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# Rural Land Assessment Report

RIVA VUE ESTATE  
ROUS RIVER WAY, MURWILLUMBAH

**NEWLAND DEVELOPERS PTY LTD**

23 NOVEMBER 2011

REVISION NO.6



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# 1 Introduction

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## 1.1 Project Overview

Newlands Developers Pty Ltd (a division of the Metricon Group) has engaged Yeats Consulting Pty Ltd to undertake a Rural Land Assessment in support of the rezoning of Lot 332 in DP1158142, Rous River Way, Murwillumbah, also known as Riva Vue Estate-Stage 4.

Newland Developers is currently developing the Riva Vue Estate, approximately 2 kilometres west of the Murwillimbah Town Centre. Part of the Riva Vue Estate was zoned for residential purposes in 1988 under Tweed Local Environmental Plan (1987), however Stage 4 (Lot 332 in DP1158142) remained zoned 1(b2) Agricultural Protection as shown on Drawing No. YC0291-SK03 (refer **Figure 1**).

The current proposal seeks to rezone Stage 4 of the Riva Vue Estate comprising approximately 10 hectares from 1(b2) Agricultural Protection to R1 General Residential and RE1 Public Recreation.

This report confirms the agricultural capability of the land and addresses the likely impacts of the development of Stage 4 of the Riva Vue Estate on surrounding agricultural land.

## 1.2 Subject Site

Street Address:	Rous River Way
Property Description:	Lot 332 in DP1158142
Site Area:	10 hectares
Proposed Use:	R1 General Residential and RE1 Public Recreation
Local Authority:	Tweed Shire Council (TSC)

The site location is shown on Drawing No. YC0291-SK04 (refer **Figure 2**).

## 1.3 Project Objectives

The objectives of this study are to:

- Assess the current and potential agricultural use of the land and the adjoining agricultural lands;
- Assess the impacts of the potential loss of the agricultural land (subject site) and fragmentation of the adjoining agricultural land and any potential cumulative impacts on reducing the viability of the cane industry in Tweed;
- Assess the impact of the expansion of the residential land use on the adjoining agricultural land and its operations, including land opposite the river; (aerial spraying, noise generation from plant/machinery);
- Assess the suitability of the subject site for urban expansion in view of the above;
- Assess if any buffers are required between the proposed residential land uses and the established agricultural land uses in proximity to the site; and
- Assess the potential impacts of the proposed residential land uses and the Rous River and any buffers required.





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TITLE	AERIAL SITE PLAN
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## 2 Method

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### 2.1 Methodology

The following methodology outlines the tasks that Yeats has undertaken to assess the agricultural land capability of this residue portion of the Riva Vue Estate:

- A review of the Agricultural Suitability Assessment prepared by Gilbert & Sutherland (2004) to determine its applicability to this current rezoning proposal;
- A review of Tweed Shire Council's Agricultural Land Suitability Mapping
- A review of Tweed Shire Council's aerial photography (2007 & 2009);
- A review of soils, slope and topography, drainage and erosion hazard on site based on the original work by Gilbert & Sutherland (2004);
- A review of the Planning Proposal prepared by Darryl Anderson Consulting Pty Ltd (May 2010);
- A review of Council's Report (20 July 2010);
- A field investigation involving a site visit on 6 April 2011;
- Confirmation of the agricultural suitability of the site against the Ministerial Directions under section 117(2), 1.2 (Rural Zones) and 1.5 (Rural Lands) and State Environmental Planning Policy (Rural Lands 2008);
- Preparation of a Rural Land Assessment Report; and
- Preparation of a Concept Plan confirming:
  - ✓ buffers between agricultural and residential uses;
  - ✓ riparian corridor buffer to the Rous River; and
  - ✓ Pedestrian access linking existing and proposed residential areas.

