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ALLAMBIE COTTAGES, 1256 BELL'S LINE OF ROAD, KURRAJONG
STRUCTURAL REPORT

heritage conservation remediation

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ALLAMBIE COTTAGES, 1256 BELL'S LINE OF ROAD, KURRAJONG STRUCTURAL REPORT

Document Version History

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2303702RE Allambie Cottages, 1256 Bell's Line of Road, Kurrajong - Structural Report	09/10/2023	Initial issue of report.	HG	HG	HG

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1. INTRODUCTION

Site Inspection of 'Allambie Cottages', 1256 Bell's Line of Road, Kurrajong was undertaken on 27 September 2023 by Hari Gohil, shreeji consultant p/l. The inspection was to assess the structural integrity of the buildings.
The inspection was at request from Christo Aitken, Heritage Architect acting on behalf of Hawkesbury City Council.
The report is prepared from limited access, observation on foot from external ground level. The buildings are designated unsafe to enter and no inside access was possible. Access to the site was provide by RTA the owners of the Properties and during a reconciliation meeting arranged in presence of the panel.

This report is prepared for Christo Aiken for the benefit of Hawkesbury City Council.

2. OBSERVATIONS FROM THE SITE

2.1.

South Cottage - view from the west.	

2.2.

North Cottage - view from the west	

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2.3.

South Cottage - view to the east from the southwest corner.	

2.4.

South Cottage - view to the west from the southeast corner.	

2.5.

South Cottage - vie from the east	

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2.6.

Infill between the North and the South Cottage - view from the east	

2.7.

North Cottage - view from the east	

2.8.

The gutters have corroded through and are non existence.	

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2.9.

The ends of the floor boards affected by constant moisture from the leaking gutter.	

2.10.

South Cottage - underfloor support. Hardwood timber stumps, some have termite trails in the sap rings.	

2.11.

South Cottage - sandstone base to the chimney	

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2.12.

The Infill Connection between the North and the South Cottages have sandstone piers underfloor support	

2.13.

North Cottage - sandstone base under the chimney	

2.14.

North Cottage - hardwood stumps under the floor	

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2.15.

North Cottage - the sandstone base to the chimney has cracked.	

3. OBSERVATIONS

3.1. The cottages are of single storey built off the ground with increased height supports towards the back, the east to accomodate the ground profile.
3.2. The construction form is simple conventional timber framing.
3.3. The original external is in wide timber boards.
3.4. The buildings are suffering from advanced deterioration from moisture ingress and termite infestation.
3.5. The roof has been renewed in the past.
3.6. All gutters have corroded through and the roof water discharges to the foundation soils.
3.7. The perimeter stumps and the sandstone bases to the chimneys are affected by the excess moisture and the cascade of rain water that falls down the perimeter of the building due to the lack of effective stormwater management.
3.8. The stumps, some of them, have wet rot at the base and have collapsed.
3.9. The sandstone bases to the chimneys and some piers have cracked due to wash out of the foundation soil.
3.10. The buildings have settled unevenly due to differential settlement due to wash out of foundations or collapse of the timber stumps.
3.11. Termites have thrived in these unoccupied timber building with moisture ingress.
3.12. Some floor framing has collapsed from the termite infestation.
3.13. The east side of the South Cottage is suffering from collapsed support and require urgent attention to arrest local collapse.
3.14. Timber staircase access to both the cottages on the east side would have collapsed and are missing.
3.15. The paint to the external timber elements is flaking and some timbers are bare from total loss of the paint.

4. COMMENTS

4.1. The building structure is a timber framed in conventional system and does not require specialised trades.
4.2. The distress, uneven settlement, failure of some under floor stumps and cracking in the chimney sandstone bases is due to excess moisture affecting the foundation soils.
4.3. The excess moisture over a prolonged period has washed the fines out of the foundation soils and affected the bearing capacity of the soil.

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4.4. Some of the underfloor stumps in timber have the embedded base in soil affected by wet rot due to presence of moisture over a prolonged period and caused them to collapse.
4.5. The termites have thrived in timber having higher than 15% moisture content. The moisture fed to the timbers is from failed gutters and most probably leaking roofs.
4.6. The roof water is fed to the base of the foundation soils by the failed gutters over a prolonged period.
4.7. The building has lacked regular maintenance which would have picked up the leaking gutters and roof and the set in of the termite activity.
4.8. The failing sections of the buildings are to be temporarily stabilised before the local collapse in the structure.
4.9. The roof are to be checked to ensure water tightness of the buildings.
4.10. The gutters and down pipes of adequate size are to be installed and the collected roof water is to be taken away from the building foundations.
4.11. Ensure the surface water flowing down hill is guide to the sides and drain away from the buildings by profiling the ground levels and surface.
4.12. The buildings are to have complete termite assessment and the termites eradicated from the buildings.
4.13. The building structural elements are to be inspected at close hand to assess their integrity.
4.14. The timber stumps to have dry feet by introducing concrete bases or concrete encasement.
4.15. The cracked and displaced bases to the chimneys, if required partly rebuilt and remediated by stainless steel 316 reinforcement stitching.

5. RECOMMENDATIONS

5.1. URGENT - WITHIN THREE MONTHS

5.1.1. Urgently inspect and temporarily stabilise all elements to avoid further unnecessary damage and loss of fabric.
5.1.2. Undertake a thorough Termite Inspection by a professional with extensive experience of heritage buildings and put in place a program to eradicate the termites from the buildings and a regular inspection and treatment.
5.1.3. Ensure the buildings are water tight.
5.1.4. Undertake a detailed element by element structural inspection at close hand to assess the integrity of the structure.

5.2. SHORT TERM - WITHIN TWELVE MONTHS

5.2.1. Undertake a thorough inspection of the building with a Heritage Architect to document the heritage significance of the buildings and to assess parts of the buildings which are intrusive and to be removed, including asbestos.
5.2.2. Remediate the primary elements of the structure - foundations, floor support, roof framing and the load bearing walls.
5.2.3. Ensure the building is water tight, the gutters and down pipes are of adequate size and discharge the collected water away from the foundation soils.

5.3. LONG TERM - WITHIN THREE YEARS

5.3.1. Remediate the buildings fully for use.

Hari Gohil
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for shreeji consultant p/l