

PRELIMINARY GEOTECHNICAL ASSESSMENT:

77 Ballyshannon Rd, Killarney Heights

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

2.0 Proposed Development

- 2.1** Demolish the existing garage in the NE corner of the property and construct a new carport in the same location
- 2.2** Slightly extend the N side of the house.
- 2.3** Construct a new bridge to the house from the driveway.
- 2.4** Extend the deck on the downhill side of the house.
- 2.5** Convert the existing garage on the uphill side of the house into a studio with loft over.
- 2.6** Install a new spa on the downhill side of the property.
- 2.7** Square off the existing pool.
- 2.8** Various other internal and external alterations.
- 2.9** Apart from those for footings, no excavations are required. No fills are shown on the plans.

- 2.4** Details of the proposed development are shown on 17 drawings prepared by Urban and Co, Project number 20-01, sheets numbered 01, 02, and 04 to 18, Revision 12, dated 19/5/20.

3.0 Site Location

- 3.1** The site was inspected on the 10th November, 2020.

3.2 This residential property is on the low side of the road and has a SW aspect. The block runs longways to the W so the slope is a cross-fall. It is located on the gentle to moderately graded upper middle reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops and steps down the property. 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 filling for the existing driveway and for landscaping 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

The natural slope falls across the property at an average angle of ~12°. At the road frontage, a brick-paved driveway runs to two stable garages on the uphill side of the property. The fill for the driveway is supported by a stable concrete block retaining wall reaching ~0.5m high. The wall was observed to be supported directly onto outcropping sandstone between the driveway and the house. The outcrop steps down ~2.0m. The outcrop displays no significant geological defects and is considered stable. The two-storey rendered masonry and timber framed and clad house is supported on masonry walls. The supporting walls of the house display no significant signs of movement. A pool has been installed on the downhill side of the property. No significant signs of movement were observed in the concrete shell of the

pool. Filling has been placed around the pool for landscaping. The fill is supported at its N end by a stable stack rock retaining wall ~0.4m high and at its S end by a stable ~1.0m high treated timber retaining wall. The walls approximate the lower boundary. Both walls were observed to be supported directly onto outcropping sandstone. Near the top of the outcropping rock face, a portion of the rock is undercut to ~1.0m (Photo 1). The undercut joint block has a relatively thick cantilever arm in relation to its overhang length, is bridged at both sides, and does not show any jointing or 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.

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

White Geotechnical Group Pty Ltd.

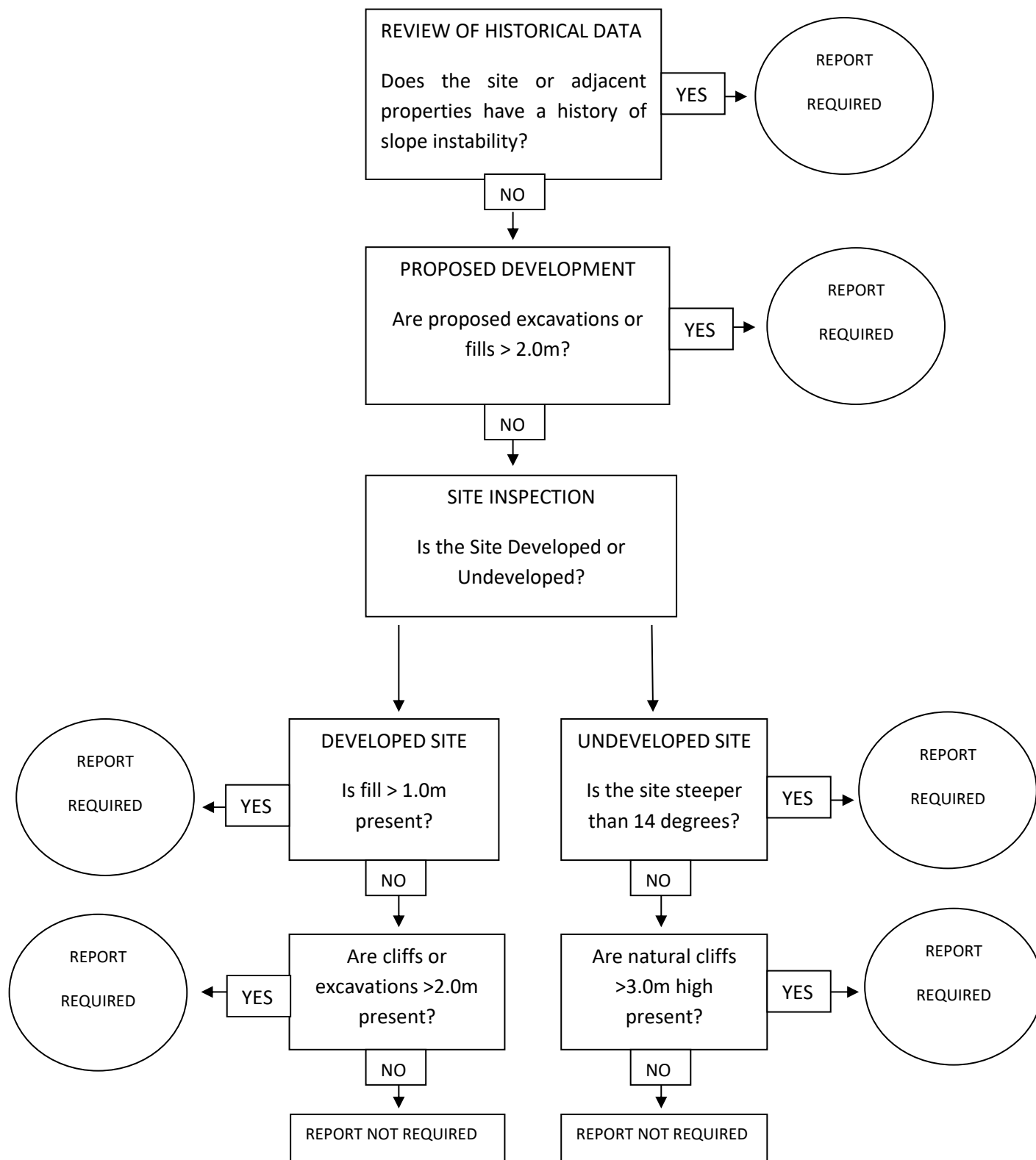


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Photo 1

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.