### 2.2 Guidelines

The guidelines and reports used to assess the agricultural land capability of this residue portion of the Riva Vue Estate and to identify any potential offsite impacts and management and mitigation measures were as follows:

- Gilbert & Sutherland (2004). *Acid Sulfate Soil Assessment and Management Plan, Stormwater Management Plan, Erosion and Sedimentation Control Plan, Agricultural Suitability Assessment and Preliminary Site Contamination Assessment for a proposed Residential Development, Barnby Street, Murwillumbah*. Prepared for Jim Glazebrook & Associates on behalf of Metricon (Qld) Pty Ltd, October 2004;
- Hulme, T., Grosskopt, T., Hindle, J. (2002). AGFACTS – Agricultural Land Classification. NSW Agriculture, October 2002;
- Learmonth, R., Whitehead, R., Boyd, W.E. & Fletcher, S. (2007) *Living and working in rural areas: a handbook for managing land use conflict issues on the NSW North Coast*, NSW Department of Primary Industries, Wollongbar, NSW;
- NRIC (1991). Digital Atlas of Australian Soils. National Resource Information Centre, digital version created 1991, accessed from [http://www.asris.csiro.au/themes/Atlas.html#Atlas\\_Metadata](http://www.asris.csiro.au/themes/Atlas.html#Atlas_Metadata);
- Tweed Shire Council Development Control Plan 2008: Section A5.



## 3 Agricultural Land Capability Assessment

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### 3.1 Review of previous Agricultural Suitability Assessment

In 2004, Gilbert and Sutherland (G&S) completed an *agricultural land capability assessment* for the 24ha Riva Vue development site, including Part Lot 237 in DP1139108 (now Lot 332 in DP1158142) the 10ha of land zoned 1(b2) under Tweed Shire Council's LEP (2000) that is the subject of this rezoning.

G&S acknowledged that the site was generally made up of Class 3 and Class 4 agricultural land with a small area of Class 5 agricultural land, defined by Hulme *et al* (2002) as:

- **Class 3:** *Grazing land or land well suited to pasture improvement. It may be cultivated or cropped in rotation with sown pasture. The overall production level is moderate because of edaphic or environmental constraints. Erosion hazard, soil structural breakdown or other factors, including climate, may limit the capacity for cultivation and soil conservation or drainage works may be required.*
- **Class 4:** *Land suitable for grazing but not for cultivation. Agriculture is based on native pastures or improved pastures established using minimum tillage techniques. Production may be seasonally high but the overall production level is low as a result of major environmental constraints.*
- **Class 5:** *Land unsuitable for agriculture, or at best suited only to light grazing. Agricultural production is very low or zero as a result of severe constraints, including economic factors which prevent land improvement.*

G&S concluded that the site could only be regarded as Class 4 and Class 5 agricultural land (at best) due to the high erosion hazard rating determined by the projected soil loss.

Since the G&S report was prepared, the following Environmental Planning Instrument and Ministerial Directions have been prepared that are relevant to this assessment:

- State Environmental Planning Policy (Rural Lands) 2008;
- Section 117 Direction 1.2 (Rural Zones); and
- Section 117 Direction 1.5 (Rural Lands).

However, the Agricultural Land Classes remain unchanged, as do the definitions for prime agricultural land, defined by the *North Coast Regional Environmental Plan*<sup>1</sup> as:

- *rural land identified by the Director-General of Agriculture as comprising Classes 1, 2 or 3 of a classification set out in the "Rural Land Evaluation Manual" available from the Department of Agriculture, or other land identified by that Director-General as having agricultural significance.*

The classification system used by G&S is still appropriate to agricultural land classification today, notably the Class definitions given in the AGFACTS – Agricultural Land Classification document (Hulme *et al*, 2002).

In addition, a review of the soil data collected by G&S against the Australian Soil Classification ([http://www.clw.csiro.au/aclep/asc\\_re\\_on\\_line/soilhome.htm](http://www.clw.csiro.au/aclep/asc_re_on_line/soilhome.htm)) and with

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<sup>1</sup> Formerly known as the North Coast Regional Environmental Plan 1988, from 1 July 2009 this plan is taken to be a State Environmental Planning Policy (refer clause 120 of Schedule 6 to the Environmental Planning & Assessment Act 1979).

reference to the Digital Atlas of Australian Soils (NRIC, 1991) indicates the soil types are also appropriately identified.

