

## Mary-Ann Edwards

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**From:** Peter Targett <ptargett@agronico.com.au>  
**Sent:** Friday, 9 August 2019 2:45 PM  
**To:** switch  
**Cc:** margaret.rice10@gmail.com  
**Subject:** Lot 1 Albert Road - Zoning Representation  
**Attachments:** Land Capability Desktop Assessment - Lisa Abblitt.pdf; Trevor Rice - Land Capability and Zoning Representation.pdf

To whom it may concern,

M J & T C Rice & N S Mainwaring would like to make a representation regrading regarding the recent zone changes to their property that are proposed in the Tasmanian Planning Scheme Draft Central Coast Local Provisions Schedule.

They have commissioned two complementary land capability reports written by two independent Agronomists;

- A desktop assessment performed by Lisa Abblitt using the DPIWE land capability map and dated 24<sup>th</sup> July 2007.
- A detailed land capability assessment, clarifying the position of capability class boundaries around the site and assessing house development opportunities and their potential impact on agricultural sustainability.

Because of the lands low agricultural value, M J & T C Rice & N S Mainwaring believe that the current zoning of 'Rural Resource' is currently appropriate and that 'Rural' zoning would be more appropriate under the new scheme. This would somewhat facilitate development of the property for a house in the future, which would still be subject to the planning restrictions of the 'Rural Zone.'

Could any communication regarding this representation please be directed both to [margaret.rice10@gmail.com](mailto:margaret.rice10@gmail.com) and [ptargett@agronico.com.au](mailto:ptargett@agronico.com.au)

Kind Regards,  
Peter Targett



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## **Land Capability Assessment**

**Lot 1 Albert Rd,  
Howth,  
Tas 7316**

**Property ID: 3344853  
Title Reference: 244535/1**

**Prepared by Peter Targett**

**8<sup>th</sup> August 2019**

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## Introduction

The following Land Capability Assessment has been prepared in accordance with the State policy on the protection of Agricultural Land 2009, using guidelines developed by Grose (1999). The report is based on background information obtained from Government assessments and an on-site agricultural survey conducted on the 7/8/19.

A number of sample holes were dug across the site using a 150 mm spade, noting soil type, structure, root activity, slope and vegetation. Slope angle was measured using 'Measure', an application published by Apple Pty Ltd (2018). Emmerson dispersion test was used to rate dispersion index (Mc Mullen, 2000). Soil texture recorded using feel and ribbon length. Existing road cuttings, uprooted trees and eroded areas were also used to check landform and soil type continuity.

## Location

The assessed property is approximately 4.9 ha, located adjacent to 70 Albert Road. The Property ID is 3344853, and the Title Reference is 244535/1.



Figure 1. An outline of the property boundary (orange). The primary land use of the local area is agricultural cropping and grazing, with some forestry.

## **General Site Overview**

According to the Digital Geological Atlas 1:25,000 scale for Burnie all of the soil at the site is derived from deeply weathered tertiary basalt (Mineral Resources Tasmania, 2019). Where lava cools rapidly on the earth's surface it forms basalt rock and soils derived from basalt parent material are amongst Tasmania's most fertile soils and are therefore highly agriculturally significant.

The soil type was very consistent across the site, consisting of deep, free draining Red Ferrosol (Isbell, 2002) of between pH 5 - 6. Current land-use of the site is grazing and occasional cropping.

The altitude of the property ranges from 60 m to 114 m above sea level. According to Grose, C J, Ed. (1999) as a guide; <200 m above sea level would allow for a full range of crops and livestock, without frost being a significant limitation.

The topography of the site is somewhat steep and according to the 'List Map' the incline average around 10.8° (Tasmanian Government, 2019).

The average annual rainfall for the area is ~950 mm (Burnie Weather Station), a full range of crops and livestock can be grown in this area.



