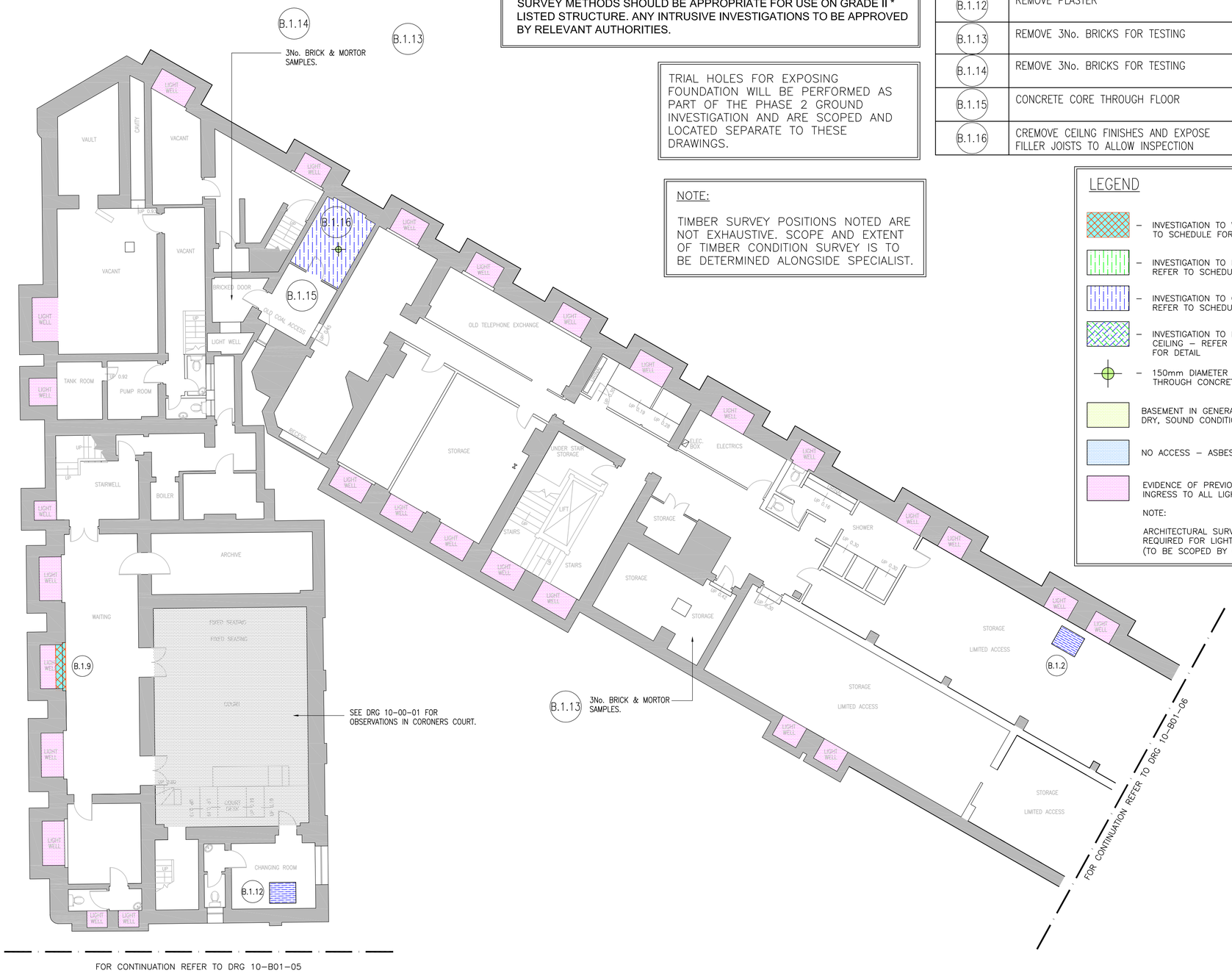
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REF	INTRUSIVE INVESTIGATION	TYPE
B.1.2	BREAK OFF CONCRETE TO REVEAL BEAM.	6
B.1.9	CLEAN OFF LIGHTWELL AND FIND LEAK	10
B.1.12	REMOVE PLASTER	6
B.1.13	REMOVE 3No. BRICKS FOR TESTING	16
B.1.14	REMOVE 3No. BRICKS FOR TESTING	16
B.1.15	CONCRETE CORE THROUGH FLOOR	14
B.1.16	CREMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6



PLAN ON EXISTING BASEMENT
SCALE 1:100

LEGEND

- – INVESTIGATION TO WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.
- BASEMENT IN GENERALLY DRY, SOUND CONDITION
- NO ACCESS – ASBESTOS.
- EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.

