



# Charmy Down Farm Nr Bath The Lodge

## Structural Commentary

Project Number: 5680

Date: December 2012



# Content/Quality Assurance

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2.0 Commentary

3.0 Summary

Appendix A – Drawings

Appendix B – Mann Williams October 2011 report

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Draft

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Design Team

Design Team

## 1.0 Introduction

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- 1.01 Mann Williams (MW) were commissioned by Mr L Cooper via Watson Bertram and Fell Architects to provide a structural commentary on the condition the Lodge was found to be in when works began on site in May 2012 to restore the building to a habitable building. Enclosed are photos of the building dating back to 2008, and from the intervening period, when the original planning application was submitted.
- 1.02 Reference is made in this report to the Allen Associates (AA) report dated May 2008 as well as the historical appraisal report compiled by The Historical Research Agency (HRA) also commissioned in May 2008.
- 1.03 Enclosed in appendix B is Mann Williams structural report dated October 2011 which is also referred to in the following commentary.
- 1.04 Human activity has been recorded on the Charmy Down plateau dating back to the iron age period. It is believed Charmydown Farm was established in the late 17<sup>th</sup> century the location more than likely having been chosen due to the numerous springs in the vicinity. The farm buildings as seen today, however, are thought to date from the late 17<sup>th</sup> century with the majority of the buildings standing today dating from a second phase of development between 1822 and 1840.
- 1.05 The Lodge building is set within what was once thought to be a communal garden and comprises a pair of two storey cottages with a symmetrical principal south facing façade. The property is built using coursed rubblestone with freestone dressings and ashlar surrounds to the windows and doors. Ashlar hoods cover the two entrances on the south elevation.
- 1.06 For the purposes of this report, although the building is orientated in a northeast-southwest direction, the facades have been referenced assuming it is orientated in an east-west direction with the front façade being the south elevation.



## 2.0 Commentary

- 2.01 Both the AA and HRA reports dated 2008 refer to the building being in a partial state a decay with the roof structure missing and the wallplate exposed. They also note that the front (south) elevation appeared to be in good order and the east and west walls as having a good line albeit partially collapsed. Both surveys were hampered by vegetation growth and we do not believe the interior of the Lodge building was accessed by either party.
- 2.02 Some vegetation clearance was carried out prior to the MW report being compiled in October 2011 which allowed access into the core of the building. The report was a visual walkover report on the back of which drawing 5680/S01 (enclosed in appendix A) was produced showing the areas of concern where the building fabric appeared to be in a very poor state of repair.
- 2.03 The areas of concern noted in October 2011 included:
- Loose masonry to the head of the front façade as well as fractures and damaged stonework to the same façade
  - Loose masonry to the head of the west elevation and in the section of wall north of the vertical fracture
  - Loose masonry to the head of the east wall as well as the junction with the north wall
  - Poor masonry condition to the whole upper portion of the north wall.
  - The report notes the presence of a lot of vegetation growing over and out of the masonry particularly on the east and north elevations.



February 2010 - South & West Elevation



February 2010 – Collapsed Roof Structure



February 2010 – East 'Lean To' Structure



October 2011 – East 'Lean To' Structure



2.04 The south and west elevations do not appear to have deteriorated significantly between 2008 and 2012 with the above noted defects remaining largely unchanged. The structures to the east and the north elevation, however, have suffered degradation in this period. This is primarily due to the ongoing vegetation growth in the form of ivy and shrub and tree growth, as well as damage to the masonry due to the core of the walls being unprotected from the weather. This has resulted in the core of the wall getting saturated which, coupled with the harsh winters of recent years, has accelerated the decline in the structural condition of these elements largely due to frost action expanding the saturated mortar and thus breaking the bond with the surrounding stonework. Over time the end result unfortunately is wall failure as illustrated below.

2.05 Below is a photo taken in October 2011 just before the section to the back and right of the collapsed section illustrated, gave way in December 2011 following a period of bad weather exposing the core to the lower wall in the area of the former fireplace.



October 2011 - North Elevation

2.06 Following receipt of planning consent in December 2008 works eventually began on site in May 2012 to clear vegetation and carefully take down dangerous elements of structure prior to the reconstruction of the property in line with the given planning consent.

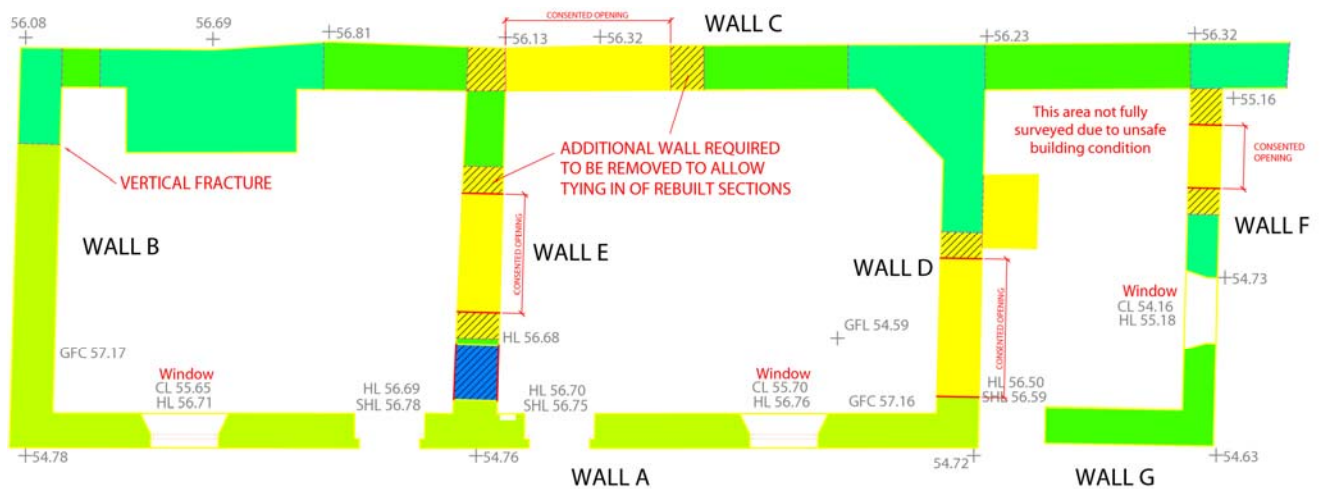
2.07 With reference to the key plan extracted from drawing 5680/L01 enclosed in appendix A, wall E was given consent in the planning permission to be taken down to first floor level, wall A and the return walls were therefore scaffolded to not only give full access for their careful restoration but to incorporate raking shores such that the front façade could be given temporary restraint whilst the internal modifications took place.



