

## **PRELIMINARY GEOTECHNICAL ASSESSMENT:**

**45 Earl Street, Beacon Hill**

<b>1.0</b>	<b>LANDSLIP RISK CLASS</b> (Highlight indicates Landslip Risk Class of property)
<input checked="" 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 and extend the existing house to the E by excavating ~1.6m into the slope.
- 2.2** Construct a new deck on the downhill side of the house.
- 2.3** Install a new spa 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 15 drawings prepared by Rapid Plans, Project number RP0718CON, drawings numbered DA1003, 1009, 1010, 2001 to 2004, 3001 to 3004, 4001 to 4003, and 5001, dated 15/4/19.

## **3.0 Site Location**

- 3.1** The site was inspected on the 7<sup>th</sup> March, 2019.

**3.2** This residential property is on the low side of the road and has a S aspect. It is located on the gently graded upper reaches of a hillslope. No rock outcrops on the property. 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. Sandstone bedrock is expected to underlie the surface at relatively shallow depths. The natural surface of the block has been altered little with the development to date. The proposed development will require an excavation to a maximum depth of ~1.6m to extend the E side of the house.

**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 ~5°. At the road frontage, a concrete and brick-paved driveway runs to a garage attached to the E side of the house that will be demolished as part of the proposed works. Between the road frontage and the house is a gently sloping lawn. The two-storey clad house is supported on brick walls and brick piers. No significant signs of movement were observed in the supporting brick walls and the supporting brick piers stand vertical. A gently sloping lawn and garden area falls from the downhill side of the house to the lower common boundary. A stable deck and spa have been recently constructed in the SW corner of the property. The area surrounding the house is mostly paved or lawn covered. 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 Recommendations

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

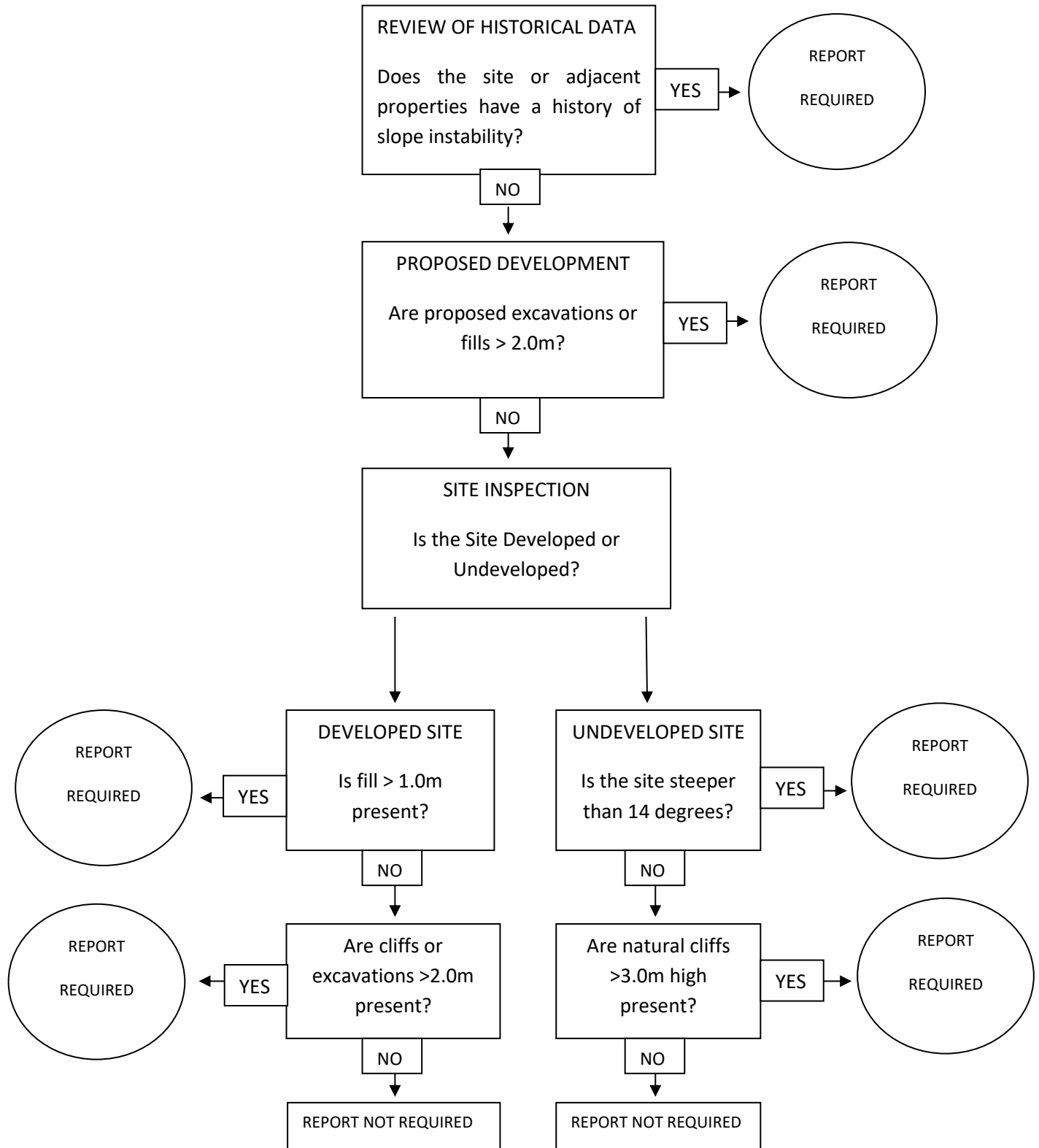
The proposed excavation for the house extension will come close to flush with the E side of the house and will reach a maximum depth of ~1.6m. Depending on the subsurface material in this location, the excavation may detrimentally impact upon the existing house. As such, before the structural engineering is done or any excavation commences, we recommend ground testing be undertaken by a geotechnical consultant to determine the subsurface profile. Once this is done, an appropriate excavation methodology plan is to be formulated to safely carry out the excavation.

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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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