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Enterprise Scale

For primary production in Tasmania

Report prepared to further the concept of the Rural Enterprise Concept for Flinders Local Provisions Schedule

Prepared for Town Planning Solutions on behalf of Flinders Council

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Glossary of terms

Enterprise Scale uses some key terms. Further background information on these and other terms is included in Appendix 2.

Agricultural land. Land that is in agricultural use or has the potential for agricultural use, that has not been zoned or developed for another use or would not be unduly restricted for agricultural use by its size, shape and proximity to adjoining non-agricultural uses (State *Policy on the Protection of Agricultural Land 2009)*.

Agricultural use. Use of land for propagating, cultivating or harvesting plants or for keeping and breeding of animals, excluding domestic animals and pets. It includes the handling, packing or storing of produce for dispatch to processors. It includes controlled environment agriculture and plantation forestry (State *Policy on the Protection of Agricultural Land 2009).*

Enterprise is an identifiable sector of the farm or horticultural business, for which outputs includes valuation of unsold stocks produced by the enterprise (Woodend 2010)

Farm. An area of land that is primarily being used for, or in connection with, primary industry; and is not Crown land, or land owned by the Forestry corporation, that is used for Planting trees, establishing forests or growing or harvesting timber; and is being used, or being prepared for use, by the occupier of the land as a primary production business within the meaning of the Income Tax Assessment Act 1997 of the Commonwealth (Tasmanian *Primary Industry Activities Protection Act* 1995).

Farm business. A business which grows produce for the purposes of selling to make a profit.

Farm business activity. A farm business activity is a single crop or form of production.

PAL Policy. State *Policy on the Protection of Agricultural Land 2009*

Primary Industry. 'Any industry such as dairy farming, forestry, mining, which is involved in the growing, producing, extracting, etc. of natural resources' (Macquarie Dictionary). It includes planting, growing or harvesting crops; breeding, rearing or managing livestock; agisting livestock; obtaining dairy, wool, eggs or other produce from livestock; obtaining juice, seeds or other produce from crops; planting trees, establishing forests or growing or harvesting timber (Tasmanian *Primary Industry Activities Protection Act 1995)*.

Viable. A viable farm is one producing sufficient income to provide for at least one family and provide full time employment (FTE) for at least one person.

1 Executive summary

Enterprise Scale defines the characteristics of four scale categories for farm businesses; Commercial, Small Scale, Hobby and Lifestyle.

It has been found necessary to characterise 'scale' in order to apply the terms 'agricultural land' and 'agricultural use' in a planning context, to assist with appropriate application of the Tasmanian State Planning Scheme. Enterprise Scale is designed to describe not only the characteristics which define the scale of the farm business but also the land and water resources which have the capacity to contribute to a commercial scale farm business[1] and the minimum resources to conduct a farm business activity at a commercial scale.

Enterprise Scale builds on previous work since 2010, undertaken by AK Consultants (now RMCG) and further clarifies the characteristics of each category as well as introducing a new category 'Small Scale Producer'. Due to resource constraints this document is currently a draft and subject to further peer review.

Enterprise Scale can be used for:

- Local Government planners to determine application of the State Planning Scheme when considering development approvals
- Zoning recommendations for the Local Provision Schedules.
- Agricultural assessment reports supporting development applications.
- High level resource assessment for agricultural businesses.

[1] See Definitions section in the Appendix for definitions of farm business and farm business activity as used in this document.

2 Introduction

Enterprise Scale and the associated definitions were first developed by David Armstrong and Astrid Ketelaar from AK Consultants in 2012 for Northern Tasmania Development in response to a request for clarification of the methodologies and tools and their application in understanding agricultural potential for planning purposes. This earlier work was called 'Enterprise Scale' and included investigating a range of characteristics including current farm business activities, Land Capability and irrigation water resources and connectivity which were analysed at the farm business level enabling titles to be classified into three broad scale characteristic categories; 'commercial', 'hobby' and 'lifestyle'[2]. The scale categories were built on existing definitions (see Appendix 2).

Since then, the concept of Enterprise Scale has been applied to:

- Strategic rezoning assessments for local government,
- Local scale primary industry studies, as part of the State Government's Planning provisions, where Councils need to amend their Local Provisions Schedules to be compliant with the State Planning Scheme,
- Assessing the impacts on agriculture from proposed developments.

The categories were adapted for the work undertaken for the Southern Tasmanian Council Authority in 2017 to define concepts for 'medium to large-scale', 'small-scale' and 'domestic-scale'. In this current project the terms 'farm business' and 'farm business activity' has been used to replace 'farm', 'holding' and 'enterprise' to reduce confusion around terminology. The term 'Enterprise Scale' is capitalised in this document to refer specifically to the scale terms and methods for applying them as defined in this document.

The Tasmanian Government's white paper for growing Tasmanian Agriculture[3] has identified that the primary industry sector will need to grow at more than double the growth rate experienced over the past 20 years to achieve a target of $10 billion by 2050. The development and application of the Enterprise Scale concept combined with implementation of the Tasmanian Planning Scheme, plays an important role in this.

More recently there has been an increased pressure from alternative developments in the Rural – Agricultural areas and an escalation in land values. Tasmania has been 'discovered' simultaneously with application of the State Planning Scheme and a growing small scale producer sector with complimentary value add and diversification interests. This paper updates the previous definitions of lifestyle, hobby and commercial and includes a new category 'small scale producers'. It then provides guidance on how to apply these terms for land use planning.

The recent ruling by the Resource Management and Planning Appeals Tribunal (RMPAT), dated 8 October 2021, RT & SD Simmons v Kentish Council and EJ Worssam [2021] TASRMPAT31 (J No31-2021) determined that 'scale' has no relevance under criteria within the *Kentish Interim Planning Scheme 2013*. This further increases the importance of ensuring the timely delivery of the Enterprise Scale concept, to provide guidance on the land and water requirements for conducting agriculture at the relevant scale to be able to apply the requirements under the Tasmanian Planning Scheme. The Tasmanian Planning Scheme requires consideration of 'scale' of agricultural use and 'agricultural land'. There is a risk that ignoring scale or applying scale in an ad-hoc manner will lead to adverse outcomes in regard to protecting agricultural land and water resources from competing demands. There is also risk that ignoring scale will lead to missed opportunities in providing the highest and best use for our land and water resources, particularly in areas where they are already compromised for agricultural production.

[2] Adapted from Ketelaar, A and Armstrong, D. 2012, Discussions paper – Clarification of the Tools and Methodologies and Their Limitations for Understanding the Use of Agricultural Land in the Northern Region - written for Northern Tasmania Development.

[3] AgriGrowth Tasmania (undated), *Growing Tasmanian Agriculture – Research, Development and Extension for 2050 White Paper*, Department of Primary Industries, Parks, Water and Environment available online at https://dpipwe.tas.gov.au/Documents/Growing%20Tas%20Agriculture-RDE%20for%202050.pdf

3 Enterprise Scale

3.1 WHY IS ENTERPRISE SCALE DEFINITION NECESSARY?

Enterprise Scale is necessary to clarify the terms 'agriculture', 'agricultural land' and 'agricultural land use'. This has relevance for planning in Tasmania.

The Rural and Agriculture zones of the Tasmanian Planning Scheme require consideration of 'scale' of agricultural use and 'agricultural land'.

