

26<sup>th</sup> April 2019

Clarendon Homes NSW Pty Ltd  
PO Box 7105  
BAULKHAM HILLS BC NSW 2153

Our Ref: AWT51787  
Your Ref: 29913405

Re: Preliminary Landslip Assessment for Lot 18, No 19 Malbara Crescent,  
Frenchs Forest

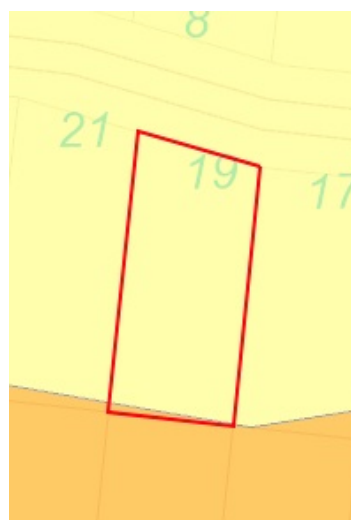
We have carried out the following investigation:

- Studied the building plans by Clarendon Homes, (dated 01/04/2019 Issue C), outlining the proposal.
- Reviewed the Northern Beaches Council online landslip mapping system.
- Reviewed a Site Classification report by AW Geotechnics Pty Ltd (dated 11<sup>th</sup> October 2018), AWT51787, which included two(2) boreholes.

Based on the information from the above sources, we have concluded the following;

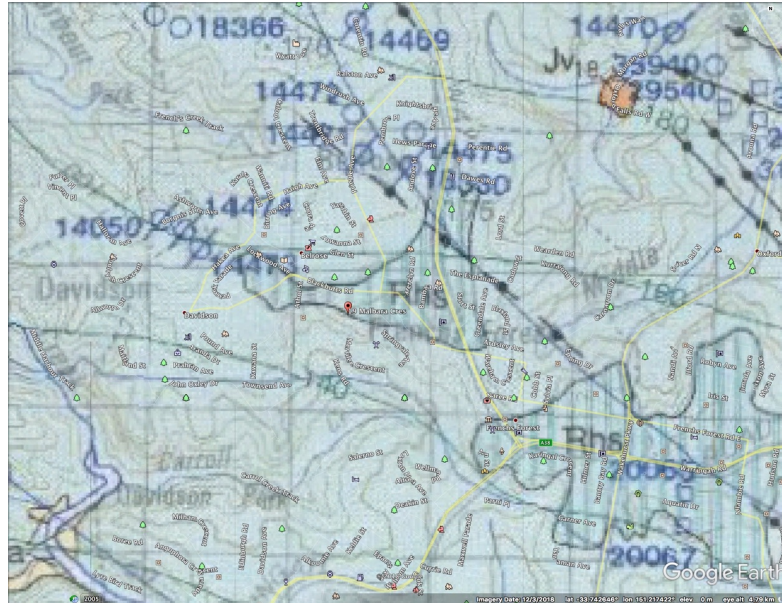
1. The main area of the site plots within Zone A, with the rear section of the allotment plotting in Zone B.

NOTE: There are no other landslide maps covering this area known to us.



- Area A - Slope less than 5 degrees
- Area B - Flanking Slopes from 5 to 25 degrees
- Area C - Slopes more than 25 degrees
- Area D - Collaroy Plateau Area Flanking Slopes 5 to 15 degrees
- Area E - Collaroy Plateau Area Slopes more than 15 degrees

2. On the relevant 1:100,000 geological map, this site plots within the Mesozoic Aged Hawkesbury Sandstone.



3. The onsite testing did not encounter bedrock down to the depths of our commission (1500mm+).
4. The onsite testing encountered filled ground down a depth of 300mm.  
NOTE: Localised shallow pockets of disturbed natural may be encountered across the site.
5. The proposed fill of depths not exceeding 1000mm, will be contained by engineer designed drop edge beams.
6. No signs of slope instability were noted within the geotechnical report nor during our site walkever.
7. We are unaware of any proposal to create an excavation deeper than 2000 mm.

8. Using Appendix C of the 2007 Australian Geomechanics Society LRM guidelines, we are of the opinion that the following applies to the proposed building footprint:

The likelihood of a Landslide event adversely affecting this dwelling during its life expectancy is conceivable, but only under exceptional circumstances (Rare:  $10^{-5}$ ).

If such an event does occur, then the damage to the structure will be in the "minor" range, which is also interpreted as having a cost in the range of 1-10% of the market property value at the time of the event.

All of this results in a risk classification due to landslide as "very low", which is the lowest most stable category of the five(5) risk categories available.

After considering the Northern Beaches Council E10 Landslip Risk Guidelines, it is our opinion that there is no need for a more detailed geotechnical report with respect to landslip risk on this site and providing that the proposed footing system is designed by a suitably qualified engineer to the relevant AS2870-2011 site classification including the site specific guidelines provided in the above referenced report.

Furthermore, providing all retaining structures are designed by a suitably qualified person and ongoing geotechnical input/supervision during earthworks is undertaken we see no reason why this development will abnormally influence the adjoining properties and associated infrastructure for the life span of the dwelling.

AW Geotechnics Pty Ltd



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