## Land Capability Overview

**Table 1. Features of Land Capability Classes**

CLASS		LIMITATIONS	CHOICE OF CROPS	CONSERVATION PRACTICES
1	<b>Under cultivation</b>	Very minor	any	Very minor
2		Slight	Slightly reduced	Minor
3		Medium	Reduced	Major
4		Severe	Restricted	<b>Major + careful management</b>
5	<b>Under pastoral use</b>	Slight to moderate	Grazing	
6		Severe	Grazing	
7		Very severe to extreme	No, or very minor agricultural value	

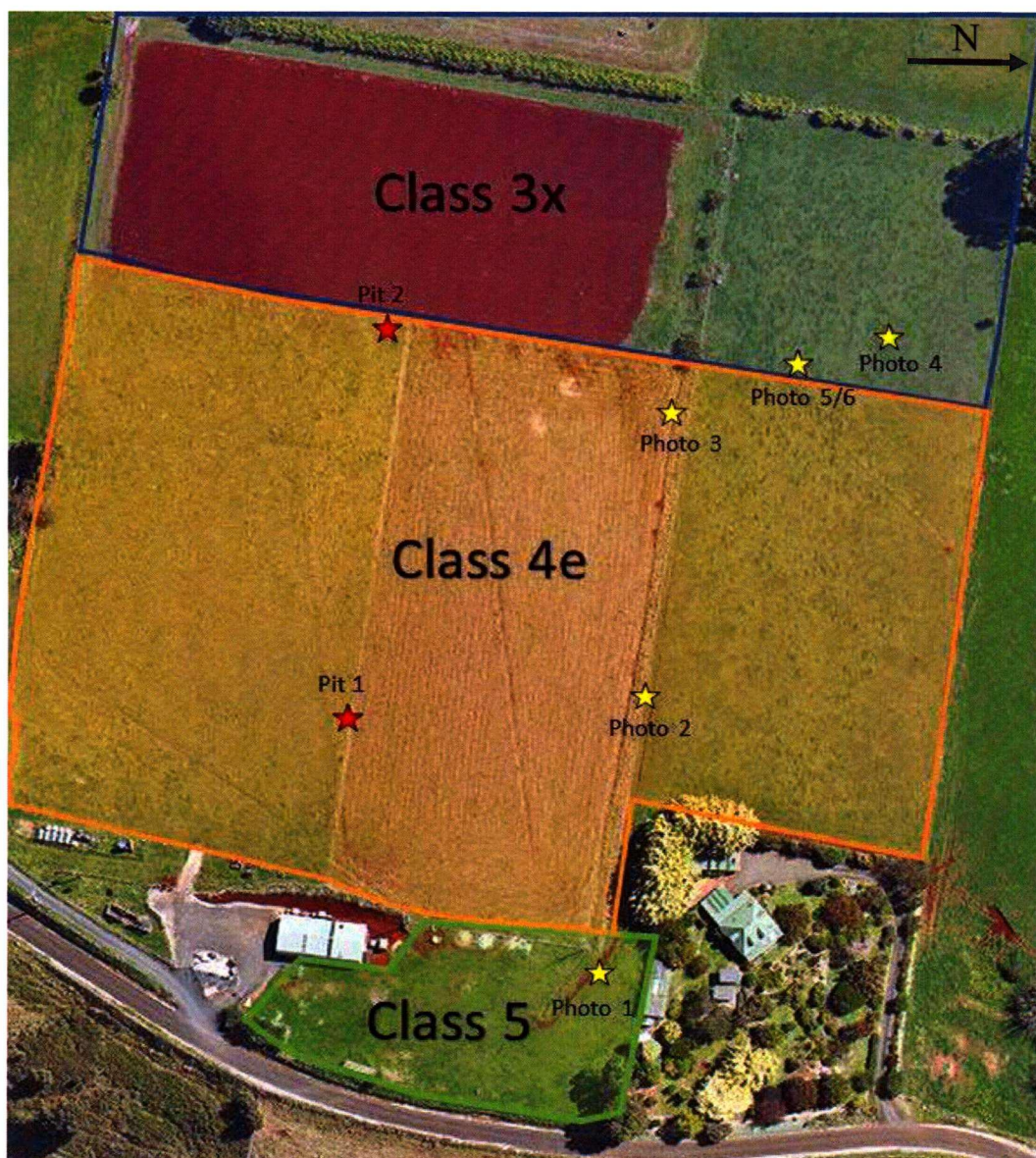


Figure 2. Mapped land capability for the site.

Based on the guidelines for the classification of agricultural land in Tasmania, Land Capability Handbook (Grose, 1999), the land at the surveyed site contains similar sized portions of high quality class 3 land as well as low quality class 4 and 5 agricultural land (figure 2).