September 2012 – South & West Elevation

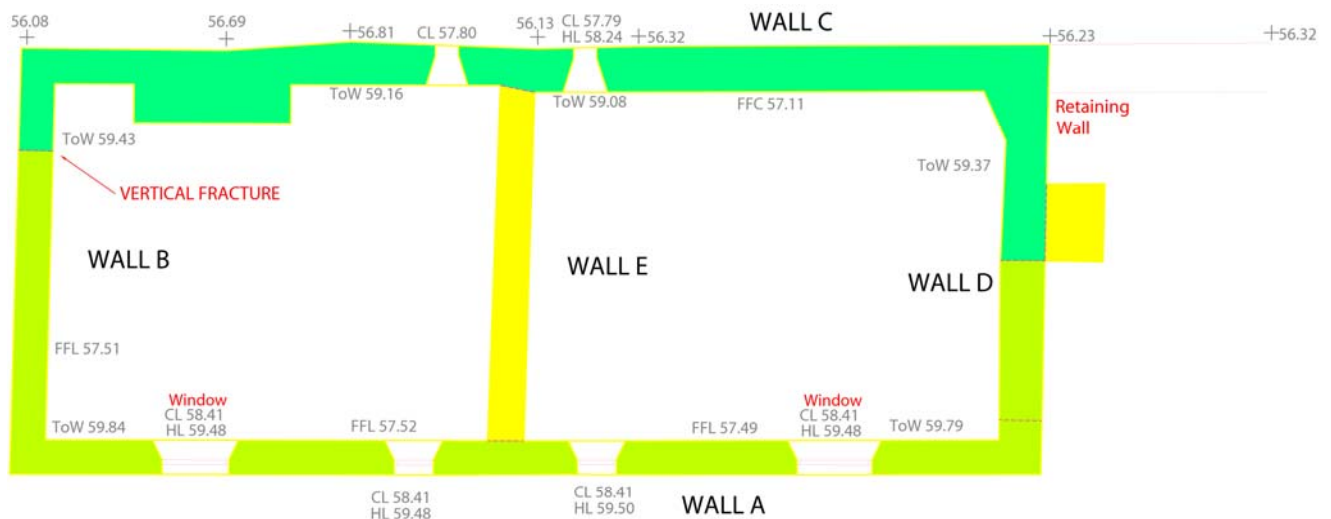


September 2012 – Stone set aside for re-use



## GROUND FLOOR

Extract From Drawing 5680\_L01 in Appendix A



## FIRST FLOOR

Extract From Drawing 5680\_L01 in Appendix A

2.08 The external chimney flue on wall D was consented to be removed but on removal of the chimney stonework masonry in a very poor condition was revealed on the east side of wall D clearly due to the ingress of water and vegetation growth over a number of years. The masonry behind the chimney flue in the north east corner was also found to be in very poor condition. Having found the centre and north end of wall D in a very poor state of repair it was decided that in order to safely create the consented opening at ground floor level the only option that could safely be adopted was to carefully take down the east end wall, setting aside the masonry for re-use, and to rebuild it with properly formed reveals to the new openings.

- 2.09 Wall C had a lot of vegetation growing over and through it and it was recognised that this wall needed to be carefully dismantled down to first floor level early on in the process. The consented works included the formation of a stair 'turret' in the north wall and the retention of the fireplace in the westernmost cottage at ground floor level. The wall collapse in December 2011 and subsequent clearing of failed masonry and vegetation revealed that the front face of the wall where the fireplace was located had fully collapsed leaving only the outer skin of masonry in place. In order to repair the masonry in this location the only course of action was to take down the remaining masonry and build it back up off the existing foundation (if found to be suitable to do so).
- 2.10 The fireplace was immediately adjacent the north end of wall B which had a vertical fracture through it at the northernmost end. The formation of the stair turret necessitated the removal of the centre of wall C which, coupled with the required rebuilding of the wall to the rear of the fireplace, meant a long section of the rear wall needed rebuilding from ground level upwards. This rebuilding would have left short sections of wall that in theory could have been retained, notwithstanding the health and safety issues working around an unrestrained wall of unknown integrity, the fact the north end of wall B had a large vertical fracture and needed rebuilding itself, coupled with the fact the junction between wall D (removed due to poor condition) and wall C was in very poor condition due to long term degradation of the masonry to the corner chimney flue, resulted in a decision being made to carefully take down the whole of the north wall down to ground level and rebuild it using the stone reclaimed from the dismantling of the wall.
- 2.11 The consented works included for a new opening to be created in wall E at ground floor level also involving the infilling of an existing opening. The north end of wall E needed to be taken back to allow the rebuilding of wall C which meant that by the time the new opening was formed to a size that allowed the reveals to be properly built in, meant very little of this wall remained at ground floor level. As a result the only pragmatic course of action was to take down the remaining sections of wall E and rebuilt it using reclaimed stonework.
- 2.12 Similarly walls F and G to the lean to were in a poor state of repair above door head level on wall G and at the north end of wall F where a new opening was proposed. Only the southeast corner of these walls remained in a condition suitable for retention but, as a result of the works outlined above, it was decided that this section too would be best rebuilt.
- 2.13 As a result of the above sequence of events only wall A and wall B remain as the condition of portions of the remaining walls, coupled with the consented alterations, meant that these walls were taken down with a view to them being rebuilt utilising reclaimed stonework where possible.



September 2012 - Raked out bed joints



September 2012 – Repaired Door Reveal

- 2.14 The condition of walls A and B have been found to be very good and the fractures to the wall and stonework in the south façade have been successfully repaired to a very good standard by careful masonry work.



