

# **Land Capability Assessment**

**Duffs Rd, Riana, TAS.** 

Property ID: 7814592 Title Reference: 52941/1

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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 4/9/2019.

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 7.1 ha located between at. The Property ID is 7814592, and the Title Reference is 52941/1.



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

#### **General Site Overview**

The average annual rainfall for the area is ~1200 mm (Gunns Plains Weather Station).

According to the Digital Geological Atlas 1:25,000 scale for Riana all of the soil at the site is derived from 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 pH 5.5. Current land-use of the site is grazing.

The altitude of the property ranges from 370 m above sea level at the lowest point to 460 m above sea level at the highest point. According to Grose, C J, Ed. (1999) as a guide; 260-380 m would generally limit the land to class 3 because of the restriction of the length of the growing season and limits the use to non-frost sensitive crops such as sweet-corn, whilst 380-500 m would generally limit the land to class 4 because of frost risk (refer figure 2).

## **Land Capability**

| CLASS |                    | LIMITATIONS                  | CHOICE OF<br>CROPS                            | CONSERVATION PRACTICES     |  |
|-------|--------------------|------------------------------|---|----------------------------|--|
| 1     |                    | Very minor                   | any   | Very minor                 |  |
| 2     | iivation           | Slight                       | Slightly<br>reduced                           | Minor                      |  |
| 3     | Under cultivation  | Medium                       | Reduced                                       | Major                      |  |
| 4     | 100                | Severe                       | Restricted                                    |                            |  |
| 5     | nse                | Slight<br>to<br>moderate     | Grazing                                       | Major                      |  |
| 6     | Under pastoral use | Severe                       | Grazing                                       | +<br>careful<br>management |  |
| 7     | Unde               | Very severe<br>to<br>extreme | No, or very<br>minor<br>agricultural<br>value | -                          |  |

Figure 2. Features of Land Capability Classes

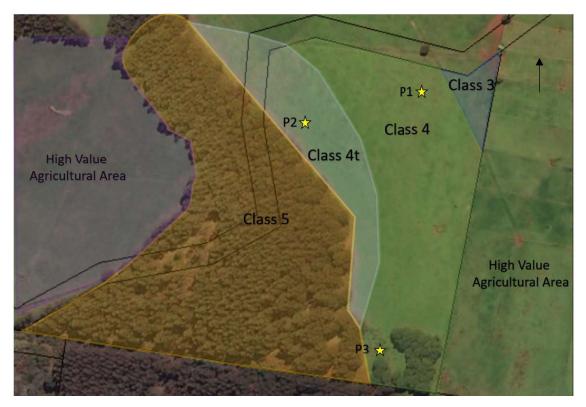


Figure 3. Mapped land capability for the site.

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 3).

#### **Soil Subclasses**

- 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.
- e = (Erosion). Unspecified erosion limitation (both current and potential).
- g = (Coarse Fragments). Limitations caused by excess amounts of coarse fragments (particles of rock 2-600 mm in size), including gravel, pebbles and stones, which impact on machinery, damage crops or limit growth. Coarse fragments may occur on the soil surface or throughout the profile.
- t = (Temperature). Limitations caused by frost risk

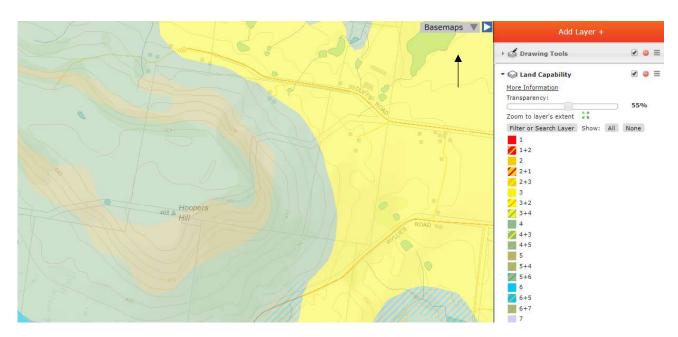


Figure 4. Reference mapped land capability class for the block and surrounding areas (source: Tasmanian Government, 2019). Capability class polygons are similar to those mapped in figure 3.

