PRELIMINARY GEOTECHNICAL ASSESSMENT:

3 Martin Street, Freshwater

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 Extend the downhill side of the ground floor.

2.2 Construct a new first floor addition.

2.3 Re-landscape the uphill side of the property by excavating to a maximum depth of ~0.8m into the slope.

2.4 Various other internal and external alterations.

2.5 No significant fills are shown on the plans.

2.6 Details of the proposed development are shown on 6 drawings prepared by Site Specific Designs, Project number 2019 11, drawings numbered DA01 to 06, dated February 2020.

3.0 Site Location

3.1 The site was inspected on the 25th February, 2020.

3.2 This residential property has dual access. It is on the downhill side of Martin Street and on the uphill side of Waine Street. The property has a SW aspect. It is located on the gentle to moderately graded upper middle reaches of a hillslope. Medium Strength Hawkesbury Sandstone bedrock outcrops and steps down 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 little with the development to date. The proposed development will require an excavation to a maximum depth of ~0.8m to re-landscape the uphill side of the property.

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 ~12°. At the road frontage to Martin Street, a concrete driveway runs to a stable timber carport attached to the uphill side of the house. Competent Medium Strength Sandstone outcrops in the garden between the road frontage and the house. The part two-storey brick 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. Some of the supporting walls and piers were observed to be supported directly onto outcropping bedrock. One of the supporting brick piers within the foundation space of the house is supported on a ~1.5m high rock face that has been slightly undercut (Photo 1). The undercut has been supported with a brick pier that is located directly below and supports the point load of the brick pier above. Furthermore, the undercut joint block has a relatively thick cantilever arm in relation to the overhang length. The undercut rock does not show any jointing or cracking through the supporting cantilever arm as viewed from above or below. As such, we consider it to be currently stable. A moderately sloping lawn and garden area falls from the downhill side of the house to the road frontage with Waine Street. 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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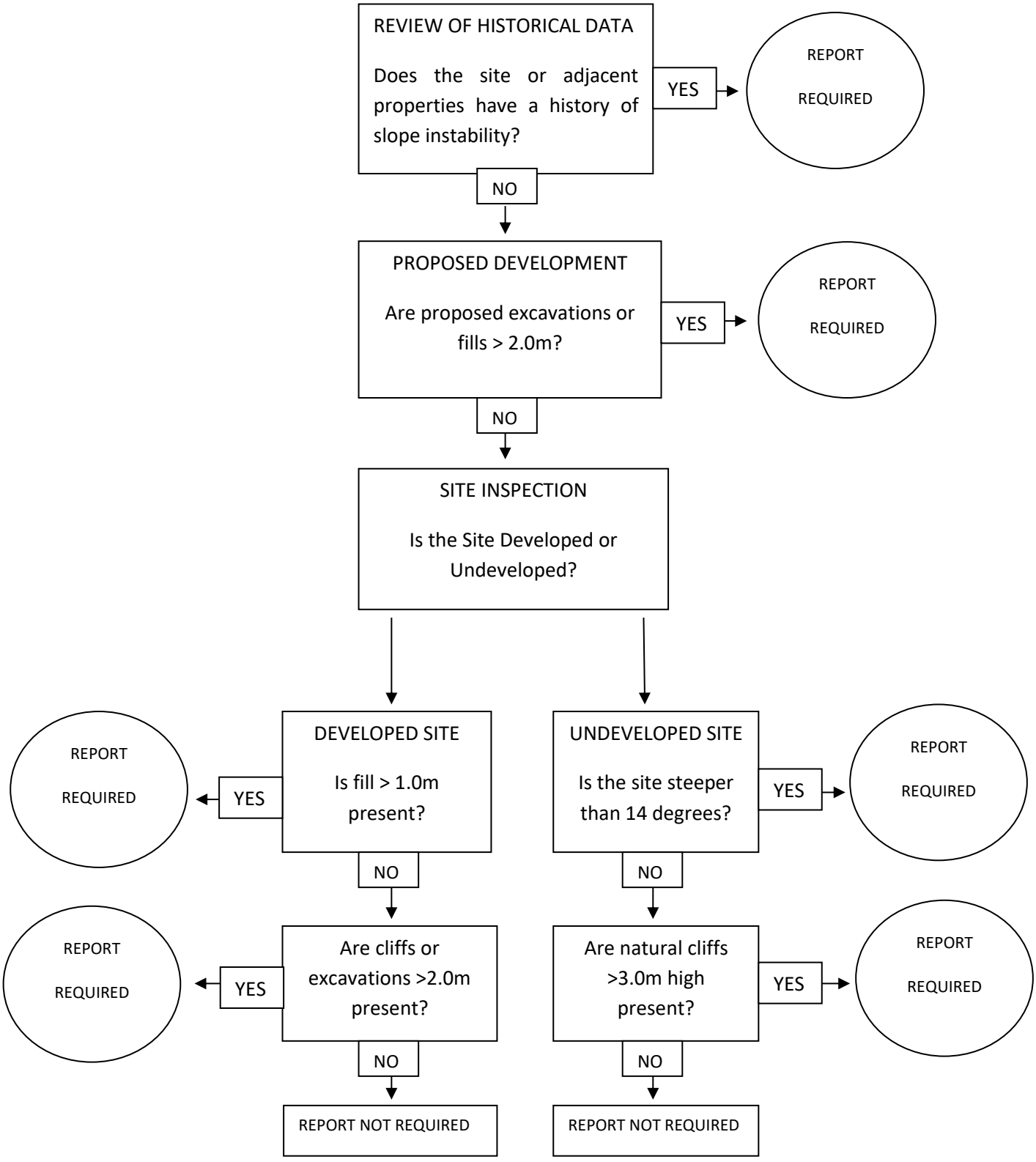
Photo 1

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.