## 3.0 Summary

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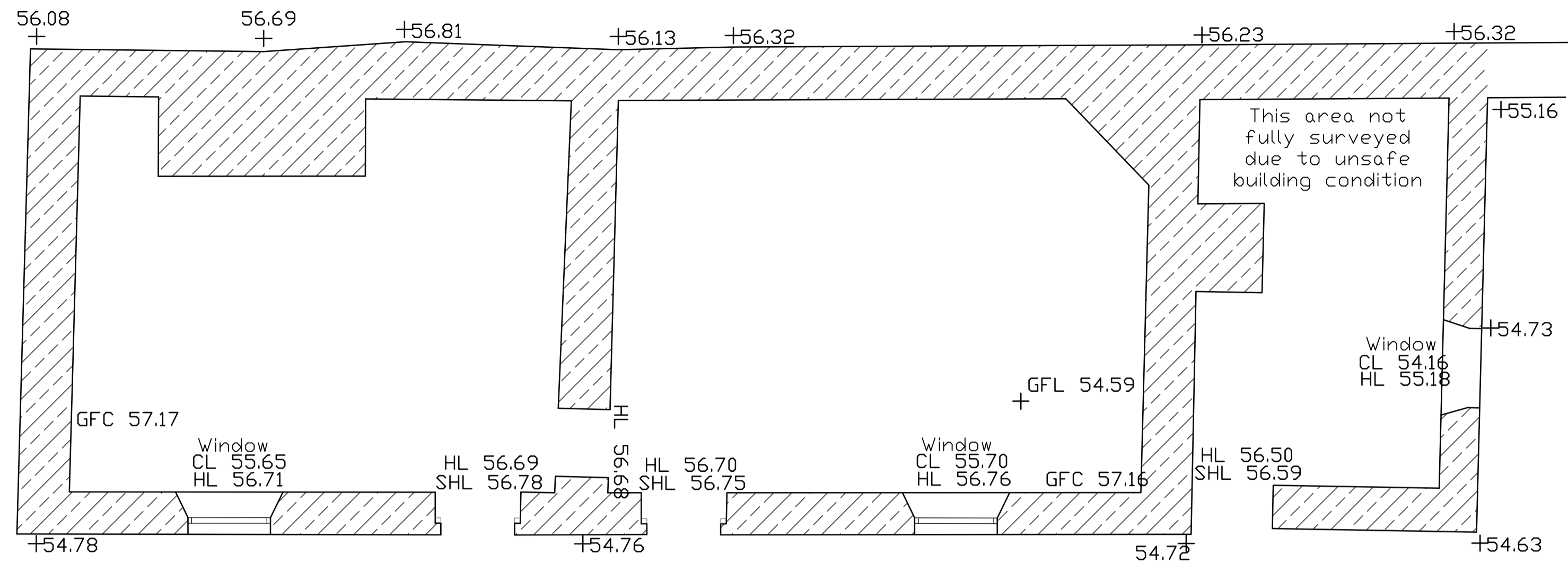
- 3.01 The condition of the Lodge walls following a series of harsh winters and wet summers had clearly deteriorated since 2008 when planning permission was sought to reinstate the Lodge as a habitable dwelling. As with all buildings of this nature the true condition cannot be established until works begin to clear debris and open up structures allowing a full assessment to be made of the remaining structures and architectural features.
- 3.02 Unfortunately with this building the condition of the masonry where vegetation and the weather penetrated the core of the walls was found to be poor. The locations where poor building fabric was found, coupled with the consented alterations, resulted in more of the walls being dismantled than originally envisaged.
- 3.03 Where walls have been able to be retained, i.e. the principal south elevation together with the west elevation, these walls have been found to be in good structural order and considerable efforts have been taken to restore them to a good standard of repair. These walls are founded on sound ground conditions and there are no concerns over future ground movement affecting the integrity of these walls.
- 3.04 The south and west walls essentially remain as freestanding walls, therefore the scaffold system has been improved on the west elevation, in line with the support given to the south elevation, to ensure the remaining walls have a good level of support through the coming winter and are not allowed to deteriorate any further. The head of these walls has also been covered in a plastic membrane to prevent the ingress of weather.
- 3.05 The remaining walls of the property are structurally sound and can very readily be incorporated into a scheme to reinstate the lodge to its former condition. A long term solution is essential in order for this listed structure to be preserved into the future.