**High Value Agricultural Areas** 



Figure 5. High value agricultural area indicated by the purple shaded area in figure 1. The elevation of this land is over 450 m making it class 4 land because of frost risk, which is not defined as prime land. However, the area is relatively flat and expansive enough for permanent broadscale irrigation infrastructure and is in a proclaimed irrigation district (Dial Blythe) and therefore quite valuable for agricultural purposes, such as irrigated pastures under intensive animal husbandry.



Figure 6. High Value agricultural area marked by dotted lines in photo. These areas are currently being used for grazing, dairying and cropping.



Figure 7. High Value agricultural in photo. These areas are currently being used for grazing, dairying and cropping.

# Class 4 Zone



Figure 8. Figure shows the steep slopes that run as a band through the middle of the class 4 zone.

### Class 4t Zone



Figure 10. There is a flat area on top of the hill (marked by the white polygon in figure 3). This area is approximately 420 m above sea level which makes it capability class 4 because of frost risk.

## Class 5 Zone



Figure 11. Class 5 zone is very steep and contains many rocky outcrops and large boulders.

| Site ID | Observations   |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|
|         | • 15° Slope  |  |  |  |  |  |  |
|         | • Depth: 800+ mm   |  |  |  |  |  |  |
|         | Strong pedal structure   |  |  |  |  |  |  |
|         | Roots up to 800 mm, no rusty roots, which indicates a free draining soil.  |  |  |  |  |  |  |
|         | No mottling  |  |  |  |  |  |  |
|         | <ul> <li>Very gradational transitional colour change from red ochre at the top of the profile<br/>to a brighter orange at 800 mm.</li> </ul>   |  |  |  |  |  |  |
|         | <ul> <li>0-100 mm, Light clay (51 mm ribbon), ρH 5.5, non-dispersive.</li> </ul>   |  |  |  |  |  |  |
|         | <ul> <li>600-700 mm, soil very sticky, Light clay (60 mm ribbon), ρH 5.5, non-dispersive.</li> <li>Classification: Red Ferrosol</li> </ul>   |  |  |  |  |  |  |
| P1      | • Capability Class 4 (limited by frost risk caused by elevation ~390 m above sea level).   |  |  |  |  |  |  |
|         | • 5° Slope   |  |  |  |  |  |  |
|         | • Depth: 700+ mm   |  |  |  |  |  |  |
|         | Roots up to 700 mm, no rusty roots, which indicates a free draining soil.  |  |  |  |  |  |  |
|         | <ul> <li>Very gradational transitional colour change from red ochre at the top of the profile<br/>to a brighter orange at 700 mm.</li> </ul>   |  |  |  |  |  |  |
|         | • 0-100 mm, Light clay, ρH 5.5, non-dispersive.  |  |  |  |  |  |  |
|         | <ul> <li>600-700 mm, Light clay (not quite as sticky as pit 1 and a little gritty), ρH 5.5, non-<br/>dispersive.</li> </ul>  |  |  |  |  |  |  |
|         | Classification: Red Ferrosol   |  |  |  |  |  |  |
| P2      | Capability Class 4 (limited by frost risk caused by elevation ~425 m above sea level).   |  |  |  |  |  |  |
|         | Exposed face from excavation   |  |  |  |  |  |  |
|         | Upper AB horizon is the same as pit 1 and 2.   |  |  |  |  |  |  |
|         | This pit shows the transition to a C horizon at significant depth and was included  for reference and the control of the |  |  |  |  |  |  |
|         | for reference only.  • Possible calcium nodules in profile   |  |  |  |  |  |  |
|         | The soil transitioned quickly to a layer of grey and red soil with various coloured  |  |  |  |  |  |  |
|         | nodules/concretions. Some tiny nodules appear to fizz when water or a weak acid added.   |  |  |  |  |  |  |
|         | <ul> <li>Soil Texture: Clay Loam, ρH 6, non-dispersive</li> </ul>  |  |  |  |  |  |  |
| Р3      |  |  |  |  |  |  |  |