Drawing No. YC0291 SK05 (refer **Figure 3**) confirms the area that is subject to rezoning and the applicable soil types identified in the G&S report. Figure 3 also recognises the fill that has been imported onto the site as a result of the construction of Rous River Way and earthworks associated with earlier stages of the Estate.

The area that is subject to this rezoning comprises largely poorly drained *Hydrosols* (*humic gleys*) with the steeper areas of the site covered by *red and brown Dermosols*. Due to poor drainage for the former and the steep erosive areas for the latter, these areas have been classed as Class 4 and 5 lands by G&S.

A smaller level to very gently inclined area of *brown Dermosols* is also located in the west of the site [refer to Drawing No. YC0291 SK05 (**Figure 3**)]. At the time of the G&S assessment in 2004, this area supported sugar cane and, according to Tweed Shire Council's aerial mapping, continued to support sugar cane until approximately 2007. G&S classed this area as *Agricultural Class 3 land*, noting that it should be deemed *Class 4 land* due to a low to moderate erosion hazard due to *Soilloss modelling* (refer Gilbert & Sutherland, 2004, p38).

However, it is our view that given this area supported cane in 2007 and recognising the level gradient of this area, it indicates that some of this area (the north-west) may be better described as 'borderline' Class 3 agricultural land.

However, recognising the changes that have occurred on site since 2007, this small area of Class 3 land is not considered viable or practical for further agricultural use for the following reasons:

- The area is relatively small and fragmented (2.82ha);
- The area is surrounded by existing residential properties and cannot achieve the recommended buffer widths under Council's *Development Control Plan (Section A5)*;
- The area is close to an existing Childcare Centre and contains no 'biological buffer' in accordance with Council's *Development Control Plan (Section A5)*;
- The Rous River forms a physical barrier to other agricultural uses, jeopardising efficient and effective management;
- Access is problematic for growing cane given the surrounding land uses;
- The construction of Rous River Way and associated service infrastructure, public reserves, buffers and drainage works has further fragmented this remaining Class 3 land; and
- The fill that has been imported onto the site as a result of the construction of Rous River Way has further reduced the area that can be considered as Class 3 land.

In addition, Council's *Development Control Plan, Section A5 – Subdivision Manual (November 2008)*, *Appendix E<sup>2</sup>* recommends the following buffer widths for conflicting land uses:

- 150 metre habitable building setback from a spray area or likely future spray area, including a 'biological buffer' of minimum width of 30 metres established prior to

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<sup>2</sup> Note: The NSW Department of Primary Industries 'Living and Working in Rural Areas' guideline recommends a buffer of 300m to sugar cane production land as a starting point and guide only.

