

D1 Consulting Engineers Pty Ltd



Structural Report

269 Charles Street, Launceston

For Scott Smith

5th October 2020

Ref: 19421

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1. Building Inspection Report

Inspection Details	
Date/Time of Inspection:	24/09/2020 at 10.30am
Type of Report:	Structural Report
Address of Property:	269 Charles Street, Launceston
Weather:	Sunny
Owner Details	
Property Owner:	Scott Smith
Client Email Address:	N/A
Client Address:	269 Charles Street, Launceston
Inspector Details	
Company Name:	D1 Consulting Engineers Pty Ltd
Company Address:	10 Jackson Street, Mowbray
Company Email:	Marcus.salonend1ce@gmail.com
Company Contact Number:	0400 347 100

2. Property Inspection Particulars

Description of Property Inspected

Brief description of the building and other structures on the property	
Type:	House and surrounding bluestone retaining wall.
Height:	12m x 5m(High) x 5m(Wide)
Building:	Rendered brick with bluestone foundations
Floor:	Timber
Roof:	Sheet
Age:	Approximately 140 years old. (Circa 1880)

3. Inspection Agreement

Requirements for the inspection agreement

AS 4349.1 - 2007 requires that an inspection agreement be entered between the inspector & the client prior to conduct of the inspection. This agreement sets out specific limitations on the scope of the inspection and on limits that apply in carrying it out. Where specific State or Territory requirements apply in addition to the scope of work in this agreement, or where the inspector and client agree to additional matters being covered, that additional scope is listed at the end of this agreement. It is assumed that the existing use of the building will continue.

AS 4349.1 - 2007 requires that the basis for comparison is a building of similar age and similar type to the subject building and which is in reasonable condition, having been adequately maintained over the life of the building. This means the building being inspected may not comply with Australian Standards, building regulations or specific state or territory requirements applicable at the time of the inspection.

Purpose of inspection

The purpose of the inspection is to provide advice regarding the condition of the property at the time of the inspection and the cause of the damage.

Areas Inspected

The following areas were inspected. As documented in obstructions and limitations to the accessible areas for inspection are to be expected in any inspection. Refer also to our listing of obstructions and limitations.

- Exterior walls
- Sub-floor structure
- Property Retaining wall

The inspection excludes areas which are affected by obstructions or where access is limited or unsafe. We do not move obstructions and building defects may not be obvious unless obstructions or unsafe conditions are removed to provide access.

Obstructions and Limitations

Building defects may be concealed by the following obstructions which prevented full inspection:

- Areas where reasonable entry is denied to the inspector or where reasonable access is not available are excluded from and do not form part of the inspection.
- Physical access limitations may include height, narrow boundary clearance, thick vegetation, small roof or crawl space and adverse weather conditions.
- The report shall identify any area or item within the scope of the inspection that was not inspected and the factor that prevented inspection.

- The extent of accessible areas shall be determined by the inspector at the time of inspection based on the conditions encountered at that time.
- The inspection shall include only accessible areas and areas that are within the inspector's line of sight and close enough to enable reasonable appraisal.
- Reasonable access includes a prerequisite that the minimum clearances specified in the table below are safely available.

The presence of obstructions increases the risk of undetected defects.

Conditions

An inspection report may be conditional on:

- Prevailing weather conditions or recent occupancy and use of services that might affect observations;
- Information provided by the client or the agent of the client;
- Deliberate concealment of defects;
- Any other relevant factor limiting the inspection.

