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12 September 2007

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URBIS JHD
Level 12
120 Edward Street
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Attention: Mr. Adrian Allen

Dear Sir,

Re: Inspection Properties 82 and 84 Fitzroy St. Warwick

We refer to an inspection carried out at the above property on the 14 May and 29 June 2005 in relation to the existing structural condition, further to a report carried out by Farr Engineers dated 6 October 2005. Our report follows which provides a summary of observations from the original report and comments as to the changes on the building condition from the time of the inspection in 2005 to that observed in the more recent visits..

1

Observations-Building 1 (Western Building)

- 1.1 The building is a 2 storey structure constructed from loadbearing sandstone walling, possibly brickwork internal walling, with timber floor and framing approximately 100 years old. More recent additions exist to the rear of the site, comprising single storey timber framed additions. Photo 1.1 1.2 1.3.



Photo 1.1 Front View Oct 2005

000015



Photo 1.2 Rear View Oct 2005



Photo 1.3 West Side View Oct 2005

The external walls have a number of tie rods connected to a cross of flat steel. One such can be seen in Photo 1.3. These generally occur at or adjacent to significant cracking in the external walls.

- 1.2 The ground floor framing is either on or very close to the ground. (Photo 1.4,1.5) . This has led to some evidence of deterioration of the floor structure and flooring itself through either rot or termite activity.



Photo 1.4



Photo 1.5

- 1.3 It was not able to determine the nature and condition of intermediate supports for the ground floor system between the loadbearing walls. The recent inspection shows further termite infestation which is moving into the interior door architraves. (Photo 1.6)

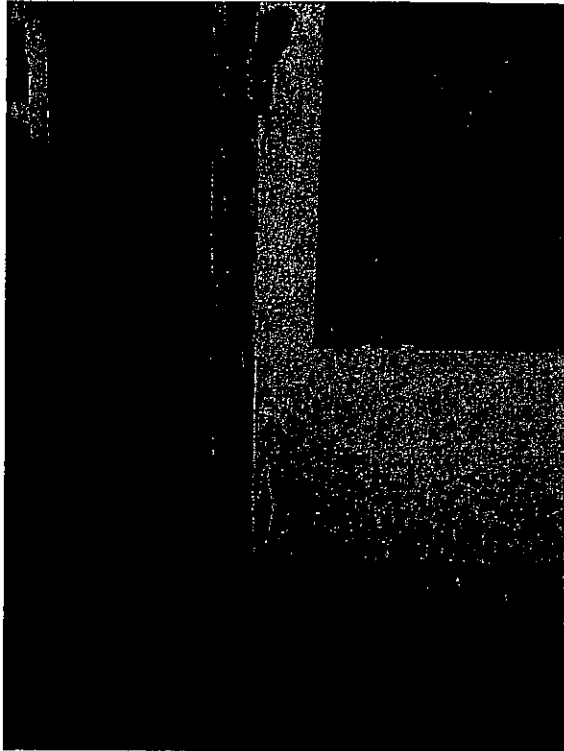


Photo 1.6 Termite Activity

- 1.4 The external and internal walls exhibit extensive cracking with relative movements both translational and lateral. These cracks appear to coincide with cracking in external walls braced by tie rods referred to in section 1.1. There appears to have been further movement in the external walls between the earlier inspection and the more recent inspections. Photos 1.7 and 1.8 show an increase of approximately 5mm in the width of the same crack in the western wall in the intervening period, and similarly photos 1.9 and 1.10 are photos taken almost 2 years apart.