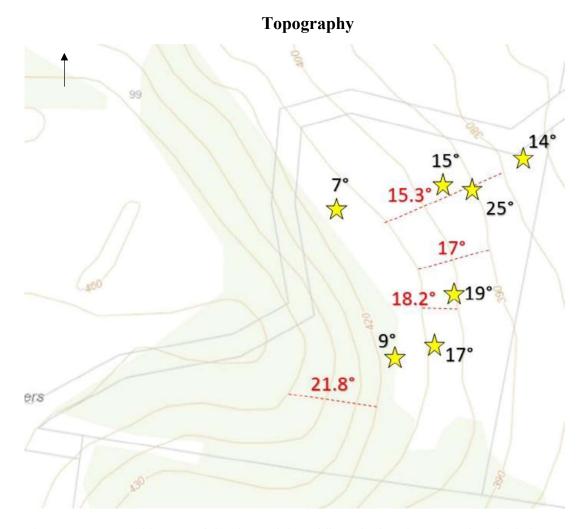


Figure 9. Topographic map of the site, red dotted lines depict trigonometric calculations based on the drawn contour lines, whilst yellow stars depict on site slope measurements.

## **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° | Erosion Risk on a slope of 18-32° |
|---------------------|--------------|------------|-------------|-----------------------------------|-----------------------------------|
| 0-100               | Light Clay   | None       | V Low       | Low (Class 3)                     | Moderate (Class 4)                |
| mm                  | (Structured) |            |             |                                   |                                   |
| 600-700             | Light Clay   | None       | V Low       | Low (Class 3)                     | Moderate (Class 4)                |
| mm                  | (Structured) |            |             |                                   |                                   |

#### Summary

In summary, the soil on this site partly consists of low agricultural value land (Classes 4 and 5), and a very small area of prime agricultural land (Class 3), as defined by the PAL Policy 2009. For class 4 land and above, the constraints generally limit the scope of agricultural use to grazing and limited cropping. One of the main constraints on the block is that >90% of the block area is over 380 m above sea level leading to a significant frost risk. Significant slopes in some parts of the block are also a significant limiting factor and make machinery operations difficult as well as giving a potential for erosion. Growing any crop types on the sloping class 4 land would require significant conservation practices on the sloping terrain to prevent erosion, whilst the class 4 land on top of the hill is less than a hectare in area and therefore too small to be croppable by itself in isolation from surrounding land. As such the class 4 land at this location is more suited to silviculture, grazing and frost tolerant horticultural type crops such as terraced fruit trees, where semi-permanent and permanent erosion control measures are easier to put into place.

#### Part 2 – Addressing the Central Coast Planning Scheme

#### Clause 26.3.3 – Residential Use

- (a) minimises the permanent and unnecessary loss of land with potential for resource development or an extractive industry; and
- (b) minimises likelihood to interfere with or constrain the existing or potential use of land for resource development or an extractive industry

#### Clause 26.3.3 Performance Criteria

(a) be consistent with local area objectives;

#### 26.1.2 Local Area Objectives

(a) The priority purpose for rural land is primary industry dependent upon access to a naturally occurring resource;

The entire cadastral parcel is approximately 7 ha in total. Of this area 3 ha is very low quality class 5 land that is mainly only suitable for a bush run for grazing. Whilst the remaining 4 hectares is also nearly all class 4 that is mainly suitable for grazing, silviculture and a limited range of frost tolerant terraced horticultural crops. Building a house on the site will not permanently reduce the amount of prime land or land suitable for intensive broadacre vegetable cropping both because of the frost risk and steep embankment that runs through the middle of the class 4 land.

(b) Air, land and water resources are of importance for current and potential primary industry and other permitted use;

3 ha of the land is very low quality class 5 land that is mainly only suitable for a bush run for grazing. The remaining 4 hectares is nearly all class 4 that is mainly suitable for grazing, silviculture and a limited range of terraced horticultural crops and not intensive vegetable and broad acre cropping. Class 4 land is not defined as prime land according to the PAL policy.

The property currently has no dams for water collection.

