

MertonVision 67 Clarendon Rd, Colliers Wood, London, SW19 2DX

Structural Condition Report

Project number: 2190695 Status: Information Revision: DRAFT 26/02/2020 Date: February 2020



## **Document Control**

		remarks:	Information				
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Date:	Feb '20	Signature:	PDu	Signature:	ORi	Signature:	ORi



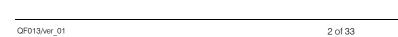


## Contents

1.0	Introduction	page	3
2.0	Location	page	4
3.0	Ground Conditions	page	5
4.0	Descriptions of the Buildings	page	5
5.0	Findings	page	10
6.0	Comments and Recommendations	page	30
7.0	Summary	page	31

## Appendix

A Simpson Hilder Floor Plans and Elevations





#### 1.0 Introduction

Elliott Wood Partnership Ltd (EWP) were instructed by Simpson Hilder Associates Limited, on behalf of Merton Vision, to undertake a structural condition survey of the buildings at MertonVision, 67 Clarendon Rd, Colliers Wood, London, SW19 2DX, to inform decisions regarding the site's future.

The site is used by MertonVision, the working name of the charity Merton Voluntary Association for the Blind (MVAB). Its role is to support and provide services to blind and partially sighted people in Merton.

Peter Dunkin BSc (Hons) CEng MIStructE, visited the site on 18th February 2020.

This report is primarily based on a visual walk-around survey of the structure visible during the visit. Finishes, false ceilings and cladding were present in many areas, obscuring the structure.

Externally, the walls were viewed where visible from ground level. Inside the building, some rooms were locked and not accessible. Some consulting rooms were in use and could not be entered.

The description of the building's structure is based on visual observation. No structural drawings have been seen. No opening up was undertaken.

Issues with non-structural elements are noted where observed. Where necessary, specialist advice should be sought regarding these.

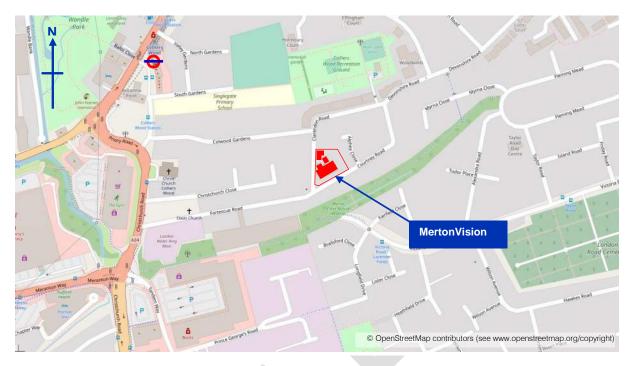
The weather was cool, cloudy and showery at the time of the visit.

A geotechnical site investigation is planned in order to understand the ground conditions and foundation details present on the site. The content of this structural condition report will be reviewed when the findings of the geotechnical site investigation are known.

This report is to account for the particular instructions and requirements of our client. It is not for the use or reliance by any third party and no responsibility is undertaken to any third party.



## 2.0 Location



Site Location Plan

The site is located within a residential area of Merton, close to Colliers Wood Underground Station. It is bounded to the west by Clarendon Road and to the south by Courtney Road.



Photograph 1: MertonVision



#### 3.0 Ground Conditions

A review of the British Geological Survey (BGS) map of the area indicates the site to be underlain by superficial deposits of sand and gravel of the Taplow Gravel Member, over London Clay. Close to the north-west is a boundary to an area where no superficial deposits were recorded. Hence the London Clay may be close to the surface. London Clay is prone to shrinking and swelling as its water content reduces and increases. Trees and large shrubs can reduce the moisture content of the clay during dry periods. This can cause subsidence of nearby buildings that have shallow foundations and result in cracking.

The log for a borehole  $\sim$ 180m south-west of the site, shows 0.9m of clay and gravel fill over London Clay. The log for a borehole  $\sim$ 270m east of the site recorded 1.3m fill over 1.05m of clayey silty sand and gravel over the London Clay.

A geotechnical site investigation is planned to determine the actual soil conditions present on the site.

#### 4.0 Descriptions of the Buildings

There are three buildings present on the site: The main building 'The Guardian Centre', The Eric Walford Studio (also referred to as the Talking Newspaper Building) and Emily Villa. Floor plans by Simpson Hilder Associates Limited are included within the Appendix.

#### Main Building

This building contains a large hall, used for events, and an adjoining kitchen and bar. There are several multifunction rooms and also offices used for administration.



Photograph 2: Main Building - Main Entrance on Clarendon Road



Photograph 3: Main Building - South-East Corner

The main building is believed to have been converted from a Victorian School. The majority of the building is single storey, with a large headroom. There is a double storey wing at the north-west corner. This has tile cladding at its upper storey on the elevation facing Clarendon Road. Most of the building has solid brick walls and tiled roofs.