NOTE:

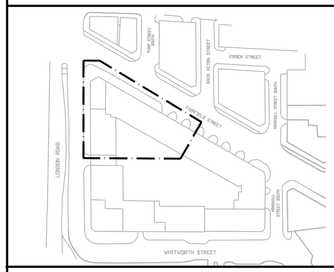
ARCHITECTURAL SURVEY REQUIRED FOR LIGHT WELLS (TO BE SCOPED BY OTHERS)

NOTES:

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KEY
SCALE 1:1500

REFERENCE DRAWINGS

BASEMENT OBSERVATIONS – 060270/10-B01-01

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

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e: manchester@curtins.com
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: BASEMENT INTRUSIVE INVESTIGATION SHEET 1 OF 3

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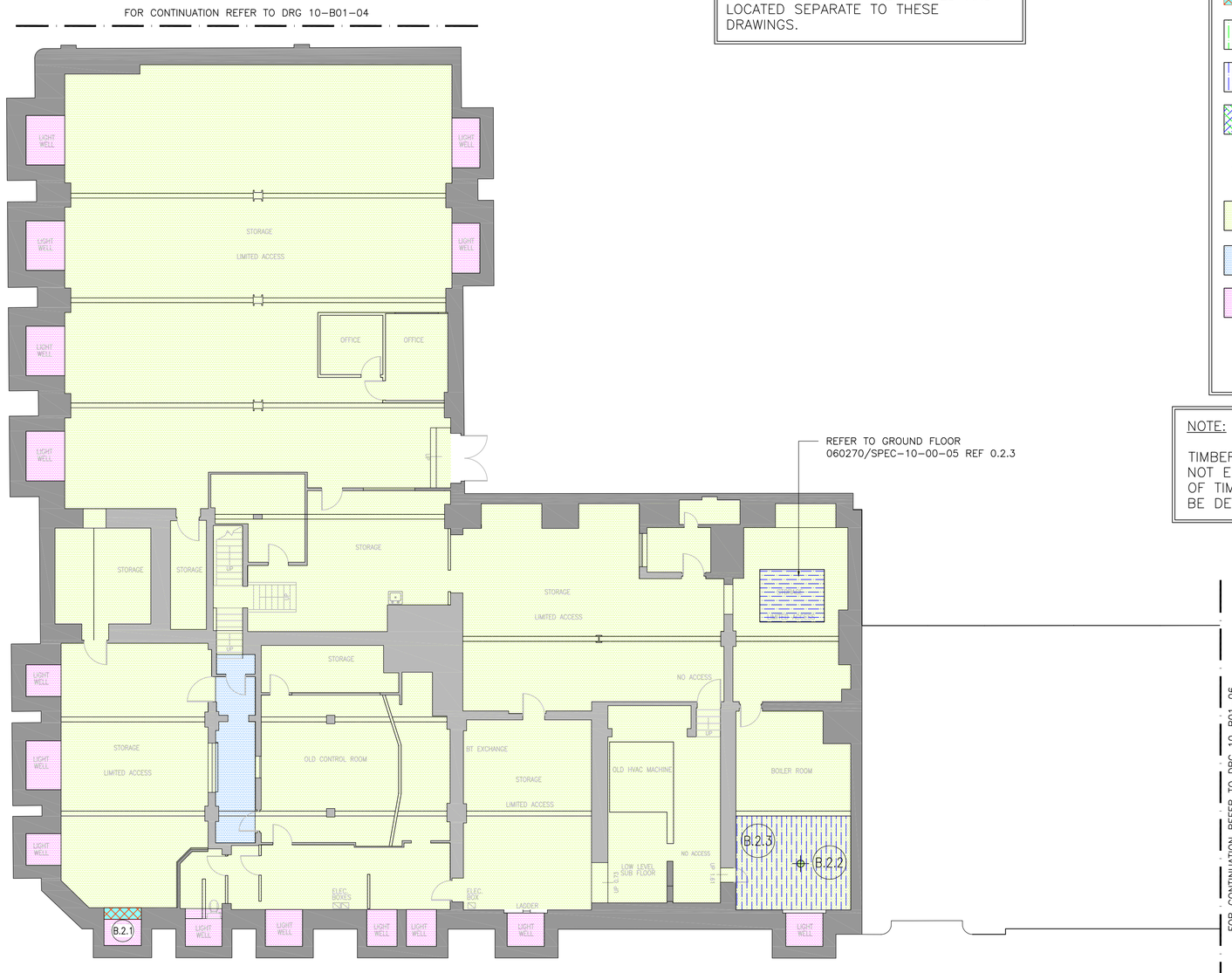
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REF	INTRUSIVE INVESTIGATION	TYPE
B.2.1	CLEAN OFF LIGHTWELL AND FIND LEAK	10
B.2.2	CONCRETE CORE THROUGH FLOOR	14
B.2.3	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6