4. Definitions

Definition of terms used to describe the current state of repair for each item inspected	
Condition Visually Fine:	When the Inspector has viewed the subject area and sees no major structural defect, no minor defect and there is no repair recommended.
General Advice on item:	The Inspector may choose to comment on the subject area, where it doesn't fall into the above categories.
Damage advice on item:	A suggestion that the repair of the defect be carried out by a licenced person, trades person or a person of ability, halting further deterioration to the property.
Major structural Defect:	A defect of sufficient magnitude where repair works must be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.
Unable to Inspect Due to access:	An area of the site where there is insufficient, unsafe or unreasonable access.
Not Applicable (N/A):	N/A: When the subject field doesn't make up any part of the inspected property.
Report Definition	
Glass Caution:	Glazing in some building (built before 1978) may not necessarily comply with current glass safety standards AS1288. In the interests of safety, glass panes in doors and windows especially in high traffic areas should be replaced with safety glass or have shatterproof film installed.
Rooms Below Ground Level:	Rooms under the house or below ground level (whether they be habitable or not) may be subject to dampness and water penetration. Drains are not always installed correctly to these areas or could be blocked. It is common to have damp problems and water entry into these spaces, especially during periods of heavy rainfall and may not be evident on the day of the visual inspection. These rooms may also not have council approval.
Owners Corporation:	If the property is covered by an Owners Corporation (Strata Title) D1 Consulting Engineers Pty Ltd recommend that an Owners Corporation search be conducted to ascertain their financial position, the level of maintenance afforded and any other relevant information that may impact your future ownership of the property.

5. Scope of inspection

What is not reported on, general exclusions detailed in AS 4349.1 – 2007

- Parts of a building that are under construction;
- The inspection is not intended to include rigorous assessment of all building elements in a property;
- Defects that would only be apparent under particular weather conditions or when using particular fittings & fixtures;
- Defects not apparent due to occupancy or occupancy behavior e.g. non-use of a leaking shower;
- The inspection report is not a certificate of compliance of the property within the requirements of any Act, regulation, ordinance, local law or by-law and is not a warranty against problems developing with the building in the future;
- Unauthorized building work or of work not compliant with building regulations;
- Title and ownership matters, matters concerning easements, covenants, restrictions, zoning certificates and all other law related matters;

What is not reported on, specific exclusions detailed in AS 4349.1 – 2007

- Footings below ground, concealed damp-proof course, electrical installations, operation of smoke detectors, light switches and fittings, TV, sound and communication and security systems, concealed plumbing, adequacy of roof drainage as installed, gas fittings and fixtures, air conditioning, automatic garage door mechanisms, swimming pools and associated filtration and similar equipment;
- The operation of fireplaces and solid fuel heaters, including chimneys and flues, alarm systems, intercom systems, soft floor coverings, electrical appliances including dishwashers, incinerators, ovens, ducted vacuum systems, paint coatings except external protective coatings, health hazards e.g., allergies, soil toxicity, lead content, radon, presence of asbestos or urea formaldehyde), timber and metal framing sizes and adequacy, concealed tie downs and bracing, timber pest activity, other mechanical or electrical equipment (such as gates, inclinators);
- Soil conditions, control joints, sustainable development provisions, concealed framing-timbers or any areas concealed by wall linings or sidings, landscaping, rubbish, floor cover, furniture and accessories, stored items, insulation, environmental matters e.g. BASIX, water tanks, BCA environmental provisions, energy efficiency, lighting efficiency.

What is reported on,

The inspection includes subjective appraisal by an inspector competent to assess the condition of the buildings. It involves a subjective assessment so different inspectors or even the same inspector on a different occasion may reach different conclusions.

The inspection comprises a visual assessment of the property to identify major defects and to form an opinion regarding the general condition of the property at the time of inspection.

The following areas shall be inspected where applicable:

- The exterior of the building: walls (including lintels, claddings, doors & windows); timber or steel frames & structures;
- The sub-floor space: timber floor (including supports, floor, ventilation, drainage, damp); suspended concrete floors;
- The property within 30m of the house and within the boundaries of the site: car accommodation, detached laundry, ablution facilities and garden sheds; retaining walls (where supporting other structures and landscaping retaining walls > 700mm high); paths & driveways; steps; fencing (general & swimming pool); surface water (drainage effectiveness).