There are newer extensions present at the south-west and south-east corners. These have flat roofs and their external walls have brick stretcher bond outer skins and may well have blockwork inner skins. The windows are timber framed.

The roofs are likely to be of timber construction. There is a suspended grid ceiling present in the main hall and plaster ceilings elsewhere. From the limited construction visible, the roof over the hall and the various multifunction rooms may be supported on timber feature trusses.

The walls are assumed to be typically loadbearing, but there may be some reinforced concrete or steel framing present where there have been alterations. A beam or frame is assumed to be present at a large opening between offices. A concrete beam was also seen within the new storeroom at the south-east corner.



Photograph 4: Main Hall



Photograph 5: A Multifunction Room

## Eric Walford Studio

This is a digital studio built in 1992. It is used by the registered charity Merton Talking Newspaper.



Photograph 6: Eric Walford Studio

The Eric Walford Studio is a small modern building linked to the older main building by a covered walkway. The outer walls are assumed to be of brick/block cavity construction. It is likely that the masonry walls are loadbearing. There are pitched tiled roofs. The roof structure is not visible but is may well comprise timber trusses. Steel framing may be present within the roof over the walkway. Four external brick piers are present on the west side. These could be loadbearing masonry, or the brickwork piers may contain concrete or steel columns.

## Emily Villa

This contains several consulting rooms plus offices.

Emily Villa was built as a Victorian residential villa. There is a main two storey part of the building to the south, with a single storey wing to the north that extends further back. This may be a later extension, albeit not built recently. Red brick solid walls feature at the front, with two projecting bays and some ornate details. The rear has mostly of plainer yellow brick façades. The entire gable wall to the south and the upper storey gable to the north have been rendered.



Photograph 7: Emily Villa - View from Clarendon Road

This building is assumed to be of traditional construction, with loadbearing brick walls, a timber first floor and timber roofs supporting slates. Externally, brick arches span over the windows.



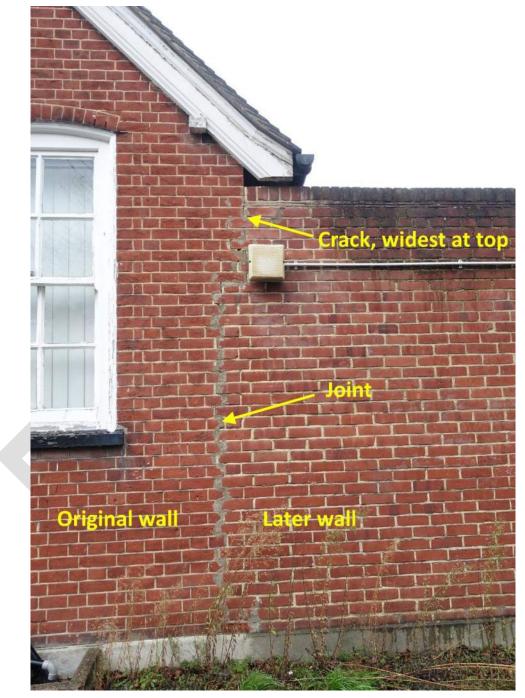
Photograph 8: Emily Villa - View from the north-west



## 5.0 Findings

## Main Building

On the south flank wall, there has been movement between the extensions at both ends and the original building. The new brickwork was built bonded into the existing. Both joints have cracked. The crack widths are widest at the top, tapering to zero width lower down, implying some rotational movement of the wall.



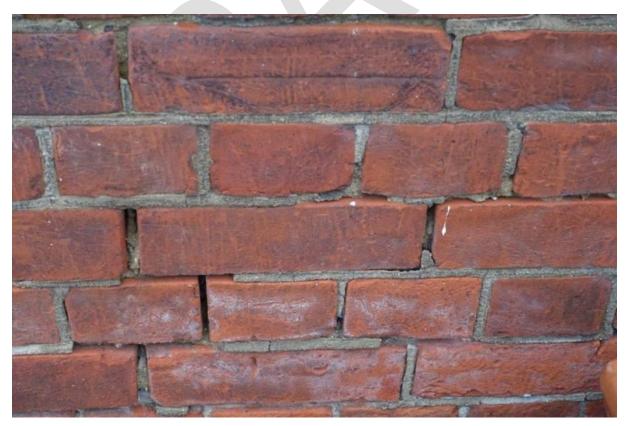
Photograph 9: Cracked joint in south wall

There is also cracking at high level on the west elevation, where newer brickwork joins older brickwork.



Photograph 10: Cracking and open joints on the west elevation

Some brickwork joints are missing mortar. This could allow damp to penetrate the wall.



