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Project No.: 2022-004

Levi & Cathy Littlejohn,
109 Rose Avenue,
Wheeler Heights, NSW 2097

Preliminary Landslip Assessment for 109 Rose Avenue, Wheeler Heights, NSW.

This letter report details the results of a preliminary landslip assessment required by Northern Beaches Council to accompany all new Development or Building Certificate Applications. It is a review of the design plans followed by a walk over visual assessment of the stability of the existing property, no insitu testing was undertaken.

The assessment follows the guidelines as set out in Section E10-Landslip Risk of Warringah Councils 2011 LEP Planning Rules.

1. Landslip Risk Class:

The site is located within Landslip Risk Class "D" as per sheet Landslip Risk Map _ Sheet 009 which is classified as Collaroy Plateau Area Flanking Slopes 5° to 15°.

2. Site Location:

The site is situated on the high eastern side of the road at the base of the escarpment. It is a rectangular block with a front western and a rear eastern boundary of 15.85m, a side north boundary of 36.145m and a side south boundary of 36.45m, as referenced from the provided survey plan.

3. Proposed Development:

It is understood that the proposed works involve alteration and addition to the existing structure. It is understood that a new top level is being proposed to the rear section of the structure. It is understood that bulk excavation is not proposed for the development of the site.

4. Existing Site Description:

The site is accessed via a concrete driveway along the north boundary that rises and extends east and is supported by a mortared sandstone rock wall along the northern side of the driveway. The southern front of the site is also occupied by a grass lawn (at similar level to the north-western side of the site) and along the eastern side is an interpreted sandstone bedrock ledge that is approximately 2.0m higher than the grass lawn and extends east and is also exposed below the site-dwelling (Photograph-1). The front of the site appears in good condition, signs of ground movement, unstable boulders or underlying geotechnical issues were not observed within the front of the site.



Photograph-1: Potential bedrock observed below the western side of the GFL. View looking east.

The centre of the site is broadly occupied by a one (southern half) and two (northern half) storey brick and timber dwelling that contains a timber deck and paved patio to the west and east of the site-dwelling, respectively. The dwelling extends north and south to approximately 1.50m from the northern and southern boundaries. Observation below the Ground Floor Level (GFL) identified that at least the western side of the GFL is supported by brick piers and walls which are then supported by the interpreted sandstone bedrock. Bedrock was also exposed at numerous locations within the site; therefore, it is likely that the site-dwelling is founded down to bedrock. Cracking, signs of ongoing settlement or underlying geotechnical issues were not observed within the site-dwelling and it appeared in good condition.



Photograph-2: Rear view of the site-dwelling. View looking down west from the rear of the site.

The eastern rear of the site is marked by a north-south striking bedrock ledge that is approximately 2.0m higher than the rear patio level and rises in level towards the east and is overlaid by grass lawn and several trees along the eastern boundary (Photograph-3). The eastern portion of the site did not contain any unstable boulder, signs of slope instability or underlying geotechnical issues and appeared in good condition.



Photograph-3: Rear of the site. View looking up east from the rear patio.

5. Neighbouring Property Conditions:

The neighbouring property to the north (No.107 Rose Avenue) is currently occupied by a one to two storey rendered brick dwelling which broadly occupies the eastern portion of the property. The property dwelling extends south to approximately 1.50m from the common boundary. The rear of the property contains a north-south striking rock ledge (at similar location to the ledge observed within the site) and overgrown vegetation. The western front of the site is currently occupied by two front concrete driveways and front gardens with relatively large trees ($\leq 15\text{m}$ high). The eastern portion of the property is at similar Ground Surface Level (GSL) to the site along the common boundary, whilst the western portion of the property is approximately 1.0m lower than the site along the common boundary. The property dwelling appeared in old condition, however cracking, signs of movement or underlying geotechnical issues were not observed within the property.

Limited observation was possible to the neighbouring property to the east (No. 20 Windermere Place). However, from the rear of the site it was observed that the property contained a one to two storey timber dwelling located within the centre of the block. The property dwelling is surrounded by a brick paved pathway and gardens along the southern and western sides and access is available via a concrete driveway facing towards Windermere Place. The property dwelling extends west to approximately 5m from the common boundary. Along the common boundary to the site, the neighbouring property contains a similar GSL to the site within the southern half and rises in level towards the north to approximately 1.50m higher than the site. Signs of instability, structure deflection, cracking, instable boulder or underlying geotechnical issues were not observed within the neighbouring property and appeared in good condition.

The neighbouring property to the south (No.260 South Creek Road) is currently vacant. The property block is moderately west dipping and contains a grass lawn and rock outcrop within the higher eastern portion and dense vegetation including large trees ($\leq 15\text{m}$ tall) within the lower western portion of the block. The neighbouring property is at similar GSL to the site along the common boundary. Unstable boulders, slope instability, tilted trees or signs of underlying geotechnical issues were not observed within the neighbouring property and appeared in a stable and good condition.

6. Assessment:

Based on the above items and on Councils flow chart check list (Page: 2 of 2 in Section E10), i.e., does the present site or proposed development contain:

- | | |
|--------------------------------|-----|
| • History of Landslip | No |
| • Proposed Excavation/Fill >2m | No |
| • Site developed | Yes |
| • Existing Fill >1m | No |
| • Site Steeper than 1V:4H | No |
| • Existing Excavation >2m | No |
| • Natural Cliffs >3m | No |

It is considered that a detailed Landslip Risk Assessment is not required for this Development Application.

7. Date of Assessment: 3rd February 2022.

8. Assessment by:



Marvin Lujan
Geotechnical Engineer

9. References:

- Conceptual Design Drawings – by H & C Design Pty Ltd, Date: October, 2021, Job No.: 21101 -01 and Drawings: Ground Floor Plan, First Floor Plan, Western Elevation (E), Northern E., Southern E. and Eastern E.
- Existing Site Dwelling Plan – by Cape Cod Australia Pty Ltd, Drawing No.: 4131/99 and Date: 16/08/99.