Enterprise Scale analysis reflects the economic realities of agricultural land use by recognising the influencing characteristics that determine whether the land is used or is likely to be utilised for agriculture through agglomeration with other surrounding titles or individually. Land and water resources suitable for agriculture are a limited resource. Enterprise Scale analysis provides the rationale behind consistent application of the terms 'agricultural use' and 'agricultural land'. Thereby providing for the opportunity to protect land and water that has the potential to contribute to the agricultural output of a region, through planning. Enterprise Scale also assists with identification of those titles with resources that are already compromised for agricultural use to be able to apply the appropriate planning response, to allow for alternative uses.

Enterprise Scale is a useful tool for Councils to utilise to assist in categorising the settlement patterns that are occurring within an area of interest after identifying the type of agricultural activity (if any) occurring on the land and available resources. Being able to categorise the scale of activities currently existing and the potential for these to contribute to a viable farm business or farm business activity run at commercial scale will assist in making decisions around appropriate zoning of an area and the assessment of planning applications.

Appropriate zoning is crucial to protecting the investment and continued capacity to conduct agricultural activities, whilst at the same time allowing for alternative development in appropriate areas and in ways which do not jeopardise this capacity.

There are references to the requirements for scale to be considered in land use planning, for example:

- The State *Policy on the Protection of Agricultural Land* 2009 (PAL Policy) excludes the keeping and breeding of 'domestic animals and pets' as 'agriculture'.
- The performance criteria for residential use in the Agricultural Zone under the Tasmanian Planning Scheme requires consideration of the scale of the agricultural use 21.3.1P4(a)(i)[4].

Also, under the Tasmanian Planning Scheme the performance criteria for discretionary uses in the Rural Zone located on 'agricultural land' require consideration of the impact on 'agriculture', however, here the reference to scale and intensity is in relation to the proposed use 20.3.1 P2(b)[5] and 20.3.1 P3(a)[6]. However, to determine whether there is impact on agriculture it is necessary to first clarify what is 'agriculture' and 'agricultural land' to ensure consistent application of the performance criteria in the Rural Zone and consistency with application of 21.3.1P4(a)(i) in the Agricultural Zone.

The ruling by RMPAT, dated 8 October 2021, RT & SD Simmons v Kentish Council and EJ Worssam [2021] TASRMPAT31 (J No31-2021) determined that 'scale' has no relevance under criteria within the *Kentish Interim Planning Scheme 2013*.

[4] 21.3.1P4b A residential use listed as Discretionary must (a) be required as part of an agricultural use, having regard to: (i) the scale of the agricultural use.

[5] 20.3.1P2 A use listed as Discretionary must not confine or restrain existing use on adjoining properties, having regard to (b) the nature, scale and intensity of the use.

[6] 20.3.1P3 A use listed as Discretionary, located on agricultural land, must minimise conversion of agricultural land to non-agricultural use and be compatible with (a) the nature, scale and intensity of the use.

Specifically, the tribunal concluded on Page 13 that:

> *30. As noted the Scheme definition of 'agricultural use' does not incorporate a commercial component. The Zone Purpose Statements, at Clause 26.1.1, also do not incorporate any required scale or commerciality of primary industry. The Local Area Objective at Clause 26.1.2(d) provides that "primary industry is diverse, dynamic and innovative; and may occur on a range of lot sizes and at different level of intensity." Those Objectives are given meaning by the Scheme Standard providing a minimum lot size in the Rural Resource Zone as one hectare, except for agricultural purposes where no minimum lot size is imposed*[7]
>
> *31. As submitted by the Second Respondent, to ascribe scale and commercial intent to 'primary industry' is not supported by the Rural Resource Zone Standards as a whole. Importing concepts of commerciality and scale to determine whether an agricultural activity in the Rural Resource Zone is a primary industry begs the question, where, if an agricultural activity which was once profitable but has operated at a loss for a considerable period, would it lose its status as primary industry and therefore the protection afforded to primary industry uses and development located on Rural Resource land. In the Tribunal's view, this cannot have been the intention of the Scheme drafters.*

Paragraph 31 reflects a focus, by the Tribunal on the 'Gross Income', rather than the overall characteristics of a 'viable' farm business. In this decision an existing sheep breeding activity comprised of eighteen sheep, was determined to be a 'farm', by the Tribunal. This then provided a permitted pathway for additional 'farm-stay' visitors accommodation. The only requirement for this non-agricultural use is to have some sort of agricultural activity, regardless of scale and independent of any other farm business characteristics.

All Local Government Planning Schemes in Tasmania are transitioning to the Tasmanian Planning Scheme. Under the Tasmanian Planning Scheme there is no scale definition for 'agricultural' or 'agricultural use' although the terms are used throughout. The Northern Tasmanian Regional Land Use Strategy (NTRLUS) provides a reference to the commercial basis of rural and agricultural activities, by reference to land that may be considered for rural residential type use. As the Tasmanian Planning Scheme operates independently of the Regional Land Use Strategies, this will not address the issues related to scale or viable farm businesses.

With increasing pressure from competing land uses, Enterprise Scale forms an important tool for applying the Tasmanian Planning Scheme requirements when considering use of the Rural and Agriculture zones and subsequent planning applications within those zones.

3.2 OTHER SCALE CATEGORY CHARACTERISATIONS

Australian Bureau of Statistics (ABS) use Estimated Value of Agricultural Operations (EVAO[8]) to estimate the relative size of agricultural activity undertaken by a business. It is similar to Gross Income or turnover. In 2015 the ABS increased the minimum value of EVAO that a farm business needs to be included in their survey data. Previously the EVAO was $5,000, this was increased to $40,000.

Australian Bureau of Agricultural and Resource Economics (ABARES) in their 'About my region – Tasmania'[9] uses the following EVAO categories:

- $50 000 – $150 000
- $150 000 – $350 000
- $350 000 – $500 000

[7] Clause 26.4.1 A1
[8] Estimated Value of Agricultural Operations (EVAO) is a measure of the value of production from farms and a measure of their business size.
[9] Available online at https://www.awe.gov.au/abares/research-topics/aboutmyregion/tas#agricultural-sector.

- $500 000 – $1 million
- > $ 1 million

However, ABARES does not, further define these categories. ABARES surveys and reporting generally targets farming establishments that make a significant contribution to the total value of agricultural output. Farms excluded from ABARES surveys contribute less than 2% to the EVAO[10].

The Agricultural Land Mapping Project (Dept of Justice, 2017) defined minimum threshold titles[11] sizes that could potentially sustain a standalone agricultural farm business activity. They use the following:

- Livestock farm business activity: 333ha
- Dairy: 40ha
- Cereals and other broadacre crops: 133ha
- Processed and fresh market vegetable: 25ha
- Berries, other fruits & vines and nurseries and cut flowers: 10ha
- Plantation forestry: no specified minimum.

The Kynetec (March 2021) Farm Intel Information brochure on Page 6 states:

Minimum Farm Size are used to ensure that 'hobby farmers' and lifestylers are not interviewed:

- Broadacre (grain, beef, sheep and cotton): 100ha
- Dairy: 75ha
- Sugar Cane: 50ha

The ABARES report (Australian lamb financial performance report) defines the following scale categories for lamb farm businesses in terms of annual lamb sales as follows

Small: 200 – 500 lambs.

Medium: 500 – 2,000 lambs.

Large: 2,000 – 4,000 lambs

Very large: more than 4,000 lambs.

This same report uses 'Farm Cash Income' in the same context as Gross Income and indicates on average 75% of 'small' scale lamb farm business activities have just under $200,000 Farm Cash Income, of which $32,200 is derived off farm.

