

PRELIMINARY GEOTECHNICAL REPORT

Landslip Risk – Area B

18 Libya Crescent ALLAMBIE HEIGHTS

prepared by

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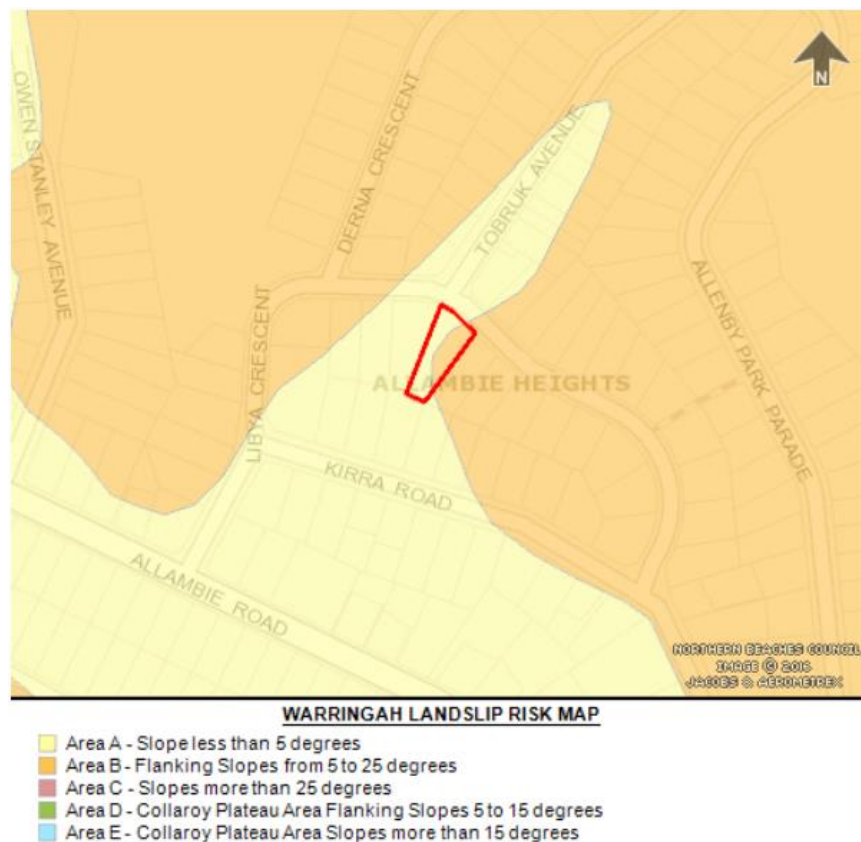
17 June 2021

This Preliminary Geotechnical Report is submitted in compliance with the Northern Beaches Council LEP 2011 in relation to the proposed development at 18 Libya Crescent, Allambie Heights.

1. GUIDELINES

Northern Beaches Council's Landslide Risk Map below indicates that the subject property is bisected by the delineation of Land Slip Risk Class A and Class B. Accordingly, it has been conservatively interpreted that the requirements of the more stringent of the two classes, being Class B, is appropriate for this development application.

Section E10 of NBC's LEP 2011 states of a development in an area of Landslip Risk Class B, that a *"Preliminary (geotechnical) assessment of the site conditions required to determine whether a geotechnical report is required"*.



2. PROPOSED DEVELOPMENT

- 2.1 The proposed development is the addition of a second level to part of the existing residence.
- 2.2 Details of the proposed development are shown on seven drawings prepared by Cape Cod Australia (Job No 8082). The Site (Survey) Plan, being Cape Cod's drawing 2, is included as Appendix A.
- 2.3 As the proposed development comprises building above the existing residence, no excavations or fills are either shown on the plans or required.
- 2.4 The site shows no evidence or indications of historical ground movement that could have occurred since the original cottage was developed. I am not aware of any historical instability on the property.

3. SITE LOCATION

- 3.1 The site was inspected on 15 June 2021.
- 3.2 The subject residential block is located on the high side of Libya Crescent opposite the intersection of Tobruk Avenue, in Allambie Heights NSW. The land has a northerly gradient and aspect towards its frontage on Libya Crescent.

At the rear of the house is a swimming pool, immediately behind which is Exposed a substantial homogeneous sandstone incline rising (~1.9m rise over a 4.2m run) to the substantial back yard which consists of a very shallow layer of topsoil (~10-15cm) over the Sandstone substrata.

It was observed that the geology of the block is characterised by the shallow underlay of extensive platforms of Hawkesbury Sandstone which is estimated to be at least of medium strength.

4. **SITE DESCRIPTION**

The block is essentially divided into two horizontal platforms across the site. The street frontage of the block presents with a landscaped rise of approximately two meters from the public footpath to the generally horizontal front yard. Extensive outcrops of the underlying Hawkesbury Sandstone are visible in the front yard, most noticeably immediately at the front foundations of the existing residence.

The surface features of the block are determined by the underlying Hawkesbury Sandstone bedrock that naturally steps across the site forming sub horizontal benches between the steps.

Upon the lower bench is situated the front yard, the existing House structure, and the swimming pool at the rear of the house.

The upper bench constitutes the elevated backyard extending to the rear boundary. In both situations the underlying Hawkesbury Sandstone is either at very shallow depth or surface exposed in outcroppings.

The sandstone contains no undercutting that could affect its stability. Any jointing observed in the sandstone is minor in nature, widely spaced, and no potential wedge forming defects were observed.

An under-house inspection indicated that the existing single story rendered brick house is founded directly on the sandstone bedrock. Its walls show no signs of movement or cracking.

No signs of movement related slope instability were detected on the site. No signs of geotechnical hazards that could impact the subject property were evident on the adjoining properties as observed from the roadway and the subject property.

Furthermore, with the proposed roof being atop the existing roof, there will be no increase in rainwater catchment or concentration, and rainwater runoff from the new roof is detailed to be directed to the existing stormwater drainage system.

RECOMMENDATIONS

The proposed development and site conditions were considered and applied to the NBC LEP Section E10 flow chart (Appendix B), entitled '*Checklist for Council's assessment of Site Conditions and need for Geotechnical Report in Geotechnical Class B and D*'.

With consideration of the nature and scope of the proposed development, the integrity of the existing house structure, and the sound and stable geotechnical conditions of the site it is recommended that no further geotechnical assessment is required.

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SITE PLAN



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Appendix B

CHECKLIST FOR COUNCIL'S ASSESSMENT OF SITE CONDITIONS AND NEED FOR GEOTECHNICAL REPORT IN GEOTECHNICAL CLASS B AND D

