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20 July 2011

The General Manager
Tweed Shire Council
PO Box 816
Murwillumbah NSW 2484

Our Ref:YC0291/L001

Attention: Mr Danny Rose

Dear Sir

**GEOTECHNICAL INVESTIGATION REPORT FINDINGS
RIVA VUE ESTATE 4 – BARNBY STREET, MURWILLUMBAH**

Further to the terms of reference of the Memorandum of Understanding between Tweed Shire Council and Newland Developers Pty Ltd for the proposed development of Lot 332 DP 1158142, Rous River Way, Murwillumbah. We provide the following responses:

1. Geotechnical, Engineering and Infrastructure

- 'The proposal will necessitate significant site filling, to raise proposed residential land above the Design Flood Level and provide flood immunity appropriate to the proposed use. This is intended to be achieved by balanced cut and fill within the site'.

Bulk Earthworks design drawings have been included in the overall response application to Tweed Shire Council, Please refer to Yeats Consulting drawing number YC0291-BE09-B for details.

- 'Provide an overall concept plan showing proposed land forming that addresses the criteria of TSC DCP A5 Section A5.4.6 and TSC Development Design Specification D6'.

Overall engineering concept design drawings have been included in the overall response application to Tweed Shire Council, Please refer to Yeats Consulting drawing numbers YC0291-BE01 to YC0291-BE15 for details.

- 'Geotechnical assessment of compressible soils over the site'.

The results of the CPT pushed and boreholes drilled across the site would indicate that the predominant nature of the clays encountered could be regarded as being stiff in nature and therefore unlikely to settle under the expected loadings. Please refer to Cardno Bowler Geotechnical Investigation number 10024rh.11 for details.

- 'Geotechnical assessment of proposed land forming capability, stability and impact on acid sulfate soils.

Please refer to sections 5 and 6 of Cardno Bowler Geotechnical Investigation number 10024rh.11 for details on acid sulphate soils and proposed land formation methodology.

- 'Ensure the bulk earthwork provides a balance of cut and fill over the site, to alleviate the need for importing fill or disposing of any surplus material'.

Bulk Earthworks design drawings have been included in the overall response application to Tweed Shire Council, Please refer to Yeats Consulting drawing number YC0291-BE09-B for details. This schedules a quantity of earthworks in net volumes without an applied compaction factor.

It is envisaged that the volumes will balance once the cut obtained on site is placed as structural fill under 'level 1 supervision' as per AS3798-2007 'Guidelines on Earthworks for Commercial and Residential Developments'.

We trust the above is to your satisfaction. Should you require any further information please do not hesitate to contact the undersigned.

Yours faithfully
YEATS CONSULTING PTY LTD

A handwritten signature in blue ink, appearing to read "Andrew Cresswell", is written over the company name.

ANDREW CRESSWELL
Project Manager

Enc.