

GEOTECHNICAL CONSULTANTS PTY LTD

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Engineering Consultants in the Earth and Rock Sciences

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Department of
Infrastructure, Planning and Natural Resources

Issued under the Environmental Planning and Assessment Act 1979

19 January 2004

Approved Development Application No. 10-2-05

subject to any conditions

Kosciusko Mountain Retreat

Sawpit Creek PMB 3

Jindabyne NSW 2627

granted on the condition in the notice of determination.

Signed

Mr. Richard Hodge

Sheet No.

Date 10-2-05

File no.

Encl.

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RE: Proposed Additions to Facilities at the Site

Dear Sir,

Thank you for asking us to undertake a foundation investigation for a shed, kitchen facilities building and cabins at the site. The investigation was carried out according to Australian Standard AS2870. A test pit was excavated at each site and simplified logs of the excavations are attached. The locations of the test pits are shown on the attached sketch.

The underlying geology is granite and all excavations revealed a soil profile consisting of a thin root zone or topsoil layer, occasionally colluvium then silty sand residual soil overlying weathered rock, which usually excavated as a sandy gravel.

The terrain has a gentle and moderate fall to the east and northeast. However, the site has been disturbed by previous activities such as track construction or other building works and uncontrolled fill could be present. Only one excavation, numbered T6, found a thin fill layer.

The recommended site classifications are tabulated below.

Excavation Number	Activity	Site Classification
T1	Shed	S
T2	Kitchen Facilities	S
T3	Cabin	S
T4	Cabin	A
T5	Cabin	A
T6	Cabin	S

Footings must be founded in residual soils. The fill found in test pit T6 is thin and has not been considered in determining the site classification, as the footings will be founded below this layer. If fill is found in any of the footing trenches it must be removed or alternatively the footing deepened so that foundation loads are transferred to the natural ground. If a slab on grade footing is proposed the fill beneath the slab must be removed or compacted.

Project Number 04073, Kosciusko Mountain Retreat

T1

- 0.0-0.3 SILTY GRAVELLY SAND, brown and dark brown, fine to coarse grained, excess fine and medium gravel, excess low plasticity fines, roots to 0.1 metres, COLLUVIUM
- 0.3-1.0 SILTY SAND, orange brown, fine to coarse grained, excess low and medium plasticity fines (about 15%), RESIDUAL
- 1.0-1.8 Completely weathered rock, depth of weathering varies from just below the surface. There is a weathered floater on one wall

T2

- 0.0-0.2 SILTY SAND, brown and grey, fine and medium grained, excess low plasticity fines, roots at the surface, COLLUVIUM
- 0.2-1.1 SILTY SAND, yellow brown, fine to coarse grained, trace of fine gravel, excess low and medium plasticity fines (approx 15%), RESIDUAL
- 1.1-1.9 Completely weathered rock, excavated as a yellow brown sandy gravel

T3

- 0.0-0.2 SILTY SAND, brown, fine to coarse grained, excess low plasticity fines, trace of fine gravel at the surface, used as a car parking site, RESIDUAL
- 0.2-0.9 SILTY SAND, yellow brown, fine to coarse grained, excess low and medium plasticity fines, some fine and medium grained gravel, becomes coarser with depth, RESIDUAL
- 0.9-1.2 Completely weathered rock

T4

- 0.0-0.1 SILTY SAND, brown, roots, fine and medium grained, excess low plasticity fines, TOPSOIL
- 0.1-1.0 Completely weathered rock, excavated as yellow brown sandy gravel

T5

- 0.0-0.3 SILTY SAND, brown and grey, medium and coarse grained, some fine grained, excess low plasticity fines, some fine gravel, roots at surface, COLLUVIUM
- 0.3-0.7 SILTY SAND, yellow brown, fine to coarse grained, excess low and medium plasticity fines (<20%), trace of fine gravel, RESIDUAL
- 0.7-1.4 Completely weathered rock, excavates as a yellow brown sandy gravel

T6

- 0.0-0.2 SILTY SAND, yellow brown, fine to coarse grained, excess low plasticity fines, some fine and medium grained gravel, FILL
- 0.2-1.0 SILTY SAND, yellow brown, fine to coarse grained, excess low plasticity fines (< 20%), some fine and medium grained gravel, thin humus layer at 0.2 metres, RESIDUAL
- 1.0-1.2 Completely weathered rock

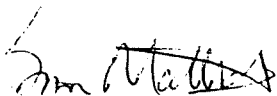
The allowable bearing pressure of the foundation soil appears adequate for a typical residential dwelling and expected settlements are within tolerances normally needed for this type of construction. The underside of the footings should be at least 0.3 metres below the surface.

The classification has been prepared according to the guidelines set out in AS 2870. Also attached is a copy of 'Foundation Maintenance and Footing Performance', prepared by the CSIRO. This guide briefly describes the site classification system and provides guidance to homeowners on the care of clay foundations and the maintenance of the dwelling.

The classification is based on the above observed soil profile at each site and the estimated instability index for the various soil layers.

In preparing the classification we have assumed the ground surface is essentially unchanged. If the final ground surface is changed significantly, either by adding fill or removing soil at the site, the site classification may need changing and should be referred to the site classifier for comment.

Yours faithfully,



Brian Mattick
Principal Geotechnical Engineer