

## **PRELIMINARY GEOTECHNICAL ASSESSMENT:**

### **20 Ethie Road, Beacon Hill**

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

## **2.0 Proposed Development**

- 2.1** Construct a ground-floor extension to the N and E sides of the house.
- 2.2** Demolish the existing first-floor and construct a first-floor addition in the same location.
- 2.3** Extend the existing garage.
- 2.4** Demolish the existing retaining wall supporting the cut for the driveway and construct a new retaining wall in the same location.
- 2.5** Various other internal additions and alterations.
- 2.6** Apart from those for footings, no excavations are required. No fills are shown on the plans.
- 2.7** Details of the proposed development are shown on 22 drawings prepared by Drawn4U Building Design, job number BH-01, drawings numbered DA000 to DA002, DA002, DA004 to DA007, DA015 to DA017, DA020, DA021, DA025 to DA027, DA030 to DA032, DA035, DA040, and DA050, dated 27.1.22.

### 3.0 Site Location

**3.1** The site was inspected on the 12<sup>th</sup> April, 2022.

**3.2** This residential property is on the low side of the road and has an SE aspect. The block runs to the NW so there is a crossfall. It is located on the gently graded middle-upper reaches of a hillslope that drops steeply to a bushland reserve. The Sydney 1:100 000 Geological sheet indicates the site is underlain by Hawkesbury Sandstone that is described as a medium to coarse grained quartz sandstone with very minor shale and laminite lenses. The natural surface of the block has been altered with a cut for a pool and a fill to create a gently sloping lawn area on the downhill side of the property. The proposed development will not alter the property 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 falls across the property at an average angle of  $<5^\circ$ . At the road frontage, a concrete driveway runs across the slope to a garage on the uphill side of the property. Competent Medium Strength Sandstone can be seen outcropping underneath the garage. A pool has been partially cut into the slope in between the road frontage and the house. The shell of the pool shows no significant signs of movement as shown by the water level against the tiles. The two-storey brick and timber clad house is supported on brick walls and brick piers. The brick walls show no significant signs of movement and the brick piers appear to stand vertical. A stable concrete block retaining wall reaching up to ~2.3m high supports the fill for a gently sloping lawn that extends to the lower common boundary. This retaining wall appears to be supported directly on outcropping Medium Strength Sandstone. The outcropping sandstone below the property steps down steeply to the property's further downslope. The area surrounding the house is lawn covered with some paved areas. No

significant 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.

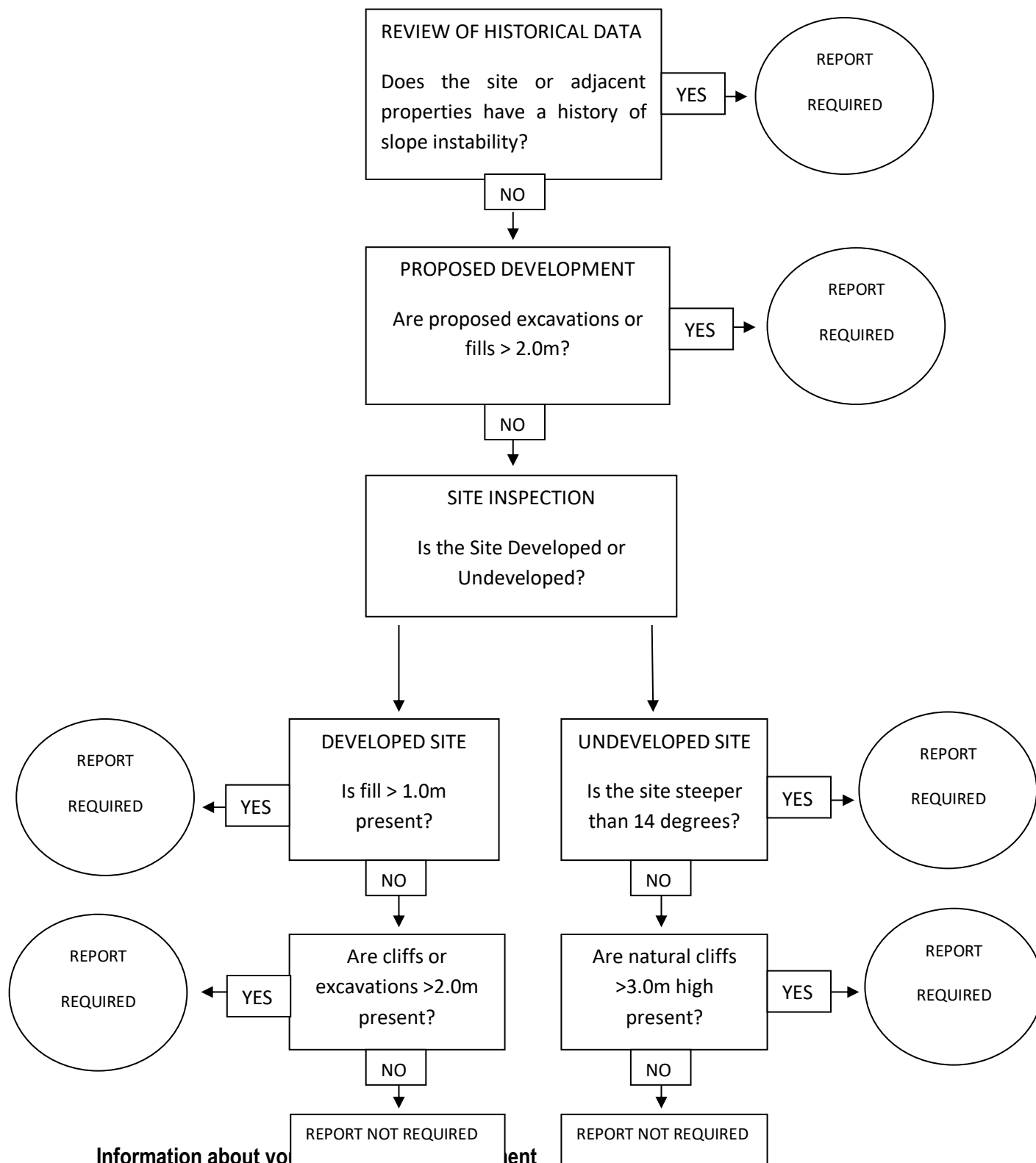
Provided good engineering and building practice are followed, no further Geotechnical assessment is recommended for the proposed development.

White Geotechnical Group Pty Ltd.



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## Preliminary Assessment Flow Chart – Northern Beaches Council (Warringah)



Information about your project

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 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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