

The Former  
**ST ANDREWS SUNDAY SCHOOL HALL**  
40 Rankin Avenue, New Lynn, Auckland

**PROPOSED REMEDIAL WORKS**  
required to make the building safe and secure



St Andrews Church Hall, New Lynn c. 1950s, Image Source: Auckland University Sheppard File: Clinton Savage.

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Prepared by Graeme Burgess + Lilli Knight  
for Auckland Council – Heritage

Report Issued: 14 December 2018

# St Andrews Sunday School Hall

40 Rankin Avenue New Lynn

## Works Required to Make the Building Safe and Secure

14 December 2018



Showing the hall at 22 Margan Avenue and associated house (former manse) at 40 Rankin Avenue, New Lynn. Photograph: Google Maps 2018

### 1.0 Introduction

Burgess Treep + Knight have been commissioned by Auckland Council to inspect the St Andrews Church Hall at 40 Rankin Avenue New Lynn, a category B historic heritage place.

This report has been written by Graeme Burgess and Lilli Knight. We visited the building on 25 September 2018 with plumbing and electrical consultants, and the structural engineers. Due care was taken when visiting the site, and permission was obtained from the owner.

Consultants reports from Lough Downey Associates (structural engineering), Flux Ltd (plumbing + drainage) and Eden Electrical are appended to this report.

Based on our observations and the consultants reports we have proposed a scope of works for the stabilisation of the place so that it does not deteriorate further and is made safe.

The hall, designed by architect Clinton Savage, was built in the late 1920s by the minister, the Rev. Rankin at the eastern side of the property. The main form of the building is the gabled hall. At the northern end of the hall is a stage set behind a brick proscenium arch. There are rooms beneath the stage area, accessed by a steep stairway down the eastern side of the stage. The entry to the building is from Margan Avenue. The entry area has a

central hall with two side rooms. This section of the building has a simple parapet form with a skillion roof within the parapet. The services wing, down the western side of the building is also a lower level structure with a skillion roof set behind parapet walls.

The roof of the women's toilet area at the north-west corner of the building, a small brick lean-to, has fallen away. This was not part of the original building. The informal lean-to structure that was on the north side of the hall has collapsed and is lying in the yard.

A brick bungalow was constructed in 1954 as the manse for the church at the north-west corner of the property. It is well away from the hall.

## **2.0 Background to Building Condition**

### **2.1 Dangerous Building Notice**

The deteriorating state of the building has been noted by Council since 2002. On 21 June 2002, a letter was written to the Auckland District Methodist Tongan Trust regarding unsafe brickwork on the building. This was followed by further letters requesting urgent action on 26 March 2003, and 14 May 2003. The May letter urges that steps be taken to either repair or to apply to demolish the building.

A dangerous building notice under section 121 of the Building Act was issued by Auckland Council in March 2010 stating that sections of the brick superstructure had been assessed as dangerous, and requiring the building to be vacated and secured. In April 2011 Council issued a revised Dangerous Building Notice, and have since issued further notices. The 2011 notice followed an inspection by Council Officers that noted the outer skin of brickwork on the eastern side of the building was showing signs of delaminating.

Shortly after this a significant portion of the outer skin of brickwork on this side collapsed. The notice fixed to the building in April 2012, reinforced previous notices, and added seismic risk, stating that the building is earthquake prone.

The current owners, Dragon Group Enterprise Limited, have erected a hurricane wire fence across the street frontage of the property. They also commissioned an engineering assessment of the building from Compusoft Engineering 2010. This examined the structural condition of the building at that time, and set out a solution for the structural upgrading of the building.

No actual work has been done by the owner to remediate the problems noted in the Dangerous Building Notices.

The rear lean-to has collapsed and the back of the building is open, making the building insecure. In our inspection of the building it was noted that people have been staying over night in the building.

The following text is from the Building Act.

Sub-part 6 of the Building Act 2004: special provisions for dangerous, affected and insanitary buildings;

121: definition of a dangerous building; a building is dangerous for the purposes of the Act if;

- a) In the ordinary course of events (excluding the occurrence of an earthquake), the building is likely to cause-
  - i) Injury or death (whether by collapse or otherwise) to any persons in it or to persons on other property; or
  - ii) Damage to other property; or
- b) In the event of a fire, injury or death to any persons in the building or to persons on other property is likely.

Further to this clause 126 sets out the processes whereby the Territorial Authority, with an order from the District Court, may carry out the work set out on the notice, and may recover the costs of these works from the owner. Clause 127 notes that 'building work' also includes the demolition of a building.

## **2.2 Health and Safety**

The safety of those carrying out the work must be the first consideration when planning how to carry out the proposed stabilisation works. In the event of the stabilisation works proceeding, all persons entering the building to carry out any works must have a full health and safety plan in place that includes a methodology for carrying out the works, and for monitoring the stability of the place during the course of the works. All workers should have appropriate OSH qualifications and at all times use appropriate personal protective equipment. It is expected that all workers should be experienced in working in high risk environments.

## **2.3 Seismic Risk**

On the latest dangerous building notice issued by Council the building was also identified as seismic prone under Section 122 (1) of the Building Act. This section has since been repealed on 1 July 2017 by Section 14 of the Building (Earthquake-prone Buildings) Amendment Act 2016. Under Section 133AB the building is earthquake prone if it is likely to collapse in a moderate earthquake and that the collapse is likely to cause death or injury and may cause damage to adjoining property.

### 3.0 Proposed Scope of Securing + Stabilisation Works

As stated in our offer of services (27 April 2018) the scope of works has been prepared to set out the minimum works required to arrest the decay of the building and to make it watertight, stable, safe, and secure. The scope of works is intended to be an interim step not a solution that would enable the building to be brought back into use.

The critical areas addressed in this report are:

Roof Condition  
Structural Integrity  
Security  
Plumbing + Drainage  
Electrical Services

#### 3.1 Roof Condition

We engaged Jarrod Gillespie, general manager of MacMillan Slaters and Tilers to inspect the roof and to give his opinion on its condition and the effectiveness of remedial works.

The main roof of the building is a plain gable set between parapet brick walls at each end. Down the eastern side the roof drained into an internal gutter behind the parapet of the wall. On the western side the roof drained conventionally into metal spoutings and downpipes.

Mr Gillespie has viewed the building from the street and looked at our photographs. The following description of the roof and opinion given on the roof is taken from his notes sent by e-mail.

The roof tiles are New Zealand made unders and overs an early version of clay barrel tiles. Each tile has a single steel fixing. A number of the tiles have failed and have fallen leaving holes in various parts of the roof. On the eastern side, the failure of the outer skin of brickwork has exaggerated this effect as the guttering system has fallen with the parapet leaving the roof draining down the wall.

Mr Gillespie did not consider that the roof could be easily repaired and would be cost prohibitive with out any guarantees on the integrity of the roof as far as water ingress is concerned or from more tiles sliding off due to the fixings failing. In his opinion the tiles were too fragile to withstand even the hammering required to re-instate the dropped tiles. He considered that the disturbance of the work itself would cause further damage and that it was too far gone to remediate. The tiles themselves are no longer available. It would be possible to replace the entire roof with similar tiles, but not with tiles to match.

In addition to this the physical condition of the roof framing is unknown and is likely to have suffered damage.

## 3.2 Structural Integrity

### 3.2.1 Stabilisation of the Hall

Lough Associates, structural engineers, inspected the property on 25 September 2018. Their report and preliminary design for stabilisation works is appended.

The proposed design is not intended to bring the building back into use, it is a design to stabilise the building as it stands and to prevent further decay.

In his report Mr Lough specifically notes that the works are not intended to make the building safe for the general public and further that all contractors entering the place must have a full health and safety plan in place before commencing any work.

Since the collapse of the outer skin of brickwork along the east side of the building the roof structure is not well supported. As noted in the Lough report, the exposed brickwork on the eastern wall is not to be relied on. Mr Lough has recommended supporting each truss to remove that load from the unreinforced brick masonry, "given the parlous state of the east wall, independent vertical support of the roof is advisable".

My Lough has recommended building external frames on mass concrete footings along the eastern side of the building in line with the trusses. He has further recommended fitting spreader beams through the building, and the building scaffold towers within the building to support the trusses and to remove roof load from the walls. The intention of the design is to prevent failure of the roof should the walls collapse. The proposal is not a developed design and is not a design that is intended to make the place available for public use.

Further to this Mr Lough has recommended removing the clay roof tiles and replacing them with metal roofing with the roofing extended out beyond the wall line to protect the wall. Mr Lough also correctly notes that the lower roof, down the western side of the building, is also failing and as a consequence leaking.

Once the support system is in place the building should be checked at regular intervals (monthly or every second month) to monitor movement and condition.