6. Terms and Conditions

1. D1 Consulting Engineers Pty Ltd has prepared this report in accordance with the guidelines of Australian Standard 4349.1 – 2007 (Standard) which covers the minimum requirements for the visual inspection of residential buildings and based on the inspection of the property named (Inspected Property) in the administrative cover letter by the inspector named (Inspector) in the administrative building inspection report.
2. The Report is prepared for the sole and exclusive use of the person, persons or body named (Client) in the administrative cover letter and cannot be used or acted upon by any other party without the express permission of D1 Consulting Engineers Pty Ltd.
3. The Client, having been provided with the opportunity to read these Terms and Conditions following the making of a booking for a property inspection, accepts these Terms and Conditions. These Terms and Conditions take precedence over any oral or written representations made by D1 Consulting Engineers Pty Ltd or the Inspector, to the extent of any inconsistency.
4. The Report is based on the condition of the Inspected Property at the date and time of inspection. While the Report is prepared with due care and diligence, the Report is based upon the prevailing conditions and the safe and reasonable access of the Inspector to the Inspected Property as outlined in the Standard.
5. The Report must be read carefully and in its entirety to gain a complete understanding of the findings of the inspection of the Inspected Property. It will help you understand the limitations faced by an inspector and why it is not possible to guarantee that a property is completely free of defects.
6. The Report is not a certificate of compliance for the Inspected Property within the requirements of any Act, regulation, ordinance or local law or by-law. The Report does not cover enquiries of councils or other authorities.
7. The Report is subjective assessment of the Inspected Property and therefore outlines the opinion of the Inspector on the general condition of the Inspected Property at the date and time of the inspection in relation to major defects and a general impression of minor defects and safety hazards. The Report provides no guarantee and is not a warranty against problems developing with the Inspected Property in the future.
8. The Report does not include identification of unauthorised building work or of work not compliant with building regulations. An estimate of the costs of rectification of defects is not required in accordance with the Standard.
9. The inspection is undertaken, and the Report prepared, by the Inspector on the assumption that the existing use of the Inspected Property will continue. As such, the Inspector will not assess the fitness of the Inspected Property for any other intended purpose. We advise you to verify any proposed change in use of the Inspected Property with the relevant authorities.

10. This Report is based on a visual assessment of the Inspected Property together with relevant features of the Inspected Property within 30m of the building and within the boundaries of the site, the prevailing structural, soil and weather conditions at the date and time of the inspection and the Inspector having safe and reasonable access to all areas. Where the Inspected Property is a unit or apartment, associated areas may include common areas pertinent and immediately adjacent to the Inspected Property, or as specifically instructed by the Client. Areas not inspected are noted in the Report. The Standard provides that “safe and reasonable access” shall be determined by the inspector at the time of the inspection, based on the conditions encountered at the time of inspection. An inspector shall only inspect areas where safe, unobstructed access is provided and where the minimum clearances are available or, where these clearances are not available, areas within the inspector’s unobstructed line of sight and close enough to enable reasonable appraisal. Minimum clearances are defined as at least 600mm vertical and horizontal clearance for roof space and sub floor area access. The interior and exterior roof must be accessible from a 3.6 metre high ladder for reasonable access to be available. Reasonable access does not include removing screws and bolts to access covers. Nor does reasonable access include cutting or making access traps, or moving furniture or stored goods.
11. This Report is not a rigorous assessment of all building elements and does not cover all maintenance items. This Report also does not cover defects in inaccessible areas, defects that are not reasonably visible, defects that may only be apparent in certain weather conditions or defects that have not yet arisen due to prolonged periods of wet or dry weather or other subsequent events.
12. As the Report only covers the visual aspects of the Inspected Property, it does not cover any part of the building located beneath the ground surface.
13. The Inspector can only make comment with regard to the general, visible condition of electrical wiring and plumbing. We suggest that a licensed tradesperson be contacted for a separate report.
14. The Inspected Property shall be compared with a building that was constructed in accordance with the generally accepted practice at the time of construction and which has been maintained such that there has been no significant loss of strength and serviceability.
15. The Report does not identify the presence of pests, or any damage caused by pests (e.g. termites, borers, etc.). We suggest that a professional pest inspector be contacted for a separate report.
16. No assessment or identification is made of asbestos or asbestos related products, toxic mould or other harmful substances. Asbestos dust is a hazardous material and should not be disturbed. It is vital that asbestos is not sawn, sanded, drilled or water blasted, etc. For more information about the handling and disposing of asbestos contact your local council.