This same report also indicates that most lamb-producing farms have a diversified mix of farm business activities, typically including a combination of wool, lambs, sheep, beef cattle and crops. The vast majority produce wool as a co-product and only a small proportion of farms have slaughter lambs as their only output. This heavily influences the number and characteristics of lamb-producing farms and makes it difficult to apply a scale category to a single farm business or a single farm business activity.

Sprout Tasmania[12] conducted a survey of 'Small Scale Producers' in early 2021. The 138 respondents from 25 out of 29 municipalities were self-selected in terms of whether they defined themselves as Small Scale

[10] Stated in 'Sample Lists' under 'Farm Surveys definitions and methods' on ABARES webpage available on line at https://www.awe.gov.au/abares/research-topics/surveys/farm-definitions-methods#sample-lists

[11] It is assumed that in this case the minimum 'title size' refers to the minimum 'land area', as this categorisation was developed as part of a constraints analysis and additional factors were applied.

[12] Sprout Tasmania is a non-profit organisation set up in 2011 to foster and support the state's start-up growers and producers.

Producers. The Sprout survey results[13] show the highest number of participants were from the Huon Valley, followed by the West Tamar and Launceston municipalities.

The turnover (equivalent of Gross Income) ranged from $5,000 to $350 000 with 1/3 of respondents deriving a large proportion of their household income off-farm. Most (89%) respondents describe themselves as established business with 70% looking to grow their business and 50% looking to invest more than $100 000 in the next 5 years.

One third engage in agritourism with 17% providing accommodation or on farm experiences and one quarter are value adding their products.

There are international examples of attempts to classify farm business scale. Andrew Woodend from the Department for Environment, Food and Rural Affairs in the UK is the author of *Definitions of Terms used in Farm Business Management*. The 2010 edition is the 4th update since 1965 and it is acknowledged in the document that the terminologies change over time as management techniques, the Common Agricultural Policy, the nature of farm businesses and structure of the industry change. Woodend (2010) uses labour requirements per hectare of crop or head of livestock to classify farms as follows.

Table 3-1: Farm Classification Table in the UK from Woodend 2010.

SIZE BAND	SLR(1)
Very small	<0.5 FTE 0.5 < 1 FTE
Small	1 < 2 FTE
Medium	2 < 3 FTE
Large	3 < 5 FTE
Very Large	5 or more FTE

(1) Standard Labour Requirements (SLR) vary depending on the extent of machinery use as a substitute for labour. SLRs are representative of labour requirements under typical conditions for enterprises of average size and performance. They are calculated for different crops and livestock on an hours per hectare or hours per head. They are then translated to Full time equivalent (FTE) based on 1900hours per year as being the standard in the UK in 2010.

These classifications were developed by economists in the Department for Environment, Food and Rural Affairs in the UK to enable effective communication between farmers, advisers and others in the industry. They were developed to:

1. Identify where market trends, policy or economic conditions affect a particular group of farms more than others
2. Help researchers assess the likely impact of market conditions and government policy on different agricultural sectors and farm sizes
3. Enable comparative analysis (benchmarking) of farms against each other. (woodend, 2010).

Woodend discusses the difficulties of using Gross Margins or any single metric to classify farms.

Whilst farm classification from international sources can provide guidance, their relevance to Tasmanian agriculture requires more detailed analysis. There appears to be no definitive farm scale categorisations within Tasmania. There is scope to seek guidance from sources and methods used internationally and nationally, however, generally the purpose for the classification needs to be considered in the first instance, to determine

[13] Available on line at https://d3n8a8pro7vhmx.cloudfront.net/sprout/pages/634/attachments/original/1623800392/SPROUT_Survey_Results_P3.pdf?1623800392

the relevance and then the policy framework and farming techniques to determine applicability to Tasmanian circumstances. This is beyond the scope of this project.

In addition to there being no standard farm business scale definitions, there is also no consistent approach to delineating farm businesses, farms, enterprises or farm business activities. It is known that the scale of operation (both farm businesses and farm business activities) in Tasmania is generally smaller when compared to national scales. Generally, there is more than one farm business activity conducted by a farm business. Farm businesses are generally made up of more than one title farmed in conjunction which are not necessarily under the same ownership or adjacent.

The objectives of the initial Enterprise Scale work undertaken in 2012 by AK Consultants and funded by Northern Tasmanian Development to enable incorporation of the PAL Policy in Municipal Planning Schemes were to:

- Protect land that can be practically used for agriculture from conversion to non-agricultural uses.
- Provide opportunities for rural living by identifying areas that already demonstrate rural living characteristics and have limited capacity to contribute to productive agriculture.

This appears to have the most relevance for determining farm business scale in Tasmania. Hence the original scale categories from this work have been used as a starting point.

The subsequent, Agricultural Land Mapping Project (Dept of Justice, 2017) (the ALMP), was completed by the Department of Justice to provide Councils with spatial data to assist with segregating the Rural Resource zone (and Significant Agriculture zone where relevant) into the 'Rural' and 'Agriculture zones, as required under the Tasmanian Planning Scheme. The scale categories utilised in this, were derived for the purpose of developing a rule set for a GIS based constraints analysis. The ALMP was not aimed to provide a comprehensive analysis of all the factors that may contribute to the constraint of agricultural land for commercial scale agriculture; it was developed to provide a tool for Councils to utilise to identify areas for further investigation that could be potentially constrained.

The document on page 16 states:

> *It is acknowledged there is a high degree of disagreement amongst experts on determining potential minimum areas that are able to sustain the various agricultural enterprises. The minimum areas will depend on a number of factors including the efficiencies of the operator, the type of agricultural enterprise, technology and markets. These factors will change over time. Farmers are also likely to incorporate a number of different agricultural or other enterprises in order to maintain a sustainable business. Nevertheless, it was considered important to establish a suitable indicator for titles requiring further analysis of potential constraints.*
>
> *A title that is below the specified size thresholds does not necessarily mean there are constraints to agriculture occurring on the title. Smaller titles are, and can be, used in a variety of ways for viable agricultural uses. The purpose of Criteria 1 is to narrow down the analysis to these titles that may be more susceptible to constraints.*
>
> *Smaller titles have a greater potential to become unviable for agricultural use as a consequence of being more susceptible to constraint caused by isolation from other agricultural land or fettering by conflicting land uses. The agricultural use of some smaller titles may also be cost prohibitive if its capital value is excessive.*

Hence the scale categories in the ALMP were derived for a specific purpose and it is acknowledged there are issues in applying these categories in isolation to single titles.

If we take a seed crop as an example farm business activity, the minimum area threshold for a profitable and feasible seed crop at a commercial scale, does then not translate into a commercial scale farm. A commercial

scale farm with seed-crops would have other complimentary farm business activities which contribute to the viability of the farming business.

Where non-agricultural development is competing with agricultural development for the same land resources determining where the line is drawn around commercial scale agricultural use should be based on current land use and surrounding land use and determining the consolidated areas that are already converted. This becomes more difficult when viticulture and orchards are included in the mix of existing and potential farm business activities as the total land and water resources for a vineyard with commercial scale characteristics can be as small as 10ha of Class 4/5 land and 20ML of water. Even vineyards smaller than this (eg 2ha) can contribute to a commercial scale business, though more than 50% of the household income may be sourced off farm. Hence even relatively small titles have the capacity to contribute to a 'viable' holding under these circumstances. These factors create problems in trying to define minimum land and water thresholds for a commercial scale farm business or a farm business activity operating at a commercial scale, based on available data and then relate that to easily distinguishable spatial information to provide guidance for planning assessments.