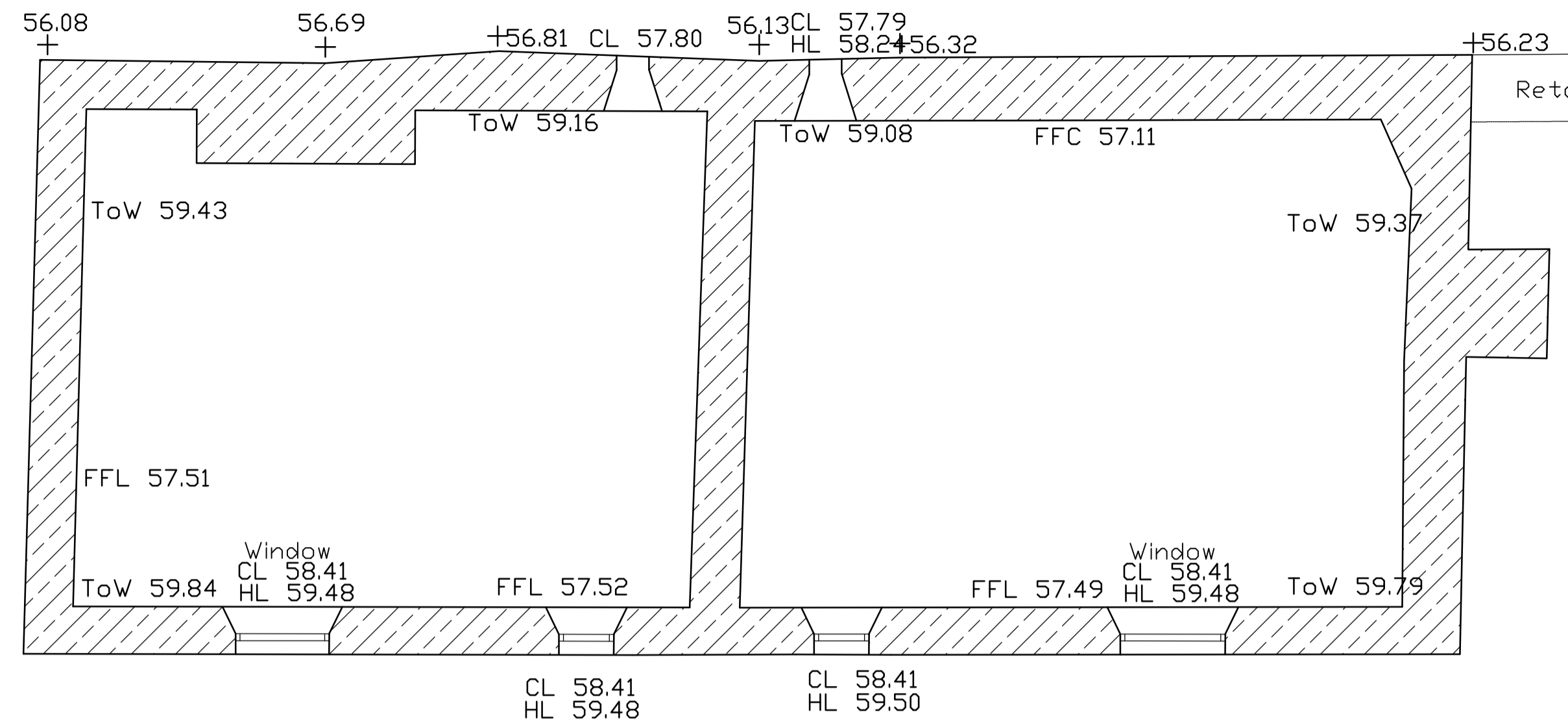
# Appendix A

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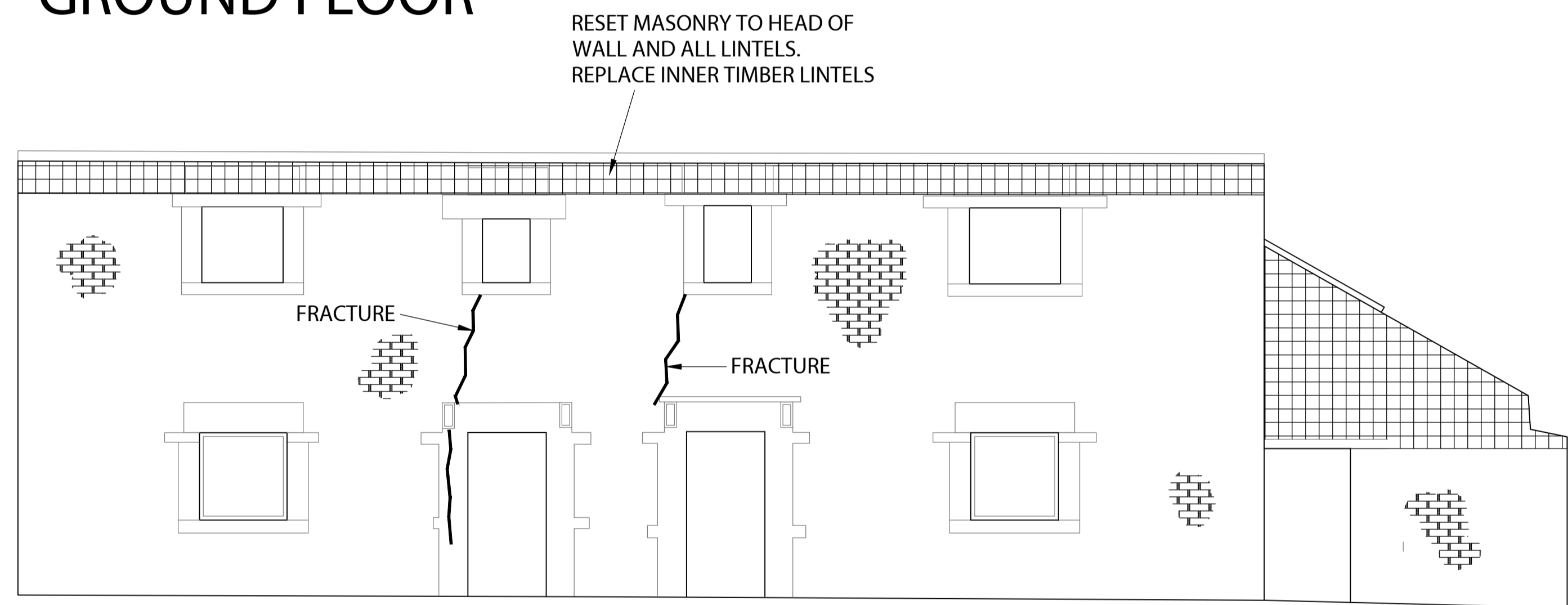
Drawings