### 3.2.2 Condition of the Floor

As a consequence of leaking since at least 2012, the floor and floor structure down the eastern side of the hall could be unreliable. The floor is carpeted. The carpet is sodden. It is highly probable that the timber in this area may be damaged. We did not walk on this section of the floor during our site visit.

In order to carry out the proposed stabilisation works sections of the floor would have to be removed. (Refer Lough Associates drawing of proposed temporary bracing). In the design the engineers have called for the scaffold towers to be supported on the ground. This will necessitate opening the floor and would resolve any issues with the integrity of the floor structure in this area.

The floor within the west wing of the building was also very damp during our visit. This area also should be treated with caution as leaking may have caused damage to the floor and floor structure.

### **3.2.3 Western Side Wing**

The roof over the dining/kitchen area, down the west side of the building, has been leaking for some time. Sections of the ceiling have collapsed. This has been a long-term problem. It is highly likely that the roof structure over this area is also damaged.

This roof needs to be made watertight, however the roof structure has to be checked carefully to ensure that it is sound, and repaired if necessary before any work can be carried out on the roof. Lough Associates have recommended installing a second structure above the existing roof. This is a possible temporary solution.

### **3.2.4 Women's Toilet Annexe**

The women's toilet annexe, at the north-east corner of the main building, at the end of the west side wing no longer has a roof and is in a state of semi-collapse. This room was added to the building in 1971.

It is recommended that this addition is demolished and all openings blocked.

### **3.2.5 Rear Entry Door**

The lintel over the rear entry door has failed. It is recommended that the opening is framed up in H3.2 timber to support the opening, and that the entry is closed with plywood cladding fitted to make it secure. (refer 3.3 Security).

### **3.2.6 Fallen Lean-to**

As noted on the dangerous building notice, the lean-to at the back of the building has collapsed. This structure was an 'informal lean-to' built behind the building. It is now wreckage in the grass.

All the fallen down and damaged building material around the building needs to be cleared away. All the fallen bricks should be carefully stacked for possible re-use, and other material removed from the site.

## **3.3 Security**

Many of the openings into the building have no windows or doors. Many of the windows are broken or otherwise insecure. People are using the building. At the time of our visit there was a bed in one of the lobby rooms, and fresh rubbish throughout the building.

People illicitly using the building may have no interest in personal safety, nevertheless their safety has to be considered. People using the building also pose a threat to the place as they may cause damage.

No-one should have access to the place except for persons carrying out work to make the building safe.

To ensure that it is secure, all openings on the outside of the building that are open, ill fitting, or broken should be secured with full shuttering such as construction plywood. The shuttering should be framed and fixed without damage to brickwork or to existing original building fabric.

The doors at the front of the building are to be replaced with more substantial doors with a dead-lock, padlock and chain, to be used as access for building works.

### **3.4 Plumbing and Drainage**

Tim Boyd of Flux Ltd inspected the property to assess the state of the plumbing services. Mr Boyd did not access the roof. His report is appended.

Mr Boyd found that the water supply was disconnected.

He recommended capping all the wastes below floor level to prevent any gas back flow into the building.

He also recommended re-instating the fallen rain-water head at the north-west corner of the building, and replacing the other down-pipes where these are missing or damaged and re-connecting the down-pipes to the storm-water system.

### **3.5 Electrical Services**

Martin van Zonnefeld of Eden Electrical has prepared a report on the electrical safety of the place as it stands. A copy is appended.

Mr van Zonnefeld confirmed that a 400 volt overhead supply is connected to the building, and that this aerial supply is live to the exterior meter board. The supply to the building from the meter board has been disconnected remotely by the supply authority. This is not considered safe given the condition of the building. Mr van Zonnefeld has recommended that the supply authority should be asked to de-energise that supply line.

Mr van Zonnefeld did not consider that the current electrical state of the premises would meet AUS/NZ electrical safety regulations without considerable remedial works.

### 3.6 Security Fence

The existing security fence on the property does not provide proper security. It does not comply with the requirement of the Dangerous building notice, to be right around the building at a distance of 5m from the building.

The existing fence runs across the street frontage of the building but does not return at the sides, and does not run across the back of the building.

## 4.0 Recommended Works

The building is in very bad condition. It is not safe to be used as it stands and must be made safe, as set out on the dangerous building notices that have been issued.

The following sets out the minimum works required to make the place safe and secure.

It is recommended that the works are carried out by a contractor experienced in this type of work. The contractor and all subcontractors must inspect the property and put forward a full health and safety plan that includes a methodology for carrying out the works as a prerequisite requirement.

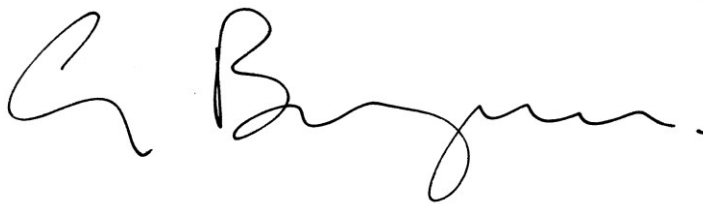
All the works have to be carried out in accordance with the dangerous building regulations as set out under sections 121-129 of the Building Act. All persons undertaking these works are to be made aware of the risks involved in the process and are expected to be experienced in this type of work and to operate under a strict occupational health and safety methodology. The structural works proposed require building consent. Other authorisations as set out under the Building Act may also be required.

We recommend the following actions, in the following order, as the minimum necessary to secure the building and to make it safe:

- Remove all fallen and damaged material from around the site including removing hanging bricks from the east wall.
- Retain fallen bricks neatly stacked for reuse.
- Install a compliant security fence around the building (note; this may not be required down the east side as the retaining at the property boundary provides this barrier. This interpretation is to be confirmed by Council Officers). Allow for a locked entry gate outside the main entry to the building
- Erect safety/warning notices
- For the duration of the stabilisation works, have a builder's electrical supply connected to the existing meter board.
- Demolish the Women's Toilet annexe at the north west corner of the building, without causing damage to the original building.
- Replace the main (non-original) front doors with a pair of plain solid doors fitted with double security locks.

- Make all other openings secure by framing the openings and fitting heavy construction plywood to the openings.
- Construct the scaffold pylon supports within the hall as shown on the Lough Associates report in order to support the roof trusses.
- Construct the steel frame supports down the east wall, with horizontal tie beams connected by tubular ties as shown on the Lough Associates design.
- Remove the clay tile roofing and replace with sheet metal roofing. The roofing is to be extended out over the wall line to prevent further water ingress. Allow to make the intersection between the roof and the frame secure.
- Construct a temporary skillion roof structure over the west wing.
- Engage a registered plumber to cap all existing waste lines and to check all existing waste vents.
- Replace or repair all existing rainwater heads (including cleaning out) and down pipes and connect these to the existing storm-water lines (check storm-water lines for condition).
- At completion of these works arrange for the electrical power supply to be disconnected at a point outside the property.
- Monitor the structure of the building at regular periods to ensure that there is no further movement or decay.

These works will ensure that the building will not deteriorate further and will be made secure so that there is no danger to people and it is not subject to further damage. The works are not restoration works and will not make the building safe for occupation and use.



**Graeme Burgess + Lilli Knight**

14 December 2018

## Appendix 1 – Photographs of the building in its current condition



East elevation showing collapsed brickwork. Photograph: B,T&K Architects 2017



Showing further collapse of brickwork (August) along East wall. Photographs: B,T&K Architects 2018



Broken glass in window and total collapse of outer skin of surrounding brickwork, East wall.  
Photograph: B,T&K Architects 2018



Showing significant collapse on East wall. Photographs: B,T&K Architects 2018



Street Elevation, Margan Avenue. Photograph: B,T&K Architects 2017



View looking west down Margan Avenue. Photograph: B,T&K Architects



Showing damage to brickwork on eastern wall, as viewed from Margan Avenue. Photograph: B,T&K Architects 2017



Street Elevation, Margan Avenue. Photograph: B,T&K Architects



Main entry doors (dangerous building notice not displayed), left, gates to Margan Avenue, right. Photographs: B,T&K Architects



Showing entry of overhead supply (400 volt) at south west corner (street elevation)  
Photographs: B,T&K Architects



View looking east up Margan Avenue. Photograph: B,T&K Architects



Showing the house at 40 Rankin Avenue (same legal title), left, and the hall, right, as viewed from the corner of Rankin and Margan Avenues. Photographs: B,T&K Architects



West Elevation as viewed from the yard at 40 Rankin Avenue. Photograph: B,T&K Architects



North west corner of the building, showing collapsed non-original toilet lean (to be demolished), and piles of building debris (to be removed from site). Photographs: B,T&K Architects



Showing rear unsecured entry on North elevation, left, collapsed lintel over doorway, right. Photographs: B,T&K Architects



Showing unsecured door to basement + partially collapsed non-original toilet addition (to be demolished) on North elevation.