Hence this document has focused on defining[14] the characteristics of a commercial scale farm business and the characteristics of a farm business activity operating at a commercial scale. This then allows for site specific assessment of land or water resources which have the potential to contribute to a commercial scale farm business activity, once regional context and local context is considered.

[14] Refer to 'Definitions' in the Appendix

3.3 THE SCALE CATEGORIES

Table 3-2 summarises a number of key characteristics associated with each scale. The characteristics described in Table 3-2 should be read in conjunction. No single characteristics is considered definitive and there will be overlap and anomalies. Table 3-2 can be used to determine the scale of the existing farm business and/or the potential scale based on the characteristics.

Table 3-2: Farm Business Scale Characteristics

INDICATIVE CHARACTERISTICS	COMMERCIAL SCALE	SMALL SCALE PRODUCER	HOBBY SCALE	LIFESTYLE SCALE
Relevance for primary production	Dominant activity associated with the farm business is primary production. Likely to be viable. Capacity to produce sufficient profit for a family and full-time employment of one person.	Dominant activity associated with the farm business is primary production. Likely to be viable in time, potentially through cooperative arrangements, higher value products, downstream processing, complementary food, recreation, hospitality, tourism or value adding. If running livestock, then current carrying capacity is at least average DSE/ha for their area.	Land used for some primary production. Occupant/family needs to be supported by non-primary production income and/or off-farm income.	Little or no relevance for primary production.
Producer aspirations	Shows commercial intent in primary production. Have a marketing strategy. Business focused with production decisions made on economic principles.	Shows commercial intent in primary production. Have a marketing strategy. Business focused with production decisions made on economic principles. Work with other small scale producers to share marketing and resources.	Profitability is not a high priority in primary production decisions and viability cannot be demonstrated.	Profitability has very low relevance. Lifestyle is the dominant motivation for any primary production activity.
Labour (FTE) for the primary production	At least 1 FTE	Likely to be at least 0.5 FTE	Likely to be less than 0.5 FTE	
Indicative Gross Income from Primary Production	Greater than $300 000 from the farm business with additional income derived from value adding or off-farm generally comprising less than 50% of total household income.	Generally, between $40 000 and $300 000 from the farm business. Total household income is generally derived from several income streams of which primary production is one. Primary production income often comprises less than 50% of total household income.	Generally, between $10 000 - $40 000 from the farm business with additional household income comprising more than 50% of total household income.	<$10 000 from the farm business.
Land and Water resources (general characteristics)	Total land area for mixed farming is likely to be 200ha-500ha or more, depending on Land Capability, water resources and farm business activity mix. Land area for	For livestock producers generally 40-80ha in one or two titles. Generally, 8-40 ha in area and a single title for other ventures.	Generally, 8-40 ha in area and a single title.	Generally, 1-8 ha in area. Land Capability variable.

INDICATIVE CHARACTERISTICS	COMMERCIAL SCALE	SMALL SCALE PRODUCER	HOBBY SCALE	LIFESTYLE SCALE
	vineyards, orchards or berries is likely to be at least 10ha-20ha and likely more. Land area generally comprising of a number of titles farmed together. Irrigation is generally necessary for smaller land areas to be viable and/or for higher value products.	Water for irrigation likely, but it depends on the farm business activity. The land and/or water resources associated with the farm business may have the capacity to contribute to a 'commercial scale' farm business depending on the degree of constraint.	Water for irrigation less likely, but possible, depending on location and cost of supply. The land and/or water resources associated with the title may have the capacity to contribute to a 'commercial scale' farm business depending on the degree of constraint.	Water for irrigation highly unlikely. No capacity to contribute to a commercial scale farm business due to constraining factors.
Connectivity	Few constraints likely. Likely to be well connected to other unconstrained titles, Expansion and/or intensification feasible.	Some constraints likely. Residences on majority of adjacent titles. Low connectivity to unconstrained titles.	Some constraints likely. Residences on majority of adjacent titles. Low connectivity to unconstrained titles.	Moderate to significant constraints likely. Residences on majority of adjacent titles. Little or no connectivity to unconstrained titles.
Registrations	Are recognised by ATO as Primary Producer. Livestock producers will have a PIC and be registered for NLIS and LPA. All producers are likely to be registered for GST. Would be part of QA schemes, depending on products and markets.	Are recognised by ATO as a Primary Producer. Livestock producers will have a PIC and be registered for NLIS and LPA. All producers are likely to be registered for GST. Would be part of QA schemes, depending on products and markets.	May or may not be recognised by ATO as primary producer. Livestock producers will have a PIC and be registered for NLIS and LPA; may be registered for GST and may be part of any QA schemes.	Are not recognised by ATO as primary producer. May not have a PIC or be registered for NLIS; are not registered for GST and unlikely to be part of any QA schemes.
Role of a dwelling	Dwelling is subservient to the primary production.	Dwelling is convenient/preferred to facilitate improved productivity. Dwelling assists with security.	Dwelling is convenient/preferred for lifestyle reasons.	Dwelling is the dominant activity on the title.

3.4 CHARACTERISTICS OF A COMMERCIAL SCALE FARM BUSINESS ACTIVITY

It is very difficult to provide an assessment of the commercial viability of a single farm business activity as generally more than one farm business activity contributes to a farming business. Table 3-3 is designed to describe the general characteristics of a commercial scale farm business activity in Tasmania. Table 3-3 can be used to characterise land and water resources to determine whether they have the capacity to contribute to a commercial scale farm business activity. For example, a farming business with less than 3,000 DSE would need additional farming activities to be viable.

Table 3-3: Characteristics of commercial scale agricultural farm business activities in Tasmania

RESOURCE	LIVESTOCK			BROAD ACRE CROPS		VEGETABLES		BERRIES	ORCHARD FRUITS & VINES	NURSERIES & CUT FLOWERS	FORESTRY PLANTATIONS
	SHEEP	CATTLE	DAIRY	CEREALS	OTHERS	PROCESSED	FRESH MARKET				
Land Capability	LC generally 3–6.	LC generally 3–5/6.	LC generally 3–5.	LC 1–4.	LC 1–4.	LC 1–4.	LC 1–4.	LC 1–4/5.	LC 1–4/5.	LC 1–4 or N/A	LC 4–6
Minimum paddock sizes	No minimum	No minimum	To suit grazing system.	10–15ha min	5–10ha min.	10ha min.	10ha min.	2–4ha.	2–5ha.	2–4ha min.	10–20ha min.
Size for a 'viable' business if conducted as single farm business activity (1)	Generally 3,000–10,000 dse -area depends on rainfall). (2)		Capacity for at least 350 milkers.(3)	Broadacre cropping will be a mix of crops in rotation with pasture and livestock. The area required for viability is highly variable.				4–10ha.	10–30ha.	5–10ha.	TBC
Irrigation water	Not essential	Not essential	Preferable 4–6ML/ha.	Not necessary.	Mostly necessary, 2–3 ML/ha.	Necessary, 2–6ML/ha.	Necessary, 2–6ML/ha.	Necessary, 1–3ML/ha.	Necessary, 2–3ML/ha.	Necessary, small quantity.	Not required.
Climate specifications	Lower rainfall preferred for wool.	No preferences.	High rainfall (or irrigation).	Susceptible to spring frosts. Difficult to harvest in humid coastal conditions.	Susceptible to spring frosts.	Susceptible to spring frosts.	Susceptible to spring frosts.	High rainfall (or irrigation).	Susceptible to spring frosts for vines. Susceptible to summer rains for cherries. Susceptible to disease in high humidity in March for vines.	Preferably low frost risk area.	Rainfall above 700–800 mm.