**Table 2. Soil Subclasses**

<p>x = (Complex topography). Limitations caused by irregular, uneven or dissected topography which limit ease of management or divide land into parcels difficult to manage at the paddock scale</p>	<p>e = (Erosion). Unspecified erosion limitation (both current and potential).</p>
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**Table 3. Soil Characteristics**

Site ID	Observations
Pit 1	<p><b>General Observations</b></p> <ul style="list-style-type: none"> <li>• Depth: 600+ mm</li> <li>• Strong moderate pedal structure</li> <li>• Many fibrous roots throughout the profile, no rusty roots.</li> <li>• No rocks or pebbles</li> <li>• Negligible mottling</li> <li>• Very slight highly transitional colour change from red ochre at the top of the profile, to a slightly more lighter orange at 50-60 cm.</li> <li>• Classification: Red Ferrosol</li> </ul> <p><b>Soil Texture and pH readings</b></p> <p>0-100 mm: Medium Clay, pH 6. Dispersion index 1 (highly stable).</p> <p>300 mm: Clay Loam, pH 5. Dispersion index 1 (highly stable).</p> <p>500-600 mm: Light Clay, pH 5.5. Dispersion index 1 (highly stable).</p>
Pit 2	<p><b>General Observations</b></p> <ul style="list-style-type: none"> <li>• Depth: 600+ mm</li> <li>• Strong moderate pedal structure</li> <li>• Many fibrous roots throughout the profile, no rusty roots.</li> <li>• No rocks or pebbles</li> <li>• Negligible mottling</li> <li>• Very slight highly transitional colour change from red ochre at the top of the profile, to a slightly more lighter orange at 50-60 cm.</li> <li>• Ironstone &lt;4% present at 500 mm.</li> <li>• Classification: Red Ferrosol</li> </ul> <p><b>Soil Texture and pH readings</b></p> <p>0-100 mm: Heavy Clay, pH 6. Dispersion index 0 (highly stable).</p> <p>400-500 mm: Light Clay pH 5.5. Dispersion index 1 (highly stable).</p>

The soil has very good depth, is free draining, highly fertile and the Emmerson dispersion testing showed every layer to be highly stable.



## Topography

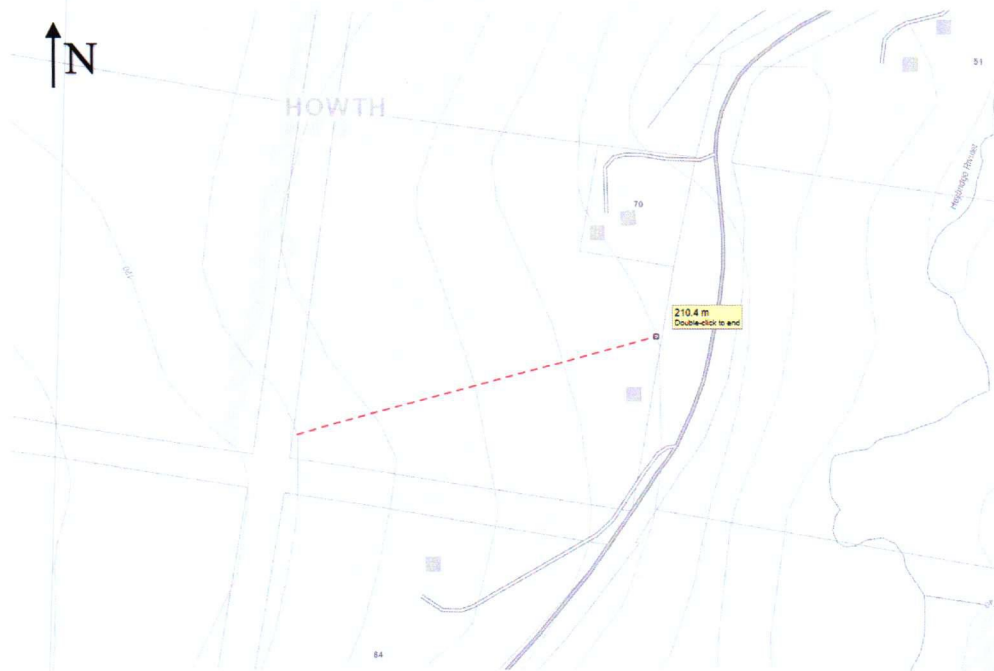


Figure 3. Topographic map, the average slope was calculated to be  $10.8^\circ$  (Tasmanian Government, 2019).



Figure 4. Slope map. The slope across the site was quite consistent and varied between  $10^\circ$  and  $13^\circ$  in the main areas of interest across most of the site.

