

Our ref: PSM1551-103L

5 March 2023

Rachel Hudson Architect  
Shop 5/15 Old Barrenjoey Road  
Avalon Beach NSW 2107  
rachel@rachelhudson.com.au

Attention: Rachel Hudson

Dear Rachel,

G3 56 Delhi Road  
North Ryde NSW 2113  
P +61-2 9812 5000  
E mailbox@psm.com.au  
www.psm.com.au

**RE: GEOTECHNICAL ASSESSMENT - 103 BYNYA ROAD, PALM BEACH: RESPONSE TO RFI**

## 1. Introduction and Original Geotechnical Findings

This letter is in response to a RFI dated 20 February 2023 from the Northern Beaches Council following submission of DA2022/2275 for Demolition works and construction of a dwelling house including swimming pool and garage at 103 Bynya Road Palm Beach.

The RFI asks the following questions relating to geotechnical stability of the ground surface in relation to the proposed development:

### 2. Clause B8.1 Construction and Demolition - Excavation and Landfill

The proposal includes excavation greater than 1.5 metres deep below the existing surface. As such the proposal must comply with the requirements of the Geotechnical Risk Management Policy for Pittwater (see Appendix 5) as adopted by Council and details submitted and certified by a Geotechnical Engineer and/or Structural Engineer with the detail design for the Construction Certificate.

### 12. Development Engineer Comments

Council's Development Engineer has reviewed the proposal and provided the following comments:

*It appears that the depth of the excavation for the proposed development is more than 1.5m.*

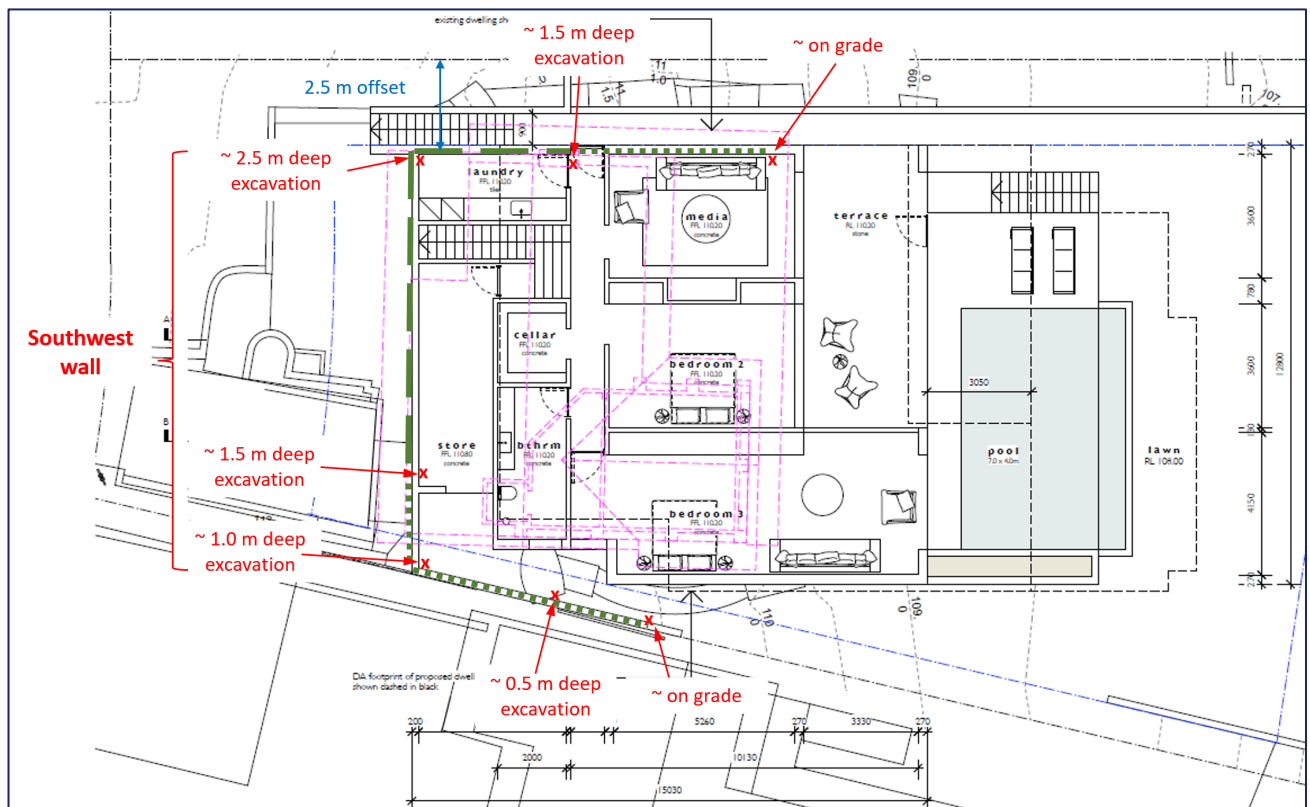
*The applicant needs to provide geotechnical risk management report as set out in Council's Geotechnical Risk Management Policy for Pittwater relating to the potential impact of excavation on Land Stability.*

Slope stability of the proposed development presented in the original DA submission was addressed in geotechnical report no. PSM1551-100L dated 20 December 2022. The PSM1551-100L report concluded the proposed new development does not include excavation depths of greater than 1.5 m at a distance of less than 1.5 m from the boundary of the property. Further, the risk of slope instability was assessed to be "very low" according to AGS (2007) guidelines.

## 2. Assessment of Revised Design in Response to Council RFI

Following revisions of the proposed house design in response to the Council RFI, relevant elements of the revised design have been reviewed with respect to slope stability. The revised design is presented in the issue B drawings prepared by Rachel Hudson, job number 165. In summary the revised proposed development comprises the following design elements relevant to slope stability (Figure 1).

- The revised dwelling design has been shifted toward the front boundary by 3050 mm with the lower floor level raised 0.5 m which has changed the depth of excavation.
- The lower level will be partly above grade and partly below grade with excavation along the southwest wall ranging between 1.0 m and 2.5 m deep.
- The portion of excavation along the southwest wall which is greater than 1.5 m deep is assessed to be at a distance of 2.5 m or more from the property boundary.
- The lower level excavation includes a retaining wall against the southeast boundary with 101 Bynya Road up to 1.0 m high.
- The pool will be largely above grade with the southeastern deep end of the pool requiring excavation up to about 0.3 m deep.
- An on-site detention tank is to be located under the lower terrace adjacent to the pool requiring about half the terrace area to be excavated up to a depth of around 0.5 m depending on final volumes.
- The landscaping works includes a retaining wall up to 0.9 m high which will be filled to produce lawn and garden surfaces.



**Figure 1: Revised excavation and southwest retaining structure**

Given this assessment the revised development proposal does not include excavation depths of greater than 1.5 m at a distance of less than 1.5 m from the boundary of the property.

### 3. Conclusion

Overall, review of the changes in the revised plans do not alter findings and recommendations in report PSM1551-100L dated the 20<sup>th</sup> December 2022. Accordingly, the property at 103 Bynya Road Palm Beach is assessed as being suitable for the proposed revised development with regard to slope stability.

We consider the risk analysis has shown that the site achieves the Acceptable Risk Management criteria required by NBC Risk Management Policy (2013).

For and on behalf of

**PSM**



**MARK EGGERS**  
**SENIOR PRINCIPAL**

MSc (Hons) BSc (Geology)

MAGS, MAusIMM, MAIG, Past VP IAEG