- (c) Air, land and water resources are protected against –
- (i) permanent loss to a use or development that has no need or reason to locate on land containing such a resource; and

3 ha of the land is low quality class 5 land that is mainly only suitable for a bush run for grazing. The remaining 4 hectares is nearly all class 4, which is not defined not defined as prime land according to the PAL policy.

The elevation of the site is nearly all in the class 4 zone because of frost risk, which limits the choice of crop types considerably. The class 4 land also has a steep embankment through the middle that renders the area mostly unsuitable for broadacre cropping/vegetable production/protected cropping. The complex topography means that the site is mainly only suitable for grazing, however if the area were expanded to adjacent properties it would also be theoretically possible to grow plantation forest and a limited range of frost tolerant terraced horticultural crops.

(ii) use or development that has potential to exclude or unduly conflict, constraint, or interfere with the practice of primary industry or any other use dependent on access to a naturally occurring resource;



Figure 1. Diagram overlay depicts approximate proposed building envelope area within the red polygon whilst yellow lines indicate distances of 100 m.

The proposed development is approximately 100 m away from surrounding flat areas of high agricultural value. The proposed development also either sits approximately 30 m higher in elevation compared to surrounding agricultural land of significance or is buffered by a significant tree shelter belt. Therefore, it is unlikely that the proposed house will constrain the ability to spray the surrounding land of agricultural significance. Grazing land only occasionally needs to be sprayed and therefore most of the grazing land within the property could still be utilised as such in the future without too much constraint by the presence of the house.

(d) Primary industry is diverse, dynamic, and innovative; and may occur on a range of lot sizes and at different levels of intensity;

The entire cadastral parcel is approximately 7 ha in total. Of this area 3 ha is very low quality class 5 land that is mainly only suitable for a bush run for grazing. Whilst the remaining 4 hectares is also nearly all class 4 that is mainly suitable for grazing, silviculture and terraced horticultural crops. Realistically the significant slopes running through the middle of the class 4 land would limit the ability to utilise the land in an intensive way and therefore the land is most suited to grazing.

(e) All agricultural land is a valuable resource to be protected for sustainable agricultural production;

3 ha of the land is very low quality class 5 land that is mainly only suitable for a bush run for grazing. The remaining 4 hectares is nearly all class 4 that is mainly suitable for grazing, silviculture and a limited range of terraced horticultural crops and not intensive vegetable/broad acre cropping. Class 4 land is not defined as prime land according to the PAL policy.

- (f) Rural land may be used and developed for economic, community, and utility activity that cannot reasonably be accommodated on land within a settlement or nature conservation area; n/a
- (g) Rural land may be used and developed for tourism and recreation use dependent upon a rural location or undertaken in association with primary industry
- (h) Residential use and development on rural land is appropriate only if –
- (i) required by a primary industry or a resource based activity; or

n/a

(ii) without permanent loss of land significant for primary industry use and without constraint or interference to existing and potential use of land for primary industry purposes

The proposed development would not cause a significant permanent loss of agricultural land that is suitable for cropping purposes for the following reasons:

- 1. The topography of the land being significantly sloping. The steep slopes run through the middle of the class 4 land and would hinder the function of many types of agricultural machinery. The steep slopes also present a significant impediment to the use of broad scale irrigation equipment such as pivots or linears. Whilst gun irrigation could be used, it is almost guaranteed to cause some level of erosion on a slope of this magnitude. Solid set irrigation could be used, however different crop types are planted using different bed sizes and machinery with different wheel centres, which is why solid set irrigation is rarely utilised in commercial vegetable production.
- 2. Constraint from frost limits the land to class 4 and only frost tolerant crops could be grown.
- 3. According to the Protection of Agricultural Land Policy, classes 1-3 agricultural land are considered prime land. Prime land is especially significant for agriculture because it can be utilised in a diverse range of farming operations with minimal limitations or management of constraints. The majority of the site is Class 4 land and above and therefore not classed as prime land.

In terms of grazing, the 3 ha area of class 5 land is mostly only suitable as a bush run and not particularly valuable for agricultural development, because its steep slope and rocky outcrops make it difficult even for pasture renovation. The remaining 4 ha of mostly class 4 land could undergo pasture renovation and permanent solid set sprinkler irrigation could be setup, provided water could be connected to the property. Irrigation would facilitate a higher stocking rate. Relatively speaking, the value of 7 ha of partially irrigatable grazing land is small in itself, however the local significance of preserving this small parcel of non-prime land for grazing use at this specific locality could be determined through either interviewing adjacent enterprises or assessment by a qualified person with local understanding.