**Table 4. Estimation of Soil Erodibility**

(Interpreted from the Land Capability Handbook pages 34-40 [Grose, 1999])

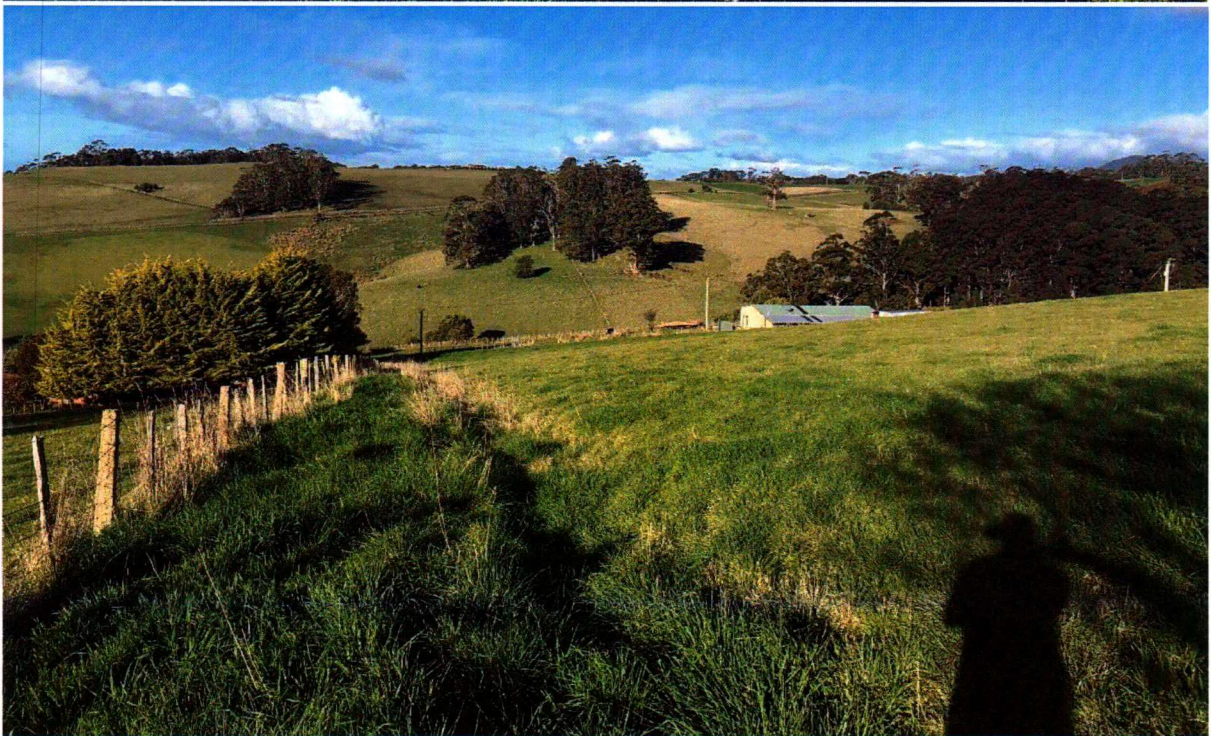
Depth (Pit 1 and 2)	Soil Type	Dispersion	Erodibility	Erosion Risk on a slope of 10-18°	Land Class
0-100 mm	Medium + Heavy Clay (Structured)	None	Low	Moderate	4
300-600 mm	Clay Loam + Light Clay (Structured)	None	V Low	Low	3

The steep topography combined with the soil texture results in a capability class of 4 for the topsoil and class 3 for the subsoil.



Photo 1. Class 5 land at the bottom section of the property. Site has significant slope and is a very small pocket of land wedged in between a shed and a house.





Photos 2 and 3. Images show the steepness of the slope found on the class 4 land.





Photos 4 and 5. Images show the breadth of the slope found on the class 4 land.





Photo 6. The slope decreases towards the upper boundary of the block and the land capability transitions to class 3 (currently under crop) accordingly.