Photograph 11: Missing mortar in brickwork joints



Cracking is present at a partially removed fitting.



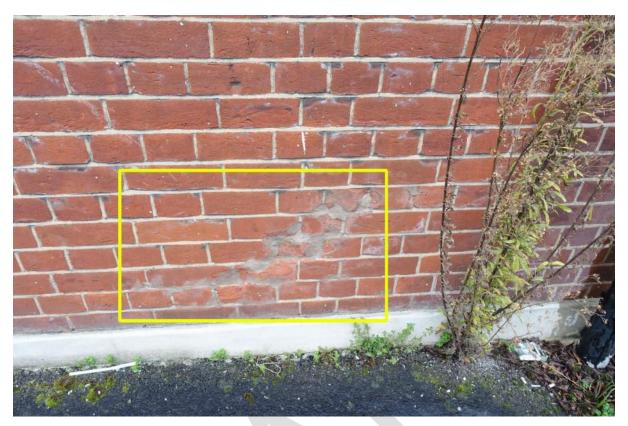
Photograph 12: Damaged brickwork at a redundant fitting

A render strip is present around the bottom of the external walls. At some locations, it has cracked at others, it has become detached from the wall, allowing rainwater ingress and plant growth.



Photograph 13: Render strip detached from base of wall

There are signs of spalled brickwork on the south elevation having had an attempted repair with mortar. The cause of the spalling is unclear. It could be frost damage or mechanical damage.



Photograph 14: Mortar repairs to spalled brickwork

Timber doors, door frames and window frames and window cills are in poor decorative condition. Exposed timber is liable to rot.



Photograph 15: Flaking/missing paint on window frames and cills



Photograph 16: Missing/flaking paint to door frame and door. The timber door is delaminating Some window frame timbers are badly rotting.



Photograph 17: Rotten window frame timbers



Paint to timber barge boards is also in poor condition.

The clay roof tiles appear to be in poor condition and may be reaching the end of their life.



Photograph 18: Poor condition paintwork on dormer window. Roof tiling appears to be breaking up

Reportedly, the felt roof over the eastern plantroom and store was replaced about 8 years ago.

Cast-iron rainwater downpipes are leaking. The metalwork is rusting. Rainwater from one leak was seen to be running down the outside of a downpipe before dripping down onto the brick wall, risking damp penetrating the building and frost damage to the brickwork if not rectified.



Photograph 19: Leaking/rusting rainwater downpipe



Two of the arches in internal walls bordering the main hall have cracks.



Photograph 20: Cracked arch in main hall

It is unclear whether the cracks are only in the plaster finish or are also present in the structure behind. The width of the cracks at the time of the visit did not cause any immediate concern.

There is some cracking in the ceiling over the bar. It is mostly hairline. Its cause in unclear.



Photograph 21: Cracking in bar ceiling



There is evidence of there having been significant damp penetrations through the ceilings at several locations in the building.



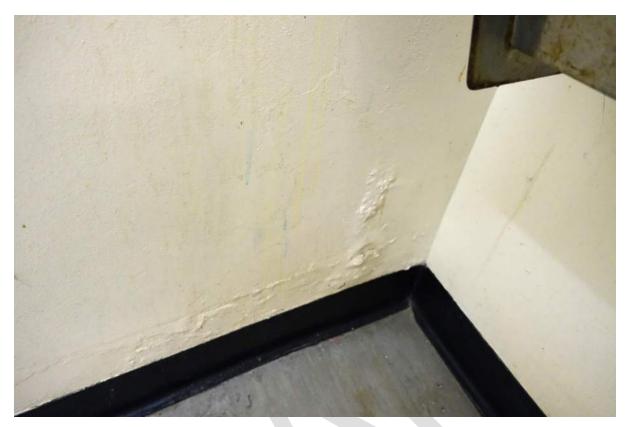
Photograph 22: Apparent damp damage in the ceiling over a first floor office



Photograph 23: Evidence of damp in the ceiling of a ground floor multifunction room



Paint damage within the toilets may be due to rising damp.



Photograph 24: Paint blistering within the Gentlemen's toilet may be due to damp



Photograph 25: Signs of damp within the Ladies' toilet



The timber parquet floor appears worn, possibly due to repeated sanding and local damage.



Photograph 26: Worn timber parquet floor in the main hall

## Eric Walford Studio

This is the newest building and appears to be generally in good structural condition. Some minor cracking is present but didn't cause concern.



Photograph 27: Minor ceiling cracking



Roof timber barge boards are overdue for repainting. Some bare timber is exposed to the elements, risking rot.



Photograph 28: Barge boards need repainting

#### Emily Villa

This building shows evidence of extensive cracking and historical crack monitoring. EWP have heard a report from staff that a drain was the cause of the problem and that this was rectified and repairs undertaken to the lower storey of the building about 8-10 years ago. Another source advised that the building had been underpinned.

