

## **PRELIMINARY GEOTECHNICAL ASSESSMENT:**

### **40 Crown Road, Queenscliff**

<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 driveway down the W side of the property by excavating to a maximum depth of ~1.5m.
- 2.2** Construct a parking bay on the downhill side of the property by filling to a maximum depth of ~1.0m.
- 2.3** Details of the proposed development are shown on 1 drawing by Taylor Consulting, project title Concept 3 Driveway Plan and Parking Bay, drawing numbered sheet-3/A, dated 28 May 2021.

## **3.0 Site Location**

- 3.1** The site was inspected on the 25<sup>th</sup> August, 2021.
- 3.2** This residential property is on the low side of the road and has a S aspect. It is located on the gentle to moderately graded upper reaches of a E-W trending ridgeline. Competent Medium Strength Sandstone can be seen outcropping 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. The natural surface of the block has been altered little with the development to date. The proposed development will require an excavation up to a maximum depth of ~1.5m for the driveway and filling to a maximum height of ~1.0m for the parking bay.

**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 ~6°. At the road frontage, a concrete driveway runs past the W side of the unit block to a parking area on the downhill side of the property. Competent Medium Strength Sandstone can be seen outcropping in between the road frontage and the unit block. A concrete retaining wall supporting the fill for the neighbouring driveway shows significant cracking down the length of the wall. See **Section 5.0** for advice regarding this wall. The part three-storey brick unit block 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. Exposed Sandstone bedrock can be seen stepping down the slope on the downhill side of the property and on the E side of the unit block. A concrete pier can be seen supporting the slab above the bedrock. No significant geological defects were observed in the rock faces and they are considered stable. A level parking area extends below the Sandstone rock faces to the lower common boundary. A stable masonry retaining wall, ~1.3m in height supports a cut for the level lawn area. The area surrounding the unit block is mostly paved and lawn covered. No signs of movement associated with slope instability were observed on the grounds. The neighbouring properties were observed to be in good order as seen from the road and the subject property.

## 5.0 Recommendations

There is minor cracking that extends down the first few courses of the brick boundary retaining wall. Further down the driveway the cracking is more severe (Photos 1 & 2). The fence runs down the length of the wall. The cracking appears related to the supporting posts of a timber fence that are embedded into the top of the wall. It is recommended the fence be assessed for stability by a structural engineer. This will likely involve obtaining the embedment depths that the fence posts were drilled into the brick retaining wall.

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.

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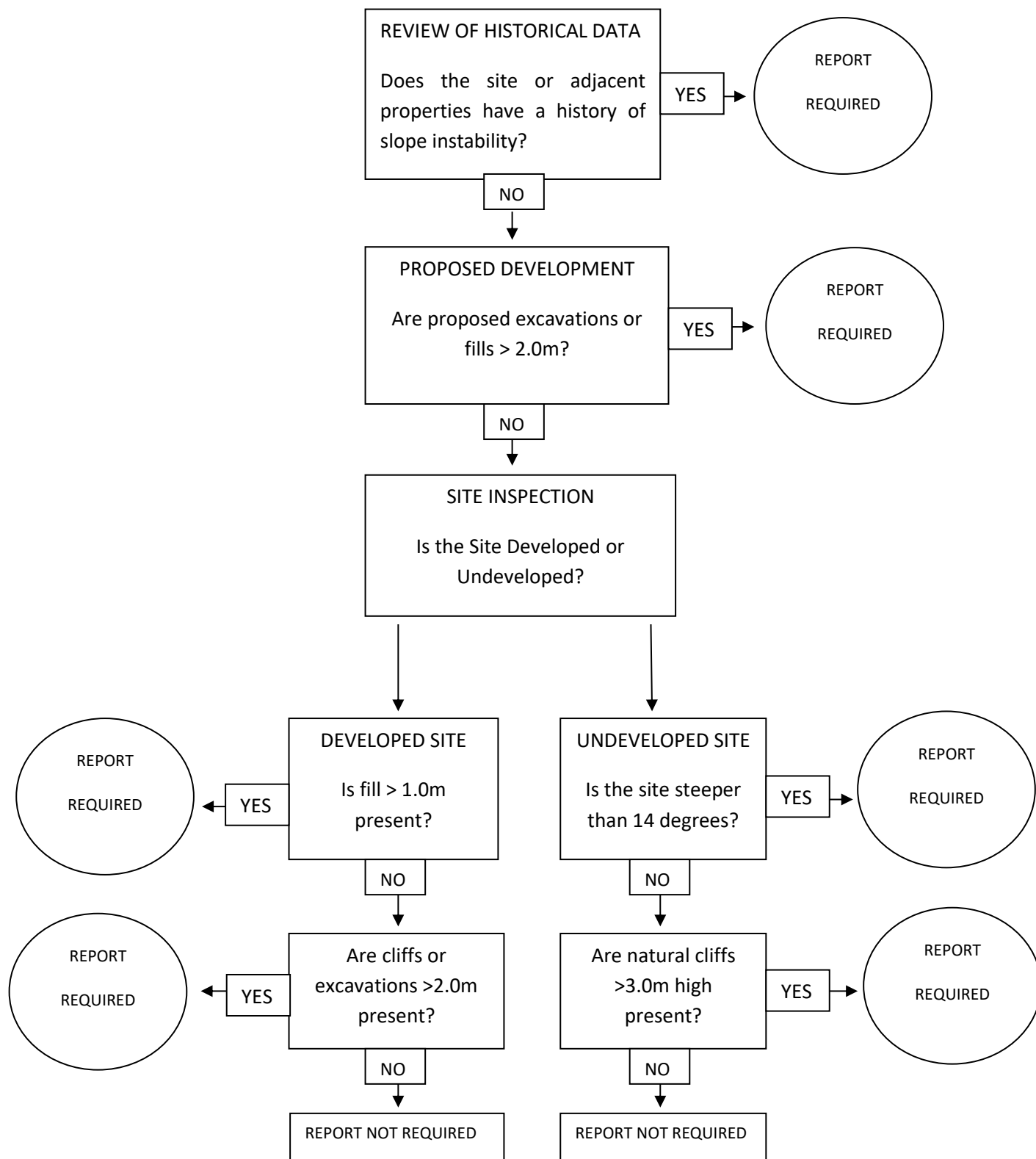


*Photo 1*



*Photo 2*

## 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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