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#### **Electronic Transmission**

То	Nicholas Michalandos	From	Dan Butterworth
Email address	nicholas@michalandos.com	Date	14 November 2014
Company	Michalandos Architects	Reference	GEOTFYSH09805AA-AB
		Pages	1 of 1
Subject	Proposed Amendments to Narraburra Ski Lodge		

Dear Nicholas,

Further to your e-mail correspondence (24 October 2014); Coffey understands that it is proposed to construct an external garbage store at the existing Narraburra Ski Lodge, Perisher Valley NSW.

Based on review of the plan, elevation and section drawing accompanying your email brief (drawing reference A 01 Rev 0, dated 16 June 2014); we understand that a small raft slab measuring approximately 2.5 m x 2.2 m is proposed to accommodate the single storey garbage store. The construction will also include the installation of a grated concrete lined trench drain along the western extent of the proposed garbage store and existing gas bottle storage area extending beyond the building footprint as a trench/rubble drain.

The site of the proposed extension is understood to be reasonably level and adjoining an existing single storey extension to the main building. Based on our experience in this area, we expect subsurface conditions to comprise topsoil and/or colluvium underlain by extremely weathered granodiorite bedrock at a relatively shallow depth ( $\leq 1$  m).

On review of the site information provided with the brief and our experience in the area, we consider that the proposed development presents minimal or no geotechnical impact on the site or related land. This assessment assumes that the foundations for the proposed extension will be founded below the natural topsoil materials and into the extremely or less weathered granodiorite bedrock.

Should the foundations be founded in the extremely weathered granodiorite then the site classification for the site in accordance with AS2870 "residential Slabs and Footings" would be **Class S**. If founding materials for footings varies then further advice should be sought.

For and on behalf of Coffey

Dan Butterworth Canberra Manager

Attached: Geotechnical Policy – Kosciuszko Alpine Resorts Form 4 (Signed Copy)



## Geotechnical Policy – Kosciuszko Alpine Resorts Form 4 – Minimal Impact Certification

Date received: \_\_\_/\_\_/

DA	no:	

This form may be used where minor construction works which present minimal or no geotechnical impact on the site or related land are proposed to be erected within the "G" line area of the geotechnical maps. A geotechnical engineer or engineering geologist must inspect the site and/or review the proposed development documentation to determine if the proposed development requires a geotechnical report to be prepared to accompany the development application. Where the geotechnical engineer determines that such a report is not required then they must complete this form and attach design recommendations where required. A copy of form 4 with design recommendation, if required, must be submitted with the development application. Please contact the Alpine Resorts Assessments Team in Jindabyne for further information. Phone 02 6456 1733. To complete this form, please place a cross in the boxes 🗌 and fill out the white sections. 1. Declaration made by geotechnical engineer or engineering geologist in relation to a nil or minimal geotechnical impact assessment and site classification ١. Mr 🖌 Ms 🗌 Mrs 🗌 Dr 🗌 Other Family name DANIEL BUTTERWORTH OF Company/organisation GEOTECHNICS ALL LED OFFET certify that I am a geotechnical engineer /engineering geologist as defined by the "Policy" and I have inspected the site and reviewed the proposed development known as NARRABARRA SKI CLUB - PROPOSED GARBAGE STORE As a result of my site inspection and review of the following documentation (List of documentation reviewed) PLAN, ELEVATIONS & SECTION - A 01 - PREDECTNO; 1405.

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	ď	advice in the form of a geotechnic	minor nature that the requirement for geotechnical al report, prepared in accordance with the "Policy", is dequate and safe design of the structural elements to s_and
	<b>e</b>	in accordance with AS 2870.1 Res classified as a type	sidential Slabs and Footings, the site is to be
		(insert classification type)	
	v	I have attached design recommer accordance with this site classification of the second s	ndations to be incorporated in the structural design in ation.
	con area	nponent in granting development co a (as identified on the geotechnical	e used by the Department as an essential onsent for a structure to be erected within the "G" line maps) of Kosciuszko Alpine Resorts without ical report in support of the development application.
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## Important information about your **Coffey** Report

As a client of Coffey you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

# Your report is based on project specific criteria

Your report has been developed on the basis of your unique project specific requirements as understood by Coffey and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structures on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-service limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Coffey to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Coffey cannot accept responsibility for problems that may occur due to changed factors if they are not consulted.

### Subsurface conditions can change

Subsurface conditions are created by natural processes and the activity of man. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project.

### Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how gualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners should retain the services of Coffey through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

# Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore vour report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

# Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.



## Important information about your Coffey Report

### Interpretation by other design professionals

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other project design professionals who are affected by the report. Have Coffey explain the report implications to design professionals affected by them and then review plans and specifications produced to see how they incorporate the report findings.

### Data should not be separated from the report\*

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel) and laboratory evaluation of field samples. These logs etc. should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

#### Geoenvironmental concerns are not at issue

Your report is not likely to relate any findings, conclusions, or recommendations about the potential for hazardous materials existing at the site unless specifically required to do so by the client. Specialist equipment, techniques, and personnel are used to perform a geoenvironmental assessment. Contamination can create major health, safety and environmental risks. If you have no information about the potential for your site to be contaminated or create an environmental hazard, you are advised to contact Coffey for information relating to geoenvironmental issues.

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to a project, from design to construction. It is common that not all approaches will be necessarily dealt with in your site assessment report due to concepts proposed at that time. As the project progresses through design towards construction, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

#### Responsibility

Reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than the design disciplines. This has often resulted in claims lodaed against consultants, beina which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.

\* For further information on this aspect reference should be made to "Guidelines for the Provision of Geotechnical information in Construction Contracts" published by the Institution of Engineers Australia, National headquarters, Canberra, 1987.