Gables and part of the lower front of the building had been rendered. Possibly, rendering may have been applied to over-cover repairs, or to address water penetration problems. There is cracking present in the render and, in at least one location, has become detached and has fallen from the building.



Photograph 29: Crack 'tell-tales' provide evidence of historical monitoring of the building's movement



Externally cracking and evidence of movement was visible around the outside of the building.

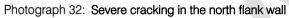


Photograph 30: Cracked brickwork at an arch



Photograph 31: Cracking, approximately 2mm wide, at the front







Photograph 33: Close up photograph of the cracking



Photograph 34: The crack is 8mm wide at head height, widening to about 10mm higher up



This wall has been extensively engraved by vandals.



Photograph 35: Damage to the brickwork surface by vandals

Brick arches show signs of having moved.



Photograph 36: A deformed and cracked brick arch over a window



The walls have been repointed, possibly after the structural repairs.





Photograph 37: Cracking in a repointed wall

Render on the front wall has cracked some has fallen from the building.



Photograph 38: Fallen render at the front of Emily Villa



The rendered south flank wall has cracking, up to about 0.8mm wide.



Photograph 39: Cracked rendered flank wall



Some timber window frames are rotting.

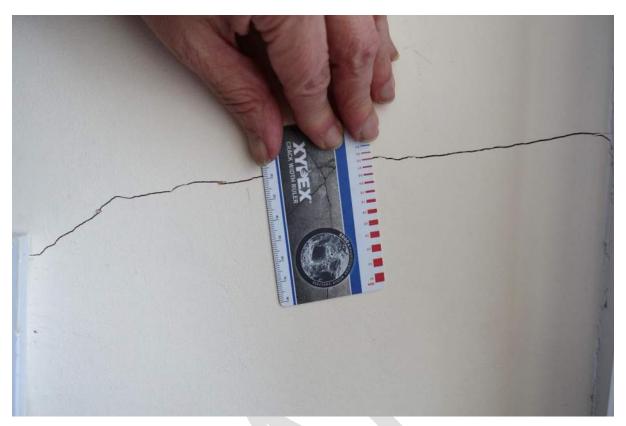


Photograph 40: Rotten timber to the rear

There is cracking of walls and ceilings at ground floor. Crack widths of up to 0.6mm were measured.



Photograph 41: Cracked ceiling at ground floor

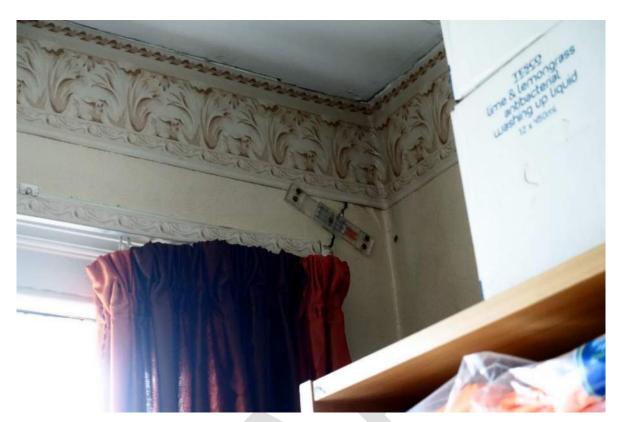


Photograph 42: A wall crack measured at 0.6mm wide

Upstairs in Emily Villa, the cracking is much worse. Staff reported difficulties in opening windows. EWP were advised that this storey was not refurbished when the public areas below were repaired.



Photograph 43: 2mm wide cracking below a first-floor window.



Photograph 44: Cracking above the window, with a tell-tale in place

Other cracks were present in the walls and ceilings at first floor. According to the staff, some of these cracks have appeared in the last 4-5 months. If correct, this suggests that some movement is still occurring.



Photograph 45: Wall and ceiling cracking at first floor



Photograph 46: Wall and ceiling cracking at first floor

Simpson Hilder have supplied the following photograph taken within the roof space of Emily Villa.



Photograph 47: Signs of damp within the roof space of Emily Villa

It can be seen that there is no sarking felt above the rafters, increasing the risk of rainwater penetration. The timbers appear to be damp and suffering from rot.



#### 6.0 Comments and Recommendations

Overall, the Main Building and Emily Villa appear to be in a poor condition for their age and type, with many structural elements being in need of repair, refurbishment or replacement. We have noted the structural defects and the nature of the works that would be required to repair these. However, there may be other defects (i.e. non-structural) with the fabric or services, which are outside our remit and should be surveyed by specialists.

