

PRELIMINARY GEOTECHNICAL ASSESSMENT:

42 Beacon Hill Road, Beacon Hill

1.0	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 - Geotechnical Engineer (Under Council Guidelines) to decide if Geotechnical Report is required
☐	E - Geotechnical Report required

2.0 Proposed Development

- 2.1** Construct a new first floor addition.
- 2.2** No excavations or fills are shown on the plans.
- 2.3** Details of the proposed development are shown on 26 drawings prepared by Drafting Help, Revision A, drawings numbered CV, SP, 1 to 16, NP, S1 to S3, SA, N1, N2, and B1, dated 23/9/20.

3.0 Site Location

- 3.1** The site was inspected on the 30th September, 2020, and previously on the 2nd October, 2018.
- 3.2** This residential property is on the low side of the road and has a NE aspect. It is located on the gently graded middle reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops at the lower boundary. Where sandstone is not exposed, it is expected to underlie the surface at relatively shallow depths. The natural surface of the block has been altered with an excavation for a pool on the

downhill side of the property. The proposed development will not alter the surface further for the proposed works.

3.3 The site shows no indications of historical movement in the natural surface that could have occurred since the property was developed. We are aware of no history of instability on the property.

4.0 Site Description

From the road frontage, the natural slope falls at an average angle of $\sim 6^\circ$ to the top of a $\sim 2.5\text{m}$ high rock face that lines the lower common boundary. At the road frontage, a tile-paved driveway runs to a stable two-storey rendered garage on the uphill side of the property. A fill on the neighbouring property to the NW is supported by a $\sim 1.7\text{m}$ high concrete block retaining wall that shows cracking through the mortar and minor settlement (Photo 1). See **Section 5.0** for recommendations regarding this wall. The single-storey rendered masonry house is supported on masonry walls. The supporting walls of the house display no significant signs of movement. A concrete patio area extends off the downhill side of the house. A portion of the property extends to the N where a pool has been cut into the slope. Minor cracking was observed along the rim of the pool but the water level indicates no ground movement has occurred in the shell of the pool since its construction. A $\sim 2.5\text{m}$ high sandstone rock face falls along the lower boundary. A portion of the rock is slightly undercut near the midpoint of the lower boundary (Photo 2). The undercut joint block has a relatively thick cantilever arm in relation to its overhang length, is bridged at its S side, and does not show any cracking through the supporting cantilever arm as viewed from above or below. As such, we consider it to be currently stable. The area surrounding the house is mostly paved or lawn covered. No signs of movement associated with slope instability were observed on the grounds. The adjoining neighbouring properties were observed to be in good order as seen from the road and the subject property.

5.0 Recommendations

The proposed development and site conditions were considered and applied to the Council Flow Chart.

The concrete block retaining wall supporting the fill on the NW neighbouring property is cracked and shows minor settlement (Photo 1). To be prudent, we recommend the retaining wall be inspected by the owners on an annual basis or after heavy prolonged rainfall, whichever occurs first, keeping a photographic record of the inspections. We can carry out these inspections upon request. Should any new movement be observed, the geotechnical consultant is to be engaged to assess the movement and provide remedial advice if necessary.

Provided good engineering and building practice are followed, no further Geotechnical assessment is recommended for the proposed development. This is subject to the recommended maintenance above being carried out.

White Geotechnical Group Pty Ltd.



