

1 June 2023

Attn: Stefan Jost  
By Email

Dear Stefan,

**RE: GEOTECHNICAL SITE INSPECTION – 147 MCCARRS ROAD, CHURCH POINT, NSW**

**INTRODUCTION**

Martens and Associates (MA) was engaged to carry out a geotechnical site inspection of the above site to assess foundation and slope risk requirements in accordance with Northern Beaches Council Geotechnical Risk Management Policy. A site visit was carried out by a Senior Principal Geotechnical Engineer from MA on 27 May 2023.

Proposed alteration and additions comprise extension of the first floor balcony to provide additional outdoor living space. The second floor balcony is also being extended to provide a roof / awning to the lower balcony rather than for additional outdoor living. This will be done by fixing joists to the existing building and extending these past the current second floor balcony. Vertical posts will connect the roof / awning to the first floor balcony.

The balcony will be supported by four posts. Two of the posts will be vertical and located at the two corners of the northern face of the existing building. The other posts will support the two corners of the extended first floor balcony; rather than being vertical, these posts will be angled towards the house. The base of each post will be fixed to exposed rock or a concrete plinth through a baseplate and bolts fixed to the rock or concrete plinth. The base of all four posts will be located immediately adjacent to the existing house.

The following documents were made available for this geotechnical assessment:

- o Proposed Elevation by Studio Indra, Drawing No. ID000 Rev P1 dated 16<sup>th</sup> May 2023.
- o Structural drawings by Spantec, dated 27/3/2023 as follows:
  - DF2 – Q30589 Rev A, 3D\_View\_1– Extended DF2
  - DF2 – Q30589 Rev A, General Arrangement 1 – Extended DF2
  - DF2 – Q30589 Rev A, General Arrangement 2 – Extended DF2
  - DF2 – Q30589 Rev A, Dimension Confirmation Plan – Extended DF2
  - RF2 – Q30589 Rev A, 3D\_View\_1 – Add Piers to Support RF1
  - RF2 – Q30589 Rev A, General Arrangement 1 – Add Piers to Support RF1

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- RF2 – Q30589 Rev A, General Arrangement 2 – Add Piers to Support RF1
  - RF2 – Q30589 Rev A, Dimension Confirmation Plan – Add Piers to Support RF1
  - RF1 – Q30589 Rev A, 3D\_View\_1 – Add Piers to Support RF1
  - RF1 – Q30589 Rev A, General Arrangement 1 – Add Piers to Support RF1
  - RF1 – Q30589 Rev A, General Arrangement 2 – Add Piers to Support RF1
  - RF1 – Q30589 Rev A, Dimension Confirmation Plan – Add Piers to Support RF1
- Plan Showing Physical Features and Levels at 147 McCarrs Creek Road, Church Point, Ref. No. 4528 Sheet A1 dated 9<sup>th</sup> February 2022.

## **SITE OBSERVATIONS**

We understand from provided information and following the site visit, that the existing property is located on a steeply sloping site comprising an approximately 40 year old double brick building with a sloping concrete driveway providing access to the garage on the northwest side of the buildings ground floor, with stair access to the front door adjacent to the driveway and a short retaining wall supporting some backfill placed in front of a rock out crop, for levelling purposes (see Attachment A, Photo 1). Observations indicate the building is likely constructed on the shallow rock.

The sloping ground generally falls towards the north at varying grades, exposing rock outcrops particularly in areas of cut. The swimming pool is located at the top of the site in an area of cut which appears to have been shotcreted on the cut side and supported by steel posts bolted into the bedrock on the downside (see Attachment A, Photo 2 and Photo 3). No signs of significant instability were observed and the building / pool structure appears to be in good condition.

## **CONCLUSIONS AND RECOMMENDATIONS**

Site observations and review of provided information, indicate that the footings for the proposed supporting posts will comprise a baseplate bolted into rock or a concrete plinth, immediately adjacent to the existing building. Exposed rock outcrop was observed at two of these locations (see Attachment A, Photo 4) and concrete was observed at other locations (see Attachment A, Photo 5 and Photo 6).

MA considers the proposed foundation arrangements to be acceptable subject to exposed rock being present for baseplate attachment or where any soil is present, this should be removed down to the level of bedrock and the baseplate attached or a concrete plinth fixed for attachment of the baseplate. It is recommended that all beams and supporting posts, as well as plates and fixings, be designed by a structural engineer.

As the proposed alterations and additions only involve minor development, we are of the opinion that a geotechnical report and risk assessment (in accordance with Geotechnical Risk management Policy for Pittwater) is not required (See Attachment B – Form 1).