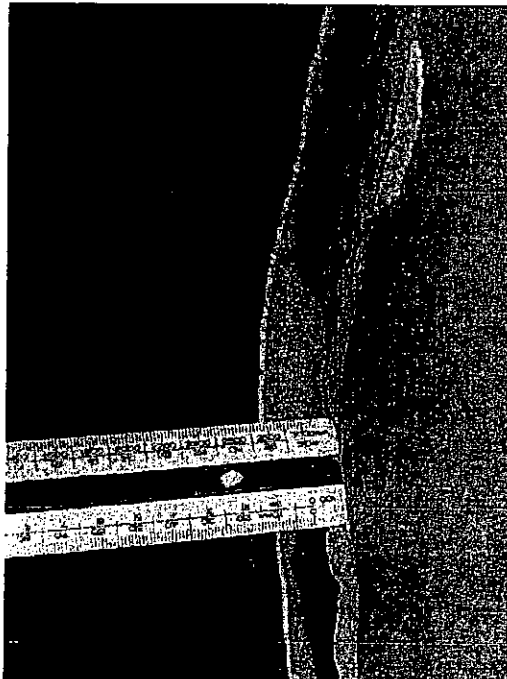


Photo 1.7 Oct 2005 15mm

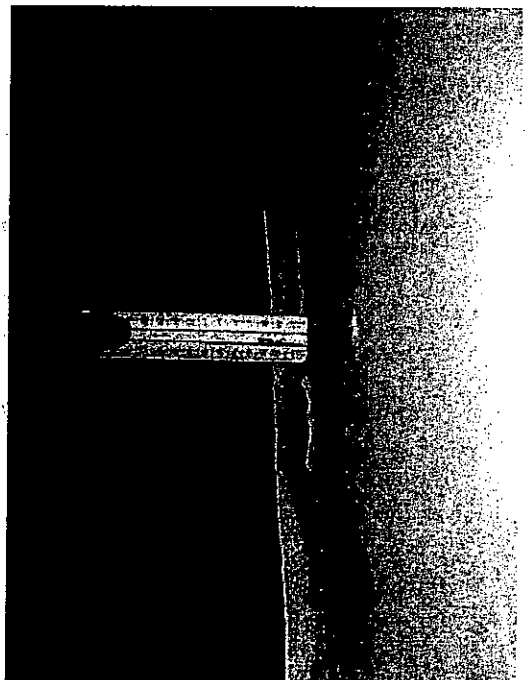


Photo 1.8 June 2007 20mm

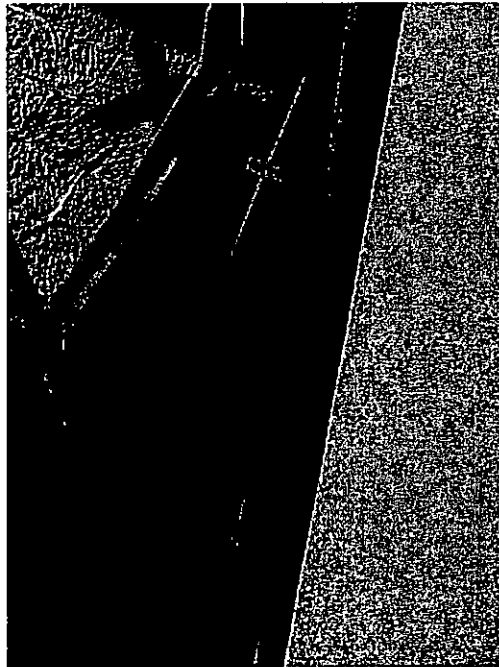


Photo 1.9 East Wall Oct 2005

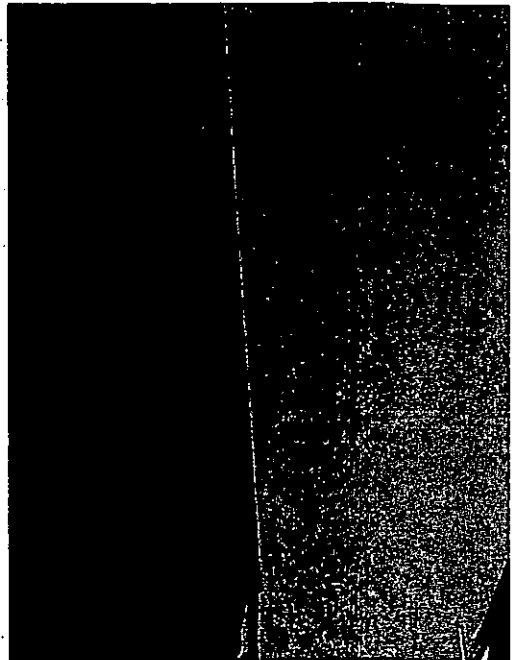


Photo 1.10 East Wall June 2007

There appeared to be an increase in the bow of the eastern wall on the at the location of the centre tie rod between the time of the two inspections.

- 1.5 Access was not available to view the upper floor framing. Isolated termite damage was evident in skirtings and mouldings. A closer inspection of the upper floor framing involving removal of the ground floor ceilings would be necessary to ensure the stability and competency of the supporting members. However, the gaps between the floor and the walls are significant. Photos 1.11 1.12. Concern exists as to the support of the floor framing if this movement continues.