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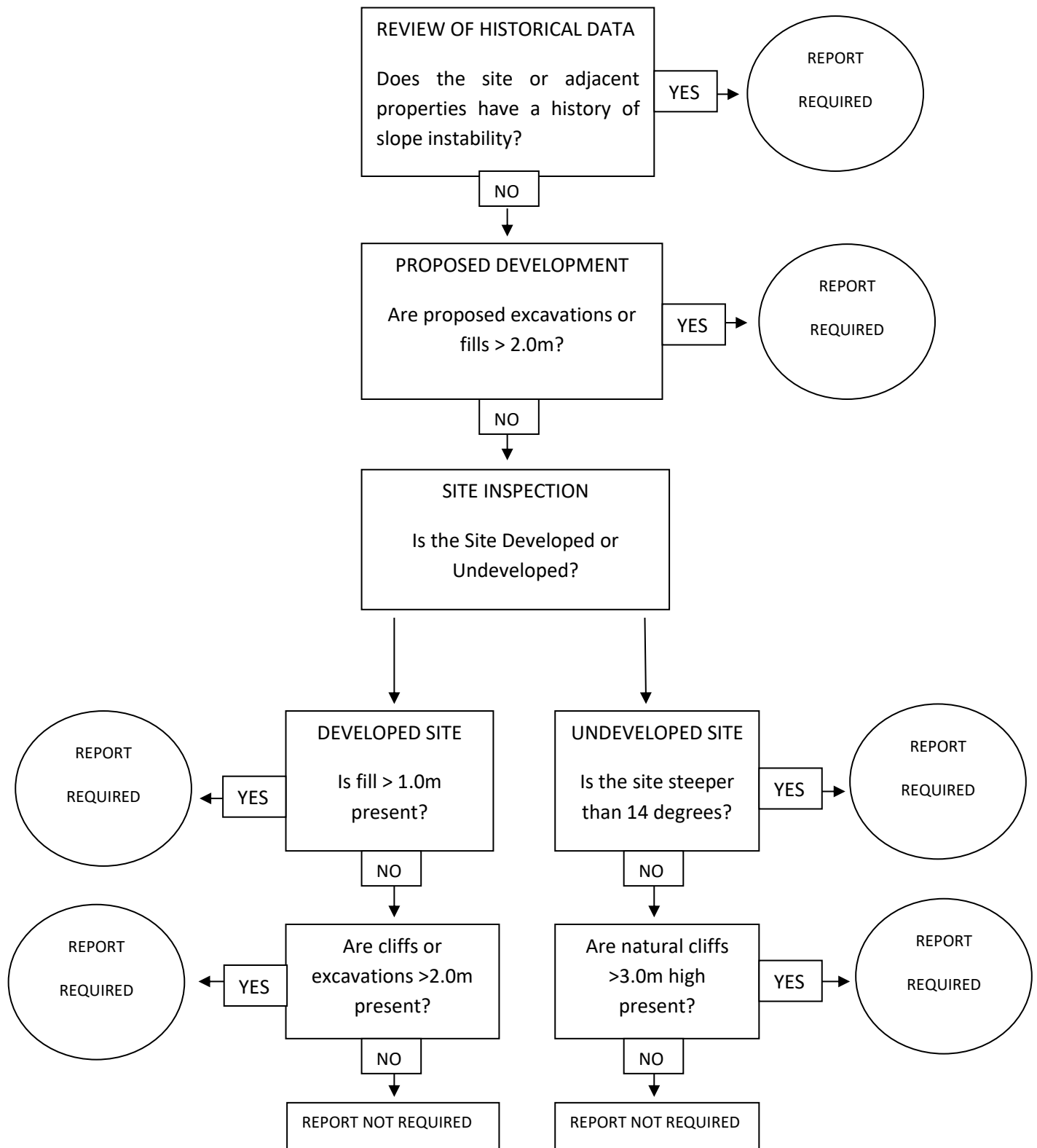


Photo 1



Photo 2

Preliminary Assessment Flow Chart – Northern Beaches Council (Warringah)



Information about your Preliminary Assessment

This Preliminary Assessment relies on visual observations of the surface features observed during the site inspection. Where reference is made to subsurface features (e.g. the depth to rock) these are interpretations based on the surface features present and previous experience in the area. No ground testing was conducted as part of this assessment and it is possible subsurface conditions will vary from those interpreted in the assessment.

In some cases, we will recommend no further geotechnical assessment is necessary despite the presence of existing fill or a rock face on the property that exceed the heights that would normally trigger a full geotechnical report, according to the Preliminary Assessment Flow Chart. Where this is the case, if it is an existing fill, it is either supported by a retaining wall that we consider stable, or is battered at a stable angle and situated in a suitable position on the slope. If it is a rock face that exceeds the flow chart limit height, the face has been deemed to be competent rock that is considered stable. These judgements are backed by the inspection of over 5000 properties on Geotechnical related matters.

The proposed excavation heights referred to in section 2.0 of this assessment are estimated by review of the plans we have been given for the job. Although we make every reasonable effort to provide accurate information excavation heights should be checked by the owner or person lodging the DA. If the excavation heights referred to in in section 2.0 of this assessment are incorrect we are to be informed immediately and before this assessment is lodged with the DA.
