Submission to the Department of Planning

Property description: Lot 100 DP 1031121, Camden Council.

Address: 125 Heath Rd Leppington NSW 2179

Owner’s contact: Viet Nguyen. Mob: 0421 512 941. Email: Lotusdeveloper2000@yahoo.com.au

Issue: The property should not be listed as an item of local significance under Leppington Precinct Plan and the proposed changes to State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (SEPP).

Reason: Based on the assessment of heritage significance at 125 Heath Road Leppington by Rappoport Pty Ltd.

- The primary heritage significance of the property is to be severely compromised by the imminent demolition of all auxiliary buildings.

- The fragmented site comprised of the cottage, pond and redundant driveway will not, in our opinion, be able to communicate its heritage values as an early farmlet in the Leppington area.

- The slated demolition and subsequent irrevocable loss of heritage values on the property will render the site unworthy of listing.

Support documents:

- Heritage Assessment 125 Heath Rd Leppington by Rappoport Pty Ltd.
- Structural Report of 125 Heath Rd Leppington by D&M Consulting Pty Ltd.
- Photos taken by D&M Consulting Pty Ltd during the inspection.
REPORT ON DAMAGE TO RESIDENCE AND DETACHED BUILDINGS AT 125 HEATH RD LEPPINGTON FOR VIET DUC NGUYEN
1. **SITE.**

**Client:** Mr V Nguyen

**Address:** 125 Heath Rd Leppington

**Property Description:** Old Style Clad Framed Cottage and outbuildings, estimated date of build is 1920. This is a special purpose structural report that has been requested as part of a heritage study of the residence and outbuildings.

2. **OBSERVATIONS OF STRUCTURAL DAMAGE**

I have inspected the condition of the existing structures on 16th December 2014. In general the damage is due to the age of the buildings, growth of tree roots and lack of repair or restoration of the buildings. The residence structure consists of a timber floor on masonry piers, timber framed walls with fibro cladding and a timber framed roof with metal cladding. Also present to the right of the residence is a detached clad framed building currently used as a laundry, on a concrete slab. At the rear of the property is a large timber-framed metal-clad shed.

3. **ANALYSIS OF DILAPIDATION**

As shown on the photos in Appendix A the buildings are in a poor state of repair. This report outlines in broad terms the works that need to be undertaken to restore the buildings. The report also details the areas that definitely require demolition and replacement. Some areas are concealed and will require inspection during the restoration process to determine the works that require remediation to bring the building to a habitable condition. This report is based on structural analysis and does not necessarily address the construction requirements of the present National Construction Code Series. Any details requiring conformity with the NCC are to be addressed to the
PCA. This report will address separate sections of the structure in a systematic way starting with the base of the residence and then to the other sections of the structure.

a) Residence Foundation and Footings.

The footings and supporting piers are masonry. These are in a fair condition and will require jacking and packing in some places. The ventilation in the subfloor is sub-standard and the subfloor is very moist. We recommend that vents be installed to the masonry walls at regular intervals in accordance with the NCC, or that mechanical ventilation is provided. This will prevent wood rot and damage to timber floor.

b) The Front External Verandah & Wall

There are several cracks to the dwarf brick walls on the front as shown on photos 9 to 12 in Appendix B. The maximum crack width is five millimetres. According to Table C1 of AS2870, reproduced in Appendix A, these cracks are classified as slight. They can be easily repaired by filling with a suitable flexible sealant and painting over as required. We recommend that they be monitored for twelve months.

There are three brick piers on the front verandah supporting the roof, and another three on the left side of the verandah, as shown on photo 1. They do not appear to be fixed to the roof. We recommend that they be tied to the roof with galvanized masonry ties and nails. We expect that some brickwork may need to be demolished and re-built. Detailed design is outside the scope of this report.

c) The Sides of the Residence

A WC on the right side of the residence is in poor condition. The slab appears to have separated from the footing and wall, as shown in photo 13. Due to the poor condition of the footings we recommend that it be demolished and re-built. The walls of the WC
appear to have asbestos sheeting and it is recommended that any cladding found to contain asbestos be removed by an accredited contractor.

d) The Rear of the Residence and Rear Verandah

As shown on photos 14 to 17 there are several damaged fibro panels to the rear external wall of the residence. We recommend that the damaged panels be removed and replaced with equivalent wall panels. The walls appear to have asbestos sheeting and it is recommended that any cladding found to contain asbestos be removed by an accredited contractor.

As shown on photos 18, 20, 21 and 22 the concrete slab at the rear is cracked and eroded severely. We recommend that it be pulled up and replaced with a reinforced concrete slab. Detailed design is outside the scope of this report.

As shown on photo 19 one of the brick piers supporting the rear verandah roof is leaning significantly. The lean is dangerous and may lead to failure/collapse of the brick pier. We recommend that it be demolished and re-built. It is to be fixed to the roof timbers with masonry ties and nails. There are two other brick piers on the rear verandah, and they also do not appear to be fixed to the roof. We recommend that they be tied to the roof with galvanized masonry ties and nails. We expect that some brickwork may need to be demolished and re-built. Detailed design is outside the scope of this report.

e) Internally.

The internal wall panels are timber clad and/or plasterboard. In general it is in good condition with no obvious defects.

f) Roof.

