

PRELIMINARY GEOTECHNICAL ASSESSMENT:
8 James Wheeler Place, Wheeler Heights

1.0	LANDSLIP RISK CLASS (Highlight indicates Landslip Risk Class of property)
<input type="checkbox"/>	A - Geotechnical Report not normally required
<input type="checkbox"/>	B - Geotechnical Engineer (Under Council Guidelines) to decide if Geotechnical Report is required
<input type="checkbox"/>	C - Geotechnical Report is required
<input checked="" type="checkbox"/>	D - Geotechnical Engineer (Under Council Guidelines) to decide if Geotechnical Report is required
<input checked="" type="checkbox"/>	E - Geotechnical Report required

2.0 Proposed Development

- 2.1** Add a new entry to the games room and ensuite to the bed room on the same level as well as other minor internal alterations.
- 2.2** No excavations are required. No fills are shown on the plans.
- 2.3** Details of the proposed development are shown on 13 drawings by Northern Beaches Designs, numbered 1914 DA 1 to 13 and dated 26.5.19.

3.0 Site Location

- 3.1** The site was inspected on the 18th June, 2019.
- 3.2** This residential property is on the high side of the road and has a W aspect. It is located on the moderately to steeply graded lower reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops beside the house and immediately above. 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 excavations to create a level platform for the lower level of the house and low cutting

and filling for the surrounding landscaping. The proposed development will not alter the surface further.

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

The natural slope rises across the site at angles of $\sim 20^\circ$ before easing above the house. At the road frontage a concrete driveway cuts the slope diagonally and runs to a garage on the lower level of the house. The slope below the driveway has recently been landscaped and is populated with recent plantings and four mature gums. Access around the house is provided by corridors on either side. A cut face on the N side exposes the subsurface profile consisting of shallow soil over sandstone bedrock. The 4 level brick house is supported on brick walls. The visible external walls show no significant cracking or other signs of slope instability. No internal access was available at the time of the inspection. A concrete slab extends from the uphill side of the house to a low rock face $\sim 1.4\text{m}$ high. The rock is Medium Strength sandstone and is considered stable. Above the rock face the slope eases and a lawn extends to the uphill boundary. No signs of movement associated with slope instability were observed on the grounds. No cliffs or large rock faces were observed on the property or in the near vicinity. The adjoining neighbouring properties were observed to be in good order as seen from the road and the subject property.

5.0 Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed below or beside or above the property. The steep slope that rises across the property is a potential hazard (**Hazard One**).

Risk Analysis Summary

HAZARDS	Hazard One
TYPE	The steep slope that rises across the property failing and impacting on the existing house and proposed works.
LIKELIHOOD	'Unlikely' (10^{-4})
CONSEQUENCES TO PROPERTY	'Medium' (20%)
RISK TO PROPERTY	'Low' (2×10^{-5})
RISK TO LIFE	2.1×10^{-7} /annum
COMMENTS	This level of risk is 'ACCEPTABLE'.

(See Aust. Geomech. Jnl. Mar 2007 Vol. 42 No 1, for full explanation of terms)

6.0 Recommendations

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

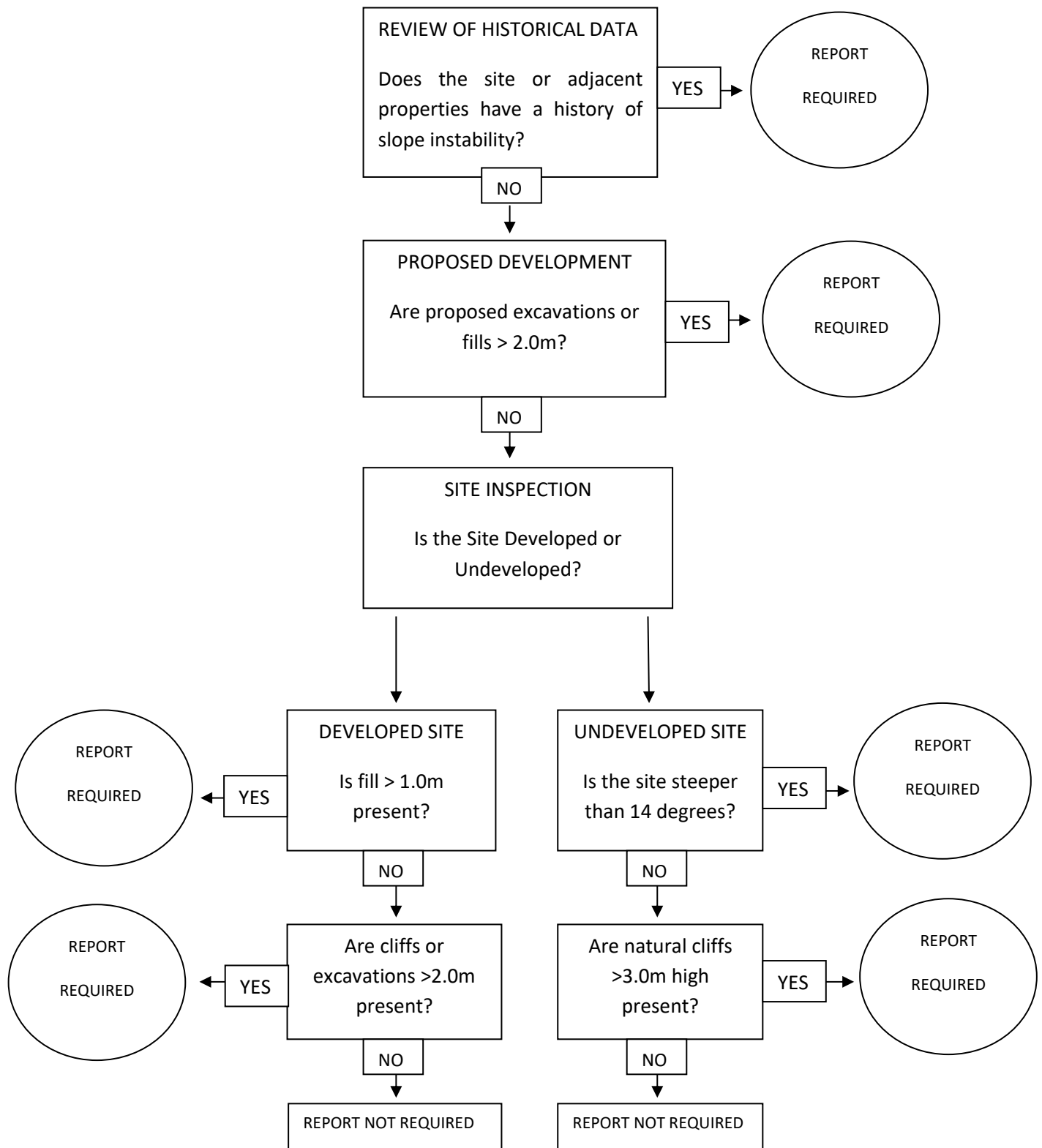
Provided good engineering and building practice are followed, no further Geotechnical assessment is recommended for the proposed development.

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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.