Unsecured openings to basement and loose building debris, South elevation. Photograph: B,T&K Architects 2018



North Elevation as viewed across west edge development site (construction on this site has since taken place) from Rankin Avenue. Photograph: B,T&K Architects 2017



Down pipe disconnected and discharging directly on to side of building/ ground. Photographs: B,T&K Architects



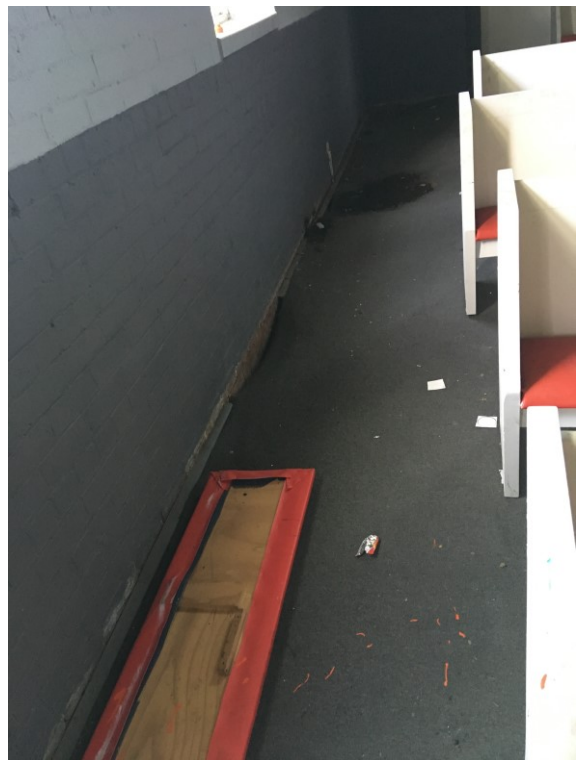
Damaged ceiling inside rear entry corridor. Photographs: B,T&K Architects 2018



View of Classroom looking south, roof has been leaking causing water damage and collapse of ceiling in places. Photograph: B,T&K Architects 2018



View of Classroom looking north, roof has been leaking causing water damage and collapse of ceiling in places. Photographs: B,T&K Architects 2018



Floor along eastern side of the hall, rotten and dangerous. Photographs: B,T&K Architects 2018



Interior view, looking north, of the stage. Photograph: B,T&K Architects 2018



Interior view, looking south. Photograph: B,T&K Architects 2018

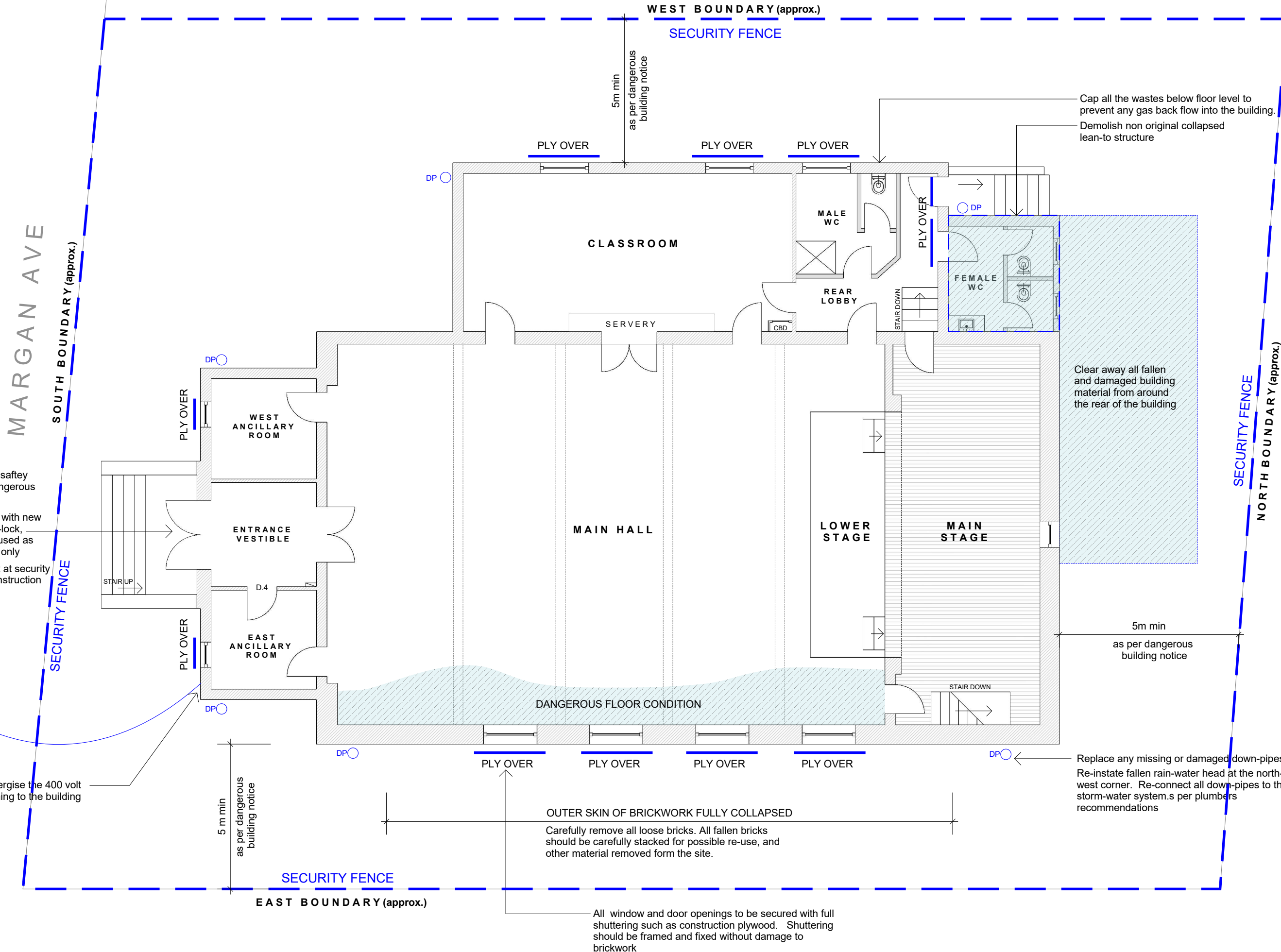


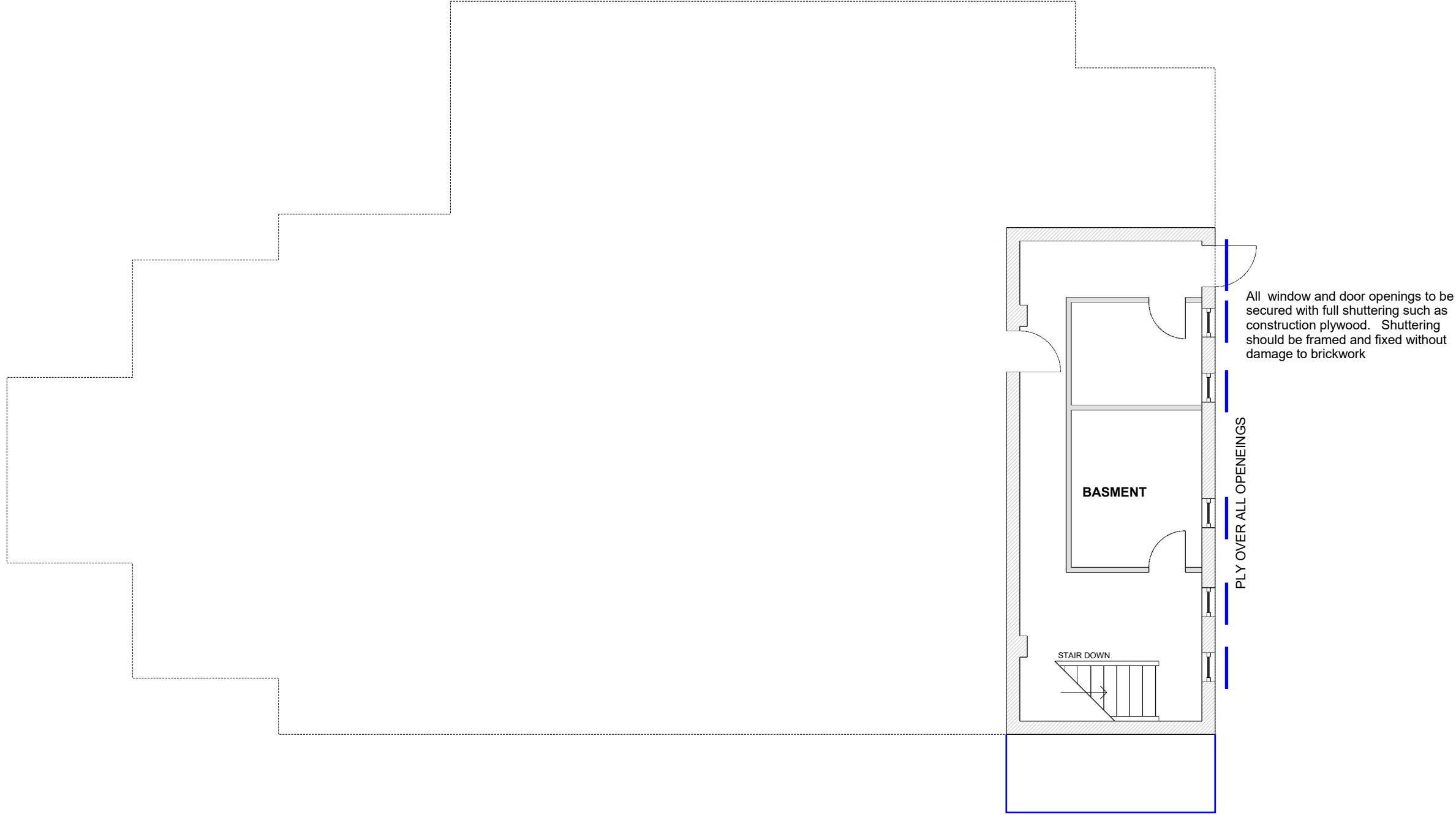
Evidence of vandalism and people sleeping rough in the building. Photograph: B,T&K Architects 2018