If the buildings are to be retained, the following extensive structural works are required:

- 1. External cracks in the masonry should generally be monitored. If movement is on-going at vertical and diagonal cracks, then underpinning will likely be required to mitigate this. The cracks should be repaired using stainless steel HeliBar stainless steel reinforcing bars and the walls made good; however, these masonry repairs may not prevent future movement. If reinforced crack repairs are undertaken without dealing with the cause of ongoing movement, e.g. by underpinning, then the building is likely to crack again, often in a different location to where the strengthening repair was made.
- 2. Where cracks occur at the joints between newer and older parts of the buildings, they are likely caused by the settlement of the new wings. The cracks should be monitored over a long period, up to one-year, to determine whether the movement is continuing. If not, the cracks should be repaired using HeliBars. If movement is continuing, consideration can be given to forming a movement joint in the masonry. However, additional restraint on either side of the movement joint may need to be reinstated.
- 3. Emily Villa has obviously had a history of movement and exhibits severe cracking. Historical information on the issues previously encountered and repairs taken should be reviewed. Decisions can then be taken on what further investigations are required and then what repairs are necessary. However, they should be assumed to be significant in this building. Underpinning may be required.
- 4. Minor internal cracks in plastered walls can be treated by removing the plaster locally, if there is a minor crack in the masonry substrate, expanded metal can be fixed across the crack before the wall is re-plastered. More serious cracks should be repaired using HeliBars.
- 5. Redundant fixings/fittings in the external walls should be removed and the walls made good.
- 6. External brickwork should be repointed where necessary.
- 7. External render should be hammer tested and all debonded areas removed and replaced. The render should be removed locally at all cracks. If there are cracks in the substrate, these should be repaired as elsewhere; stainless steel expanded metal lathing should by fixed across the crack in the substrate before the wall is re-rendered.



- 8. Generally, the condition of all roofs, flashings, gutters and downpipes should be reviewed by specialists and replaced or refurbished as necessary to ensure the buildings are watertight in the future. Based on the extent of the damp/water ingress observed, it is likely that extensive repairs or replacement will be required.
- 9. Where significant water leaks have already occurred, if not already undertaken, the condition of timber in the vicinity should be checked for decay. A specialist timber report should be obtained on the condition on the timber in all roof spaces. From the evidence of historical roof leaks and the photograph within the Emily Villa roof space, significant decay may be present. Timber treatment is likely to be required and significant quantities of defective timber may need to be replaced.
- 10. External timber of all the buildings, windows, doors, barge boards, etc., should be reviewed by specialists and repaired or replaced as necessary. However, based on our observations, considerable repair and/or replacement is likely.

#### 7.0 Summary

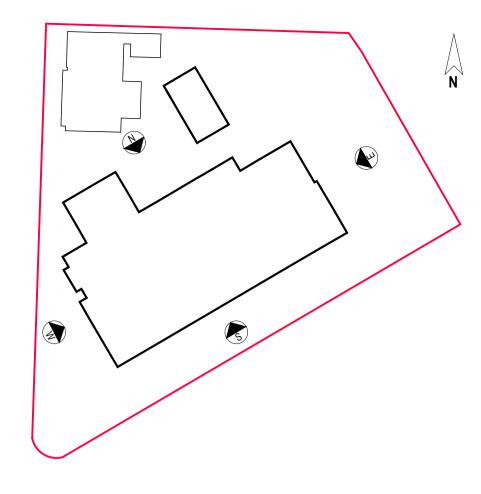
From our observations, extensive repairs will be required to the Main Building and Emily Villa structures. The newer building, Eric Walford Studio, appears to be in good condition. Further input would also be required for non-structural elements (such as windows, etc.) throughout the buildings (Main Building and Emily Villa). As such refurbishment to extend the life of the existing buildings may not prove cost effective.