17. Our inspection does not assess the operation of appliances, alarms, security and communication systems, smoke detectors, heating and cooling systems, blinds (internal and external), soft furnishings, telephones, spa and pool equipment, building automation, electrically operated doors, plant and equipment. Any item not specifically noted in this Report is excluded from the inspection of the Inspected Property. We suggest that a licensed tradesperson be contacted for a separate report in respect of gas or electrical appliance and fittings.
18. No item of furniture or fixtures will be removed, moved or modified during the inspection and items and conditions covered by such furnishings and fixtures are not inspected or considered. Nor do we assess the condition of conspicuous, non- structural items such as carpets, vinyl floor coverings etc.
19. Any maintenance and general advice items are intended as a helpful guide. The Report is not necessarily an exhaustive list of all maintenance and advice items.
20. You should address legal and conveyance matters such as title and ownership to your solicitor or legal representative. Compliance issues in relation to the positioning of services, privacy, vehicle access, the siting of the buildings, zoning, permit or town planning issues or other legal matters should be directed to the relevant authority or to a solicitor or legal representative.
21. Acceptance of this report and payment by the Client acknowledges acceptance of the Inspection Agreement and Terms & Conditions.

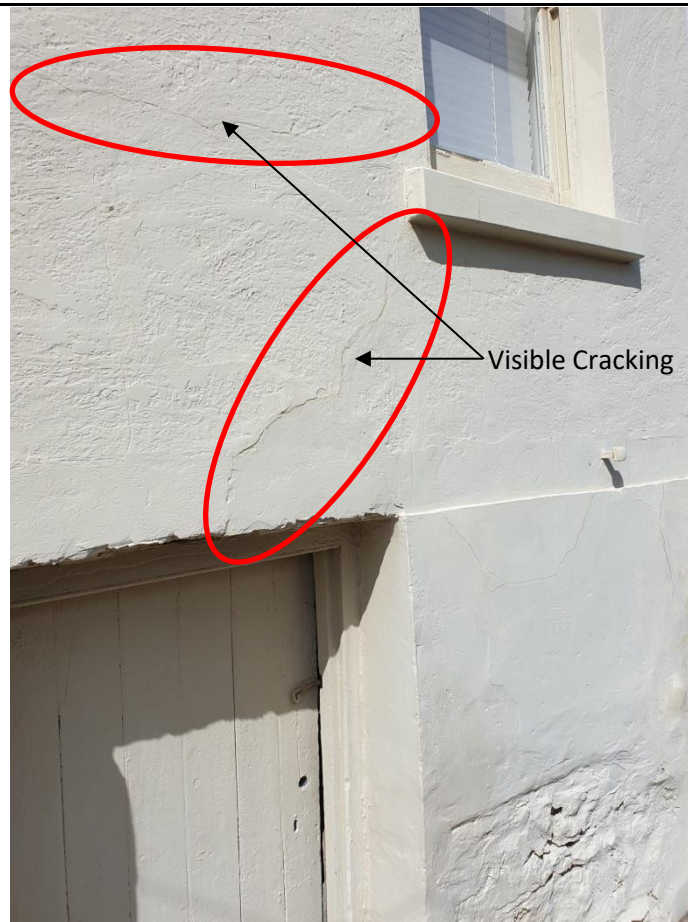
7. Visual Building Inspection

7.1 External building Inspection

External of house inspection checklist						
	Condition Visually FINE	General Advice on Item	Damage advice on item	Major Structural Defect	Unable to Inspect Due to Access	Not Applicable (N/A)
Driveways and Paths	✓					
External Walls			✓			
Retaining Wall				✓		
Floor Structure		✓				
Roof						✓
Down Pipes	✓					
Drainage		✓				