Unsecured windows in basement, north elevation. Photograph: B,T&K Architects 2018

## Appendix 2 – Architectural Drawings: Proposed remedial works required to make the building safe and secure





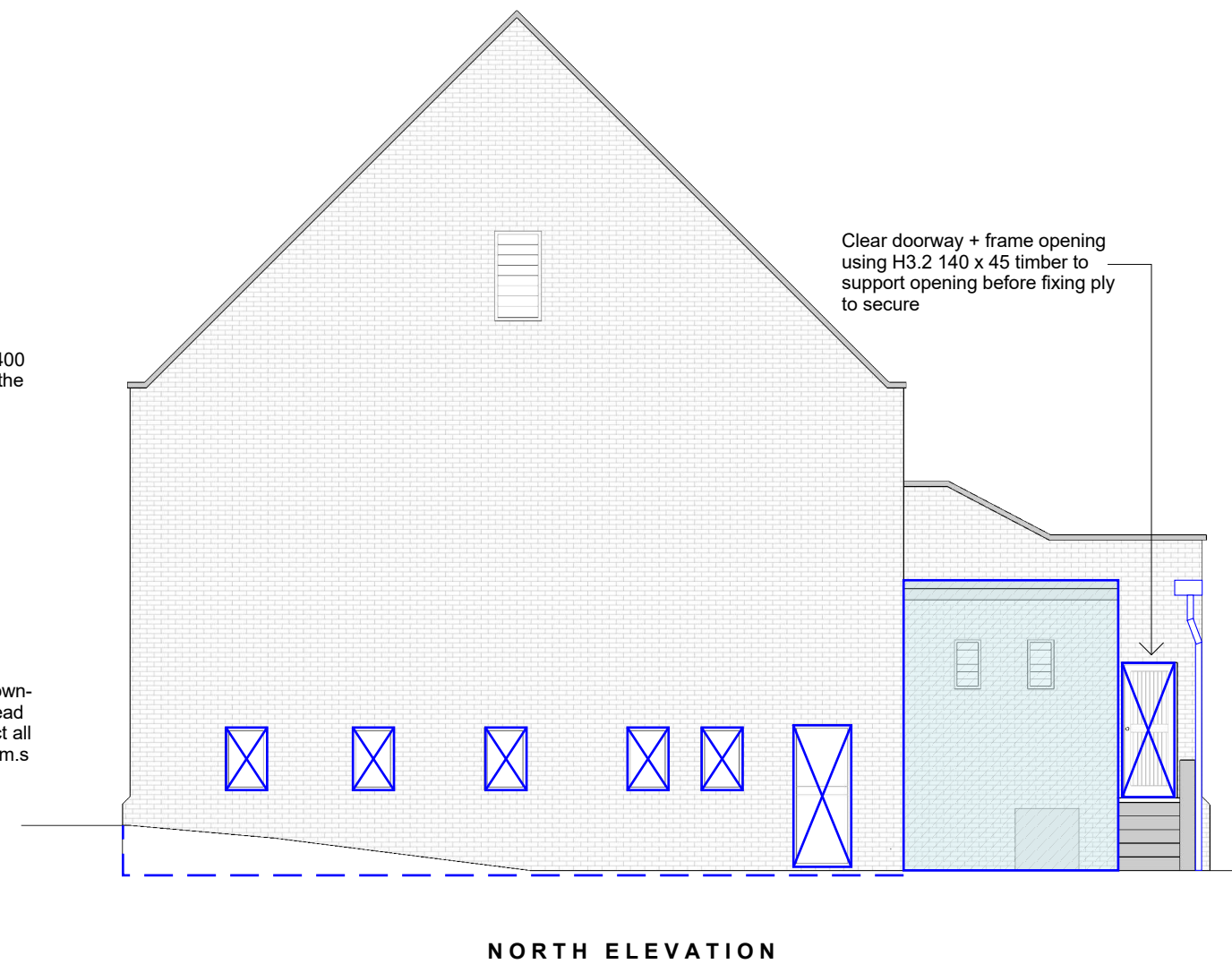
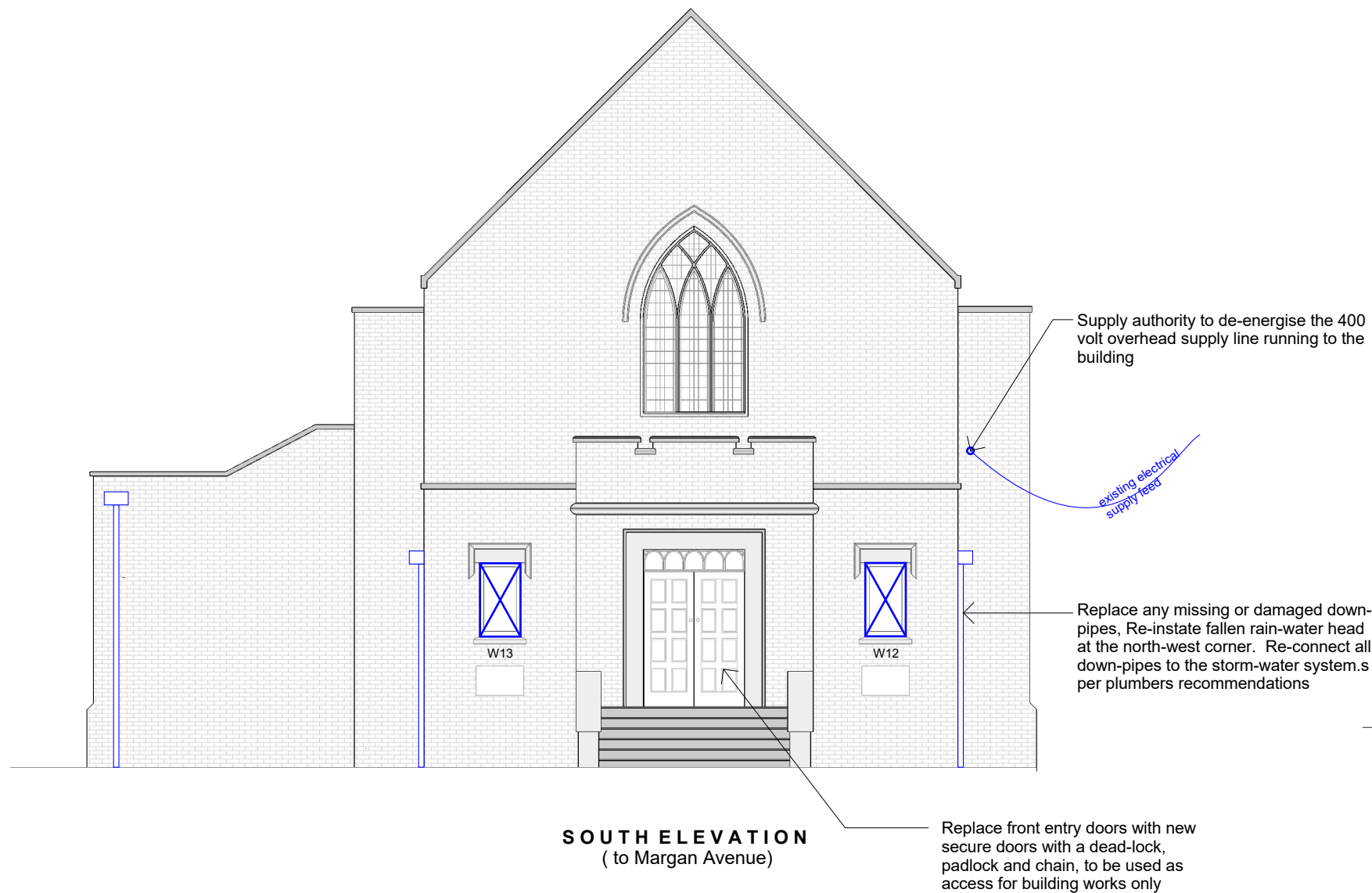
## NOTES