Gaps between floor and western wall
Photo 1.11 June 2007

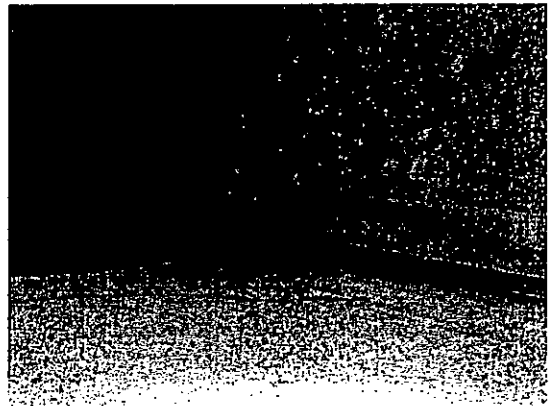


Photo 1.12 June 2007

- 1.6 Access was gained to the roof space. The roof framing is timber battens, rafters, underpurlins and ceiling framing. Photo 1.13 1.14. There did not appear to be any significant change in the condition of the roof framing, which appears to be generally sound.



Photo 1.13 Oct 2005



Photo 1.14 June 2007

The upper floor front verandah is in a deteriorated state, with rotten boarding and joists. The balcony rails are in poor condition. The roof framing comprising rafters spanning from the stone walls to timber bearers in reasonable condition, but the walling shows signs of movement (Photo 1.15 1.16) There is further deterioration in the condition of the balcony between the two inspection dates.

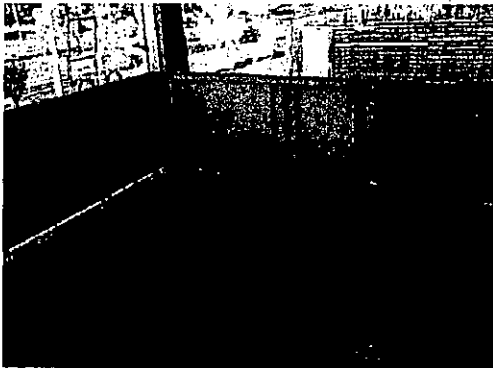


Photo 1.15 Oct 2005



Photo 1.16 Oct 2005

All internal walls are cracked where they adjoin external walls, with crack widths of 15-25mm in width occur in a number of instances, and cracking over windows and doors is extensive.. (Photos 1.17 -1.20)