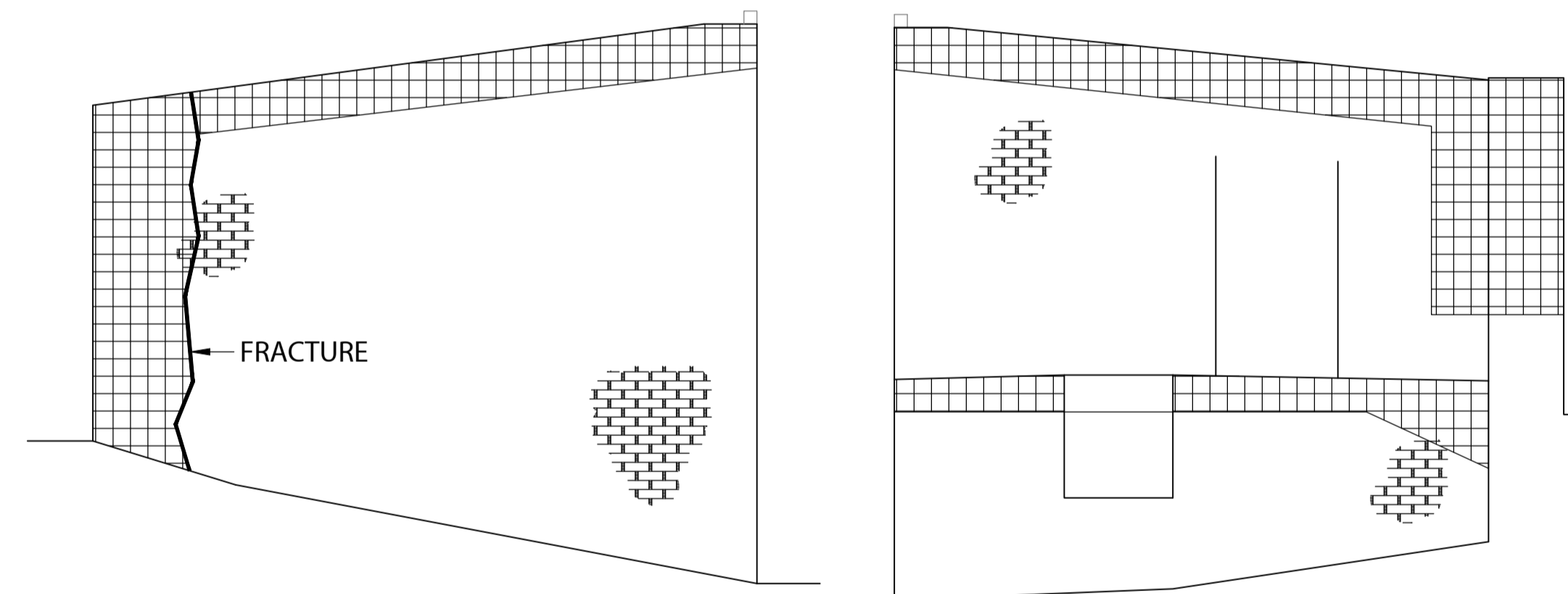
GROUND FLOOR



FIRST FLOOR

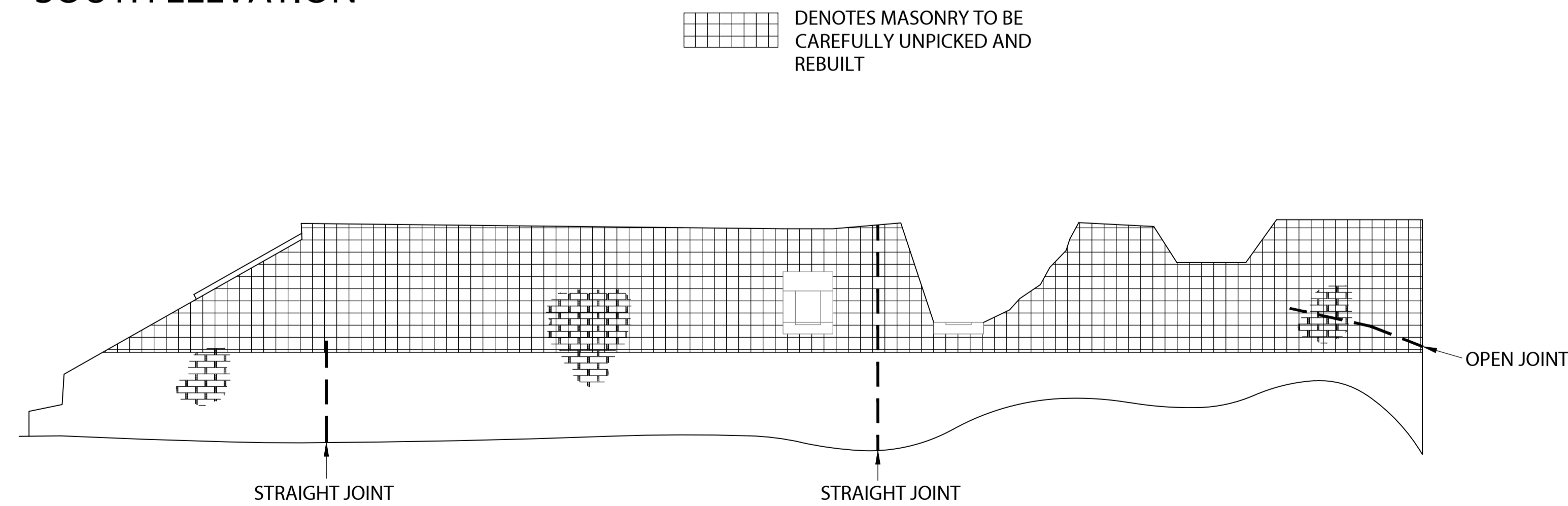


SOUTH ELEVATION



WEST ELEVATION

EAST ELEVATION



NORTH ELEVATION

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REV	DESCRIPTION	BY	DATE
P1	PRELIMINARY ISSUE	PEB	14.10.11

P-PRELIMINARY T-TENDER CONSTRUCTION