## Summary

In summary, the soil on this site partly consists of low agricultural value land (Classes 4 and 5), and areas of prime agricultural land (Class 3), as defined by the PAL Policy 2009. The site has been owned and managed by Trevor Rice, who is a very experienced farmer, for over 30 years. Trevor maintained this small pocket of property as a hobby farm when he sold the majority of his farm some years ago. Trevor mostly only grows crops on the class 3 land and mostly grazes what we have classed as class 4 land. To grow crops such as pyrethrum, carrots, onions, potatoes and brassicas on the class 4 land, significant erosion control would need to be put in place. Trevor reports that last time he had all of the class 4 land under cultivation a significant rain event close to Christmas washed about a foot of mud into the neighbour's house that resulted in an insurance claim lodged by the neighbour. Since this event which occurred over 12 years ago Trevor has not cropped the class 4 land. Trevor has also dug open drainage channels across the property to help channel the runoff water and soil. Trevor has also reported that in the past when he has had the class 4 land under crop, the council have had to come to clear the main road from slope wash derived from the paddock. The class 5 land located on the North East corner of the property is too small to be of agricultural significance and is also significantly sloping.

Rip/mulch lines placed in the crop along the contours would be an effective way to mitigate wash, however in my experience of witnessing growers using this technique on similar soils with slopes of this magnitude I would expect certain weather conditions at the wrong point in time (e.g after just after sowing), could lead to significant slope wash. Terracing would be an acceptable long-term solution to erosion, however the capital cost of doing so would likely be uneconomical.

The effects of establishing a house at the proposed site on permanent agricultural land loss and on the ability to intensively farm the prime land located on the adjacent properties will be assessed in the next section.

## Part 2 – Zoning Representation

The property is located on the boundary between the agricultural zone and rural zones. Although it has been proposed to zone the property as agricultural, the majority of the land on the block is not prime land. It is therefore suggested that rural zoning may be more appropriate.

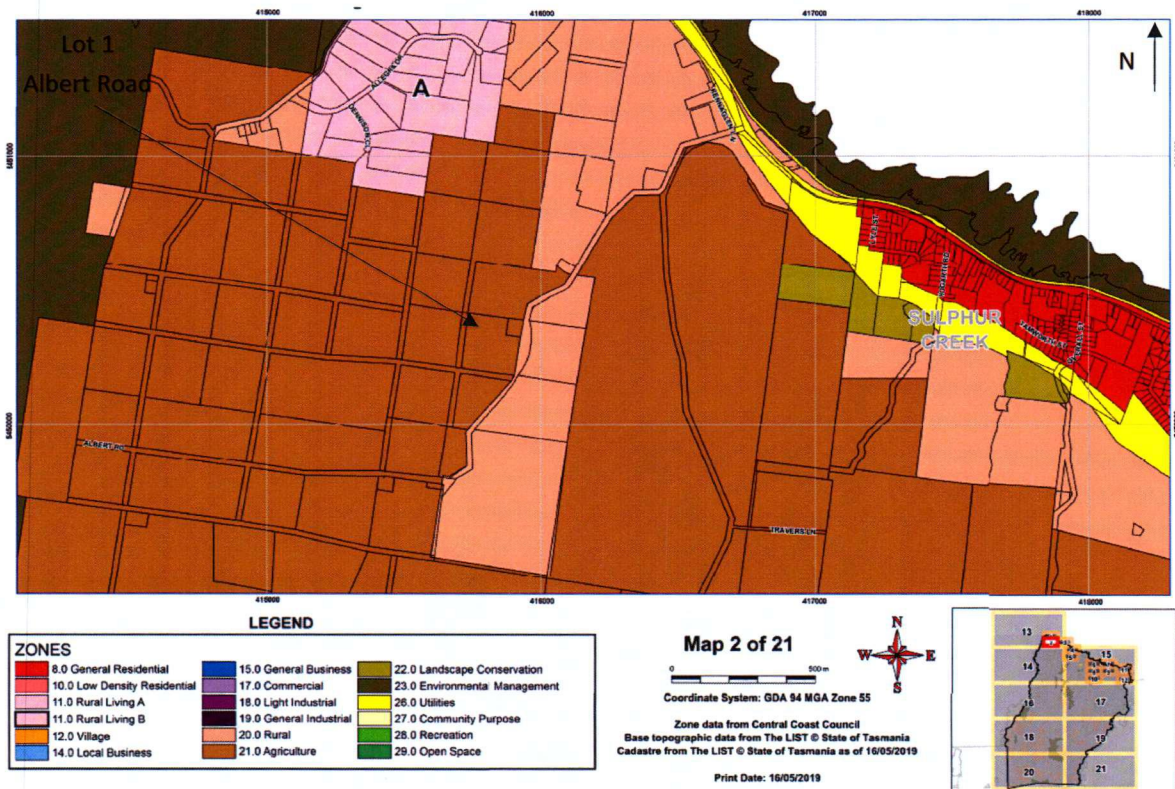


Figure 5. Tasmanian Planning Scheme – Draft Central Coast Local Provisions Schedule – Zones.



