

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

Development Application for *ARH Warriewood Pty Ltd*
Address of site *53C Warriewood Road, Warriewood*

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

I, Indra Jworchan, on behalf of Geotechnique Pty Ltd

on this the *8 January 2016* certify that I am a geotechnical engineer or engineering geologist 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 \$2million.

- I
- Please mark appropriate box**
- have prepared the 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 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 am of the opinion that the Development Application only involves Minor Development/Alterations that do not require a Detailed Geotechnical Risk Assessment and hence my report is in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009 requirements for Minor Development/Alterations.
 - Provided the coastal process and coastal forces analysis for inclusion in the Geotechnical Report

Geotechnical Report Details:


Report Title: *Geotechnical Investigation Report Nos 13262/1-AA and 13262/1-AC*
Report Date: *5 September 2014 and 21 December 2015*
Author: *Indra Jworchan*
Author's Company/Organisation: *Geotechnique Pty Ltd*

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

Australian Geomechanics Society (AGS), Landslide Zoning Working Group. "Guideline for Landslide Susceptibility, Hazard and Risk Zoning for Land Use Planning", Journal and News of Australian Geomechanics Society, Volume 42, No 1, March, 2007.

Pittwater Council, Geotechnical Risk Management Policy for Pittwater- 2009

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
Name - Indra Jworchan
Chartered Professional Status - CPEng
Membership No.- 806995
Company - Geotechnique Pty Ltd

**GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 1(a) - Checklist of Requirements For Geotechnical Risk Management Report for Development
Application**

Development Application for ARH Warriewood Pty Ltd
Address of site 53C Warriewood Road, Warriewood

The following checklist covers the minimum requirements to be addressed in a Geotechnical Risk Management Geotechnical Report. This checklist is to accompany the Geotechnical Report and its certification (Form No. 1).

Geotechnical Report Details:

Report Title: *Geotechnical Investigation Report Nos 13262/1-AA and 13262/1-AC*
Report Date: *5 September 2014 and 21 December 2015*
Author: *Indra Jworchan*
Author's Company/Organisation: *Geotechnique Pty Ltd*

Please mark appropriate box

- √ Comprehensive site mapping conducted 27 August 2014
- √ Mapping details presented on contoured site plan with geomorphic mapping to a minimum scale of 1:200 (as appropriate)
- √ Subsurface investigation required
 - No Justification ...
 - √ Yes Date conducted on...27 August 2014.....


- √ Geotechnical model developed and reported as an inferred subsurface type-section
- √ Geotechnical hazards identified
 - Above the site
 - √ On the site
 - Below the site
 - Beside the site

- √ Geotechnical hazards described and reported
- √ Risk assessment conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009
 - √ Consequence analysis
 - √ Frequency analysis

- √ Risk calculation
- √ Risk assessment for property conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009
- √ Risk assessment for loss of life conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009
- √ Assessed risks have been compared to "Acceptable Risk Management" criteria as defined in the Geotechnical Risk Management Policy for Pittwater - 2009
- √ Opinion has been provided that the design can achieve the "Acceptable Risk Management" criteria provided that the specified conditions are achieved.
- √ Design Life Adopted:
 - √ 100 years
 - Other specify

- √ Geotechnical Conditions to be applied to all four phases as described in the Geotechnical Risk Management Policy for Pittwater - 2009 have been specified
- √ Additional action to remove risk where reasonable and practical have been identified and included in the report.
- Risk assessment within Bushfire Asset Protection Zone

I am aware that Pittwater Council will rely on the Geotechnical Report, to which this checklist applies, as the basis for ensuring that the geotechnical risk management aspects of the proposal 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
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 Chartered Professional Status - CPEng
 Membership No.- 806995
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