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3 Elizabeth Place
Brookvale NSW 2100

Preliminary Landslip Assessment for 3 Elizabeth Place, Brookvale, 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 "B" as per sheet Landslip Risk Map _ Sheet 008A which is classified Flanking Slopes 5° to 25°.

2. **Site Location:**

The site is situated on the high western side of the road within gentle to moderate (<18°) east dipping topography with Consul Road passing the rear, upslope west boundary. It is a broadly rectangular block with front eastern and rear western boundaries of 13.715m and side northern and southern boundaries of 63.27m as referenced from the provided survey plan.

3. **Proposed Development:**

It is understood that the proposed works involve the demolition and clearing of the existing site structure and the subsequent construction of a new one and two storey dwelling with basement garage level partially excavated below existing surface levels. The excavation is anticipated to extend to a maximum depth of 0.80m below existing ground levels. Additional works involve the construction of a new single storey ancillary residence (granny flat) within the rear of site and primarily accessed from the rear western boundary with Consul Road. This structure is proposed to be elevated above existing ground levels and therefore will not require any bulk excavation.

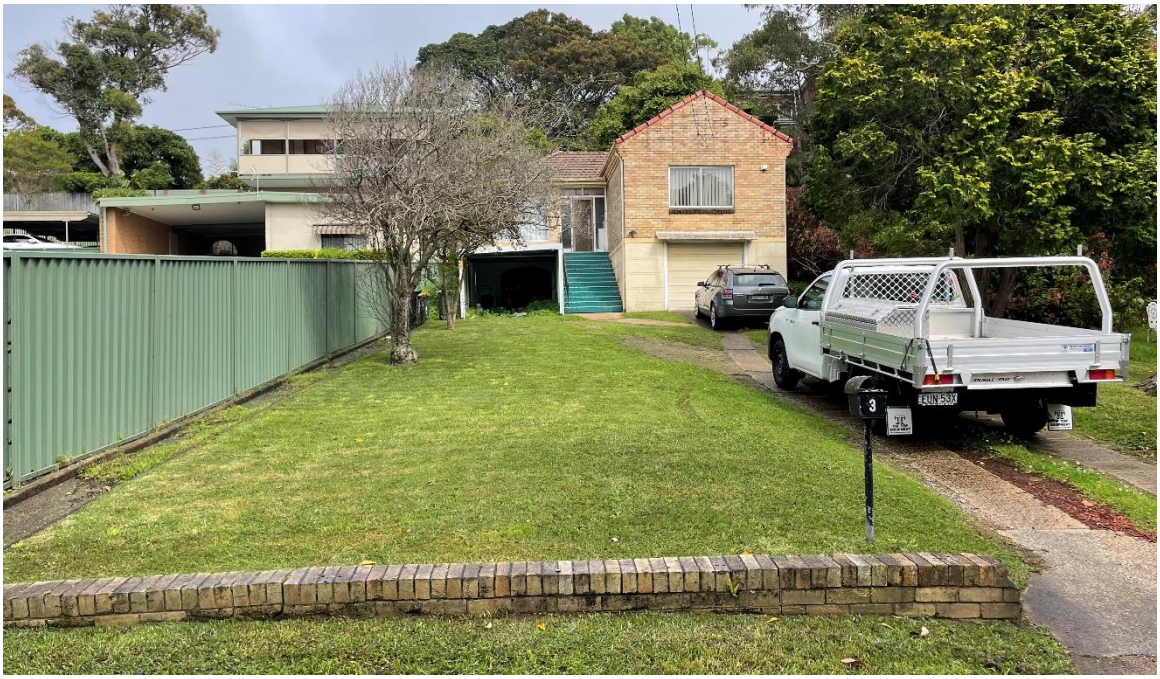
4. **Existing Site Description:**

The site is located at mid slope level with the majority of the block within gentle to moderate east sloping topography. The road is relatively flat where it passes the site with a bitumen surface and concrete gutter. There were no signs of excessive settlement or cracking observed within any of the structures adjacent to the front of the site to indicate any underlying geotechnical concern.

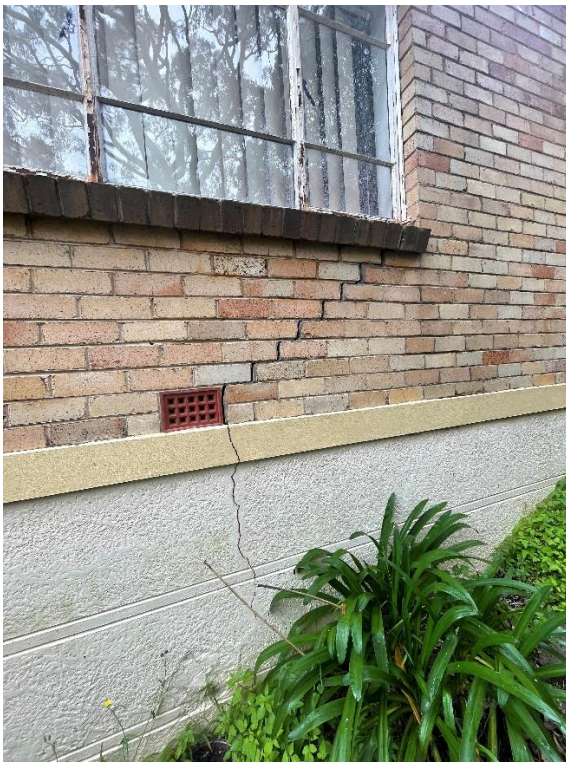
Consul Road passes the rear of the site and comprises a bitumen pavement with no kerb or gutter. The road reserve is then gently to moderately east dipping and vegetated.