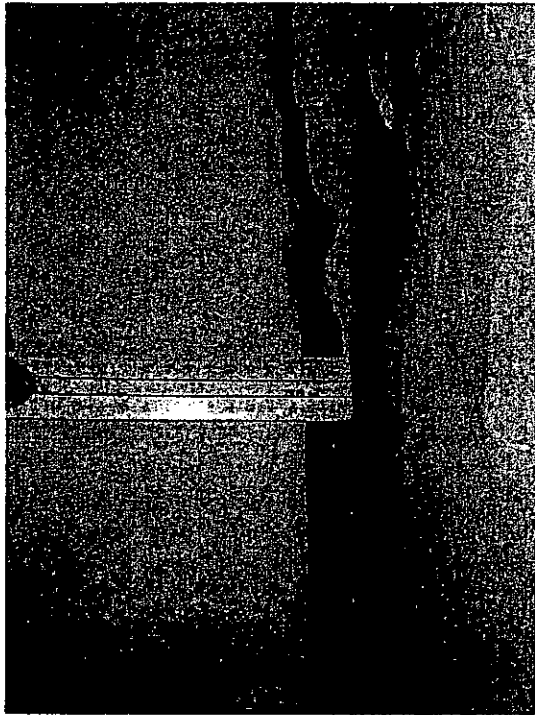


Photo 1.17 June 2007

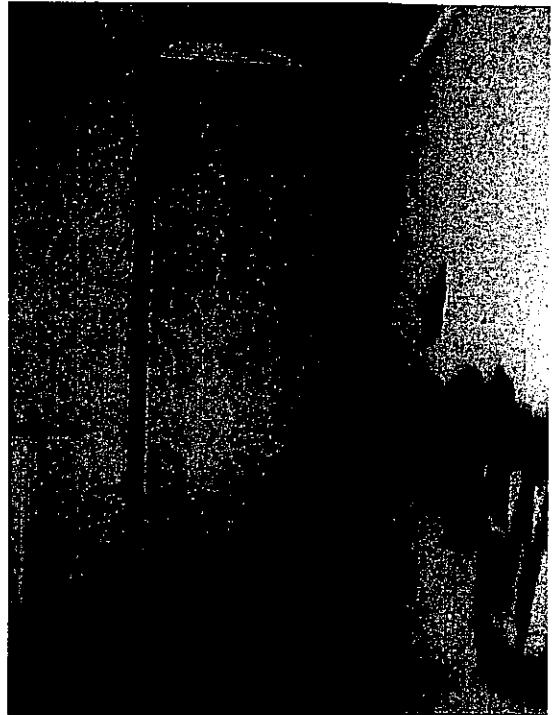


Photo 1.18 June 2007



Photo 1.19 June 2007

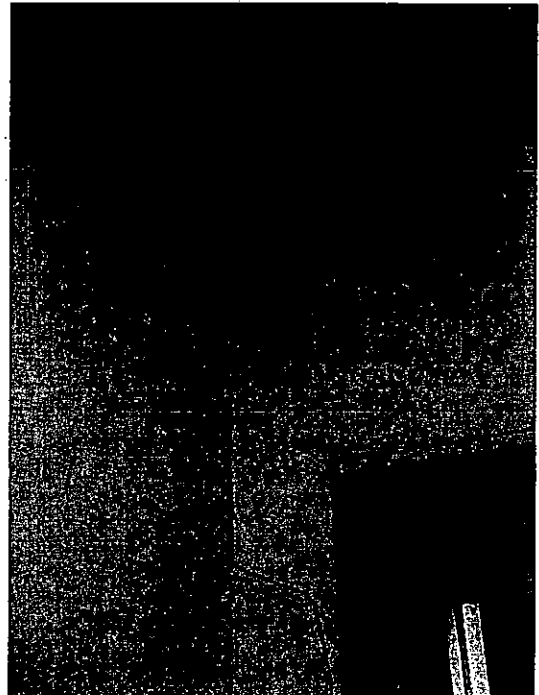


Photo 1.20 June 2007

1.7 Rising damp affects the majority of the lower floor walls. Photo 1.21 1.22



Photo 1.21

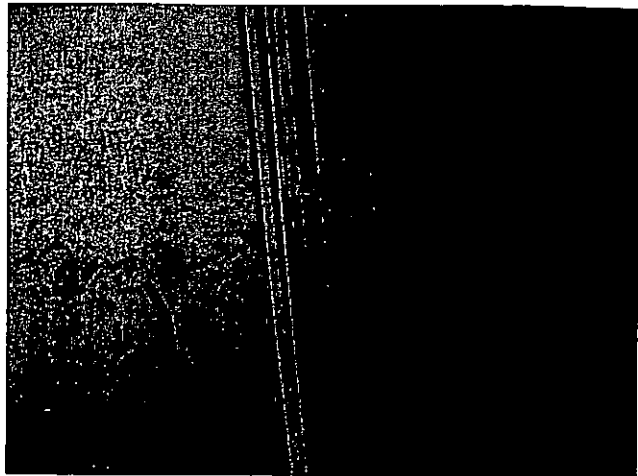


Photo 1.22

1.8 The newer rear addition is of timber framing on a slab-on-ground. The condition of this structure is reasonable.

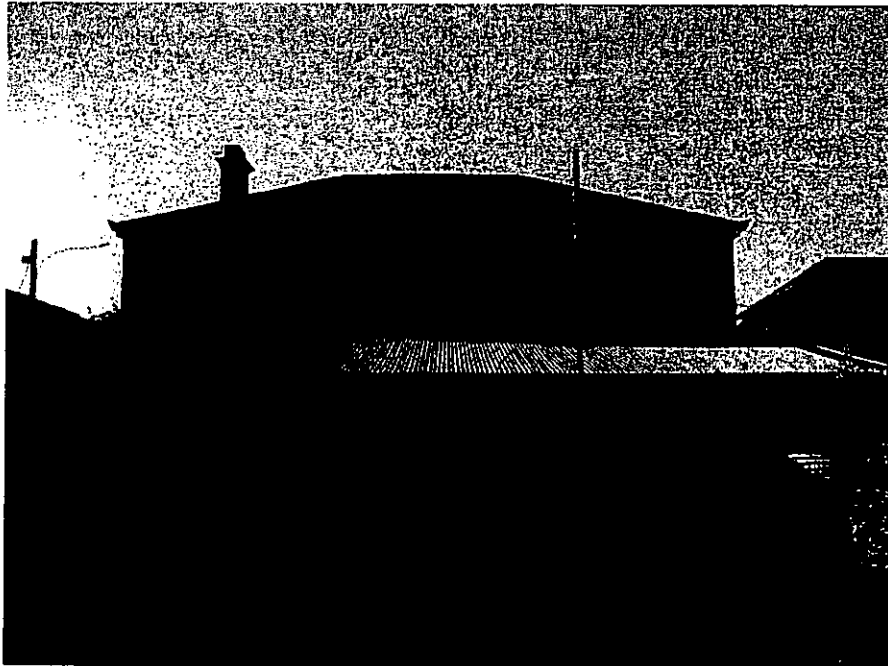


Photo 1.3 Rear Newer Building from rear yard June 2007

2

Observations-Building 2 (Eastern Building)

- 2.1 The eastern building is a brick masonry and timber framed structure on indeterminate age. The lower floor wall framing is masonry, with the upper floor of predominately timber framing. (Photos 2.1 2.2) Access could not be gained to the lower floor in June 2007 to assess the current condition.