Appendices





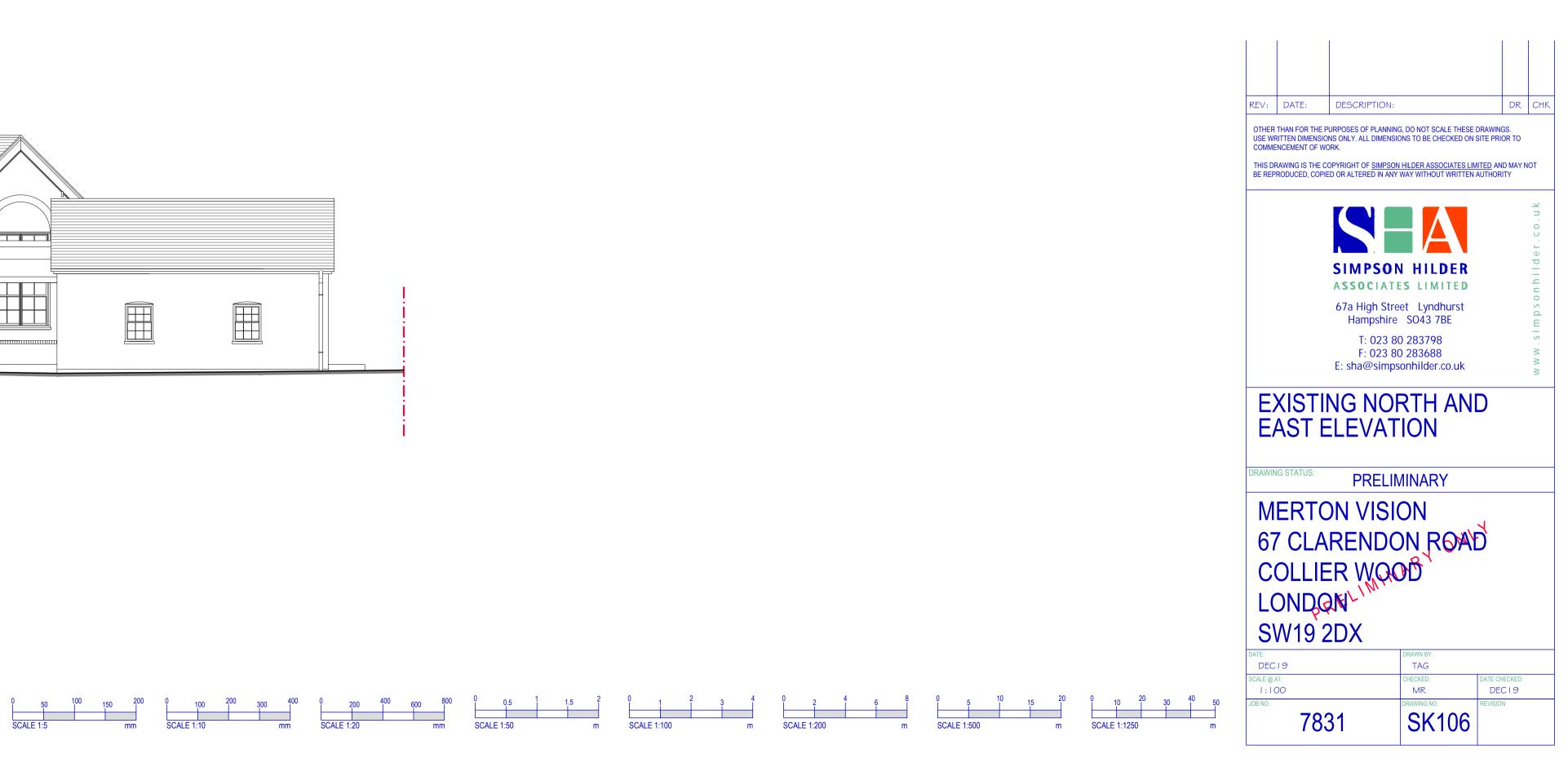




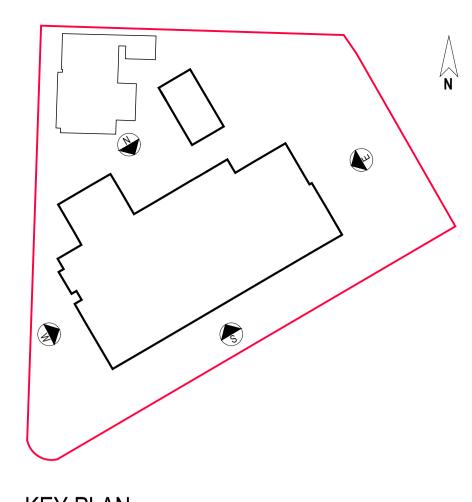