The front of the site comprises a gently east dipping lawn with a concrete strip driveway extending from the roadway to the front edge of the dwelling. The dwelling comprises a one and two storey masonry structure with the lower level partially excavated below pre-development levels. The structure is anticipated to be of >40 years construction age and exhibits signs of deterioration. A relatively large crack was observed on the

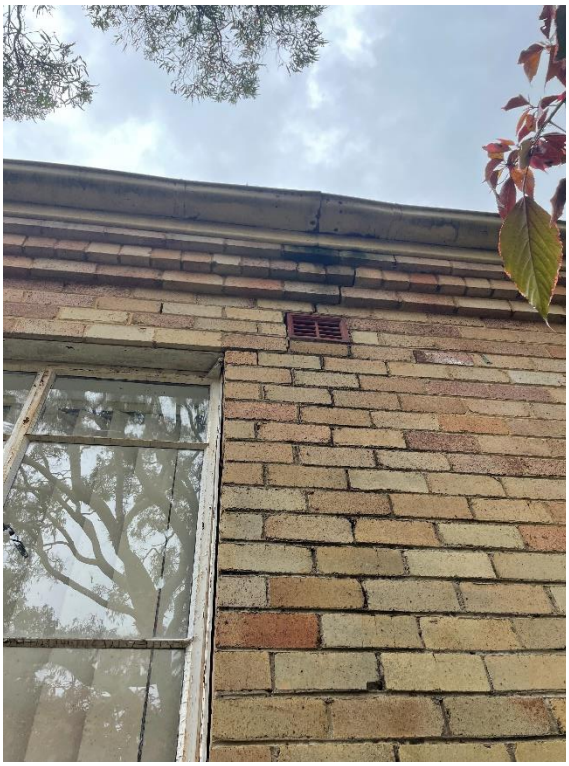
northern side of the structure propagating through render and the mortar lines from the base of the structure to the roof. This crack is interpreted as a result of differential settlement of the front and rear portion of the dwelling with the latter likely founded atop/closer to materials of greater strength due to its extension into the slope. Photographs 1 and 2 below provide views of the front of site and the dwelling.



Photograph 1: View of the front of site, looking broadly west from the roadway



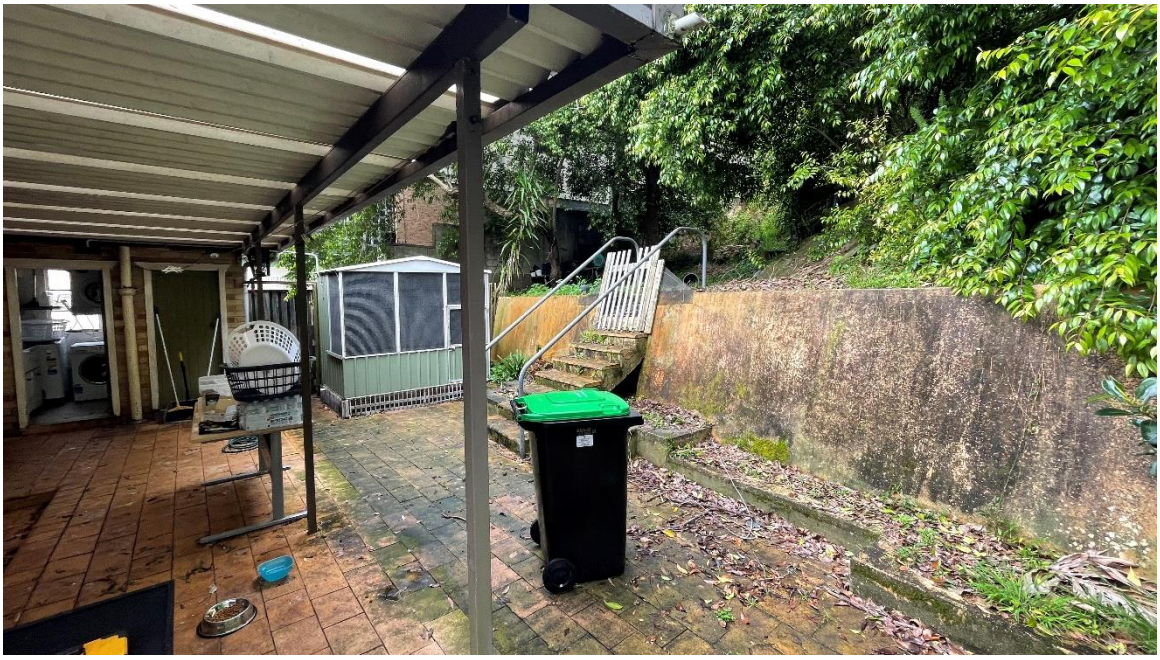
Photograph 2: View of the cracking on the northern dwelling wall (lower portion)