## Potential Residential Development on Site

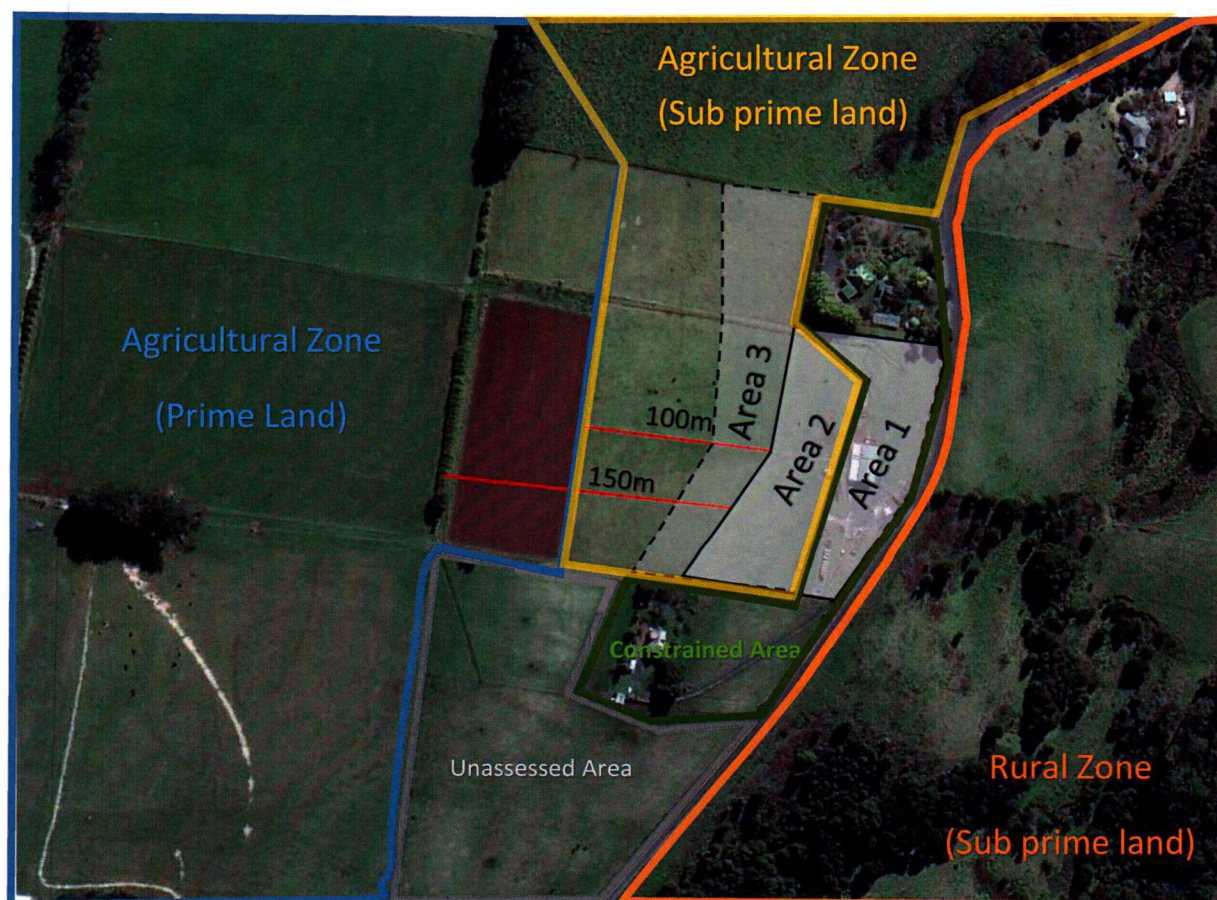


Figure 6. Permanent Loss of Agricultural Land and Operational Constraints arising from a potential house development across three areas.