**KEY PLAN** 



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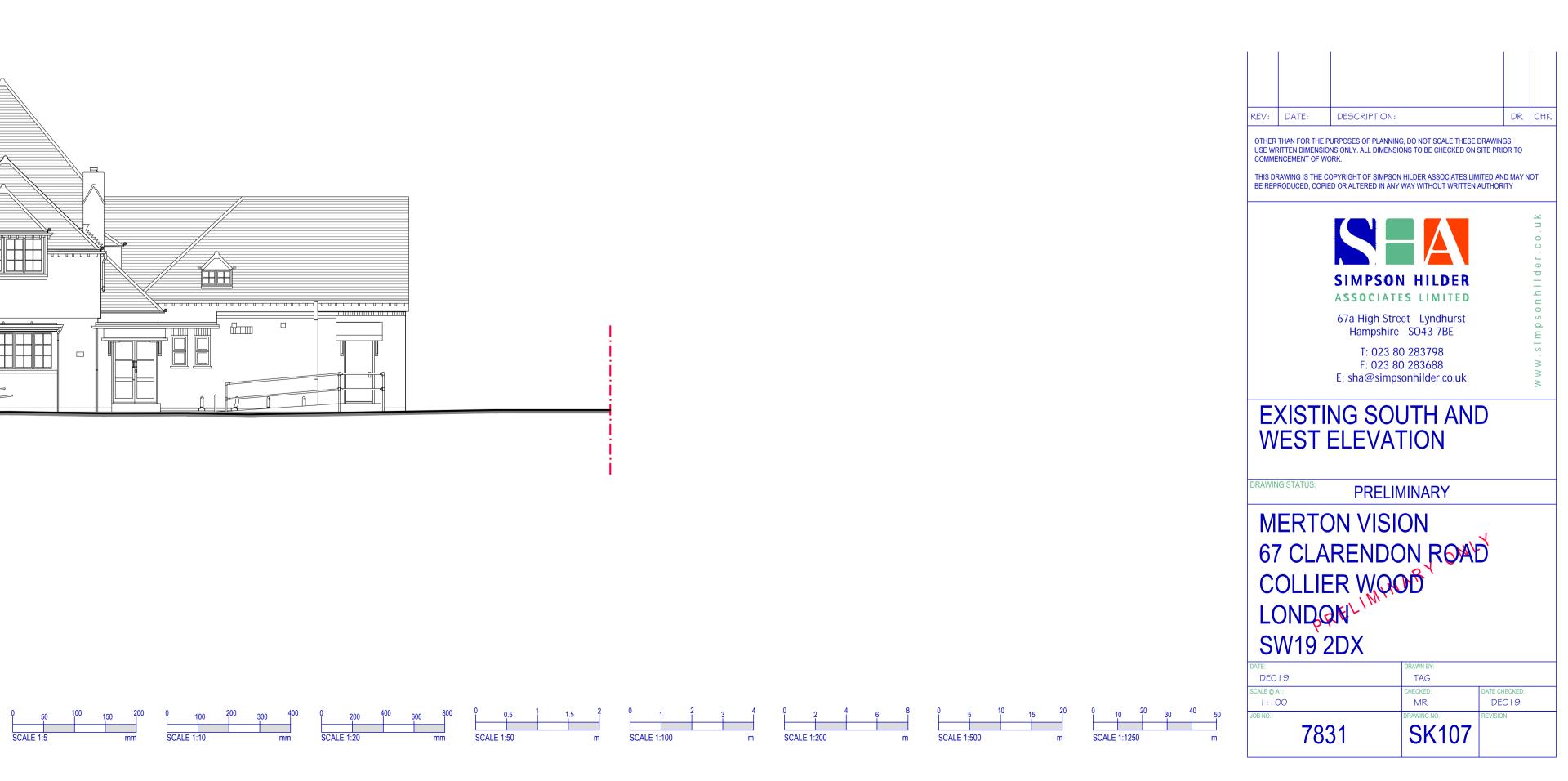