PLAN ON EXISTING BASEMENT
SCALE 1:100

LEGEND

- INVESTIGATION TO WALL – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION TO FLOOR – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION TO CEILING – REFER TO SCHEDULE FOR DETAIL
- INVESTIGATION TO FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
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- EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.

NOTE:

ARCHITECTURAL SURVEY REQUIRED FOR LIGHT WELLS (TO BE SCOPED BY OTHERS)

NOTE:

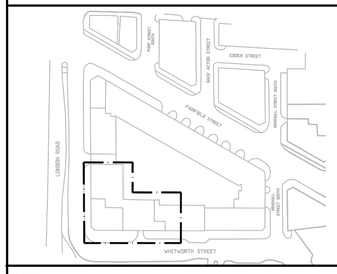
TIMBER SURVEY POSITIONS NOTED ARE NOT EXHAUSTIVE. SCOPE AND EXTENT OF TIMBER CONDITION SURVEY IS TO BE DETERMINED ALONGSIDE SPECIALIST.

NOTES:

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5. CONTRACTOR IS TO PROVIDE A METHOD STATEMENT AND RISK ASSESSMENT TO THE CLIENT PRIOR TO ANY WORKS.

INVESTIGATION TYPES	
1	REMOVE PLASTER LOCAL TO CRACK IN WALL ON ONE SIDE (CLIENT TO ADVISE WHICH SIDE). INVESTIGATE CRACK EXTENT, MEASURE CRACK MONITORING POINTS WHERE APPLICABLE.
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3	TIMBER CONDITION SURVEY
5	REMOVE BOARDS TO ALLOW INSPECTION OF EXISTING HOLES
6	REMOVE FINISHES TO EXPOSE BEAMS / FILLER JOIST TO SOFFIT. CONCRETE TO UNDERSIDE OF FILLER JOISTS TO BE BROKEN OUT WHERE VISIBLE TO ALLOW INSPECTION
9	EXPOSE LINTEL FULLY TO DETERMINE CONDITION.
10	LIGHT WELL INSPECTION (ARCHITECTURAL)
11	TAKE UP FLOOR FINISHES LOCAL TO CRACK
12	REMOVE BRICKWORK TO EXPOSE STRUCTURE BEHIND (MAY REQUIRE TEMPORARY PROPPING).
13	SPECIALIST SURVEY FOR SIGNIFICANT HERITAGE ITEM.
14	150mm CONCRETE CORE THROUGH FLOOR SLAB
15	STEEL SAMPLE FROM EXPOSED MEMBER FOR TESTING
16	REMOVAL OF MASONRY SAMPLE FOR TESTING

FOR INFORMATION ON EACH INVESTIGATION REFER TO CURTINS INVESTIGATION AND REPAIR SCHEDULE.



KEY
SCALE 1:1500

REFERENCE DRAWINGS

BASEMENT OBSERVATIONS – 060270/10-B01-02

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

Rev:	Description:	Date:	By:	Chkd:

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com
Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: BASEMENT INTRUSIVE INVESTIGATION SHEET 2 OF 3

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Drg No: 060270 / SPEC-10-B01-05

