19 January 2021

Project No.: G2102

Client Name: Bill Wright

E mail: bill.wright@outlook.com

RE: Preliminary Geotechnical Assessment Report for 19 Cromer Road, Cromer NSW 2099

Introduction

BMB Engineers was commissioned by Mr Bill Wright to carry out a preliminary assessment of site conditions to determine the requirement of the detailed geotechnical report addressing the landslip risk at 19 Cromer Road, Cromer. This report documents the results of a preliminary geotechnical assessment conducted on 16th January 2021 to fulfil the requirements of Northern Beaches Council as a part of Development Application.

Proposed development

BMB Engineers reviewed the proposed development prepared by Urban Exteriors plan dated 23 November 2020 (refer Figure 1).

It is understood that the proposed development consists of a construction of a new pergola and deck removing the existing pergola and deck. This development has no additional cutting and fillings except the localised excavation for the pad footings.

Site Geology

This Lot is a rectangular shape and occupies approximately 562 m^2. Overall the site has a steep slope of about 8 to 10 degrees dipping towards the northwest direction (road side).

Reference to the 1:100,000 scales NSW Department of Mines Geological Map of the Sydney Basin indicates that the site is underlain by Hawkesbury Sandstone of Wianamatta group dating back to the Triassic period. It comprises medium to coarse-grained quartz sandstone, minor shale and laminate lenses.

Site Observations

During the site visit, following observations were made by *BMB Engineers*:

- The lot has a road on the north side, and is surrounded by residential dwellings in other sides.
- The lot is sloping towards south direction, i.e. sloping towards the rear side from the road with the angle of about 8 to 10 degrees.
- The lot has an existing double storey residential dwelling in the middle part of the site.

- An existing Pergola & Deck was observed at the backside of the dwelling, which is proposed to remove and replace with the new Pergola & Deck.
- The site is covered with the lawn and stone paves.
- Sandstone outcrops can be observed at the 20 Cromer Road across this lot.

Based on the visual assessment, it can be anticipated that the location of the proposed development is covered with fill of less than 1.0m over the very thin topsoil/residual soil underlying highly weathered, medium strength sandstone (bedrock).

No seepage was observed during the site visit.

Preliminary Landslip Risk Assessment

There was no sign of slope instabilities such as rock fall, rock slide, slump or localized failures in the site at the time of site visit. A few photographs of the site are presented below.

Front view of the property

Driveway of the dwelling and the access to the backyard

The existing Pergola & Deck to be removed and replaced with the new Pergola & Deck

Backyard and the dwelling with the existing Pergola & Deck (Photo taken from rear to front)

There was no indication of instability in the vicinity of the proposed development site that could be attributed to the landslip hazards.

Conclusions and Recommendations

Based on the council landslip risk map, the site is located at the Area B. A preliminary assessment of site conditions prepared in accordance with the Checklist for Council's assessment of site conditions has been carried out for the proposed development. Based on the flowchart of the conditions and need of geotechnical report in Geotechnical Class B and D (refer Figure 2), it is considered that detailed geotechnical report for landslip hazard assessment is not required.

It is recommended that the foundation of footings should be placed on the competent ground and the quality of the founding stratum of footing excavations should be assessed by a suitably qualified geotechnical engineer or engineering geologist.

Limitations

The report is based upon the information provided by the client and visual inspection of the site. Where subsurface conditions are encountered other than expected, we recommend that you immediately contact this office for further advice.

Should you need any further information, please do not hesitate to contact the undersigned.