Please call our offices if you have any further queries regarding this matter.

**For and on behalf of**

**MARTENS & ASSOCIATES PTY LTD**



**KENNETH W BURGESS**

B.Eng (Civil) Pg. Dip (Geotechnical), MIEAust, CPEng, NER  
Principal Geotechnical Engineer

**Attachments**

Attachment A: Site Photographs

Attachment B: Form 1

# Attachment A – Site Photographs



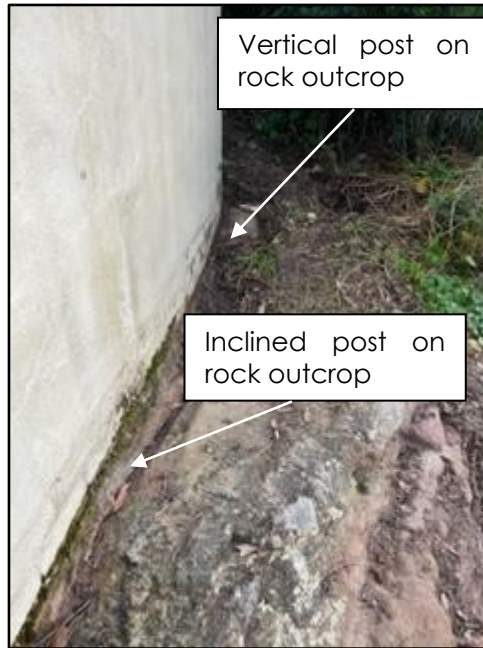
**Photo 1:** House frontage – concrete driveway and access stairs



**Photo 2:** Steel posts supporting the pool



**Photo 3:** Shotcrete on cut face of pool



**Photo 4:** Footings on rock – right side of house frontage



**Photo 5:** Footings on concrete – top of driveway / stairs



**Photo 6:** Footing on concrete – top of driveway (left side of house frontage)

**Attachment B – Form 1**

**GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER  
FORM NO. 1 – To be submitted with Development Application**

Development Application for <u>Stefan Jost</u>	Name of Applicant
Address of site <u>147 McCarrs Road, Church Point NSW</u>	

**Declaration made by geotechnical engineer or engineering geologist or coastal engineer (where applicable) as part of a geotechnical report**

I, Kenneth Burgess on behalf of Martens and Associates  
(Insert Name) (Trading or Company Name)

on this the 31/5/2023 certify that I am a geotechnical engineer or engineering geologist or coastal engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2009 and I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least \$10million.

I:  
**Please mark appropriate box**

- have prepared the detailed Geotechnical Report referenced below in accordance with the Australia Geomechanics Society's Landslide Risk Management Guidelines (AGS 2007) and the Geotechnical Risk Management Policy for Pittwater - 2009
- am willing to technically verify that the detailed Geotechnical Report referenced below has been prepared in accordance with the Australian Geomechanics Society's Landslide Risk Management Guidelines (AGS 2007) and the Geotechnical Risk Management Policy for Pittwater - 2009
- have examined the site and the proposed development in detail and have carried out a risk assessment in accordance with Section 6.0 of the Geotechnical Risk Management Policy for Pittwater - 2009. I confirm that the results of the risk assessment for the proposed development are in compliance with the Geotechnical Risk Management Policy for Pittwater - 2009 and further detailed geotechnical reporting is not required for the subject site.
- have examined the site and the proposed development/alteration in detail and I am of the opinion that the Development Application only involves Minor Development/Alteration that does not require a Geotechnical Report or Risk Assessment and hence my Report is in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009 requirements.
- have examined the site and the proposed development/alteration is separate from and is not affected by a Geotechnical Hazard and does not require a Geotechnical Report or Risk Assessment and hence my Report is in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009 requirements.
- have provided the coastal process and coastal forces analysis for inclusion in the Geotechnical Report

**Geotechnical Report Details:**

Report Title:
Report Date:
Author:
Author's Company/Organisation:

**Documentation which relate to or are relied upon in report preparation:**


I am aware that the above Geotechnical Report, prepared for the abovementioned site is to be submitted in support of a Development Application for this site and will be relied on by Pittwater Council as the basis for ensuring that the Geotechnical Risk Management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure, taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature ..... K Burgess .....  
 Name ... KENNETH W BURGESS .....  
 Chartered Professional Status... MEMBER .....  
 Membership No. .... 3789174 .....  
 Company... MARTENS AND ASSOCIATES