RESOURCE	LIVESTOCK			BROAD ACRE CROPS		VEGETABLES		BERRIES	ORCHARD FRUITS & VINES	NURSERIES & CUT FLOWERS	FORESTRY PLANTATIONS
	SHEEP	CATTLE	DAIRY	CEREALS	OTHERS	PROCESSED	FRESH MARKET				
Infrastructure	Yards & shearing shed.	Yards, crush, loading ramp.	Dairy shed, yards, crush, loading ramp.	Minimal.	Irrig facilities.	Irrig facilities.	Irrig facilities. Possibly a packing shed unless using a contract packer or growing on contract	Irrig facilities. Packing shed	Irrig facilities. Packing shed	Plastic/glass houses.	Firefighting dams. Access roads
Plant & equipment	Minimal.	Minimal; hay feeding plant.	General purpose tractor, hay/silage feeding.	Tractors & implements.	Tractors & implements.	Tractors & implements.	Tractors & implements.	Tractors & implements.	Tractors & implements.	Small plant.	Contract services.
Market contracts	Not required.	Not required.	Necessary.	Not required.	Generally required.	Necessary.	Highly preferred.	Desired.	Desired.	Contracts preferable.	Varies.
Labour	Medium.	Low.	High.	Low.	Low.	Low.	Variable/medium.	High at times.	High at times.	High at times.	Low.
Local services	Shearers.	Vet.	Vet, dairy shed technician.	Agronomist, contractors.	Agronomist, contractors.	Agronomist, contractors.	Agronomist, contractors.	Pickers.	Pickers.	Pickers.	Contractors.
Regional suitability	Dryer areas good for wool. All areas suitable; larger farm sizes needed for viability.	All areas suitable.	Economics dictate large area necessary. Needs high rainfall or large water resource for irrigation.	Generally large areas, so need larger paddocks and larger farms.	Generally large areas, so need larger paddocks and larger farms.	Medium sized paddocks & farms; area for crop rotations and irrigation.	Medium sized paddocks & farms; area for crop rotations and irrigation.	Specific site requirements; proximity to markets and transport/carriers.	Specific site requirements; potentially available in most municipalities.	Proximity to markets is important.	Low rainfall areas less preferred.

Table notes:

1. The Agricultural Land Mapping Project (ALMP) (Dept of Justice, 2017) defined minimum threshold titles sizes that could potentially sustain a standalone agricultural farm business activity. The ALMP have 333ha for a livestock farm business activity, 40ha for dairy, 133ha for cereals and other broadacre crops, 25ha for processed and fresh market vegetable, 10ha for berries, other fruits & vines and nurseries and cut flowers and no specified minimum area for plantation forestry.
2. Kynetec (March 2021) Farm Intel Information brochure uses 100ha as the minimum farm area for livestock.
3. Kynetec (March 2021) Farm Intel Information brochure uses 75ha as the minimum farm area for dairy.

3.5 SEPARATION DISTANCES AND BUFFERS

The Tasmanian Planning Scheme, as an acceptable solution, requires a minimum setback for a sensitive use in the Rural zone of 5m or if the setback of an existing building is within 5m, then not less than the existing building. For the Agriculture zone this is extended to 200m or not less than an existing building used for a sensitive use. The performance criteria under the Tasmanian Planning Scheme requires consideration of additional factors.

Farm business activity scale in combination with Table 3-4 can be used to provide guidance on appropriate separation distances when there are no additional mitigating factors. Appendix 3 provides further explanatory text on constraints in relation to farming activities and appropriate separation distances as well as a risk assessment matrix.

Table 3-4: Separation distances

RESOURCE	LIVESTOCK			BROAD ACRE CROPS		VEGETABLES		BERRIES	ORCHARD FRUITS & VINES	NURSERIES & CUT FLOWERS	FORESTRY PLANTATIONS
	SHEEP	CATTLE	DAIRY	CEREALS	OTHERS	PROCESSED	FRESH MARKET				
Recommended min. buffer for individual dwellings (1)	50m to dryland and 100m to irrigated grazing area (3)	50m to dryland and 100m to irrigated grazing area.(3).	50m to dryland and, 100m to irrigated grazing, 300m to dairy shed and 250m to effluent storage or continuous application areas (2).	200m to crop.	200m to crop.	200m to crop.	200m to crop.	200m to crop.	200m to crop.	200m to crop.	100m from crop for aerial spraying.
Recommended min. buffer for residential areas (1)	50m to dryland and 100m to irrigated grazing area.(3)	50m to dryland and 100m to irrigated grazing area.(3)	50m to dryland and, 100m to irrigated grazing, 300m to dairy shed and 250m to effluent storage or continuous application areas (2).	300m to crop.	300m to crop.	300m to crop.	300m to crop.	300m to crop.	300m to crop.	300m to crop.	Site specific (1).

Table notes:

1. From (Learmonth, Whitehead, Boyd & Fletcher, 2007). These are industry specific recommended setbacks which do not necessarily align with Planning Scheme Setback requirements. Council should ensure they are aware of attenuation setback requirements for specific activities.
2. The State Dairy Effluent Working Group, 1997 uses 50m to grazing area, 250m to dairy shed and 300m to effluent storage or continuous application areas. The State Planning Scheme uses 300m to diary shed and 250m to effluent lagoon
3. Learmonth, Whitehead, Boyd & Fletcher, 2007 uses 50m from grazing areas.

3.6 APPLYING ENTERPRISE SCALE

Enterprise Scale can be used for strategic assessments, regional profiles, local area studies or site-specific analysis. It is designed to be used in conjunction with an analysis of existing and potential constraints.

Understanding the inherent value of agriculture to the local and regional economy and the nature and distribution of agricultural activities is crucial for strategic planning purposes. Having an understanding of the main farm business activities, their resource needs and the potential impacts of non-agricultural developments on the agricultural resource base is fundamental to planning decisions at the strategic level and development application levels.

For strategic purposes the starting point initially involves gaining an understanding of the main primary industry or farm business activities in the area and then examining the residential development patterns and constraints these impose on farm business activities. This is followed by consideration of the farm business scale and the potential for the current and potential land use to contribute to a farm business activity at a commercial scale. This analysis can then be used to inform appropriate zones for titles and provide recommendations on where the zoning boundaries should lie.

For site specific development applications in the Rural zone or Agriculture zone, Enterprise Scale can be utilised to categorise the potential of the title (or farm business activity) and surrounding land. When considered in conjunction with constraints an appropriate planning response can be applied to ensure compliance with the requirements of the Rural or Agriculture zone.

The Rural Enterprise concept provides a consistent, transparent and repeatable framework for making decisions in both strategic and statutory processes that reflect the specific circumstances of the area or site.

Commercial scale farming businesses are generally larger than 40 hectares and they are usually comprised of more than one title. The difficulty lies in applying terms such as ‘viable’ to single titles. There is nothing which binds titles together other than ownership or leasing, hence, applying planning responses at a title level becomes difficult because ownership is ephemeral. Considering the capacity for a title to contribute to a commercial scale farm business or farm business activity thus becomes important and this requires consideration of the land and water resources of the title and the title context. If a title has ‘commercial scale’ characteristics in our opinion it has the potential to either be, or contribute to, a ‘viable’ farm business.