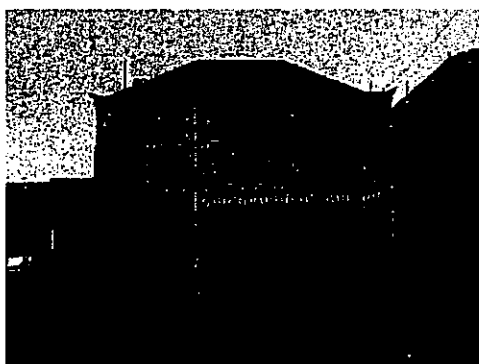


Photo 2.1 Oct 2005



Photo 2.2 Oct 2005

- 2.2 The lower floor is very unstable with extensive areas of collapsing floor framing, rotten floor boards and joists, leaving movement on the floor dangerous. Photos 2.3, 2.4 show examples.



Photo 2.3 Oct 2005



Photo 2.4 Oct 2005

- 2.3 Evidence abounds of termite and rot damage in walls skirtings and mouldings. Photos 2.5 2.6



Photo 2.5 Oct 2005

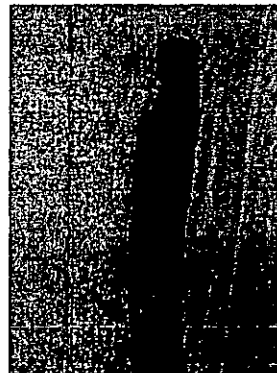


Photo 2.6 Oct 2005

2.4 The rear verandah framing is on the verge of collapse. Photo 2.7, 2.8.



Photo 2. 7 June 2007



Photo 2.8 June 2007

2.5 Similarly to the western building, it was not possible to obtain access to the upper floor framing. However rotten floorboards and skirtings point to the risk of damage in the framing from termite and rot damage. The Roof framing was not able to be accessed either. Similar comments apply.