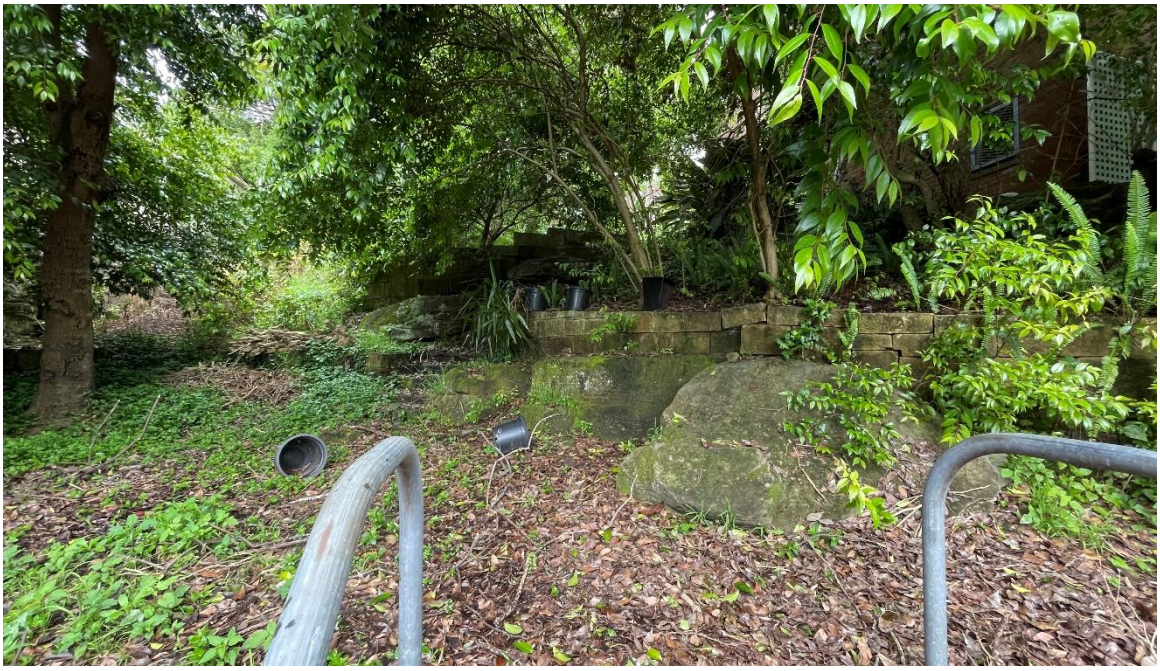
Photograph 3: View of the cracking on the northern dwelling wall (upper portion)

Access to the rear of the site was gained via a gently east dipping concrete pathway which extends around the northern edge of the dwelling. A tiled courtyard area is situated directly adjacent to the dwelling and is bounded to the west by a concrete wall retaining approximately 1.50m of soils upslope. No cracking or rotation was observed within the retaining wall to indicate any impending geotechnical concern.

Further upslope of the wall, the rear of site comprises a moderately east dipping vegetated garden area with some sandstone block retaining walls forming level terraces. Sandstone was observed outcropping in multiple locations throughout the rear garden where it was interpreted as both bedrock and as boulders. Photograph 4 and Photograph 5 below provide views of the rear portion of site.



Photograph 4: View of the rear courtyard of site, looking broadly south west from the northern boundary



Photograph 5: View of the rear graden of site, looking broadly west from the top of the retaining wall

5. Neighbouring Property Conditions:

The neighbouring property to the north (No. 5 Elizabeth Place) contains a one and two storey masonry dwelling setback from the shared boundary a minimum of 1.00m. The property is situated at similar ground levels to the site and contains large sandstone bedrock outcrops which were preliminarily classified as at least low strength. The neighbouring structure is estimated to be of >40 years construction age, was visible founded atop sandstone bedrock and appeared in good condition with no signs of excessive settlement or cracking observed on the visible aspects.

The neighbouring property to the south (No. 1 Elizabeth Place) contains a two storey masonry dwelling setback from the shared boundary by a minimum of 0.80m. The property shares similar ground levels as the site along the shared boundary with the exception of a portion adjacent to the rear garden where the neighbouring property is retained up to 1.20m above the site via a sandstone block boundary wall. The boundary wall exhibited some signs of cracking however there were no other indications of excessive settlement or impending instability on the visible aspects of the neighbouring structures.

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., Based on the observed cracking within the existing dwelling, structures have an inherent risk of differential settlement within the site. Therefore, care must be taken to ensure that all new footings are founded within material of similar strength.

7. Date of Assessment: 21st October 2022.

8. Assessment by:

James Dee
Geotechnical Engineer

9. References:

- Design Drawings – Adriano Pupilli Architects, Project: ELI, Drawing No.: 001A – 0014A, Dated: 5/9/22
- Site Survey – Peak Surveying Services, Job No.: 22-1812, Dated: 17/03/2022