Applying spatial definitions and land area thresholds is difficult and can lead to misrepresentation. For example, if a typical beef cattle ‘hobby scale’ farm might be a single title of 8-40ha, the majority of which is pasture. It does not mean that titles greater than 40ha are then ‘viable’ farms or even have commercial scale characteristics. It means that a beef cattle farming activity on a single title less than 40ha and not farmed in conjunction with other titles has reduced potential to be a ‘viable’ farming business. However, this also leads to the conclusion that ‘hobby scale’ farming activities on single titles can still have the potential to contribute to a commercial farming business. There are other context factors which need to be considered in determining the appropriate zoning for this scale of farming activity.

Small scale producers are defined more by their attitude to farming. They have a clear intention to generate a profit, however their resources to enable this are often limited in some way and they seek to diversify their income streams.

For the purposes of determining whether land has the capacity to be utilised for contributing to the EVAO of a region it is generally the context of the hobby or small scale producer activity that needs to be considered. Hence the categories ‘lifestyle’, ‘hobby scale’, ‘small scale producer’ and ‘commercial scale’ are useful characterisations for determining the current level of activity and the potential of the land and water resources associated with the current activity; with commercial scale certainly having potential, small scale producer and

hobby scale having some potential depending on connectivity and constraints, and lifestyle scale having no potential.

Given that the statistics no longer capture farm business activities contributing less than $40,000, our methodology is very conservative in terms of recommendations for retaining land and water resources which have potential to contribute to the EVAO. We would still consider an EVAO of $10,000 - $40,000 as fitting the 'hobby scale' and provided other characteristics indicate there is some potential for agricultural use these farm business activities should be retained in the Agricultural zone, unless there is an existing dwelling on the title or the title is surrounded by existing dwellings and lacks connectivity with land and irrigation water with commercial scale characteristics. Under those circumstances the Rural zone is likely to be more appropriate.

Key determinants as to the long-term viability of a farm business activity on a smaller title will likely be access to water resources, whether it is farmed in conjunction, surrounding constraints, location in terms of access to markets and labour, scope for expansion or diversification and whether there are other non-agricultural activities associated with the operation (for example café or off-farm income). Where the agricultural activity has potential for long-term viability the appropriate zone is the Agricultural zone. Where it is constrained in a significant way and supports mixed use the more appropriate zone is generally the Rural zone.

This is particularly relevant for small scale producers who are characterised by trying to maximise the profit from their limited resources through alternate income streams. These income streams are likely to have a better fit in the Rural Zone than the Agricultural Zone.

If, through zoning or development approvals the number of non-agricultural developments at the interface are increased then the constraints on the capacity to conduct agriculture on the adjacent land may also increase if densities and buffers are not appropriately considered. However, where there is consolidated non-agricultural activity there is opportunity for alternate 'Rural uses' without risk of compromising the agricultural productivity of the region. Historically incremental conversion to non-agricultural use has complicated the issues.

Strict application of the planning controls in regard to subdivision and dwellings in the Agricultural zone and the Rural Zone should be adhered to, to reduce the risk of further compromising agricultural productivity in Tasmania.

Table 3-5 provides guidance on the recommended planning responses in relation to zoning and development applications for the relevant farm business activity scale. Appendix 1 provides guidance on the use of Agricultural Management Plans and Land Management Plans to support the application of a dwelling. It complements the Tasmanian Planning Scheme and the more recent Brighton Residential Use in the Agriculture zone Policy.

Table 3-5: Planning responses

INDICATIVE CHARACTERISTICS	COMMERCIAL SCALE	SMALL SCALE PRODUCER	HOBBY SCALE	LIFESTYLE SCALE
Objectives for Planning	Retain current and future agricultural productive potential	Provide opportunities for small scale producers without risking loss of the primary production land and irrigation water resources. Provide opportunities for entrepreneurs, value adding and start-up ventures.	Provide for hobby farms where the land cannot be used for commercial scale or small scale producers. Can contribute to buffers at the rural/residential interface to provide for gradational impacts.	Provide opportunities for rural residential lifestyle choice without risking the loss of primary production land and irrigation water resources. May contribute to buffering at the rural/residential interface
Planning Responses for zoning Bearing in mind other overarching principles such as avoiding spot zoning as per Decision Rules for zoning guidelines developed by AK Consultants.	Agricultural Zone	Agricultural Zone if: Primary production potential is good; i.e. if it has all or some of the following characteristics; Few Constraints, LC 1-3, irrigation water available, well, connected, currently no house, currently supporting high value agriculture. There is a proposed dwelling to facilitate improved primary production. Rural Zone if – There is an existing dwelling or proposed dwelling which can demonstrate no impact on adjacent primary production. There are alternative existing or proposed associated uses such as agritourism, downstream processing. Consistent zoning pattern and titles' capacity to create a buffer between agriculture zone and residential zones, needs to be considered Encouraging small scale producers in areas where commercial scale is already compromised also needs to be considered.	Agricultural Zone if: Primary production potential is good, i.e. if it has all or some of the following characteristics; Few Constraints, LC 1-3, water available, well connected, currently no house, currently supporting high value agriculture. Rural Zone if – There is an existing dwelling or proposed dwelling which can demonstrate no impact on adjacent primary production. If the title is part of a cluster of lots with Hobby scale characteristics where potential is lower, the land area is in effect already converted from commercial scale agriculture and would be considered an established Rural area.	If the title is part of a cluster of lots with Lifestyle scale characteristics where potential is negligible, the land area is in effect already converted and would be considered an established Rural Living area. Agricultural use potential is always low, however, subdivision and intensification of residential use needs to consider in the context of nearby 'commercial scale' activity and the potential to achieve appropriate buffering
Planning responses for proposed dwelling based on Tasmanian Planning Scheme	Agricultural zone - House must be required as part of an agricultural use (1)	Agricultural zone – House must be required as part of an agricultural use (1) Rural zone – House must not confine or restrain 'existing use' on adjoining properties. House must minimise conversion of agricultural land (2)	Agricultural zone – House must be required as part of an agricultural use (1) Rural zone – House must not confine or restrain 'existing use' on adjoining properties. House must minimise conversion of agricultural land (2)	Agricultural zone – House must be on land not capable of supporting an agricultural use and must not confine or restrain agricultural use on adjoining properties. Rural zone – House must not confine or restrain 'existing use' on adjoining properties. House must minimise conversion of 'agricultural land' Rural Living Zone – House is a permitted use, however it must not constrain existing or potential adjacent primary production land.

INDICATIVE CHARACTERISTICS	COMMERCIAL SCALE	SMALL SCALE PRODUCER	HOBBY SCALE	LIFESTYLE SCALE
Planning responses for proposed subdivision based on State Planning Scheme.	Agricultural zone – to protect the long-term productive capacity of agricultural land	Agricultural zone – to protect the long-term productive capacity of agricultural land (2) Rural zone – to facilitate use and development for allowable uses. Must not impact on adjacent agricultural use and must minimise conversion of agricultural land (2)	Agricultural zone – to protect the long-term productive capacity of agricultural land (2) Rural zone – to facilitate use and development for allowable uses. Must not impact on adjacent agricultural use and must minimise conversion of agricultural land (2)	Agricultural zone – to protect the long-term productive capacity of agricultural land Rural zone – to facilitate use and development for allowable uses. Must not impact on adjacent agricultural use and must minimise conversion of agricultural land Rural Living Zone – to facilitate additional residential living on minimum lot sizes A (1ha) - D (10ha)

Table notes:

1. Agricultural Use – In our opinion in addition to the definition provided under the State Policy on the Protection of Agricultural Land 2009, Agricultural Use must consider the scale hierarchy described in this document, with agricultural use with commercial scale characteristics warranting priority for protection from non-agricultural use or constraint.
2. Agricultural Land - In our opinion in addition to the definition provided under the State Policy on the Protection of Agricultural Land 2009, Agricultural Land must consider the scale hierarchy described in this document, with agricultural land with commercial scale characteristics warranting priority for protection from non-agricultural use or constraint.