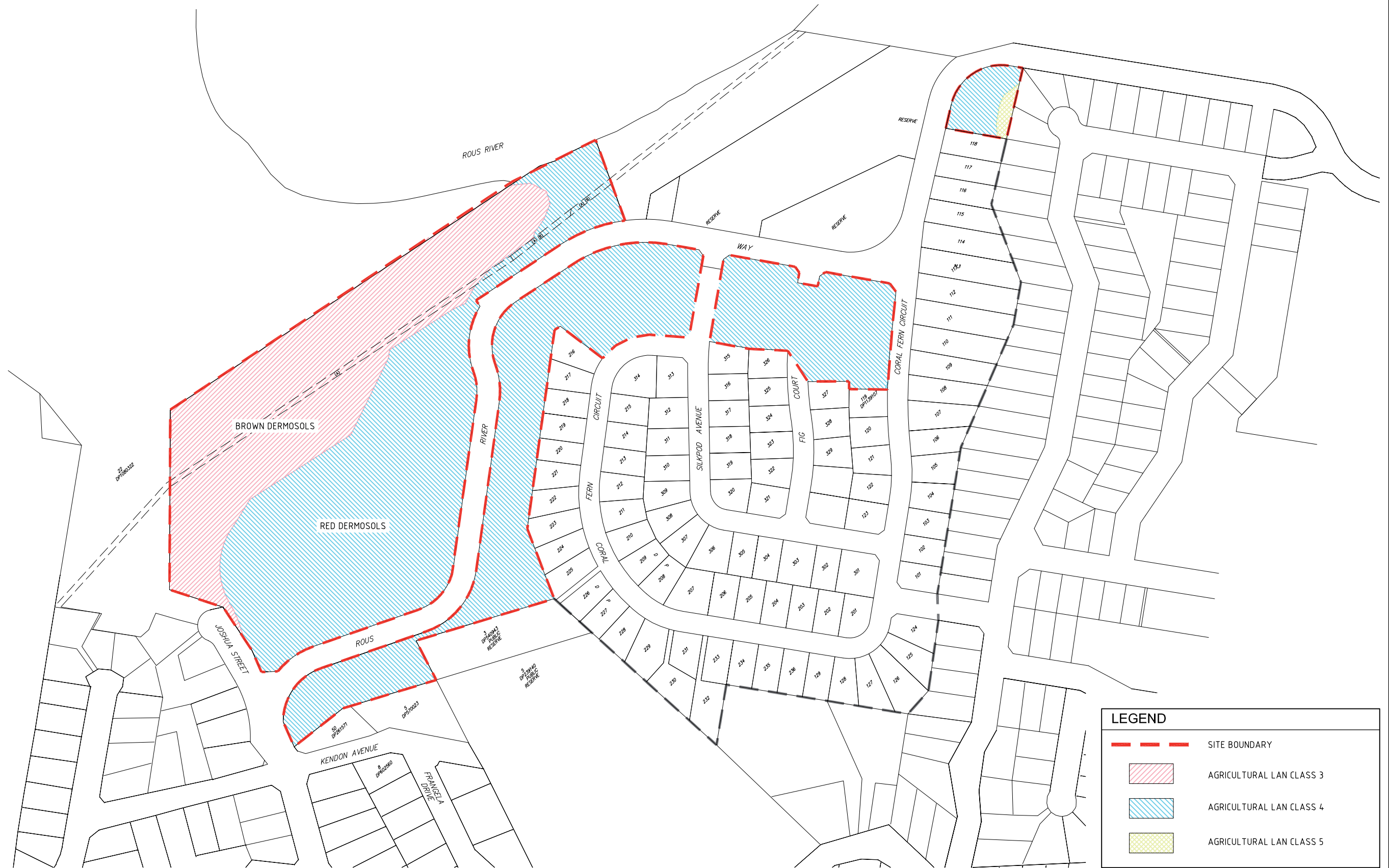
development along the boundaries adjoining intensive cropping and horticultural land use

- Where the spray application is not applied by aircraft, the setback can be reduced to 80 metres, which will include a 'biological buffer'.

It is acknowledged that the NSW Department of Primary Industries (DPI) '*Living and Working in Rural Areas*' guideline (p 26) gives precedence to prior rural areas and requires residential development to incorporate certain buffer widths between residential and agricultural lands, however, in regards to buffers this guideline (p 87) allows Council controls to prevail and states, "*The buffers recommended should be used as a starting point and guide only in the absence of any other or more appropriate separation arrangements. Local and site specific circumstances and application of relevant policies and specific guidelines will dictate the minimum separation required and what is reasonable and appropriate in the circumstances*".

Immediately adjoining the study area to the south is an existing residential area which, in accordance with Council's Development Control Plan, must have a minimum 80m buffer width from the conflicting land use. Applying the required buffer from the existing residential boundary reduces the useable Class 3 agricultural land within the study area to some 1.53ha, as shown on Drawing No. YC0291 SK10 (refer **Figure 4**).





LEGEND	
	SITE BOUNDARY
	AGRICULTURAL LAN CLASS 3
	AGRICULTURAL LAN CLASS 4
	AGRICULTURAL LAN CLASS 5

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LEGEND

SITE BOUNDARY

SUGAR CANE CLOSEST TO RESIDENTIAL AREA

SUGAR CANE ADJACENT TO RIVER

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