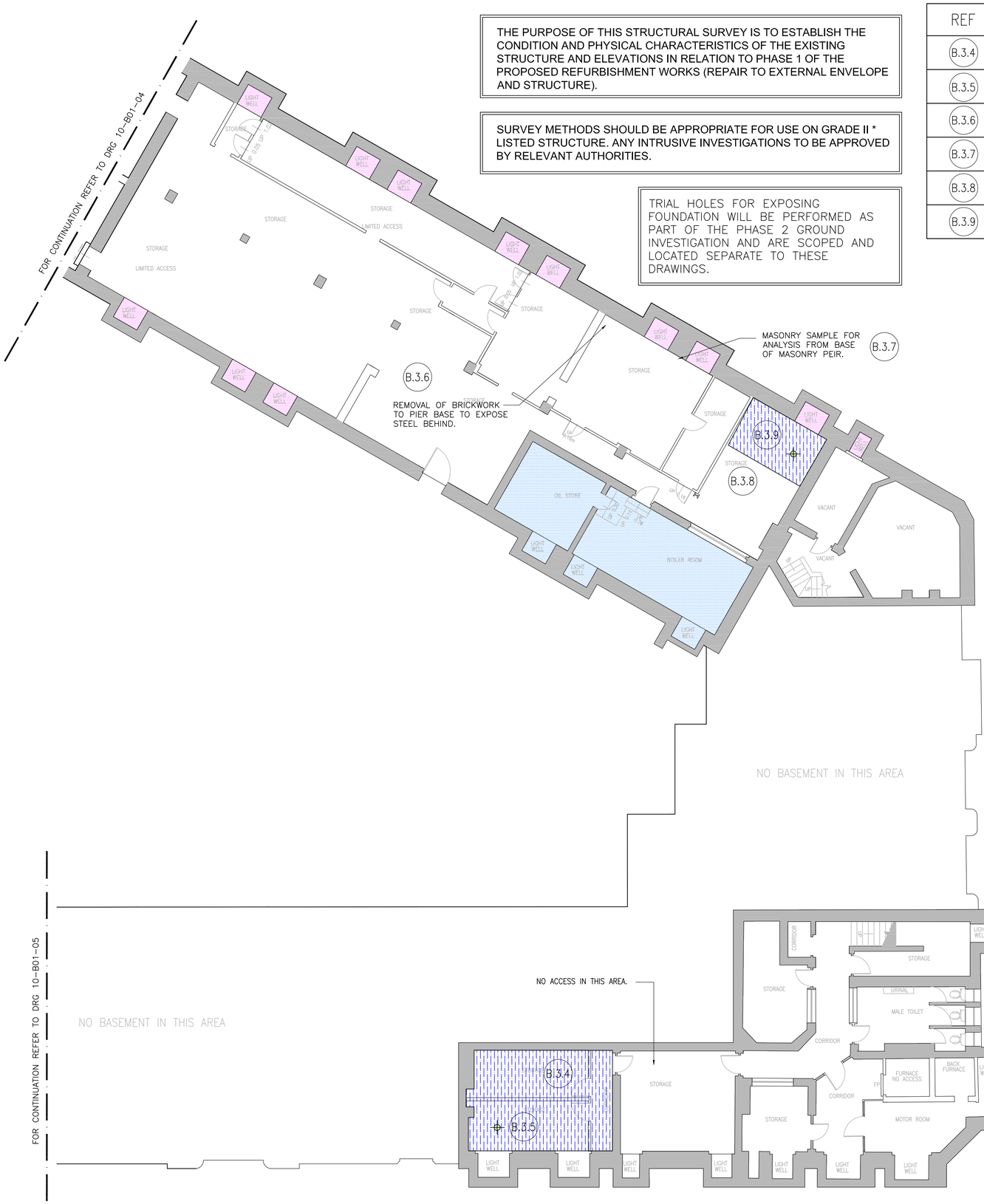
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THE PURPOSE OF THIS STRUCTURAL SURVEY IS TO ESTABLISH THE CONDITION AND PHYSICAL CHARACTERISTICS OF THE EXISTING STRUCTURE AND ELEVATIONS IN RELATION TO PHASE 1 OF THE PROPOSED REFURBISHMENT WORKS (REPAIR TO EXTERNAL ENVELOPE AND STRUCTURE).

SURVEY METHODS SHOULD BE APPROPRIATE FOR USE ON GRADE II * LISTED STRUCTURE. ANY INTRUSIVE INVESTIGATIONS TO BE APPROVED BY RELEVANT AUTHORITIES.

TRIAL HOLES FOR EXPOSING FOUNDATION WILL BE PERFORMED AS PART OF THE PHASE 2 GROUND INVESTIGATION AND ARE SCOPED AND LOCATED SEPARATE TO THESE DRAWINGS.