All window and door openings to be secured with full shuttering such as construction plywood. Shuttering should be framed and fixed without damage to brickwork



Demolish non original collapsed lean-to structure, clear away all fallen and damaged building material from around the rear of the building



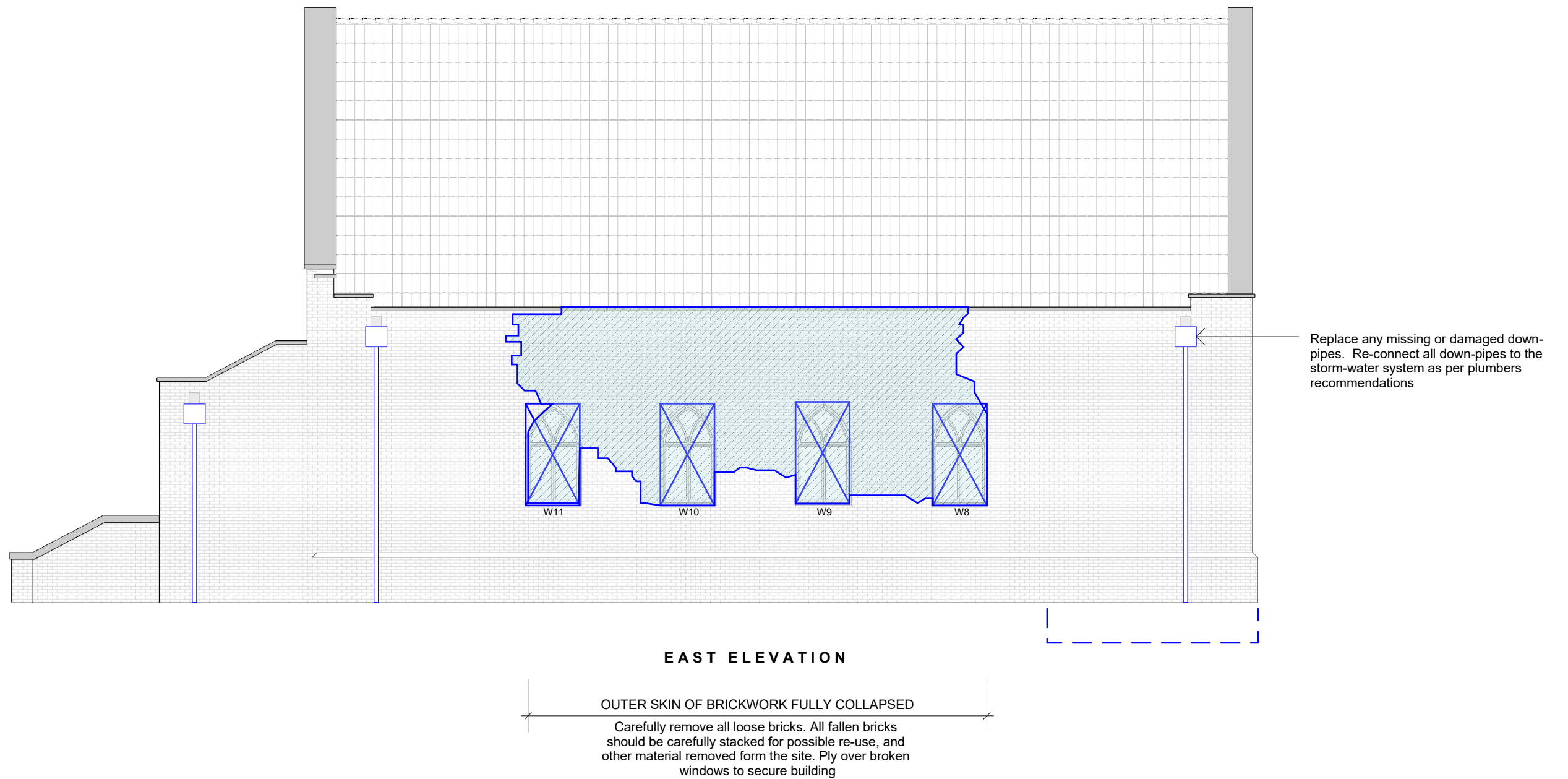
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Extent of collapsed outer skin of brickwork



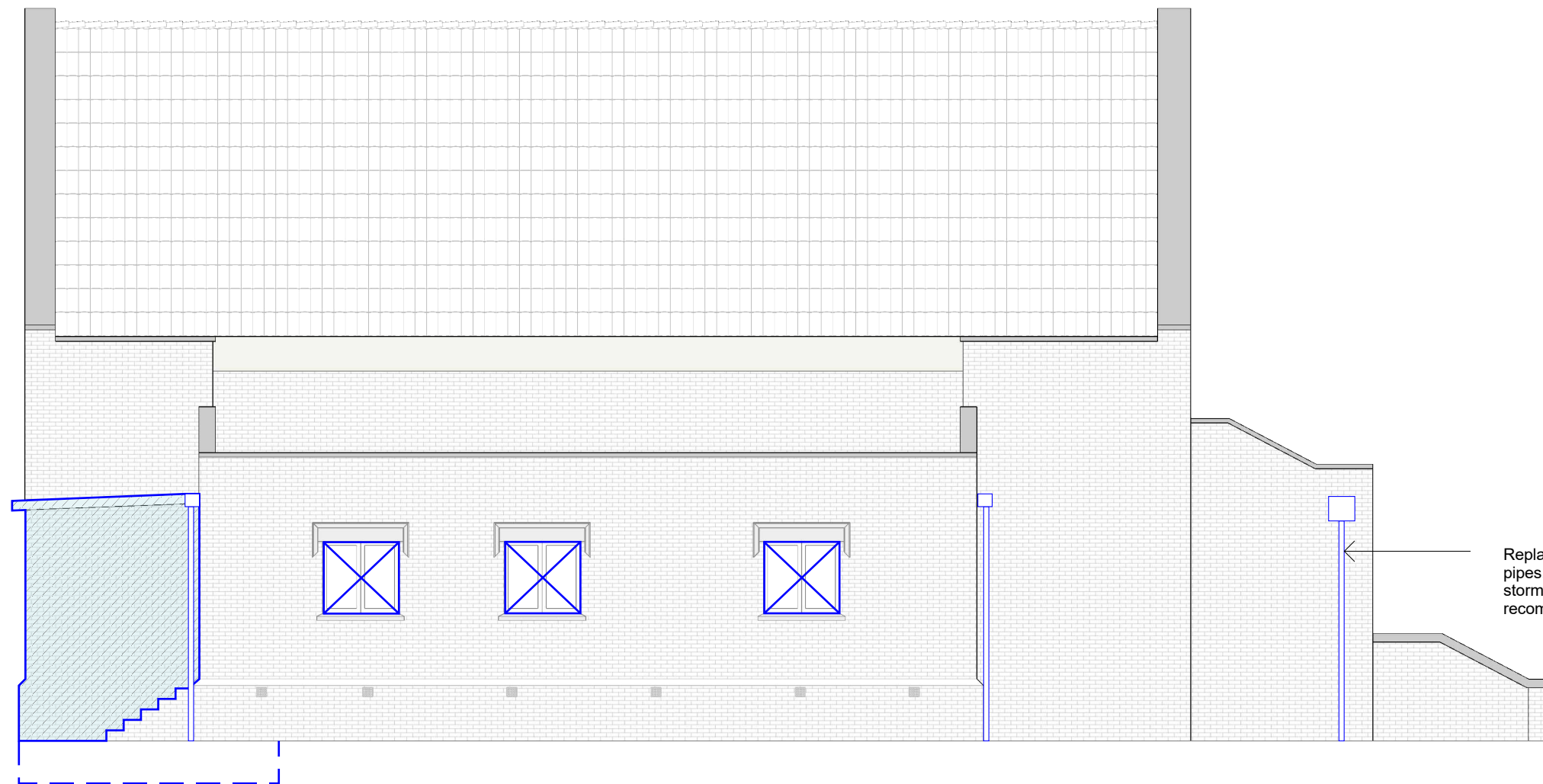
## NOTES



All window and door openings to be secured with full shuttering such as construction plywood. Shuttering should be framed and fixed without damage to brickwork



Demolish non original collapsed lean-to structure, clear away all fallen and damaged building material from around the rear of the building



Replace any missing or damaged down-pipes. Re-connect all down-pipes to the storm-water system as per plumbers recommendations

WEST ELEVATION

## Appendix 3 – Structural Report

14 December 2018

LAL Ref 5220

Attention Graeme Burgess  
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Dear Graeme

**RE: STRUCTURAL ASSESSMENT AND STABILISATION OF  
ST ANDREWS CHURCH AT 40 RANKIN AVE, NEW LYNN**

Further to our site inspections and discussions, we are pleased to report on the general structural condition of the historic church building at 40 Rankin Ave, and to provide structural advice with regards to temporary stabilisation of the existing structure.