External**Structural Damaged**- **Western House Corner****Comments:**

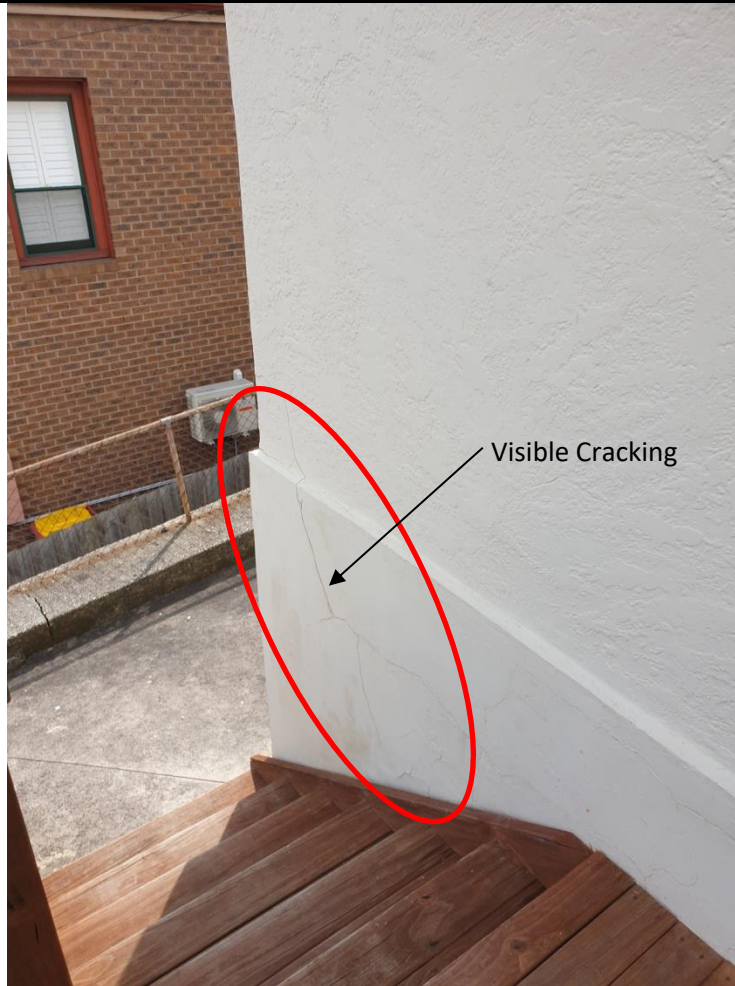
Visible cracking within the western corner of the house which is currently slightly leaning outwards with radiating cracks that are signs of foundation failure. This has occurred due to the existing brick/bluestone retaining wall has failed just at the stair well. Refer to Front yard staircase.



House Western corner from access door.



House Western window corner.



House North-West stair corner.