Zone	Area Estimate	Constraint to Neighbours	Internal Constraint
Area 1 (Constrained)	0.57 ha	Nil	Nil
Area 2 (Sub-Prime, Moderately Constrained)	0.71 ha	Nil	Sub-prime land: Marginal loss of subprime land area, somewhat limits spraying opportunities. Prime land: Nil
Area 3 (Sub-Prime, Marginally Constrained)	(Approximate boundary)	Negligible increase to existing constraints from existing dwellings.	Sub-prime land: Small loss of sub-prime land and potentially moderate limitation on spraying opportunities depending on precise location. Prime Land: Minimal impact on spraying opportunities



Building a house in areas 1 or 2 would not impinge on the ability to farm the prime land in any significant way and would result in a minimal loss of sub-prime land. All of area 1 and the majority of area 2 is at least 100 m away from prime land located on the western side of the block. This provides a significant buffer for spraying. The 'Code of Practice for Ground Spraying' states:

"If you are a commercial grower or producer, you should notify occupiers of properties and buildings within 100 metres of any area to be sprayed, of your intention to spray at least one, but preferably two days in advance. The information you provide should include details of the sprays to be used and the steps that will be taken to minimise drift. Verbal notification is acceptable."

Building a house in area 3 would result in some degree of constraint to the prime land within the property that would vary depending on the precise locality of the dwelling and would need to be assessed on a case by case basis. Building a house in area 3 would likely have an insignificant impact on the ability to farm the prime land on the neighbouring property beyond what already exists because of the dwellings located to the North and South.

## **Summary**

The property in question is located right on the fringe between what is proposed to be the agricultural zone and the rural zone. As such the land transitions quickly from prime class 3 land next to the agricultural zone to sub-prime class 4 land, which makes up the majority of the block, to marginal class 5 land which is right next to the proposed rural zone. In my opinion, establishment of a dwelling on the property could be done without significantly hindering intensive agricultural development in the future such as cropping in the nearby prime-land located to the West. The amount of prime land in question is only relatively small (~1.4 ha) compared to the size of the block (~4.9 ha). Such a parcel of land would be too small on its own for most commercial vegetable growing contracts which would need at least 4 ha to be grown at once as a minimum. Therefore, it is proposed that the block be given a rural zoning which would reflect the lack of capability of the land to be developed for intensive agricultural purposes and the potential to build a dwelling without significant interference to long term sustainable use of the surrounding prime agricultural land.

## References

Grose, C J, Ed. (1999). *Land Capability Handbook. Guidelines for the Classification of Agricultural Land in Tasmania*, Department of Primary Industries, Water and Environment, Tasmania, Australia.

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24 July, 2007

Mr & Mrs T Rice  
9 Waterford Rd  
SULPHUR CREEK TAS 7316

CENTRAL COAST COUNCIL

DEVELOPMENT & REGULATORY SERVICES

Received: 09 AUG 2019

Application No: .....

LPS DOC: 331240

Dear Trevor and Margaret,

As per your request I have assessed the land capability of your 4.060 ha block at Albert Road, Howth, title reference 244534. It is my understanding that this assessment is to be used as part of a building application to Central Coast Council.

According to DPIWE's land capability map (Inglis land capability survey mapsheet 1:100 000 scale 1999), your block falls in an area of class 4.

A more detailed assessment of your block would suggest that this is correct for the majority of this block with a small area of the south eastern corner that is class 5, please see attached map.

The definition of class 4 land is "...land well suited to grazing but which is limited to occasional cropping or to a very restricted range of crops. The length of the cropping phase and/or range of crops are constrained by severe limitations of erosion, wetness, soils or climate. Major conservation treatments and/or careful management is required to minimise degradation". Land Capability Handbook, C J Grose, 1999.

Class 5 land is "Land with moderate limitations to pastoral use. This land is unsuitable for cropping, although some areas on less severe slopes may be cultivated for pasture establishment or renewal..."

The main limitation to agricultural production on this land parcel is erosion. Due to the slope of this land regular cultivation of this soil could lead to severe erosion, and I would suggest that careful management of the soil resource is required to minimise this risk. This is especially true of the small area of class 5 which is steeper than the rest of the block.

To complete this assessment, the principles published in the Land Capability Handbook and Forth Report published by the Department of Primary Industries, Water and Environment were used. For more in depth information on land classification, I would recommend that you check these publications.

If you require any further information for your application to council, please don't hesitate to contact me anytime at Roberts Limited, 38 Alexandra Rd, Ulverstone, or on 0408 132 785.

Yours sincerely,

L. Abblitt

Lisa Abblitt  
Agronomist  
Roberts Ltd, Ulverstone

Roberts