PROJECT  
**CHARMYDOWN FARM BATH**  
**THE LODGE**

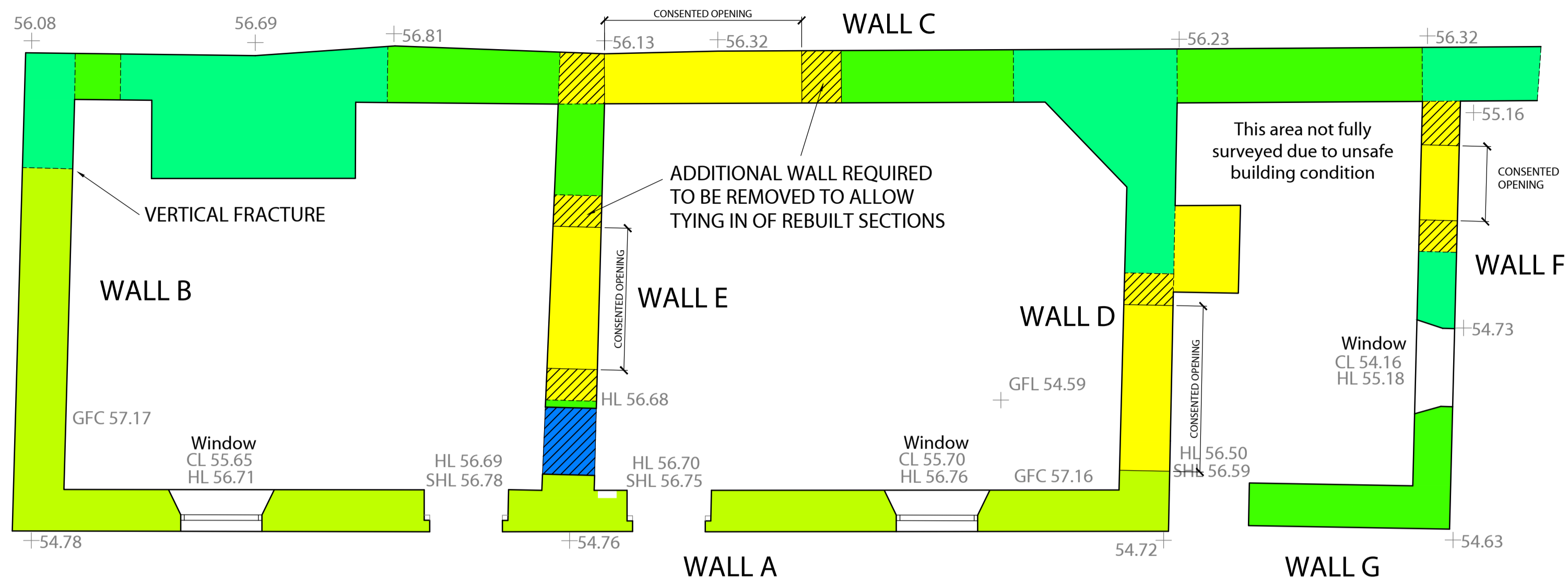
TITLE  
**PLANS & ELEVATIONS SHOWING AREAS OF WALL LIKELY TO NEED REBUILDING**

**MANN WILLIAMS**  
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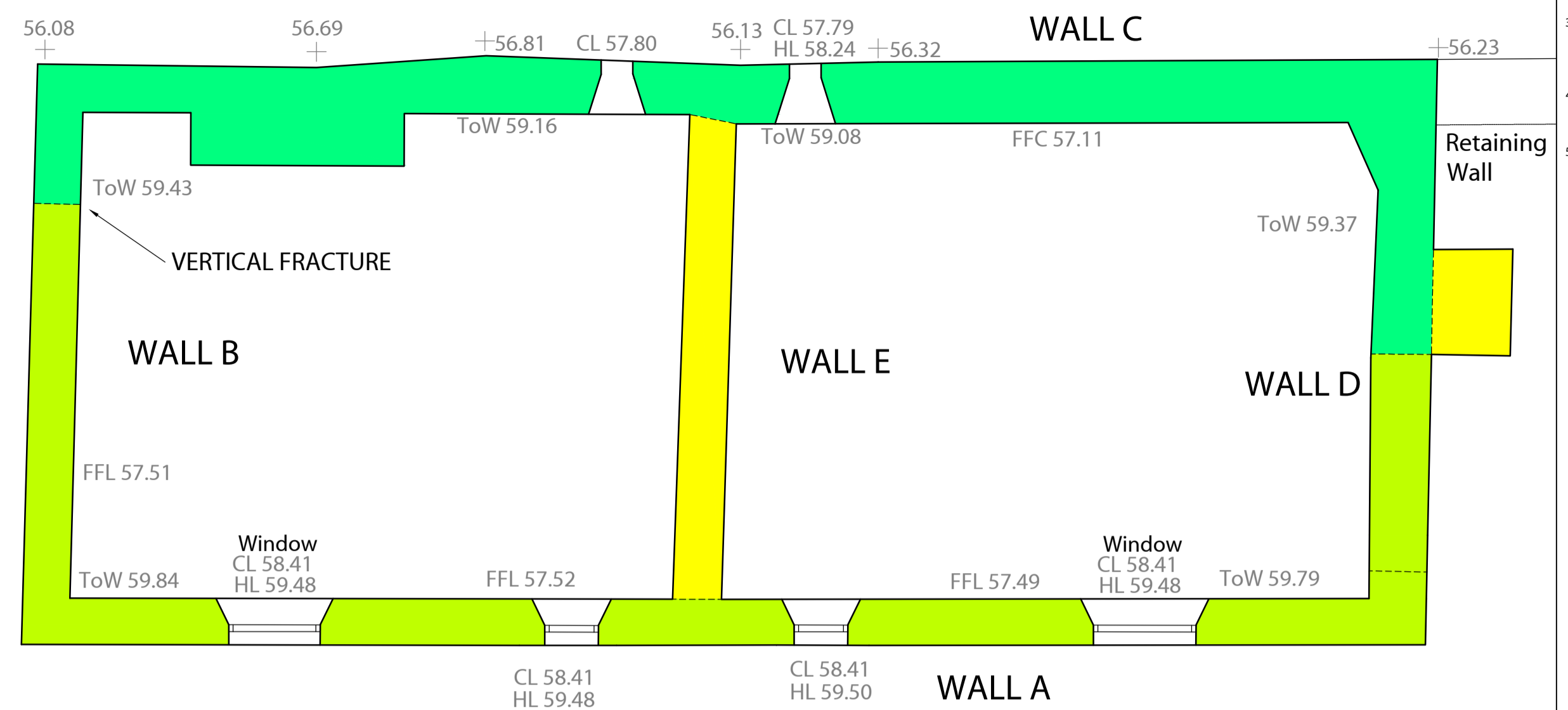
DRAWN	CHKD	SIZE	SCALE	DATE
MPC		A1	1:50	OCT 2011