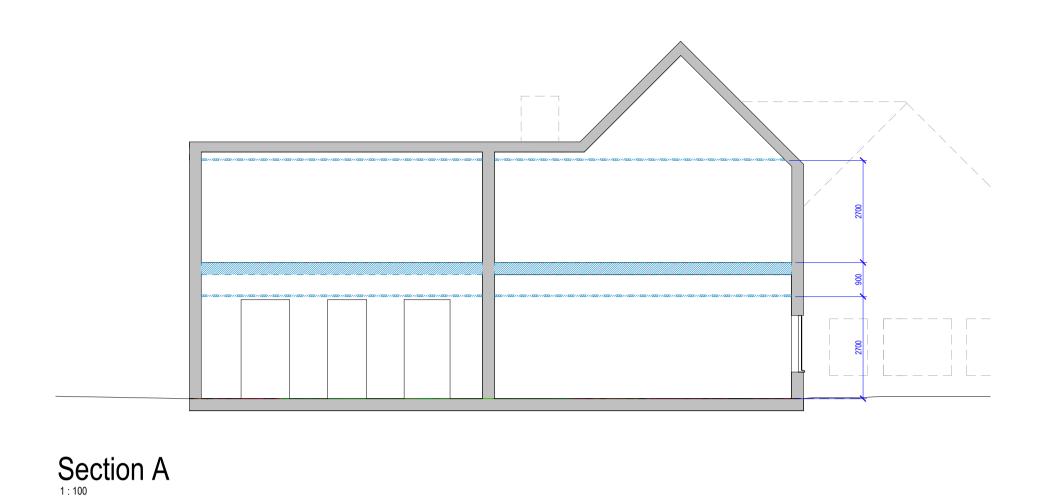


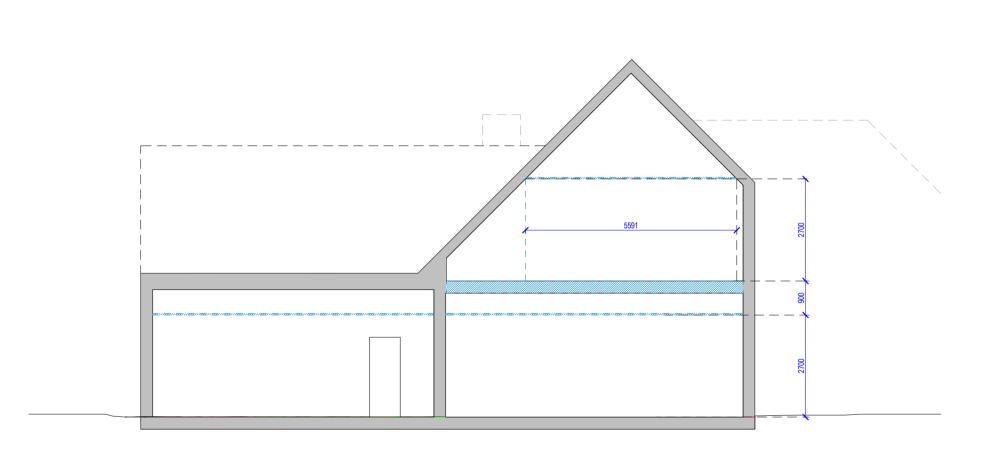


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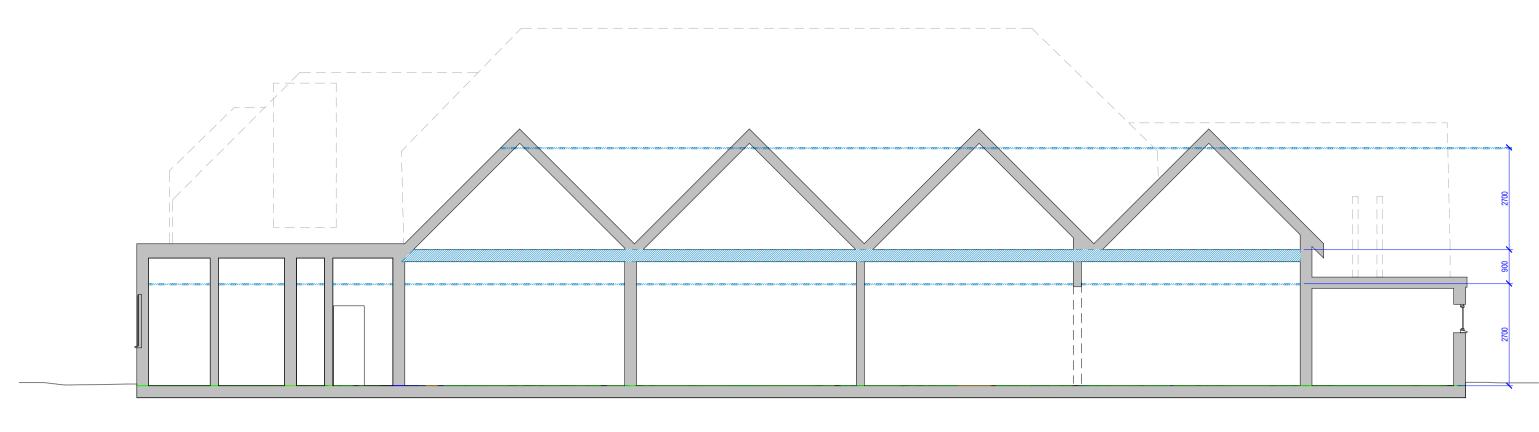








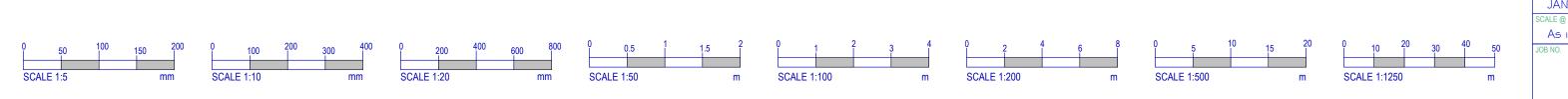
Section B



Section C



Site Plan View



## Note:

Blue hatch indicates indicative proposed mezzanine & service zones



## **EXISTING BUILDING - SECTIONS**

PRELIMINARY

MEDTON VISION SITE

MERTON VISION SITE
THE GUARDIAN CENTRE
67 CLARENDON ROAD
COLLIERS WOOD
SW19 2DX

7831	SK108		
JOB NO.	DRAWING NO.	REVISION	
As indicated	MR, TW		
SCALE @ A1:	CHECKED:	DATE CHECKED:	
JAN 2020	TAG		
DATE:	DRAWN BY:		



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