External**Major structural damage**- **Front Yard Staircase****Comments:**

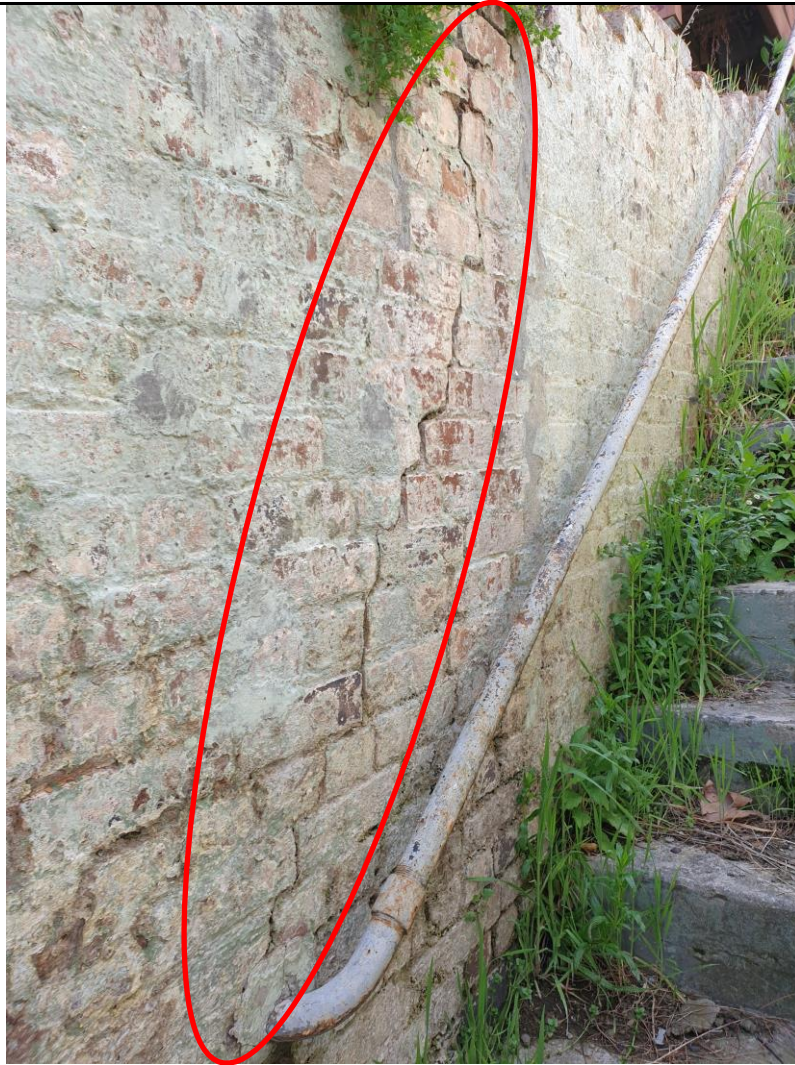
The existing front yard concrete staircase is currently in average condition, but the brick/bluestone retaining wall located on the left hand side has failed and is currently leaning towards the Charles Street.



Large crack on top of bluestone retaining wall above staircase.



Large crack on within of brick/bluestone retaining wall adjoining the stairwell.