The proposed development is approximately 100 m away from surrounding flat areas of high agricultural value. It is unlikely that spraying contractors on neighbouring properties would need to notify the occupant of the proposed dwelling before spraying. The code of practice of 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."

The proposed development also either sits approximately 30 m higher in elevation compared to surrounding agricultural land of significance or is buffered by a significant tree shelter belt. Therefore, it is unlikely that the proposed house will constrain the ability to spray the surrounding land of agricultural significance. Grazing land only occasionally needs to be sprayed and therefore most of the grazing land within the property could still be utilised as such in the future without too much constraint by the presence of the house.

The property is within the 'Strategic Prospectivity Zone' for mining and there are exploration rights for petroleum products (Cat 4), Industrial Materials (Cat 5), Metallic Minerals, Atomic Substances (Cat 1). However there are no mining leases currently within 1000 m of the site. Please refer to a geologist report for further details.

(b) be consistent with any applicable desired future character statement;

Please refer to the owner's intended usage statement.

- (c) be on a site within which the existing or proposed development area –
- (i) is not capable by reason of one or more of factors of topography, resource capability, size or shape of being utilised for resource development or extractive industry use; and

The proposed development would not cause a significant permanent loss of agricultural land that is suitable for intensive cropping purposes because the proposed house site is located on class 4 land (figure 1). Class 4 land is not defined as prime land according to the Protection of Agricultural Land policy. The house site is situated in a location that would unlikely ever be industrially cropped for vegetables in the future. The land is most suitable for grazing and could be irrigated by a solid set sprinkler system for the purpose of growing grass, however it would likely not be a good location for a pivot or linear irrigator and there are much better sites for these machines close by.

(ii) is not capable of utilisation in the operations of a resource development or extractive industry enterprise, regardless of ownership; and

The entire cadastral parcel is approximately 7 ha in total. Of this area 3 ha is very low quality class 5 land that is mainly only suitable for a bush run for grazing. Whilst the remaining 4 hectares is also nearly all class 4 that is mainly suitable for grazing, silviculture and terraced horticultural crops. Building a house on the site will not permanently reduce the amount of prime land or land suitable for intensive vegetable cropping both because of the frost risk and steep embankment that runs through the middle of the class 4 land.

(iii) does not constrain or interfere with existing or potential resource development or extractive industry use of land including the balance area on the site.

The proposed development is approximately 100 m away from surrounding flat areas of high agricultural value. It is unlikely that spraying contractors on neighbouring properties would need to notify the occupant of the proposed dwelling before spraying. The code of practice of 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."

The proposed development also either sits approximately 30 m higher in elevation compared to surrounding agricultural land of significance or is buffered by a significant tree shelter belt. Therefore, it is unlikely that the proposed house will constrain the ability to spray the surrounding land of agricultural significance. Grazing land only occasionally needs to be sprayed and therefore most of the grazing land within the property could still be utilised as such in the future without too much constraint by the presence of the house.

The property is within the 'Strategic Prospectivity Zone' for mining and there are exploration rights for petroleum products (Cat 4), Industrial Materials (Cat 5), Metallic Minerals, Atomic Substances (Cat 1). However, there are no mining leases currently within 1000 m of the site. Please refer to a geologist report for further details.

#### Clause 26.3.3 Performance Criteria

(b) be consistent with any applicable desired future character statement;

#### 26.1.3 Desired Future Character Statement

- (a) may create a dynamic, extensively cultivated, highly modified, and relatively sparsely settled working landscape featuring
  - (i) expansive areas for agriculture and forestry;
  - (ii) mining and extraction sites;
  - (iii) utility and transport sites and extended corridors; and
  - (iv) service and support buildings and work areas of substantial size, utilitarian character, and visual prominence that are sited and managed with priority for operational efficiency

Please refer to owners intended usage statement.