According to the tenant the roof has never leaked. It appears to be in good condition.
g) Detached Fibro Laundry

As shown in photos 23 to 25, there are large cracks (>20mm width) in the laundry slab. Concrete is spalling off and degrading. The concrete is poorly constructed and under-reinforced. According to Table C2 from AS2870, reproduced in Appendix A, the damage category is severe. We recommend that the laundry be demolished and re-built. The walls of the laundry appear to have asbestos sheeting and it is recommended that any cladding found to contain asbestos be removed by an accredited contractor.

g) Metal Shed

As shown on photo 26 to 28 the metal shed is timber clad with metal roof and walls. There is no bracing to the walls or roof. The damage to the internal slab is extensive, with numerous significant cracks and spalling of the concrete. The slab and footings supporting the timber frame is unlikely to be reinforced and is poorly constructed. We recommend that the shed be demolished and re-built.

4. IMPORTANT INFORMATION

Due to the nature of the report and the limits placed by the fact that the structure is in existence and as the inspector is limited in the areas that can be inspected this report is only an expression of opinion based on the observations made during the inspection. We have relied on information provided and supply this report in good faith based on over 20 years of experience in residential structural design. Many of the walls slated for demolition appear to have asbestos sheeting and it is recommended that any cladding found to contain asbestos be removed by an accredited contractor.
Due to the limited nature of the areas that can be accessed no definitive instructions can be issued regarding the structural integrity of the building and the builder is required to contact the engineer if anything that appears to be of a structurally inadequate nature becomes apparent during the restoration works. If unsure please contact this office.

Should anything in this report be unclear please contact the author for clarification.

YOURS FAITHFULLY,

DUNCAN PETERS. B.E. MIEA.
APPENDIX A
SUPPORTING DOCUMENTS
APPENDIX C
CLASSIFICATION OF DAMAGE DUE TO FOUNDATION MOVEMENTS
(Normative)

Classification of damage with reference to walls is given in Table C1. Classification of damage with reference to concrete floors is given in Table C2.

TABLE C1
CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

<table>
<thead>
<tr>
<th>Description of typical damage and required repair</th>
<th>Approximate crack width limit (see Note 1)</th>
<th>Damage category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hairline cracks</td>
<td>&lt;0.1 mm</td>
<td>0 Negligible</td>
</tr>
<tr>
<td>Fine cracks that do not need repair</td>
<td>&lt;1 mm</td>
<td>1 Very slight</td>
</tr>
<tr>
<td>Cracks noticeable but easily filled. Doors and windows stick slightly</td>
<td>&lt;5 mm</td>
<td>2 Slight</td>
</tr>
<tr>
<td>Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weather tightness often impaired.</td>
<td>5 mm to 15 mm (or a number of cracks 3 mm or more in one group)</td>
<td>3 Moderate</td>
</tr>
<tr>
<td>Extensive repair work involving breaking out and replacing sections of walls, especially over doors and windows. Window frames and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted</td>
<td>15 mm to 25 mm but also depends on number of cracks</td>
<td>4 Severe</td>
</tr>
</tbody>
</table>

NOTES:
1 Where the cracking occurs in easily repaired plasterboard or similar clad-framed partitions, the crack width limits may be increased by 50% for each damage category.
2 Crack width is the main factor by which damage to walls is categorized. The width may be supplemented by other factors, including serviceability, in assessing category of damage.
3 In assessing the degree of damage, account shall be taken of the location in the building or structure where it occurs, and also of the function of the building or structure.
### TABLE C2
CLASSIFICATION OF DAMAGE WITH REFERENCE TO CONCRETE FLOORS

<table>
<thead>
<tr>
<th>Description of typical damage</th>
<th>Approx. crack width limit in floor</th>
<th>Change in offset from a 3 m straightedge centred over defect (see Note 1)</th>
<th>Damage category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hairline cracks, insignificant movement of slab from level</td>
<td>&lt;0.3 mm</td>
<td>&lt;8 mm</td>
<td>0 Negligible</td>
</tr>
<tr>
<td>Fine but noticeable cracks. Slab reasonably level</td>
<td>&lt;1.0 mm</td>
<td>&lt;10 mm</td>
<td>1 Very slight</td>
</tr>
<tr>
<td>Distinct cracks. Slab noticeably curved or changed in level</td>
<td>&lt;2.0 mm</td>
<td>&lt;15 mm</td>
<td>2 Slight</td>
</tr>
<tr>
<td>Wide cracks. Obvious curvature or change in level</td>
<td>2 mm to 4 mm</td>
<td>15 mm to 25 mm</td>
<td>3 Moderate</td>
</tr>
<tr>
<td>Gaps in slab. Disturbing curvature or change in level</td>
<td>4 mm to 10 mm</td>
<td>&gt;25 mm</td>
<td>4 Severe</td>
</tr>
</tbody>
</table>

**NOTES:**
1. The straightedge is centred over the defect, usually, and supported at its ends by equal height spacers. The change in offset is then measured relative to this straightedge, which is not necessarily horizontal.
2. Local deviation of slope, from the horizontal or vertical, of more than 1:100 will normally be clearly visible. Overall deviations in excess of 1:150 is undesirable.
3. Account should be taken of the past history of damage in order to assess whether it is stable or likely to increase.
PHOTO 1 – Front View of Residence

PHOTO 2 – Right View of Residence

PHOTO 3 – Rear View of Residence
PHOTO 4 – WC on right side of Residence

PHOTO 5 – Front View of Laundry

PHOTO 6 – Front View of Shed
PHOTO 12 – Masonry Crack Front Verandah Wall

PHOTO 13 – Slab and Wall Separation WC
PHOTO 14 – Rear Wall Fibro Cracks

PHOTO 15 – Rear Wall Fibro Cracks