We visited the building on 25<sup>th</sup> September 2018, and undertook a walkthrough structural inspection.

We are aware of a Dangerous Building Notice issued on the property under section 124 of the Building Act in August 2014.

We have reviewed the previous structural report prepared by Compusoft Engineering in 2010. We note that the Compusoft report examined the seismic strength of the building, and offered preliminary design advice regarding structural works to improve the seismic rating of the building as part of renovations and future public use.

Given the Dangerous Building Notice, we understand that our brief is to assess the building as it stands, and offer structural advice as to works that may be required to stabilise the building and remove the immediate danger.

**BUILDING DESCRIPTION**

The building is a church that is constructed primarily of unreinforced brick masonry, with timber roof trusses and clay tile roofing. Original construction dates from the 1920's. The basic footprint is 19m x 11m including a stage area at the northern end. The roof is steeply pitched at approx. 45 degrees and measures 11m to the ridge. There is an annex to the west measuring 14m x 4m, with a shallow corrugated iron roof on timber framing. Annex walls are unreinforced brick masonry similar to the main church. It is expected that the load bearing brick walls will be founded on shallow concrete strip footings that may not be reinforced.

External brick walls are of cavity construction, with a double skin inner structural wall 230mm thick, and an outer single skin veneer over a cavity. The original construction had wire ties across the cavity.

## **BUILDING CONDITION**

At the time of our inspection, we observed that the condition of the church looked to be reasonable for its age on the on the south, west and north elevations. There was some evidence of poor mortar joints and cracking of brickwork, but the defects were relatively minor and readily repairable.

On the eastern wall, we noted that a significant proportion of the exterior brick veneer skin had collapsed over approximately 50% of the wall area. Exposed brick wire ties have been revealed as completely corroded through, which is the obvious cause of the collapse. The internal double skin brickwall is still standing, although removal of the veneer has revealed that the condition of the wall is not good.

Exposed area of brickwork around the church appear to be neat and tidy, but in contrast, the cavity area that was not exposed to view originally is of a very poor workmanship standard. Brick laying is uneven, and there are significant areas of brickwork that are lacking in mortar in the joints. It would be difficult to quantify the structural strength of the brickwork, but the cavity face now exposed on the eastern wall must rate at the lowest end of the workmanship and structural strength scale.

## **OVERALL SEISMIC STRENGTH**

Previous examination of the overall seismic strength of the church has been carried out by Compusoft Engineering as detailed in their report of September 2010. The east wall veneer had not collapsed at the time of their examination, but they noted that there was a “bulge” in the brick veneer, most likely due to the failing veneer ties. Even if the bulge had been repaired, Compusoft was of the opinion that the overall seismic rating would be less than 34% of New Building Standard (34%NBS) which is the threshold for requiring strengthening under the Building (Earthquake-prone Buildings) Amendment Act 2016. We have not undertaken a detailed seismic analysis of the building, but based on our inspection ,a review of the Compusoft report, and our experience with similar buildings, we are of a similar opinion that the overall building strength is less than 34%NBS.

Compusoft’s report is conditional upon the standard of construction throughout the building being to a reasonable standard, including the strength of mortar joints and the condition of brick veneer cavity wall ties. The state of brick masonry construction and the condition of wall ties exposed on the east wall only reinforces the low overall strength of the building.

## **STABILISING WORKS**

Our current brief has been to consider stabilising works to hold the church in its’ current state until such time as a detailed plan for strengthening and restoration can be determined. To this end, we have considered the following:

1. Overall lateral stability of the church under east-west lateral loads. External steel frames with reinforced mass concrete footings. Frames and footings are designed to take all seismic lateral loads up to 67%NBS level. To make the frames fully effective, spreader beams are provided along the top of the east and west walls, and the tops of both walls are interconnected by pipe struts so that the frames that will be on the east side of the building only will provide effective support to both the east and west walls.
2. Internal scaffold towers to support weight of roof trusses. Roof trusses are currently supported on the unreinforced brick masonry side walls. Of the church. Given the parlous state of the east wall, independent vertical support of the roof is advisable. Should any part of the brick walls fail in the future, the independent support will ensure that the roof remains intact, and no partial failure of a wall would lead to overall catastrophic collapse.
3. New temporary roofing to be provided over the eastern bracing frames and the western annex. The western annex roof is leaking, and the partial failure of the eastern wall has allowed rainwater to penetrate to the extent that the eastern edge of the church floor is rotten and unsafe. The main roof tiles are also in need of repair, and it is considered practical to remove all tiles and replace with corrugated iron roofing (at least as a temporary measure). Waterproofing the roof and protecting the walls from further moisture ingress will help to minimise ongoing degradation.

Stabilising structural works are shown Lough Associates Ltd drawing 5220 S01.

## SUMMARY

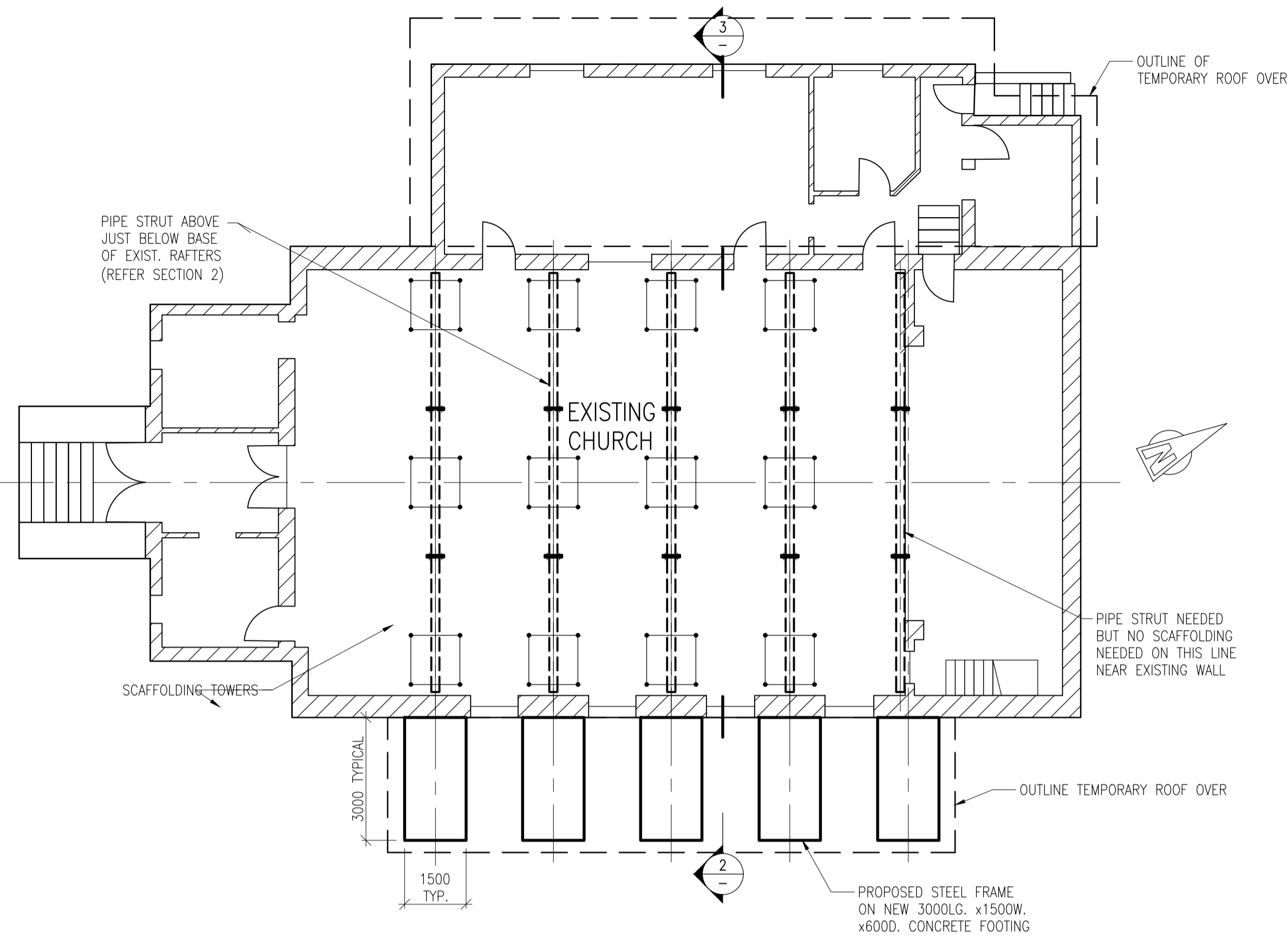
The stabilising works are intended to hold the building in its current state, whilst making the structure safe enough for workmen to carry out some repairs and maintenance, particularly the removal of tiles and re-roofing with corrugated iron. Sequencing of the works is critical, and would need to be undertaken with consideration of a contractor's detailed Health and Safety plan.