- (b) may be interspersed with
  - (i) small-scale residential settlement nodes;
  - (ii) places of ecological, scientific, cultural, or aesthetic value; and
  - (iii) pockets of remnant native vegetation

Please refer to owners intended usage statement.

- (c) will seek to minimise disturbance to -
  - (i) physical terrain;
  - (ii) natural biodiversity and ecological systems;
  - (iii) scenic attributes; and
  - (iv) rural residential and visitor amenity;

Please refer to owners intended usage statement.

#### Clause 26.3.3 Performance Criteria

(c)

(i) be on a site within which the existing or proposed development area — is not capable by reason of one or more of factors of topography, resource capability, size or shape of being utilised for resource development or extractive industry use; and

The entire cadastral parcel is approximately 7 ha in total. Of this area 3 ha is low quality class 5 land that is mainly only suitable for a bush run for grazing and not particularly suitable for pasture renovation because of boulders. The remaining 4 hectares is also nearly all class 4 that is mainly suitable for grazing, silviculture and frost tolerant terraced horticultural crops such as apples. Class 4 land is not defined as prime land according to the PAL policy. Although possible, the site is not particularly suited to cropping or vegetable production because of the steep slope/sideling that ranges up to 19 degrees in places. Considering the small size of the block both silviculture and terraced horticulture would need to be undertaken in conjunction with utilising the land in the immediate vicinity to make it worthwhile on a commercial scale. The majority of the class 4 land is very steep and terracing the property would be quite expensive and therefore highly unlikely considering that there is much more suitable flatter land in the region. Therefore, practically speaking the site is most suited to grazing, which has been the land use for many years.

(ii) is not capable of utilisation in the operations of a resource development or extractive industry enterprise, regardless of ownership; and

The 3 ha area of class 5 land is mostly only suitable as a bush run and not particularly valuable for agricultural development, because its steep slope and rocky outcrops make it difficult even for pasture renovation. The remaining 4 ha of mostly class 4 land is not very suitable for cropping because of the steep slopes running through the middle of the property. The land is most suitable for grazing. This area could undergo pasture renovation and permanent solid set sprinkler irrigation could be setup, provided water could be connected to the property. Irrigation would facilitate a higher stocking rate.

(iii) does not constrain or interfere with existing or potential resource development or extractive industry use of land including the balance area on the site.

The proposed development is approximately 100 m away from surrounding flat areas of high agricultural value. It is unlikely that spraying contractors on neighbouring properties would need to notify the occupant of the proposed dwelling before spraying. The code of practice of 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."

The proposed development also either sits approximately 30 m higher in elevation compared to surrounding agricultural land of significance or is buffered by a significant tree shelter belt. Therefore, it is unlikely that the proposed house will constrain the ability to spray the surrounding land of agricultural significance. Grazing land only occasionally needs to be sprayed and therefore most of the grazing land within the property could still be utilised as such in the future without too much constraint by the presence of the house.

The property is within the 'Strategic Prospectivity Zone' for mining and there are exploration rights for petroleum products (Cat 4), Industrial Materials (Cat 5), Metallic Minerals, Atomic Substances (Cat 1). However, there are no mining leases currently within 1000 m of the site. Please refer to a geologist report for further details.

Noise pollution from the surrounding valley would be a factor to consider house and garden design, both because of the valley's future potential for industrial agricultural development and because the house is situated on a rise coming from the valley which would funnel the noise.

d) not be likely to impose an immediate demand or contribute to a cumulative requirement for public provision or improvement in reticulated or alternate arrangements for utilities, road access, or community service.

For council to assess.

#### 26.4.3 Location of development for sensitive uses

New development, except for extensions to existing sensitive use where the extension is no greater than 30% of the existing gross floor area of the sensitive use, must -

- (a) be located not less than -
- (i) 200m from any agricultural land;

Proposed development is located on class 4 non-prime agricultural land suitable for grazing and approximately 100 m away from land of high agricultural significance and less than 200 m away from expansive areas of flat prime land within a proclaimed irrigation district. Council approval is therefore discretionary based on the performance criteria.