PLAN ON EXISTING BASEMENT
SCALE 1:100

REF	INTRUSIVE INVESTIGATION	TYPE
B.3.4	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
B.3.5	CONCRETE CORE THROUGH FLOOR	14
B.3.6	REMOVE BRICKWORK TO PIER BASE TO EXPOSE STEEL BEHIND	12
B.3.7	MASONRY SAMPLE FOR ANALYSIS FROM BASE MASONRY PIER	16
B.3.8	REMOVE CEILNG FINISHES AND EXPOSE FILLER JOISTS TO ALLOW INSPECTION	6
B.3.9	CONCRETE CORE THROUGH FLOOR	14

LEGEND

- – INVESTIGATION TO WALL – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO CEILING – REFER TO SCHEDULE FOR DETAIL
- – INVESTIGATION TO FLOOR & CEILING – REFER TO SCHEDULE FOR DETAIL
- – 150mm DIAMETER CORE SAMPLE THROUGH CONCRETE FLOOR.

BASEMENT IN GENERALLY DRY, SOUND CONDITION

NO ACCESS – ASBESTOS.

EVIDENCE OF PREVIOUS WATER INGRESS TO ALL LIGHT WELLS.

NOTE:

ARCHITECTURAL SURVEY REQUIRED FOR LIGHT WELLS (TO BE SCOPED BY OTHERS)

NOTE:

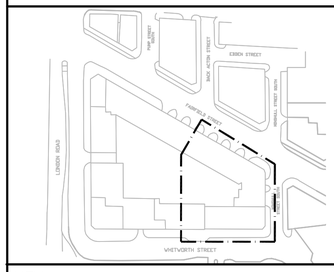
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KEY
SCALE 1:1500

REFERENCE DRAWINGS

BASEMENT OBSERVATIONS – 060270/10-B01-03

CONDITION SURVEY SPEC – 060270/SPEC-20-00-01-03

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

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Status:
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Project:
LONDON ROAD FIRE STATION

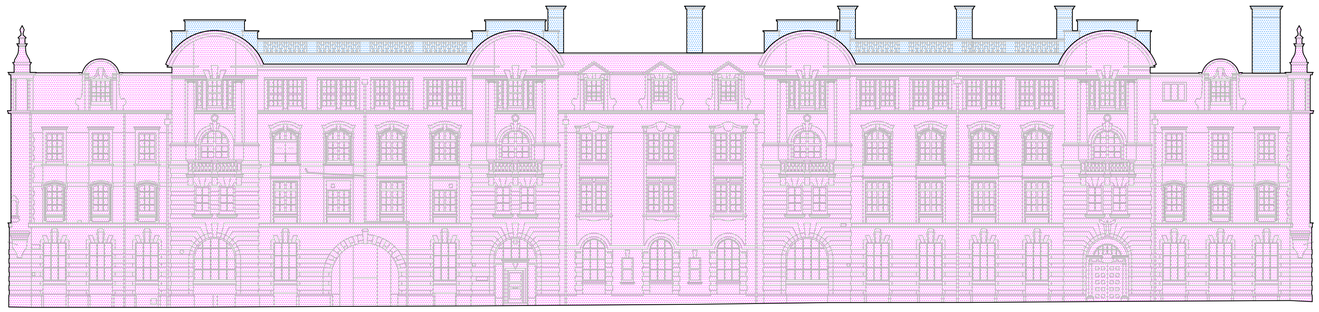
Drg Title:
BASEMENT INTRUSIVE INVESTIGATION
SHEET 3 OF 3

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Drg No: 060270 / SPEC-10-B01-06

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ELEVATION A (WHITWORTH ST)
SCALE 1:200



ELEVATION B (FAIRFIELD ST)
SCALE 1:200



ELEVATION C (LONDON ROAD)
SCALE 1:200

THE PURPOSE OF THIS STRUCTURAL SURVEY IS TO ESTABLISH THE CONDITION AND PHYSICAL CHARACTERISTICS OF THE EXISTING STRUCTURE AND ELEVATIONS IN RELATION TO PHASE 1 OF THE PROPOSED REFURBISHMENT WORKS (REPAIR TO EXTERNAL ENVELOPE AND STRUCTURE).

SURVEY METHODS SHOULD BE APPROPRIATE FOR USE ON GRADE II * LISTED STRUCTURE. ANY INTRUSIVE INVESTIGATIONS TO BE APPROVED BY RELEVANT AUTHORITIES.