It is not intended that these works will represent seismic strengthening to meet any requirements under Earthquake-prone Building legislation. Additional design and strengthening works will be required to meet any requirement for building strength in excess of 34%NBS

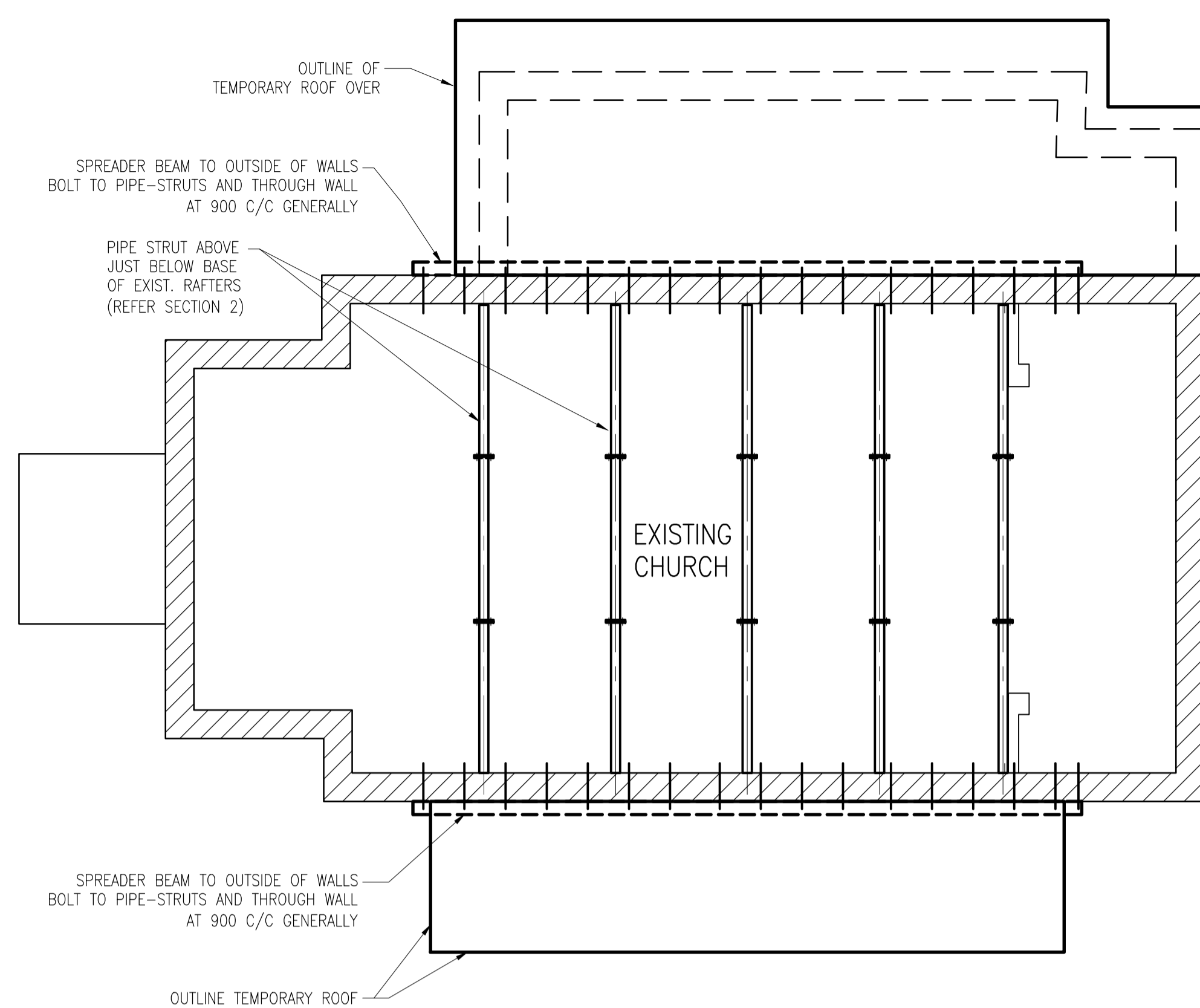
It is also not intended that these works will make the building safe for access by the general public. However, the stabilising works will ensure that there should be acceptably low risk to contractors entering the building, and also ensure that the building will not pose a significant risk to adjoining properties. Contractors entering the building should do so wearing appropriate PPE, and consider their own Health and Safety plan to cover any works which they undertake.



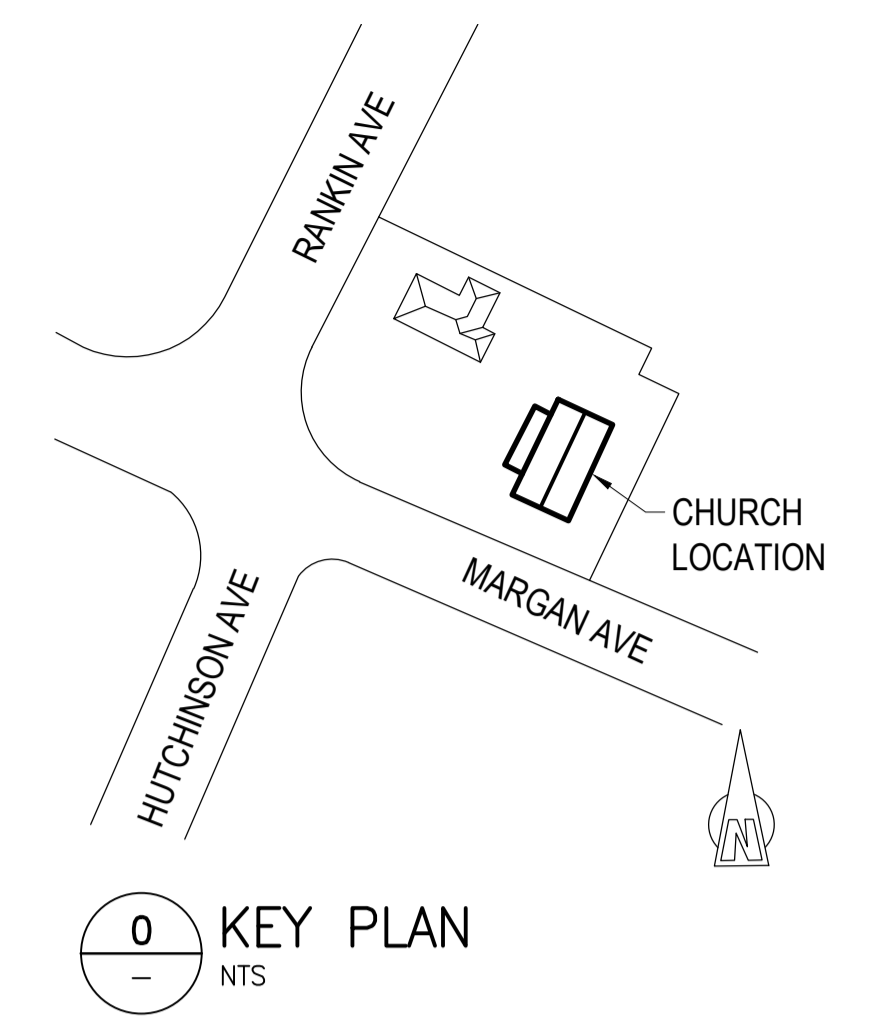
Steve Lough ME CMEngNZ CPEng  
Director  
**LOUGH ASSOCIATES LTD**



