PRELIMINARY GEOTECHNICAL ASSESSMENT:

132D Rose Avenue, Wheeler Heights

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 Construct a new garage on the S side of the house.

2.2 Construct a new first floor addition.

2.3 Various other internal and external alterations.

2.4 Apart from those for footings, no significant excavations are required. No fills are shown on the plans.

2.5 Details of the proposed development are shown on 18 drawings by Carl Rutherfoord Design, drawings numbered DA00 to 17, Revision A, all drawings are forward-dated to 24/2/20.

3.0 Site Location

3.1 The site was inspected on the 31st January, 2020, and previously on the 19th October, 2015.

3.2 This residential property is on the high side of the road. It is located on the moderate to gently graded upper reaches and crest of a hillslope. The land surface falls in all directions around the house to the boundaries. Medium Strength Hawkesbury Sandstone bedrock outcrops under and around 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 an excavation for a pool on the N side of the property and with filling used for landscaping 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 falls across the site at gentle angles that gradually increase to a maximum of ~10° at the common boundaries. At the road frontage, a concrete Right of Carriageway (ROW) runs up and across the slope and past the S side of the subject property. The fill for the ROW is supported by a stable stack rock retaining wall that reaches a maximum height of ~2.0m. This wall appears well constructed and is considered stable. A driveway diverts off the ROW to a concrete parking area on the S side of the house. The single-storey sandstone block and timber framed house is supported on sandstone block walls and piers. No significant signs of movement were observed in its supporting walls and piers. Some of the walls and piers were observed to be supported directly off outcropping competent Medium Strength Sandstone. An excavation has been made on the slope on the N side of the property for a pool. The water level of the pool indicates no ground movement has occurred in the shell of the pool since its construction. Filling has been placed to the north of the house to create a level platform for a lawn area. The fill is supported by two, old stepped mortared sandstone block and rough stack rock retaining walls. No significant signs of movement were observed in the walls and they are considered stable. The W end of the wall was observed to be

supported directly off Medium Strength Sandstone. The exposed sandstone displays no undercutting or other geological defects that could affect its stability. The area surrounding the house and driveway is mostly lawn-covered with some paved areas. 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

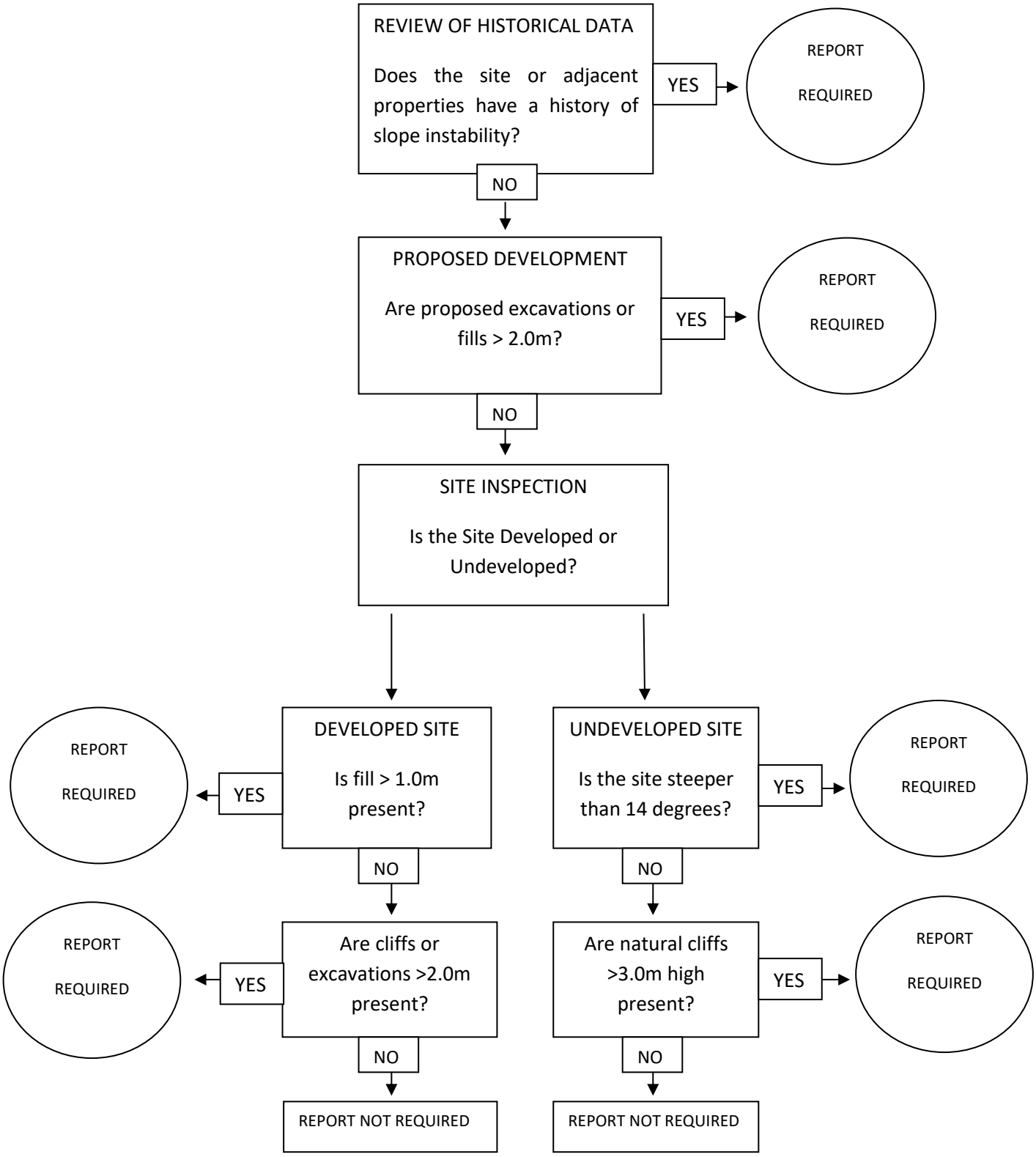
The proposed development and site conditions were considered and applied to the Council Flow Chart.

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

White Geotechnical Group Pty Ltd.

Ben White M.Sc. Geol.,
AusIMM., CP GEOL.
No. 222757
Engineering Geologist.

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.