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Appendix 1: Agricultural Management Plans and Land Management Plans

This section has been prepared to provide guidance on the use of Agricultural Management Plans and Land Management Plans to support the application of a dwelling. It addresses the requirements of the Tasmanian Planning Scheme and is consistent with the more recent Brighton Residential Use in the Agriculture zone Policy 2021.

The Tasmanian Planning Scheme under the Rural zone, 20.3.1 P3 states;

A use listed as Discretionary, located on agricultural land, must minimise conversion of agricultural land to non-agricultural use and be compatible with (a) the nature, scale and intensity of the use (b) the local or regional significance of the agricultural land; and (c) whether agricultural use on adjoining properties will be confined or constrained.

If these requirements can be met, then under 20.4.1 P2 buildings for a sensitive use must be sited so as not to conflict or interfere with an agricultural use within the Agricultural zone.

The Tasmanian Planning Scheme under the Agricultural zone, 21.3.1 P4 states;

A Residential use listed as Discretionary must:

(a) Be required as part of an agricultural use, having regard to:

- (i) the scale of the agricultural use;
- (ii) the complexity of the agricultural use
- (iii) the operational requirements of the agricultural use;
- (iv) the requirement for the occupier of the dwelling to attend to the agricultural use; and
- (v) proximity of the dwelling to the agricultural use; or

(b) be located on a site that:

- (i) is not capable of supporting an agricultural use;
- (ii) is not capable of being included with other agricultural land (regardless of ownership) for agricultural use; and
- (iii) does not confine or restrain agricultural use on adjoining properties.

If either of these requirements can be met, then under 21.4.2 P2 buildings for a sensitive use must be sited so as not to conflict or interfere with an agricultural use. For Council planning officers to be able to assess compliance with these requirements information from the applicant is required. The rest of this section provides guidance on the use of Agricultural Management Plans (AMP) and Land Management Plans (LMP). To assist in the decision-making process, a flow chart has been prepared to provide guidance with the starting point being an application for a permit for a dwelling (See Figure A1-1).

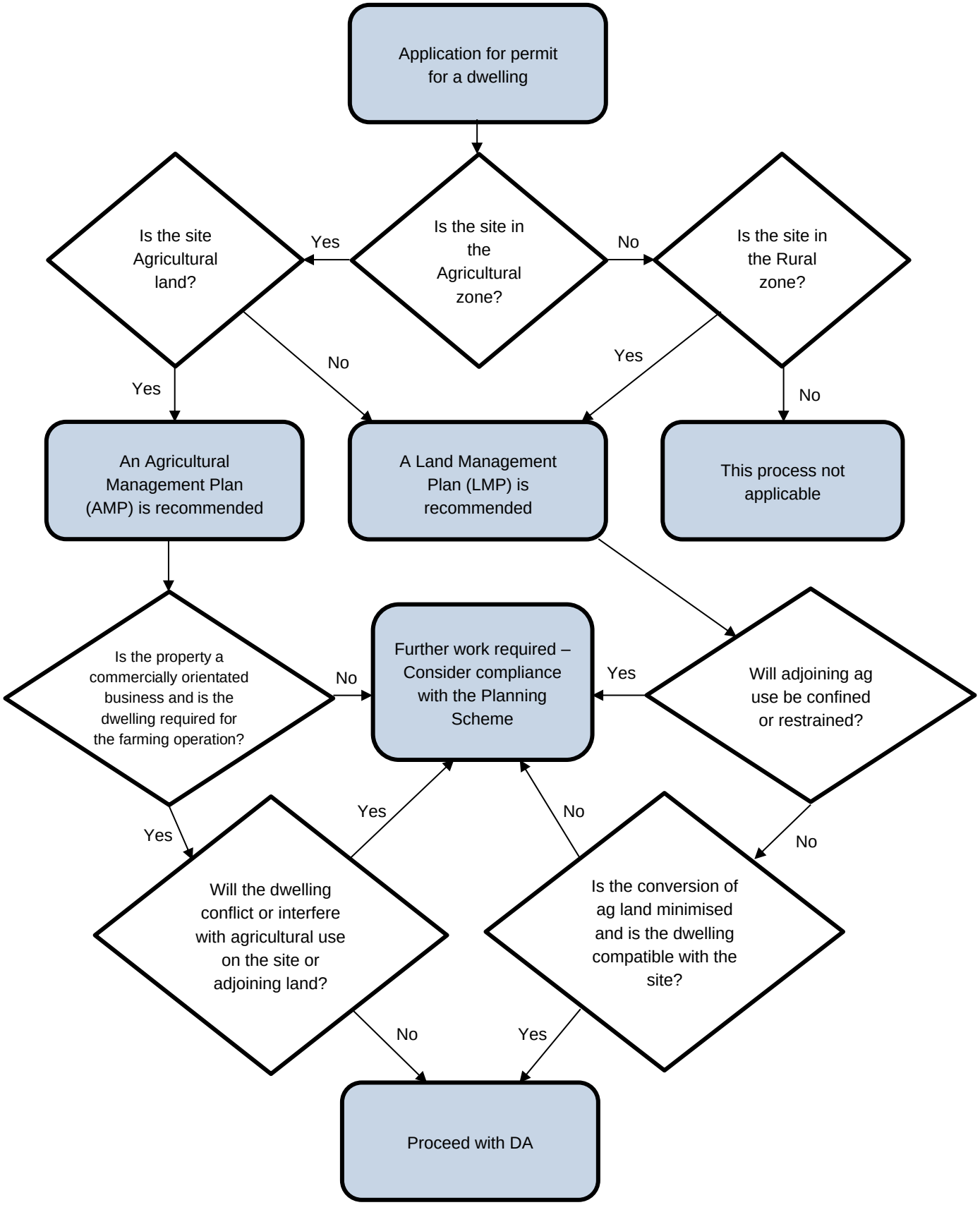

Figure A1-1: Flow Chart describing the process for determining when an Agricultural Management Plan or Land Management plan is required

AGRICULTURAL LAND & AGRICULTURAL USE

To be able to assess compliance a definition of ‘agricultural land’ and ‘agricultural use’ is required

There are existing definitions for agricultural land and agricultural use.

Agricultural land. Land that is in agricultural use or has the potential for agricultural use, that has not been zoned or developed for another use or would not be unduly restricted for agricultural use by its size, shape and proximity to adjoining non-agricultural uses (State Policy on the Protection of Agricultural Land 2009).

Agricultural use. Use of land for propagating, cultivating or harvesting plants or for keeping and breeding of animals, excluding domestic animals and pets. It includes the handling, packing or storing of produce for dispatch to processors. It includes controlled environment agriculture and plantation forestry (State Policy on the Protection of Agricultural Land 2009).

These definitions have been expanded to provide additional distinguishing characteristics to allow consistent differentiation between agricultural land and non-agricultural land. It follows that any land that is determined to be agricultural land then has the potential to be utilised for an agricultural use. Table A1-1 provides a gradational scale for each characteristic and its relative value to agriculture. These characteristics need to be considered in combination and include consideration of commercial scale characteristics for the particular agricultural activity as outlined in Section 3.4 of this report.

