PRELIMINARY GEOTECHNICAL ASSESSMENT
FOR
PROPOSED ALTERATIONS AND ADDITIONS
AT
56 DARLEY STREET, KILLARNEY HEIGHTS

1.0 INTRODUCTION.

1.1 This assessment has been prepared to accompany an application for development approval.

1.2 The site is located in land that is subject to Area B on the Landslip Risk Map. The methods used in this Assessment are based on those described in Landslide Risk Management March 2007, published by the Australian Geomechanics Society. Also Council checklist contained within Clause E10 of Warringah DCP and the WLEP Map identifying the Landslip Risk Class as highlighted (red) below:-

	LANDSLIP RISK CLASS *(Highlight indicates Landslip Risk Class of property)*
☐	*A Geotechnical Report not normally required*
☒	*B Geotechnical Engineer (Under Council Guidelines) to decide if Geotechnical Report is required*
☐	*C Geotechnical Report is required*
☐	*D Council officers to decide if Geotechnical Report is required*
☐	*E Geotechnical Report required*

1.3 The experience of Hodgson Consulting Engineers spans some 25 years in Northern Beaches and the Greater Sydney area.

2.0 PROPOSED DEVELOPMENT

2.1 Demolition of the existing driveway and garage. Construction of a new driveway, carport and first floor level deck at the northern side of the existing residence.

2.2 Details of the proposed development are shown on a series of architectural drawings prepared by Casa Studio, Dwg Nos: 1 to 12, Version A and dated 22nd March, 2024.

3.0 SITE LOCATION

3.1 The site was inspected for this assessment on the 30th April, 2024.

3.2 This average sized trapezoidal shaped residential block has an easterly aspect. From the road frontage the site falls steeply to the east at approximately 15 to 25 degrees before flattening out near the front of the existing residence to a moderate slope before the rear boundary. A cross fall exists to the south east that is a moderate to steep slope at approximately 10 to 20 degrees.

4.0 SITE DESCRIPTION

4.1 From the road frontage a concrete driveway crossing starts at the north western corner of the property heading east before turning south towards the semidetached double garage. Pedestrian access to the main entrance is via a landscaped pathway and stairs uphill of the driveway that leads to a ground floor level patio at the front of the existing residence. Several small landscaping retaining walls have been used to support the slope around the patio area. Access to the rear of the property is via the driveway and gated fence on the north eastern corner of the existing garage. At the rear of the existing residence is a gently sloping lawn area. Along the eastern side boundaries there is a sandstone driveway access for the neighbouring property.

4.2 The existing residence is of brick veneer construction supported on strip and pad footings. At the time of our inspection no significant geotechnical hazards were identified and the existing residence was in fair to good condition with no signs of significant movement due to geotechnical instability. Some cracking in the brickwork was observed possibly due to the lack of expansion joints and stepping foundations.

5.0 RECOMMENDATIONS

5.1 The proposed alterations and additions will require minimal excavation for the new footings that are required. The depth to the underlying bedrock is approximately 0.5 to 1.0 metres. We recommend that the new foundations are to be taken to the underlying bedrock.

5.2 The proposed alterations, additions and existing site conditions were considered and applied to the Council Flow Chart for class B area as contained within Clause E10 of Warringah DCP and the WLEP. Based on this preliminary assessment, the proposed development works would be considered satisfactory from a Geotechnical and landslip perspective subject to the application of good engineering practice for the structural design and construction methods. As it is not proposed to undertake any major excavation for the future works it is therefore recommended that no further geotechnical assessment is required.

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