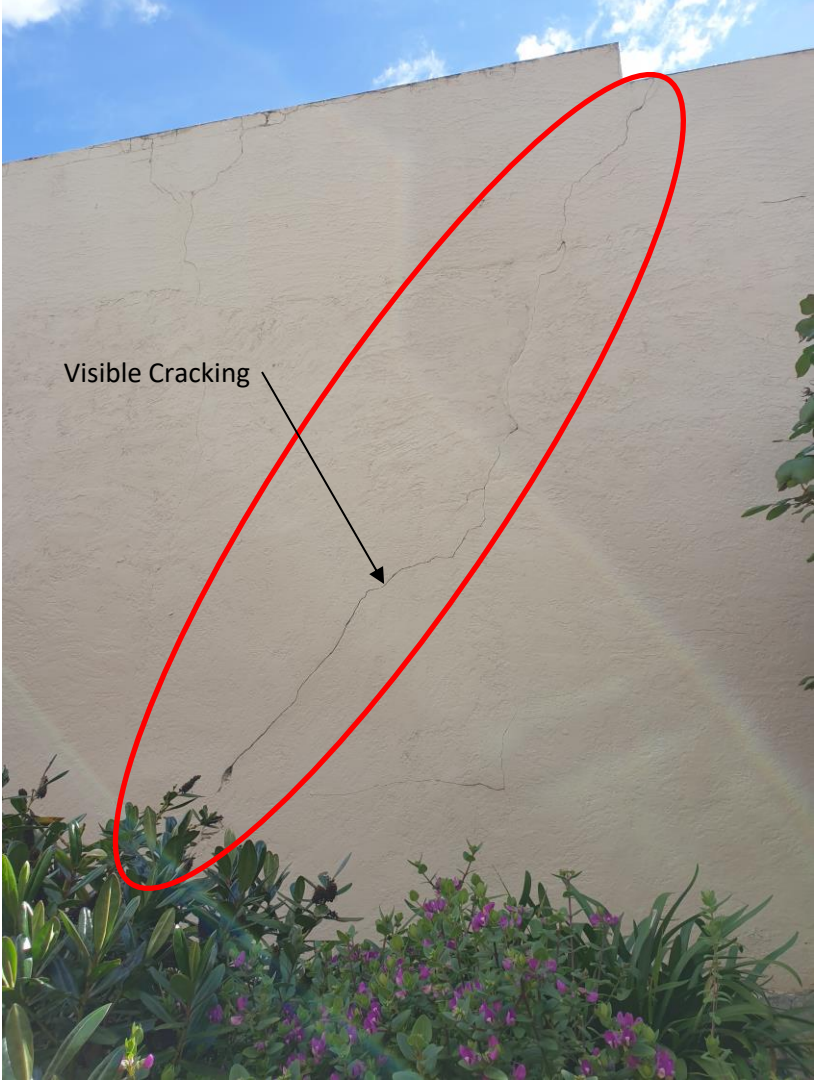
Large crack further up staircase within brick/bluestone retaining wall.

External**Major structural damage** - Southern House Corner**Comments:**

Visible cracking within the southern corner of the house. These cracks radiate from the existing foundations to the top of the building line that are signs of foundation failure. This has occurred due to the existing bluestone retaining failing on Charles Street.



Southern corner of house photo 1.



Southern corner of house photo 2.



Southern house corner foundation crack



Southern house corner severe cracking

External**Major structural damage** - Southern bluestone retaining wall**Comments:**

The existing bluestone retaining wall running along Charles Street, has failed, There are visible signs of repair works that have also failed.



Cracking in southern corner of existing bluestone retaining wall Photo 1.



Cracking in southern corner of existing bluestone retaining wall Photo 2.

8. Major Report Findings

Report Summary

Summary

The following findings have been considered to have been the main cause of the structural failure of the house and bluestone retaining wall;

1. The main reason for the structural failure within the house is due to the load transfer from the building footprint proximity to the bluestone retaining wall.
2. The reason of the bluestone retaining wall failure is due to the proximity of the house footprint transferring its loads into the retaining wall causing it to fail as seen within this report.
3. The existing structural design was constructed to best practices of the time when the building was originally built but was positioned too close to the existing bluestone retaining wall.

Recommendations:

- The bluestone retaining wall will need to have sections pulled down and repaired.
- The existing building would need to be underpinned but this will not be possible due to the existing condition of the bluestone retaining wall where a service load could bring the entire bluestone retaining wall into failure along Charles Street. The only possible methods would be by demolishing the rear of the building to access the front of the house or the work to be done completely by hand which would be deemed unsafe due to the current conditions.
- The current building condition will continue to deteriorate until it is unsafe to live in. The building is beyond future repairs and it is recommended to be demolished or replaced.
- The replacement will need to be designed to avoid any loads transferring onto the bluestone retaining wall as to prevent any future damage to the existing bluestone retaining wall.

Should you require any further information, please contact me on 0400 347 100.



Marcus Salonen
B.E. (Civil/Structural), MIE Aust, CP Eng, NER.
Accreditation No. CC7347, RPEQ. No 20174