STATUS  
**PRELIMINARY**

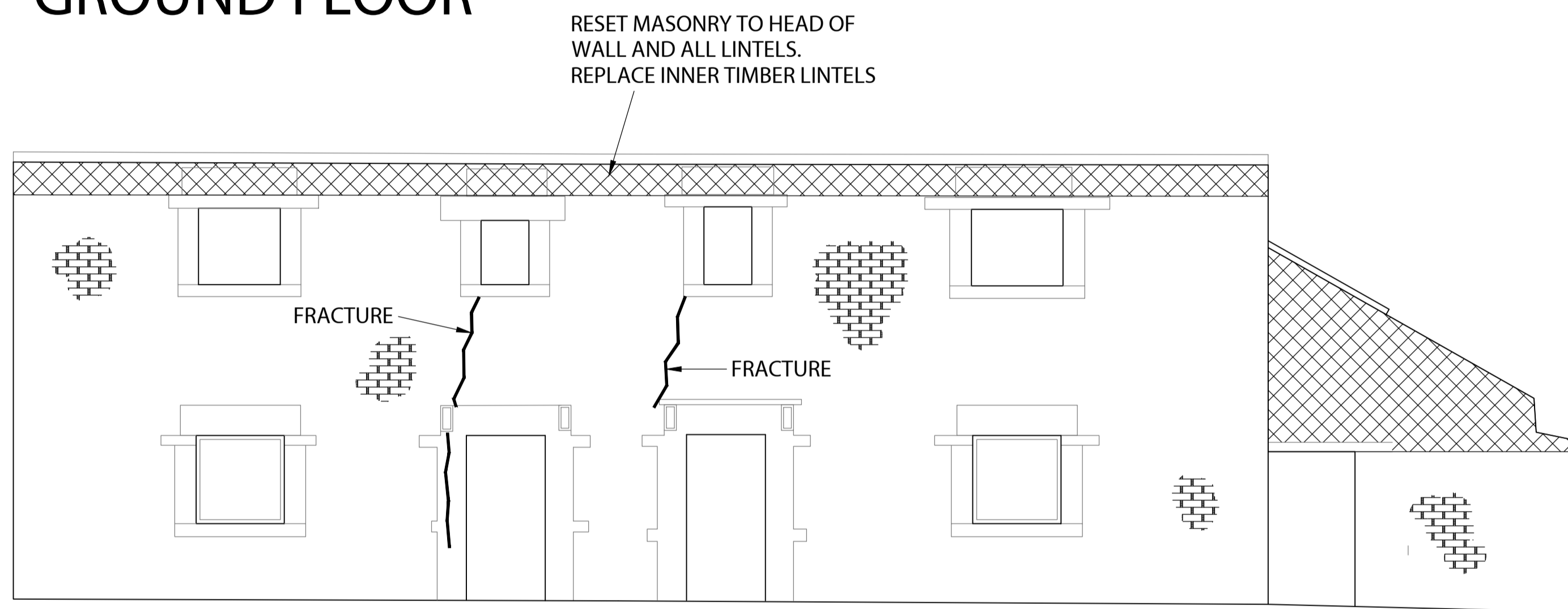
PROJECT	DRAWING	REV
5680	S01	P1



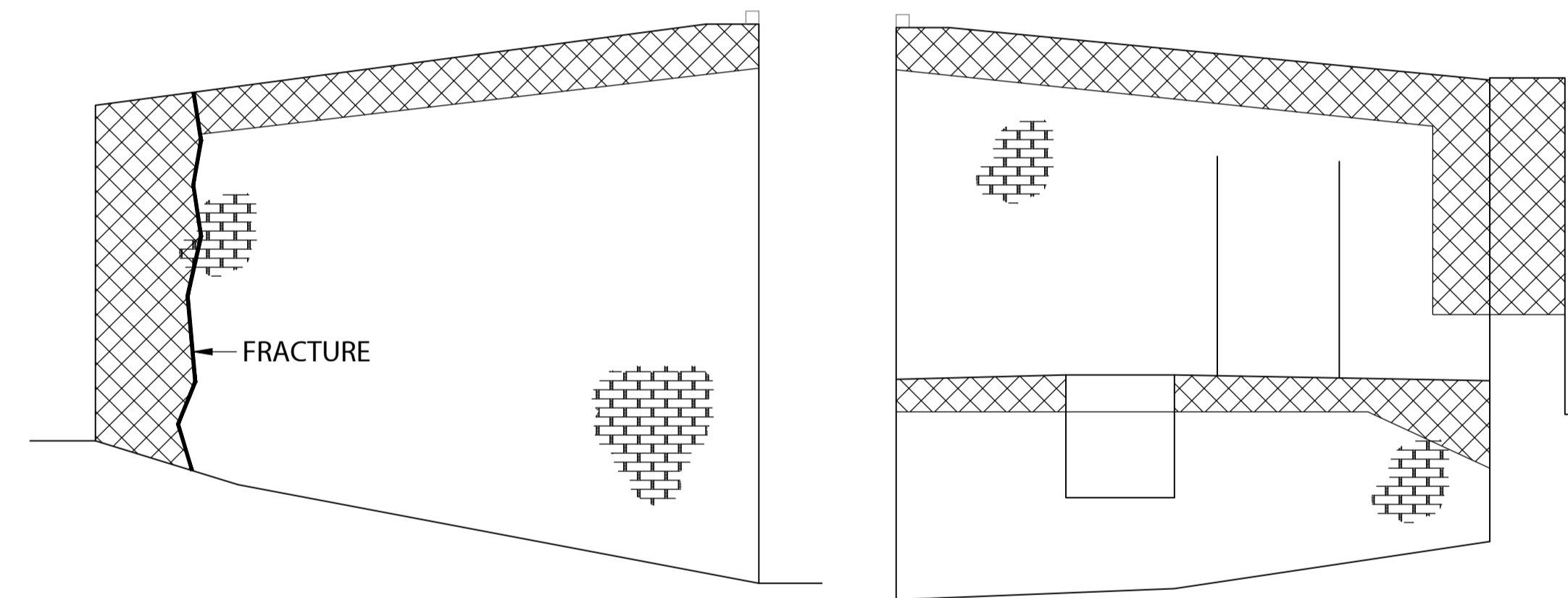
GROUND FLOOR



FIRST FLOOR



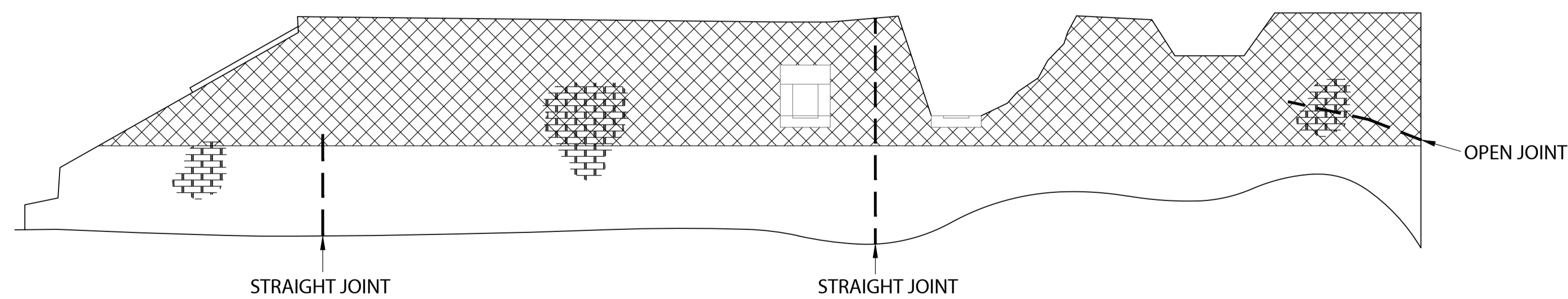
SOUTH ELEVATION









WEST ELEVATION

EAST ELEVATION

 DENOTES MASONRY TO BE CAREFULLY UNPICKED AND REBUILT



NORTH ELEVATION

- KEY:**
-  MASONRY WALLS RETAINED AND RESTORED
  -  MASONRY WALLS CONSENTED TO BE REMOVED
  -  EXTEND OF WALL REQUIRED TO BE REMOVED TO CREATE CONSENTED OPENING
  -  CONSENTED MASONRY INFILL
  -  MASONRY WALLS BEYOND REASONABLE REPAIR
  -  MASONRY WALLS DEEMED OF INSUFFICIENT SIZE TO BE REASONABLY INCORPORATED INTO THE RECONSTRUCTION OF THE ADJACENT WALLS