On the behalf of BMB Engineers

Prepared by
Prabin Kayastha
MSc, BE (Civil), MIEAust
Geotechnical Engineer

Attachments

1. Plan of the proposed Pergola & Deck
2. Flowchart of the Conditions and Need of Geotechnical Report

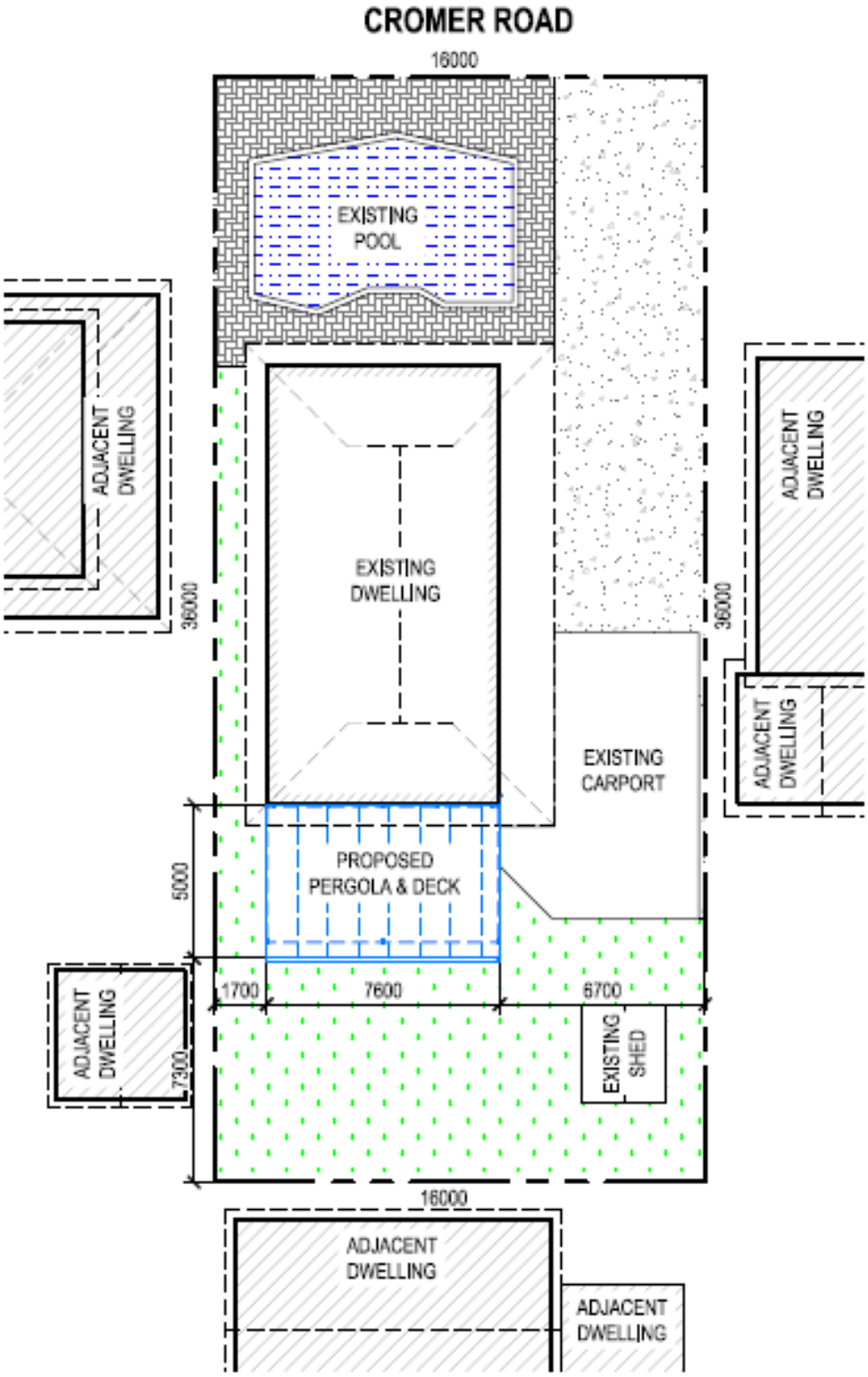

Figure 1. Plan of the proposed Pergola & Deck

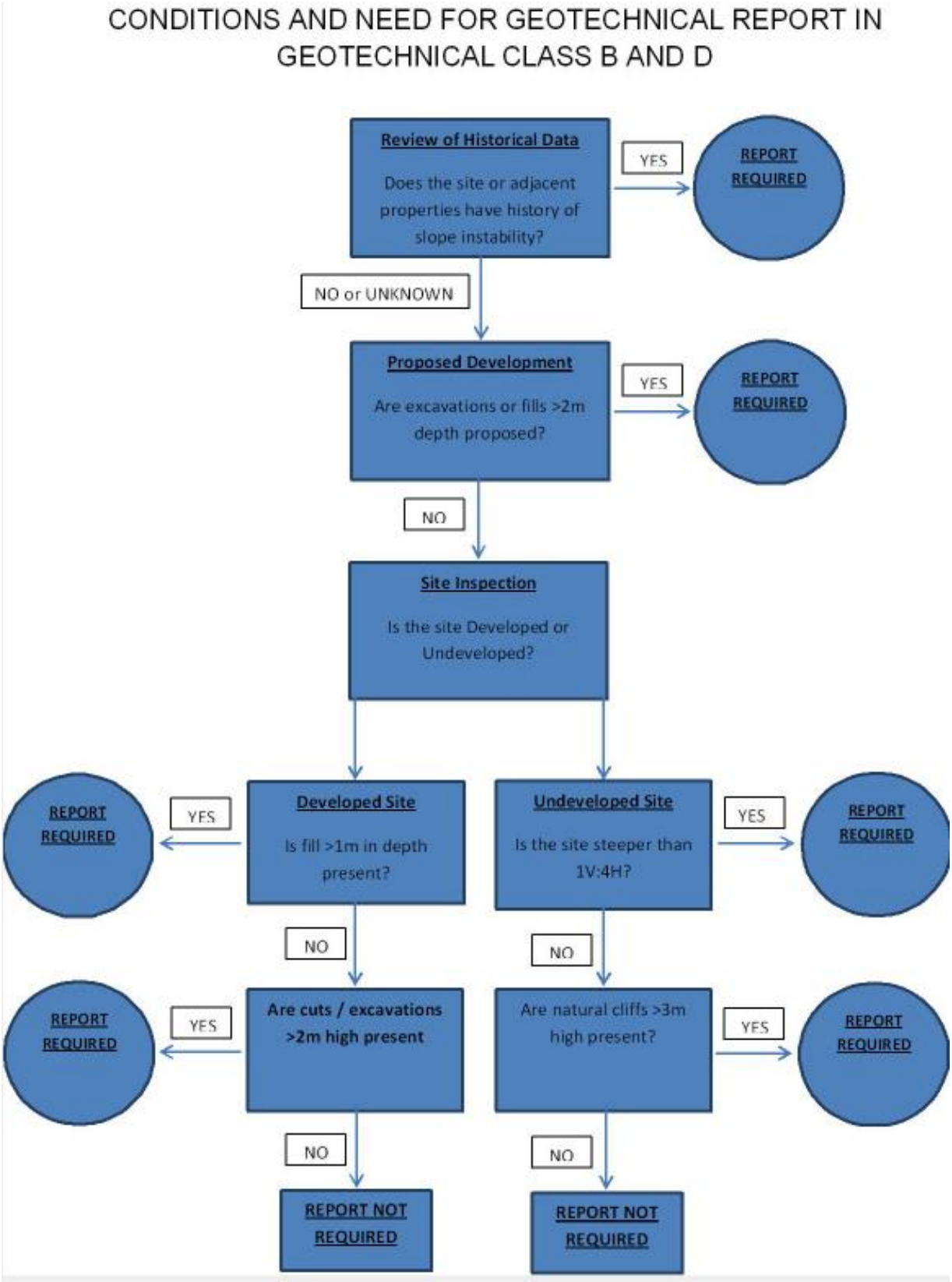

Figure 2. Flowchart of the Conditions and Need of Geotechnical Report