2.6 Walls show significant damage from rising damp. Photos 2.9 2.10.

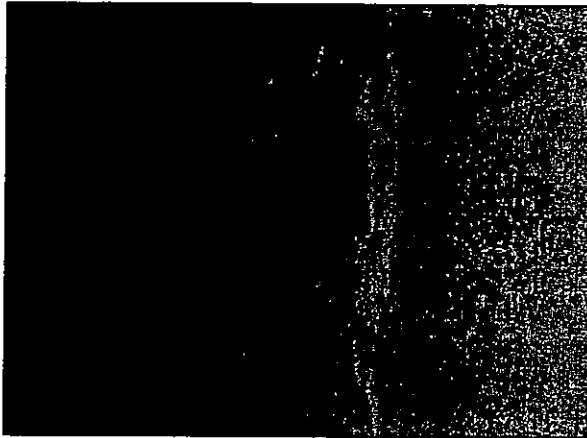


Photo 2.9 Oct 2005



Photo 2.10 Oct 2005

3

Comments- Western Building

- 3.1 As previously reported, the western building has two significant structural issues. Firstly, the deterioration in the lower floor framing indicates that it is likely given the lack of access that the ground floor framing needs to be replaced where damage has occurred. The installation of some form of moisture and physical barrier full width in the walls would be required to provide a habitable space devoid of rising damp.
- 3.2 Secondly, the stability of the external walls has obviously been an issue for some period of time, with the use of through wall ties and restraints to attempt to at least maintain some stability in the walls. The comment was made in the October 2005 report that "... a change in the foundation support conditions (for example wetting up or drying out of support soils) has the capacity to dramatically change the situation with respect to the structural condition of the wall quite quickly.". The spate of dry weather in the intervening period is appearing to continue the deterioration in the stability of the side walls, and the evidence of further movement requires a more urgent review of the stability of these walls, and the installation of protection to third parties person and property to guard against the damage from the possibility of collapse of the walls. The previously installed anchor rods across the width of the building appear to be ineffective in preventing outward movement in the walls as cracking in the walls occurs either side of the ties, allowing lateral movement in the bulk of the wall each side of the anchors.
- 3.3 The root cause of the cracking in the walls appears to be foundation movement, with the existing foundations laid on either weak and/or reactive ground, which has settled and been subject to changing moisture conditions over the years. This has resulted in significant differential movements and rotations in the walls, causing the observed cracking. The most alarming is along the western wall, where there are clear indications of significant outward relative displacements of part of the wall (Photo 1.8) of up to 25mm in the upper storey, and an increase in 5mm approximately from the earlier inspection in October 2005. This observed wall movement (which exists in all the internal and external walls to a greater or lesser degree) could be arrested by underpinning of the building foundations to a deeper more competent and less reactive strata. However, a full temporary shoring system supporting the wall to guard against the possibility of collapse using vertical walers and diagonal braces at reasonably close centres would be indicated.
- 3.4 We are now of the view that the structural integrity of the walls is seriously compromised and urgent measures need to be instituted to protect third parties from the effects of a possible collapse of the wall.
- 3.5 If underpinning, termite protection and rising damp alleviation is achieved by repairing the two major structural issues outlined in 3.1 and 3.2, further work would be required to tie the cracked walls together with horizontal members at the ceiling lines of the ground and upper floors, and ascertain and repair the likely damage that may have occurred in the lower and upper floor framing. This would entail removal of all the lower floor flooring and ceilings in order to be able to properly view the condition of the lower and upper floor framing.
- 3.6 Institution of effective management of stormwater runoff from roofs and rear yards would be important to maintain constant moisture conditions in the foundation soils.

4

Comments- Eastern Building

- 4.1 As outlined in the October 2005 report, the eastern building has a lower floor framing which is unsafe in it's current condition. Furthermore the significant rising damp in the walls means the total value of carrying out repair work is called into question. Deterioration evident in the upper floorboards requires a full examination from the underside of the framing members by removing the existing ceiling.
- 4.2 The roof framing of the single storey section to the rear is water affected and rotten to a large degree, and would require re-roofing after first repairing rotten and termite affected members. The roof of the upper storey is likely to be in similar condition. The existing building services are ancient and would require a complete upgrade to conform to modern standards.
- 4.3 The October 2005 report concluded that "The building is essentially at the end of its structural life and is little more than a demolition exercise.". This report concurs with that view.

5

Conclusions

- 5.1 The structural condition western building gives rise to significant concern about the stability of the side walls, and the condition of the lower floor framing. The rising damp in the walls, coupled with the rot and termite damage means that a significant amount of work is required to reinstate the building to a serviceable condition. The external walls should be provided with temporary external support to resist potential collapse and measures should be taken to protect third parties from consequential effects of collapse of the subject walls, whilst repairs are effected involving foundation underpinning. Once the long term movements in the foundations have been stabilized, the external walls would need to be tied to a horizontal supporting member along their length at the ceiling level of the ground and upper floor to restrain the sections of wall divided by cracking associated with prior movements.
- 5.2 The recommendation contained in the October 2005 report that "It is considered that the eastern building is in such a poor structural state that little can be achieved short of a complete gutting of the existing timber frame and total reconstruction." Is considered to be still relevant.

We trust the above report provides the information you require at this stage. Please contact the undersigned if any further information is required.

Yours Sincerely
Farr Engineers Associates Pty. Ltd.



A.C. Farr

Cc Thomson Adsett