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REV	DESCRIPTION	BY	DATE
P1	PRELIMINARY ISSUE	PEB	10.12.12

P: PRELIMINARY T: TENDER C: CONSTRUCTION  
 PROJECT  
**CHARMYDOWN FARM BATH**  
**THE LODGE**

TITLE  
**PLANS & ELEVATIONS SHOWING TREATMENT OF THE BUILDING WALLS**


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DRAWN	CHKD	SIZE	SCALE	DATE
MPC		A1	1:50	DEC 2012

PROJECT	DRAWING	REV
5680	S01	P1

STATUS  
**PRELIMINARY**



# Appendix B

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Mann Williams Structural Report dated October 2011



# Charmydown Farm Bath

## **The Cottage Structural Report**

Project Number: 5680

Date: October 2011

# Discussion

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## Introduction

Mann Williams have been asked to review the condition of the remaining structure to the Cottage, to comment on its structural integrity and advise if there are any risk areas in terms of its current stability.

Mann Williams attended site on 12 October 2011 and no opening up works were carried out or trial holes dug. The accompanying drawings are based on the measured survey carried out by Brunel Surveys Ltd in July 2007 and may not entirely reflect the current state of the building.

## Survey

### *South Elevation*

The front (south elevation) remains intact virtually up to roof eaves level, but clearly the masonry at the head of the walls and the lintels to the windows have suffered from moisture ingress and vegetation growth and the masonry is very loose.

There are currently two entrances into the building at ground floor level and above each entrance there are vertical fractures indicating structural movement is occurring to the elevation. The elevation remains quite plumb but the fracturing would indicate that there may be some issues with either the foundations or the lack of lateral restraint to the walls (refer later).



### *West Elevation*

The west elevation again appears reasonably plumb but there is a large vertical fracture at the northern end again indicating either foundation problems or a lack of lateral restraint. The masonry to the head of this wall is also loose and there is currently no protection against the ingress of water into the head of the wall.

### *East Elevation*

This elevation comprises a single storey lean to built up against the two storey gable end. The gable end has an integral chimney structure but at the time of the survey this end of the building was largely covered in vegetation. From what could be seen this end of the building is suffering from similar issues to the other elevations in that the masonry to the head of the walls is loose and currently there is no weather protection to these areas.





West Elevation



East Elevation

*North Elevation*

The north elevation is in poor condition. The eastern end leans outwards and the masonry is loose, a section in the centre west has collapsed and the western end has a lot of vegetation growing out of it and the corner is very loose. There is also a straight joint in the centre which does not help the stability of the wall at this point.



North Elevation...





*Internal*

Originally there would have been a timber floor internally comprising timber beams and floor joists, but this has completely collapsed. Likewise it appears the building recently had a mono pitch corrugated iron roof supported on purlins but this too has completely collapsed.



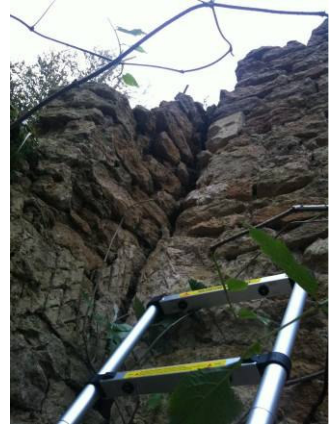
Collapsed Roof and Floor



Collapsed Chimney Brest



Vegetation Growth/Open Jointing



Straight Joint

The walls internally have no plaster remaining apart from the inside of the front (south) elevation. The plaster here though appears to have largely debonded and therefore offers little in terms of bonding the face of the stonework together.

The fractures noted on the external elevations are reflected internally and therefore run through the full width of the wall. The internal lintels to the windows are timber and are in very poor condition.

At the eastern end the chimney flue is missing up to just below roof level where the remaining stonework is hanging precariously.

There is also an old chimney breast in the western portion of the building but this has largely collapsed and needs rebuilding.



Wall Sockets For Joists/Beams

The internal cross wall and the rear walls in particular appear to have a number of straight joints in them which are not ideal bearing in mind the general condition of the building.

It is not clear if a floor remains intact at ground floor level as there is too much debris lying on the ground. From our cursory inspection would it would appear however that there is no formal floor remaining.

There is a lean to structure at the eastern end of the property which originally would have had a mono pitch cat slide roof. Internally the walls are much as those mentioned above but the vegetation growth prevented a closer inspection. It is not clear therefore if the chimney attached to the east gable is in reasonable condition or not.

## Conclusions & Recommendations

The building is dangerous in its current state which, due to the proximity of public rights of way, needs to be addressed as a matter of urgency. We would suggest that the building is fenced off (Heras or similar) to keep the general public away but there remains a serious issue with the safety of the building if local youth etc gain access to it.

The heads of the masonry walls are very loose and the north wall in particular where it leans outwards could easily collapse. There are also sections of roof hanging precariously which could fall at any time. We would recommend therefore that works are carried out immediately not only to remove dangerous elements of structure but to also reintroduce support and protection to the remaining portions of the building before they fall into a state that is beyond repair.

All the walls to the cottage are now free standing and no longer have lateral support at first floor or roof level. There has clearly been some structural movement to the walls, in particular the front (south) wall and the west wall. From recent trial pitting on site we know the ground conditions immediate beneath the cottage comprise a weathered rock stratum overlying solid rock. It is therefore unlikely the movement is due to poor ground conditions but more likely that the movement has occurred due to there being a lack of lateral support to the remaining walls.

The masonry to the head of the walls is very loose and there is currently no protection to the walls from the weather. This situation has clearly remained so for a long time as the walls are quite voided and a lot of the mortar to the walls has washed out. The weathering has also resulted in the plaster to the rear and side walls falling off. The face of these walls therefore no longer has any protection against the weather and no longer has the plaster bonding the masonry face together. The straight joints in the walls need stitching across to reinstate some tying together of the structure.

In our opinion works are required urgently to this building in order to stabilize the building from possible further collapse and to ensure that another harsh winter does not render any more of the structure unsuitable for repair.

The best way to protect the building would be to reinstate a roof to the structure, after having stabilised the head of the walls, and to reintroduce a first floor structure to give the walls some lateral stability back. Works could then be carried out to the building to reinstate some integrity to the walls by raking out and re-pointing the walls generally and reinstating plaster finishes. It would be prudent to introduce a new ground floor slab in order to help restrain the base of the walls.