

PRELIMINARY GEOTECHNICAL ASSESSMENT:

142 Melwood Avenue, Killarney Heights

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** Demolish the existing bridge and the uphill side of the house and construct a new carport on the uphill side of the property by excavating to a maximum depth of ~1.8m.
- 2.2** Construct a new deck on the downhill side of the house.
- 2.3** Construct a new above-ground pool on the downhill side of the property.
- 2.4** Various other minor internal and external alterations.
- 2.5** No fills are shown on the plans.
- 2.6** Details of the proposed development are shown on 14 drawings prepared by Site Design Studios, drawing number 1411, drawings numbered L-01 to L-14, Issue D, dated 31/5/23.

3.0 Site Location

- 3.1** The site was inspected on the 6th September, 2022.

3.2 This residential property is on the low side of the road and has a SW aspect. It is located on the moderately graded upper reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops on the downhill side of 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 an excavation for the existing parking area and with filling used for landscaping across the downhill side of the property. An excavation to a maximum depth of ~1.8m will be required to construct the proposed carport.

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 site at an average angle of ~14°. At the road frontage, a concrete driveway runs to a parking area between the road frontage and the house. The cut for the parking area is supported by a brick retaining wall ~1.0m high. The SE end of this wall reaches a maximum height of ~2.0m. The wall displays some vertical cracking and a small amount of deflection but will be demolished as part of the proposed works. The two-storey brick house is supported on brick walls and brick piers. No significant signs of movement were observed in the supporting walls and the visible supporting brick piers stand vertical. Some of the supporting walls were observed to be supported directly onto outcropping sandstone bedrock on the downhill side of the house. A concrete-paved fill extends off the downhill side of the house. The fill is supported by a brick retaining wall reaching ~0.6m high. This wall displays some vertical cracking but no signs of deflection and is considered stable. The wall was observed to be supported directly onto outcropping sandstone bedrock. The outcropping bedrock steps down the slope to the lower common boundary and displays no significant geological defects. The area surrounding the house is mostly paved or garden 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.



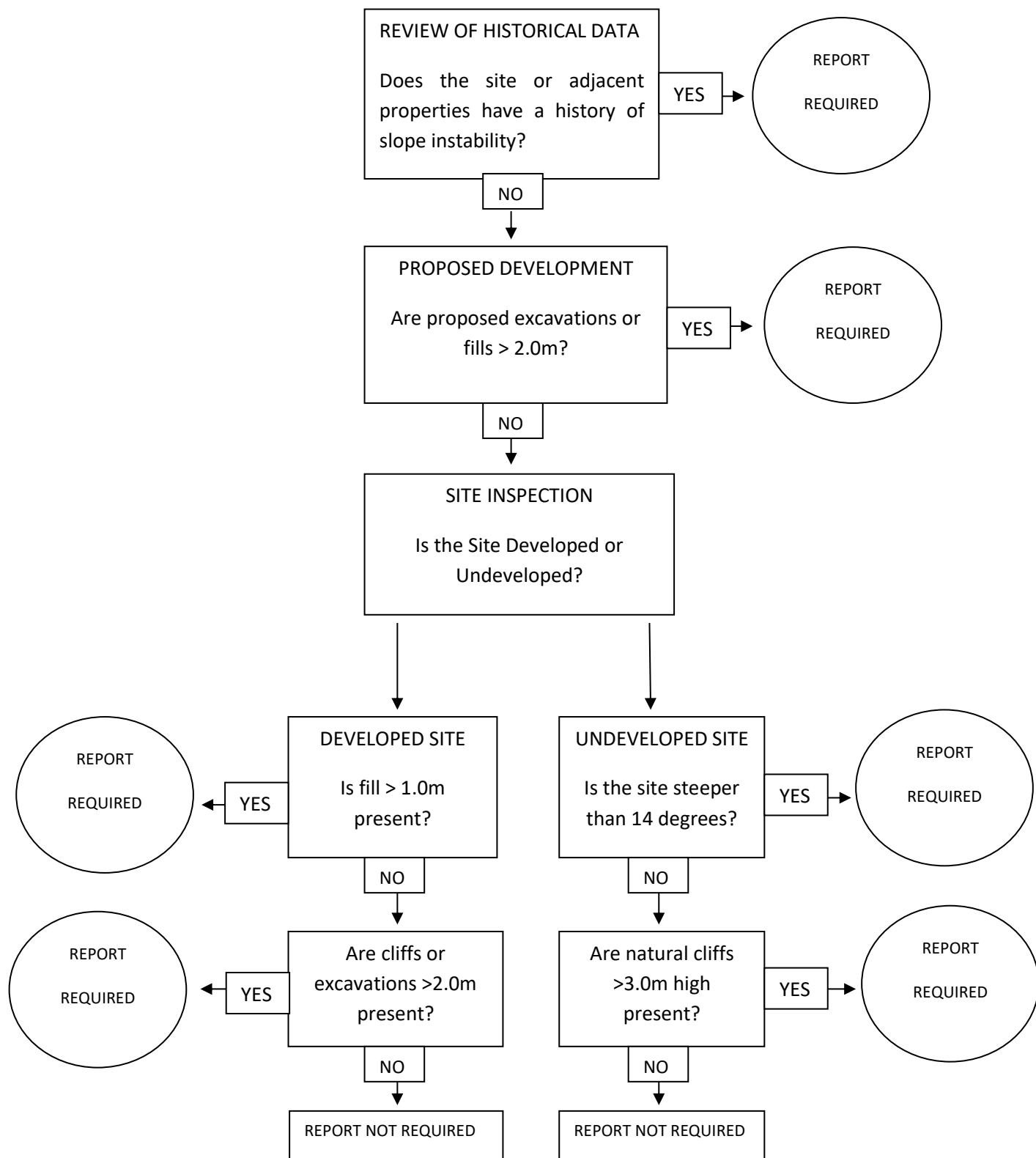
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Preliminary Assessment Flow Chart – Northern Beaches Council (Warringah)



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.