EXTERNAL FACADE CONDITION SURVEY SPECIFICATION

- FULL ABSEIL SURVEY REQUIRED TO ALL EXTERNAL ELEVATIONS INCLUDING ROOF AREAS.

TOWERS, PARAPETS AND CHIMNEYS CONDITION SURVEY SPECIFICATION

- FULL SURVEY REQUIRED TO ALL SIDES OF TOWERS AND PARAPETS.

CONDITION SURVEY SPECIFICATION

SEE ARCHITECTS 'LEVITT BERNSTEIN' SPECIFICATION FOR FACADE SURVEY OF THE FIRE STATION. THIS IS TO BE A VISUAL INSPECTION OF EACH ELEVATION.

DUE TO COMPLEXITY OF THE SURVEY IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR ATTENDS SITE TO CONFIRM SCOPE AND METHODOLOGY.

CONDITION SURVEY TO COVER:

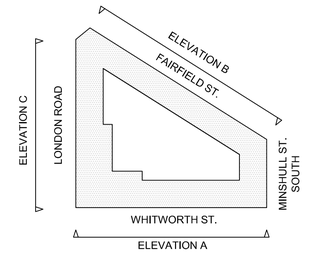
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2. CORROSION
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4. PLUMB AND LEVEL
5. MATERIAL AND CONSTRUCTION DETAILS
6. SURFACE FINISH
7. STAINING
8. WEEP HOLES AND VENTS
9. MOVING PARTS
10. MAINTENANCE EQUIPMENT
11. FIXINGS AND FASTENERS
12. ALL LOOSE MATERIALS TO BE RECORDED
13. ALL MATERIALS TO BE IDENTIFIED ALONG WITH FIXING METHODS EITHER VISIBLE OR INFERRED.
14. BRICK SUPPORT LEVELS WHERE APPARENT
15. ALL VISIBLE STRUCTURAL ELEMENTS TO BE MEASURED AND LOCATED.
16. NON-INTRUSIVE SCANNING OF TIES.
17. HAMMER TESTING.

ASBESTOS SURVEY SPECIFICATION

A REFURBISHMENT/DEMOLITION TYPE ASBESTOS SURVEY IS REQUIRED . THE SURVEY MUST LOCATE AND IDENTIFY ALL ACM BEFORE ANY STRUCTURAL WORK BEGINS AT A STARTED LOCATION OR ON STATED EQUIPMENT AT THE PREMISES. IT INVOLVES DISTINCTIVE INSPECTION AND ASBESTOS DISTURBANCE. THE AREA SURVEYED MUST BE VACATED, AND CERTIFIED 'FIT FOR RE-OCCUPATION' AFTER THE SURVEY.

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t: 0161 236 2394
e: manchester@curtins.com
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Status:
INFORMATION

Project:
LONDON ROAD FIRE STATION

Drg Title:
CONDITION SURVEY SPECIFICATION
EXTERNAL ELEVATIONS
SHEET 1 OF 2

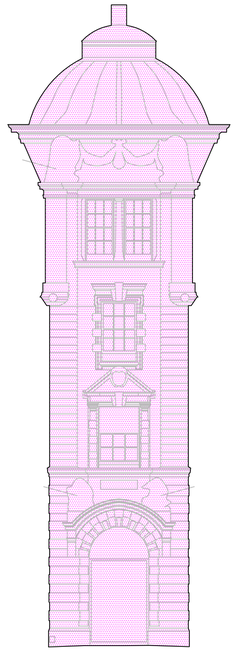
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ELEVATION D (MINSHULL ST SOUTH)
SCALE 1:100



ELEVATION E (CORNER OF LONDON ROAD)
SCALE 1:100

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EXTERNAL FACADE CONDITION SURVEY SPECIFICATION

- FULL ABSEIL SURVEY REQUIRED TO ALL EXTERNAL ELEVATIONS INCLUDING ROOF AREAS.

TOWERS, PARAPETS AND CHIMNEYS CONDITION SURVEY SPECIFICATION

- FULL SURVEY REQUIRED TO ALL SIDES OF TOWERS AND PARAPETS.

CONDITION SURVEY SPECIFICATION

SEE ARCHITECTS 'LEVITT BERNSTEIN' SPECIFICATION FOR FACADE SURVEY OF THE FIRE STATION. THIS IS TO BE A VISUAL INSPECTION OF EACH ELEVATION.

