

**PRELIMINARY GEOTECHNICAL ASSESSMENT:**  
**55 Binalong Avenue, Allambie Heights**

<b>1.0</b>	<b>LANDSLIP RISK CLASS</b> (Highlight indicates Landslip Risk Class of property)
<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** Construct a new lift connecting the carport with the house.
- 2.2** No significant excavations or fills are shown on the plans.
- 2.3** Details of the proposed development are shown on 3 drawings prepared by High Design, drawings numbered 1-3 913 20 HD to 3-3 913 20 HD, dated February 2021.

## 3.0 Site Location

- 3.1** The site was inspected on the 20<sup>th</sup> April, 2021.
- 3.2** This residential property is on the high side of the road and has a NE aspect. It is located on the moderate to steeply graded lower middle reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops on the uphill and downhill side of the house. 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 a cut for the house and filling for the carport, pavements, steps and garden and lawn areas across 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 rises from the downhill property boundary to the downhill side of the house at an angle of  $\sim 19^\circ$  before easing to gentle angles on a bench in the slope. A sandstone rock face  $\sim 6\text{m}$  high is located on the uphill side of the house. The slope above the rock face rises at gentle angles.

At the road frontage, a concrete and brick paved driveway runs up the slope to a carport on the downhill side of the house. Fill provides level platforms for the carport and a lawn area on the NW side of the carport. The fill for the carport has been placed on outcropping Medium Strength Hawkesbury Sandstone. The fill batter is vegetated and stable. The fill for the lawn is supported by a low rendered retaining wall. Sandstone bedrock is outcropping on the uphill side of the carport. Soil and clay is visible below the base of the rock and a portion of the rock is undercut by up to  $\sim 0.6\text{m}$ , but the rock is considered to be stable. Fill provides level platforms for a pavement and garden area on the downhill side of the house. A stable keystone retaining wall up to  $\sim 1.5\text{m}$  high supports the garden fill. A stable brick retaining wall  $\sim 2.4\text{m}$  and a low sandstone retaining wall support the fill for the pavement. It is expected that the lower portion of the brick wall sits in front of outcropping bedrock and only the upper portion supports fill.

The single storey brick house is supported by brick walls, brick piers and timber posts. The external supporting walls show no significant signs of movement. A Medium Strength Hawkesbury Sandstone rock face  $\sim 6\text{m}$  high is located on the uphill side of the house. The upper portion of the rock face is undercut by up to  $\sim 1\text{m}$  but is considered to be stable. Part of the lower portion of the rock has been cut to provide a level platform for the house. A low rough stack rock retaining wall supports a filled garden area above the S side of the rock face on the S neighbouring property. Fill provides a platform for steps on the N side of the house.

The fill is supported by a low brick retaining walls and an old ~1.5m high sandstone flagging retaining wall. The mortar in the flagging wall is heavily cracked but the rock components of the wall appear to be in stable positions. The steps run a to a spiral steel staircase that leads to a gently sloping lawn area on the uphill side of the ~6m high rock face. 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.

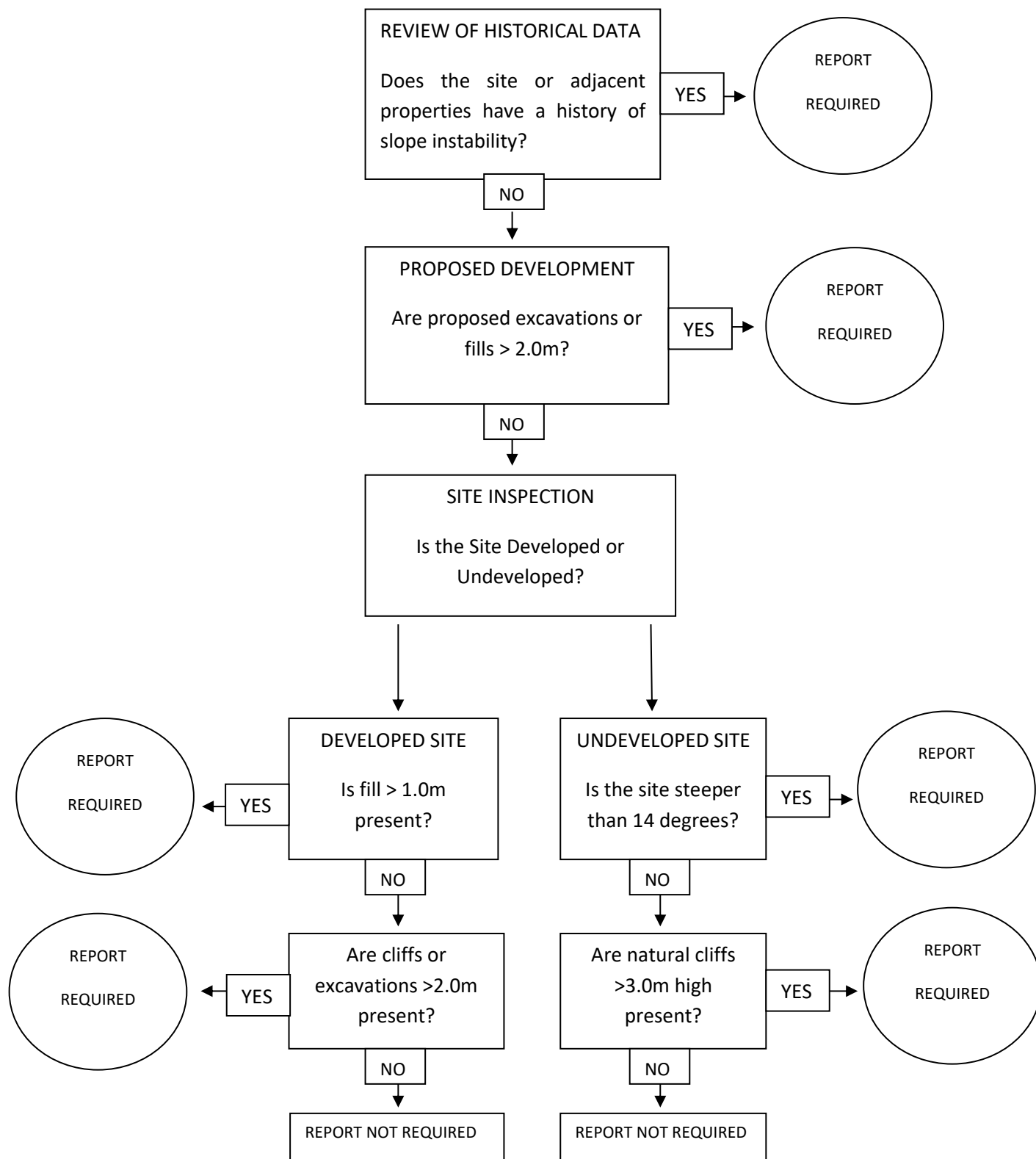
Provided good engineering and building practice are followed, no further Geotechnical assessment is recommended for the proposed development.

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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.

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