**1**  
EXISTING FLOOR PLAN  
PROPOSED SUPPORTS  
SCALE 1:100

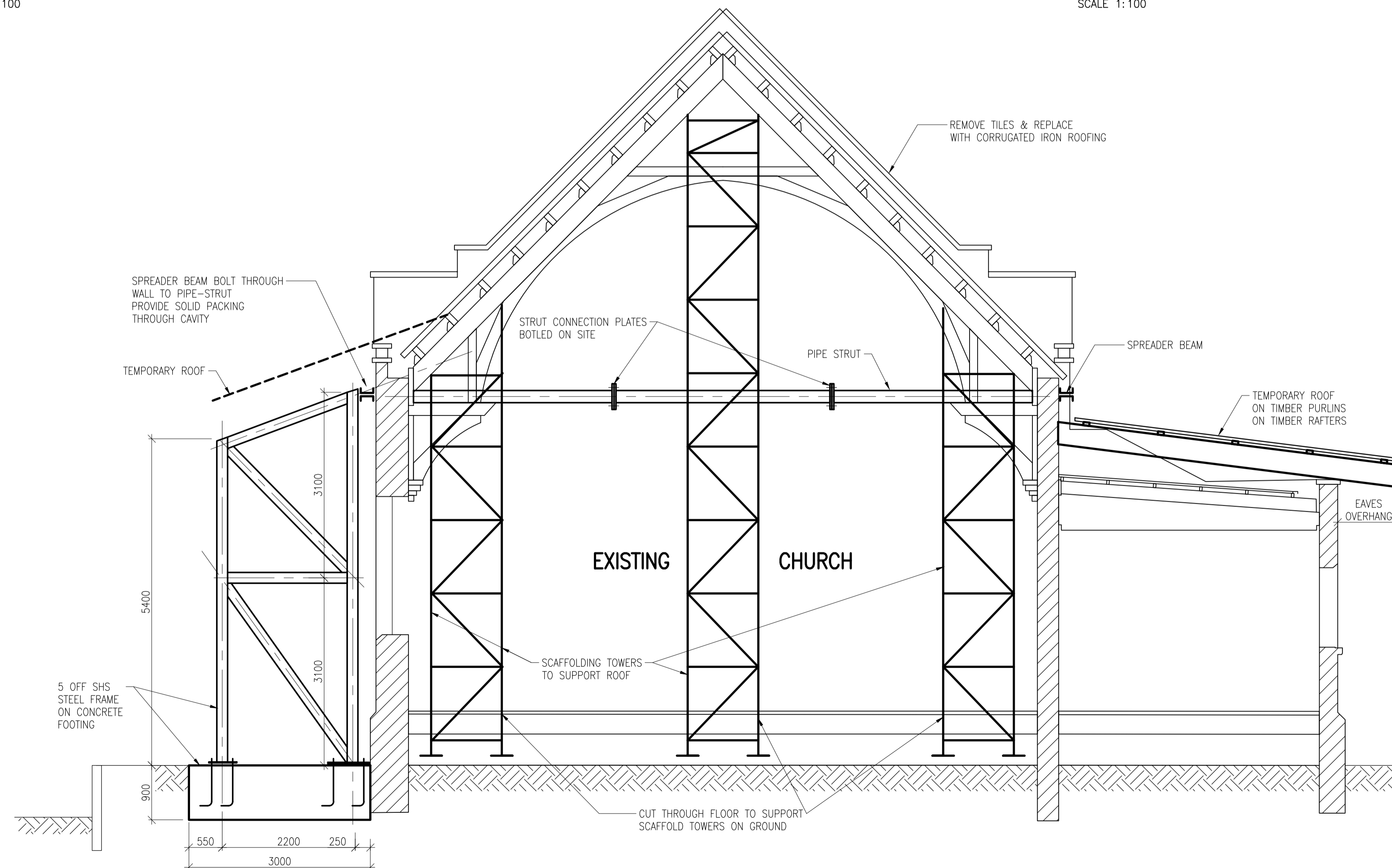


**2**  
PIPE STRUT LEVEL PLAN  
PROPOSED STRUTS & ROOFS  
SCALE 1:100



#### NOTES

1. THIS STRUCTURAL DRAWING IS PROVIDED TO SHOW A SCHEME OF TEMPORARY STABILISATION OF THE EXISTING CHURCH BUILDING
2. THE BUILDING IS CURRENTLY IN A PARTIALLY DILAPIDATED STATE AND IS NOT SUFFICIENTLY STABLE TO BE GENERALLY OCCUPIED.
3. STABILISING WORKS SHOWN INCLUDE SCAFFOLD TOWERS TO SUPPORT THE WEIGHT OF ROOF FRAMING IN THE MAIN CHURCH HALL
4. EXTERNAL BRACING FRAMES ON THE EAST SIDE ARE TO PROVIDE LATERAL STABILITY FOR SEISMIC AND SEVERE WIND LOADING
5. CLAY TILE ROOFING IS TO BE REMOVED AND REPLACED WITH TEMPORARY CORRUGATED IRON ROOFING TO REDUCE WEIGHT, AND TO PROVIDE A WEATHERTIGHT ROOF. TEMPORARY IRON ROOF TO EXTEND OVER BRACING FRAMES AND WESTERN ANNEX.



**3**  
EXISTING CROSS SECTION  
PROPOSED SUPPORTS  
SCALE 1:50

PRELIMINARY

P1	PRELIMINARY	16-11-18
Rev	ISSUE	DATE
<b>LOUGH ASSOCIATES</b> CONSULTING ENGINEERS 112C BUSH ROAD, ALBANY P.O. BOX 303 248, NORTH SHORE 0751 Phone: (09) 930 9580		
JOB TITLE: <b>TEMPORARY BRACING</b> <b>RANKIN AVE CHURCH</b> <b>NEW LYNN</b>		
SHEET TITLE: <b>KEY PLAN</b> <b>EXISTING FLOOR PLAN</b> <b>CROSS SECTION</b>		
ENG: SL	DATE: NOV 2018	
DRAWN: RTB	SCALE: AS SHOWN DO NOT SCALE OFF THIS DRAWING	
JOB No. 5220	SHEET No. S01	REV. P1

## Appendix 4 – Plumbing Report

Flux Limited

Tim Boyd

+6421945637

tim@flux.kiwi

September 2018

### 22 Margan Ave - Plumbing Report



Site visit 25 September 2018

## Immediate work required - Damage control

### Water

The water has already been shut off at the meter, but it would be a good idea to disconnect off the meter and cap it off. This would prevent people tampering with the meter and potential flooding out the building.

### Waste

There are two waste connections and a gulley that should be disconnected to prevent any sewer gases from entering the building. The two waste connections simply need to be cut and capped with 100mm PVC caps. The gulley could be plugged and mortared over to make a seal.

If there is concern of people breaking in and using the fixtures, even though the water and waste have been disconnected, the fixtures could be removed entirely.

### Stormwater

There are two storm water issues that should be resolved to ensure water being collected on the roof is dispersed away from the building.

The first issue is a rain head that has come away at the rear of the building on the NNE corner above the back door. The rain head is still on site and simply needs to be reinstalled along with some 100mm pipework to reconnect to the stormwater system.

The second issue is the downpipe on the west front corner needs to be diverted away from the footings, as it is currently discharging onto them.

There is no stormwater outlet on this corner, but taking it away from the building will slow the damage.

## Gas

There is no gas onsite.

## Costs

A conservative estimate to complete the work would be in there realm of \$800-\$1000+GST. This does not include removing the existing fixtures if this is desired.

# Long term work - Restoration

If the building were to be restored all of the plumbing systems above ground need to be fully replaced.

## Water

The current water main is 15mm galvanised pipe. This should be upgraded to 25mm MDPE and a limiting valve installed.

There is a mix of copper, galvanised and plastic water pipes under the building. All of these need to be removed and replaced with a single system.

All fixtures need to be removed and repiped.

## Waste

The current waste system is undersized in most parts and needs to be fully replaced and brought up to code. I can't speak for the drains under the ground as I am not a drainlayer, but I would advise having a camera put down the drains before re-connecting to them.

## Stormwater

The storm water system is mostly in good condition, but it would be advisable to camera the pipework underground to determine the condition.

## Appendix 5 – Electrical Report

### **EDEN ELECTRICAL CONTRACTORS LTD** **25 Westmere Park Ave Westmere 1022**

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8 October 2018

Burgess Treep & Knight Architects.  
32A St Marys Bay Rd  
St Marys Bay.

**Re: (former) St Andrews Sunday School Hall, 40 Rankin Ave New Lynn**

Attn: G Burgess & L Knight.

Dear Graeme & Lilli,

as requested we have visited the subject site to assess the condition of the electrical installation and advise on any safety issues that we could identify.

We can confirm the premises have a 400 volt overhead supply.  
*This aerial supply is LIVE to the exterior Meter-board.*

There is a Master Switch therein, currently switched off. The supply authority has disconnected use of the electrical supply via remote telecommunication access to the electricity meter.

Given the current state of the premises, the electrical installation in it's current condition would not meet AUS/NZ Electrical Safety Regulations without considerable remedial work.

*I reiterate there is an energised live electrical energy supply to the incoming terminals of the Master Switch.*

Should the premises not be utilised in the near future, we recommend liaising with the Supply Authority to de-energise the aerial supply line to the building.

We can arrange this action if required.

Yours faithfully,

martin van zonneveld (principal, eden electrical contractors ltd)

**phone 3766825 mobile 027-4964857 fax 3766825**  
email [lumen@eden-electric.co.nz](mailto:lumen@eden-electric.co.nz)

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