#### Performance Criteria

(a) permanent loss of land for existing and potential primary industry use;

The entire cadastral parcel is approximately 7 ha in total. Of this area 3 ha is very low quality class 5 land that is mainly only suitable for a bush run for grazing. Whilst the remaining 4 hectares is also nearly all class 4 that is mainly suitable for grazing, silviculture and terraced horticultural crops. Realistically the significant slopes running through the middle of the class 4 land would limit the ability to utilise the land in an intensive way and therefore the land is most suited to grazing.

(b) likely constraint or interference to existing and potential primary industry use on the site and on adjacent land;

The proposed development is approximately 100 m away from surrounding flat areas of high agricultural value. It is unlikely that spraying contractors on neighbouring properties would need to notify the occupant of the proposed dwelling before spraying. The code of practice of 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."

The proposed development also either sits approximately 30 m higher in elevation compared to surrounding agricultural land of significance or is buffered by a significant tree shelter belt. Therefore, it is unlikely that the proposed house will constrain the ability to intensively spray the surrounding land of agricultural significance. Grazing land only occasionally needs to be sprayed and therefore some of the land within the property boundary could still be utilised for grazing in the future.

(c) permanent loss of land within a proclaimed irrigation district under Part 9 Water Management Act 1999 or land that may benefit from the application of broad-scale irrigation development; and

The proposed development is within the Dial Blythe irrigation district. The topography of the block is such that it would significantly impede the establishment of broad scale irrigation infrastructure such as a pivot or linear irrigator. Also because of topography and climate the land is not very well suited to cropping/vegetable production. Solid set irrigation could be setup to irrigate 4 ha of improved grazing pasture, the remaining 3 ha of land is unlikely to benefit much from irrigation.

(d) adverse effect on the operability and safety of a major road, a railway or a utility

Continued: New development, except for extensions to existing sensitive use where the extension is no greater than 30% of the existing gross floor area of the sensitive use, must -

(ii) 200m from aquaculture or controlled environment agriculture;

Site is over 200 m away from both types of enterprises.

For council to assess.

(iii) 500m from the operational area boundary established by a mining lease issued in accordance with the Mineral Resources Development Act 1995 if blasting does not occur; or

Site is over 500 m away from a mining lease boundary.

(iv) 1000m from the operational area boundary established by a mining lease issued in accordance with the Mineral Resources Development Act 1995 if blasting does occur; or

Site is over 1000 m away from a mining lease boundary.

(v) 500m from intensive animal husbandry;

Site is within 500 m of land that is either utilised or could be utilised under intensive animal husbandry (dairying).

(vi) 100m from land under a reserve management plan;

Site is over 100 m away from a reserve management plan.

(vii) 100m from land designated for production forestry;

Site is over 100 m away from a reserve management plan.

(viiii) 50m from a boundary of the land to a road identified in Clause 26.4.2 or to a railway line; and

Proposed development is further than 50 m away from Bass Highway or a railway line.

(ix) clear of any restriction imposed by a utility; and

For council to assess.

(b) not be on land within a proclaimed irrigation district under Part 9 Water Management Act 1999 or land that may benefit from the application of broad-scale irrigation development

The proposed development is within the Dial Blythe irrigation district. The topography of the block is such that it would significantly impede the establishment of broad scale irrigation infrastructure such as a pivot or linear irrigator. Also because of topography and climate the land is not very well suited to intensive vegetable production. Solid set irrigation could be setup to irrigate improved grazing pasture.

#### 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.

Isbell, R F (2002). *The Australian soil classification. Melbourne*, CSIRO Publishing. http://www.clw.csiro.au/aclep/asc re on line/fe/ferrsols.htm.

Mineral Resources Tasmania, (2019). http://www.mrt.tas.gov.au/webdoc2/app/default/map\_detail?id=898078

WeatherZone (2019). http://www.weatherzone.com.au/climate/station.jsp?lt=site&lc=91240

Tasmanian Government (2019). http://maps.thelist.tas.gov.au/listmap/app/list/map

Tasmanian Government (2009). State Policy on the Protection of Agricultural Land.

## Appendix 1

Pit 1



Pit 3 (cutting)