DUE TO COMPLEXITY OF THE SURVEY IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR ATTENDS SITE TO CONFIRM SCOPE AND METHODOLOGY.

CONDITION SURVEY TO COVER:

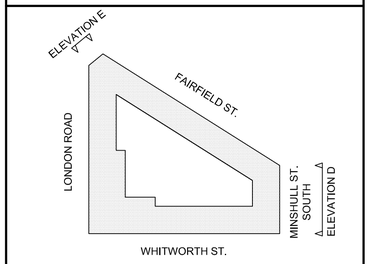
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16. NON-INTRUSIVE SCANNING OF TIES.
17. HAMMER TESTING.

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Merchant Exchange, 17-19 Whitworth Street West, M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: CONDITION SURVEY SPECIFICATION
EXTERNAL ELEVATIONS
SHEET 2 OF 2

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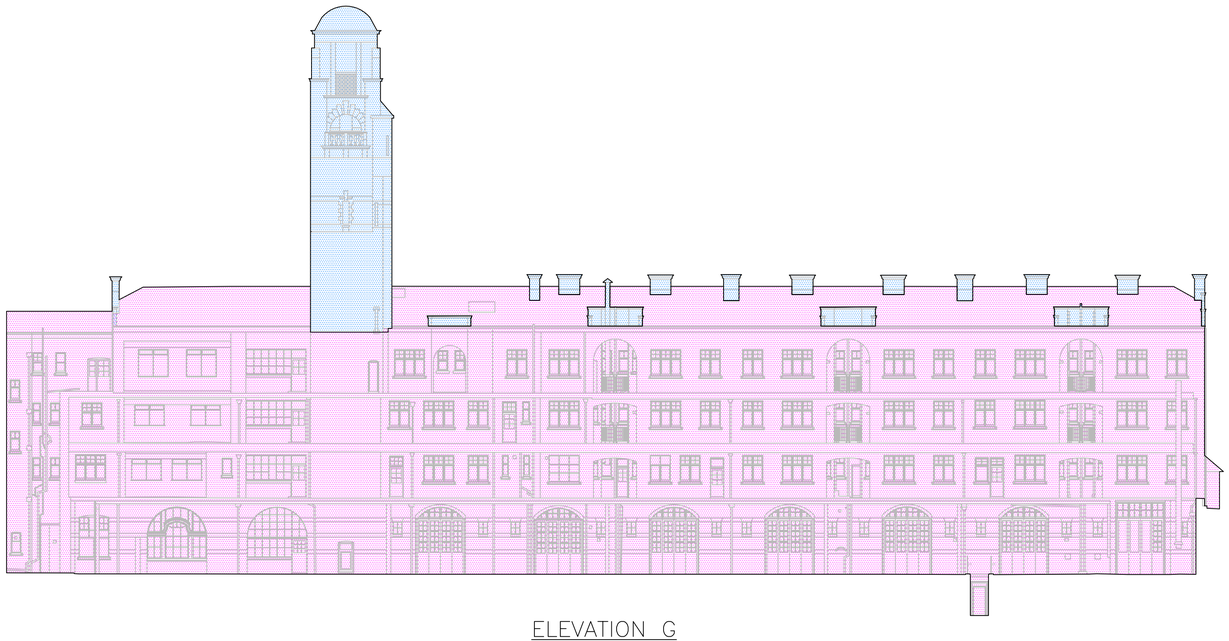
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ELEVATION F
SCALE 1:200



ELEVATION G
SCALE 1:200



ELEVATION H
SCALE 1:200



ELEVATION J
SCALE 1:200

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COURTYARD FACADE CONDITION SURVEY SPECIFICATION

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- ALL WALL RETURNS, ALCOVES AND ARCHES ARE TO BE INCLUDED.

TOWERS, PARAPETS AND CHIMNEYS CONDITION SURVEY SPECIFICATION

- FULL SURVEY REQUIRED TO ALL SIDES OF TOWERS AND PARAPETS.

CONDITION SURVEY SPECIFICATION

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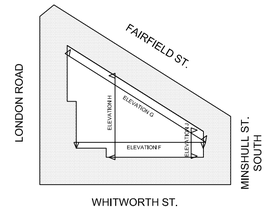
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Status: INFORMATION

Project: LONDON ROAD FIRE STATION

Drg Title: CONDITION SURVEY SPECIFICATION
COURTYARD ELEVATIONS
SHEET 1 OF 1

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