Table A1-1: Characteristics of Agricultural Land

CHARACTERISTIC	AGRICULTURE HIGH VALUE ⟷ LOW VALUE
Land Capability	Class 1 ⟷ Class 7
Development	Agricultural Infrastructure; dams, grain silos & feed stores, barns, sheds & workshops, underground irrigation mains, irrigation pumps, gravel laneways, wallaby proof fencing, stock facilities ⟷ Dwellings and non-agricultural developments in excess of commercial needs
Size of title	Large ⟷ Small
Scale of agricultural busines See Table 3-2 for the characteristics of Commercial, Small Scale, Hobby and Lifestyle Scale Farm Businesses and 3-3 for commercial scale characteristics for a range of farm business activities.	Commercial ⟷ Lifestyle
Connectivity Other than non-agricultural developments topographical constraints, reserves, threatened vegetation, major water courses and roads, steep slopes, swampy ground, etc can limit connectivity	Well connected to other titles with commercial scale characteristics ⟷ No connectivity with titles with commercial scale characteristics
Constraints	Minimal constraints to agricultural use from sensitive uses in proximity ⟷ Many sensitive uses in close proximity on multiple boundaries
Irrigation Water	Existing access to irrigation using surface water, ground water or Scheme water ⟷ No potential access to irrigation water
Regional context	Close to contract labour, processing facilities and markets; lower transaction costs ⟷ Isolated from contract labour, processing facilities and markets; higher transaction costs

AGRICULTURE MANAGEMENT PLAN

The Agricultural Management Plan (AMP) is primarily focused on farm business matters related to the proposed agricultural use to enable demonstration of meeting the requirements under 21.3.1 P4. The AMP needs to provide evidence that the residential use is required as part of an agricultural use, having regard to:

1. The scale of the agricultural use,
2. The complexity of the agricultural use,
3. The operational requirements of the agricultural use,
4. The requirement for the occupier of the dwelling to attend to the agricultural use; and
5. Proximity of the dwelling to the agricultural use,

This can be translated into two core requirements:

- The land use is a genuine commercially oriented farming operation, and
- A new dwelling or residence is critical to the proponent conducting this activity.

This can be treated as a two-step process. That is, the proponent must first show that they are currently or seeking to operate a commercially oriented farm. Once this is achieved, then the question of whether a new dwelling is needed should be considered.

It should be noted that an assessment of the commercial viability of a farm business is very difficult and, to some extent, subjective. There are, however, some core characteristics which can be easily used to demonstrate viability and commercial scale and under these circumstances the level of detail required is simplified. However, where viability is marginal, the proponent will need to demonstrate that they intend to run a genuine and commercially focused farm business aimed at primary production from the land with an intent to make a profit.

This focus and terminology are consistent with the Australian Tax Office's (ATO) approach to assessing whether a taxpayer qualifies as a primary producer. The ATO seeks evidence from the taxpayer that shows they are carrying on a business of primary production with an intention to make a profit. The information contained in an AMP should provide evidence of this intent.

The components of an AMP are outlined in Table A1-2. This table also includes guidance that could be provided to applicants to ensure they understand the intent of the information required in the AMP. Table A1-2 is consistent with the characteristics of a Commercial Scale and Small Scale Producer as outlined in the Scale categories section of this report.

A key goal of the AMP is to provide evidence that the property is a genuine commercially oriented farming operation. The AMP requires data on the farming enterprise, including information on Gross Income as a key indicator of the commercial orientation. Sections after Table A1-2 provide further information on the levels of Gross Income that would be expected from livestock and horticultural operations. This is intended to give proponents clearer guidance on how Gross Income will be used to assess genuine commercially oriented farming.

If it can be demonstrated that the dwelling is required, then it also needs to be demonstrated that the location of the dwelling will not interfere with agricultural use on the site or adjoining land.

Table A1-2: Components of an Agricultural Management Plan

AGRICULTURAL MANAGEMENT PLAN (AMP)	EXPLANATION
What is an AMP?	A report that documents the type of farm business and farm business activities proposed for the land including the rationale for the need of a dwelling to conduct these activities.
When is an AMP required?	New dwelling in the Agriculture zone
Rationale for requiring an AMP	To enable the proponent to provide evidence to Council that they will be conducting a farming business which requires a dwelling in order to carry out the anticipated farming activities. This evidence will be used to assess the proponent's application for a planning permit.
Key elements of an AMP	**Guidance for proponents**
1. Description of the land	
a. Features of the land	**Tips**
Description of the property: ▪ Address ▪ Zone and Municipality ▪ Land area (ha) associated with the title where the dwelling is proposed and any additional titles farmed in conjunction ▪ Land characteristics (slope, soil type, waterways, Land Capability, rainfall) ▪ Existing land uses and water resources (irrigation and stock & domestic) ▪ Existing vegetation (native vegetation and introduced) ▪ Location of existing infrastructure (dams, roadways, buildings, fences etc.) ▪ The availability of power and other services (distance and access to services) ▪ Identification of existing agricultural land.	Outline current site characteristics and conditions – this is needed to establish the "pre-development" status or use of the land. Not all of these may be applicable. Include topographic and aerial maps, where appropriate.
Summarise any current land management issues or assets on the property, including: ▪ Extent of any soil damage or existing active erosion. ▪ Infestations of weeds and their status. ▪ Any pest animals on the property	Identify current land management issues and their severity. Demonstrate an awareness of natural resource management issues that could arise in future.

AGRICULTURAL MANAGEMENT PLAN (AMP)	EXPLANATION
▪ Areas of environmental significance such as native vegetation, wetlands or habitat for priority species. Provide information on any existing third-party arrangements to manage all or parts of the land.	For example, a share farming agreement, leases or rental agreements, contractors to be engaged to reduce fuel loads, spray weeds etc.
Provide information on any current property management plans to address: ▪ Weeds and pests ▪ Soil erosion ▪ Water runoff and waterways (catchment dams, water access, protection of waterways by fencing etc.) ▪ Native vegetation protection ▪ Bushfire.	For example, funded activities through a Landcare grant or an NRM project. Compliance documents such as Farm Water Access Plans.
b. **Features of the surrounding land**	**Tips**
Context information about the surrounding land: ▪ Zone, Municipality, Reserves, Irrigation Districts and tenure ▪ Proximity to nearest towns / service centres ▪ Title sizes (ha) ▪ Land characteristics (slope, soil type, waterways, Land Capability) ▪ Existing land uses and water resources (irrigation and stock & domestic) ▪ Existing vegetation (native vegetation and its conservation status) ▪ Location of existing infrastructure (dwellings, dams, roadways, buildings, etc.). Identification of existing or potential agricultural use and agricultural land in proximity to the site	Outline current characteristics and conditions of land surrounding the site – this is needed to establish the "pre-development" status or use of the surrounding land It also provides regional context for the subject land and activities Most of this can be shown in a map.
2. Evidence of commercial focus of the farm business	
a. Details of existing farm business activities	**Tips**
Production information, for example: ▪ If a livestock enterprise: – Type and number of head – Area of pasture (ha) and stocking rate (dse/ha) – Breeding or fattening operation – Feed lotting or paddock grazing – Agistment or ownership of livestock	This information is needed to establish the scale of the existing farm business. If it can be demonstrated that the existing farm business scale is clearly 'commercial' and requires a minimum of 1 FTE, then the dwelling can be assumed to be necessary to provide accommodation for the 1 FTE and family. Under these circumstances the remaining information to be provided in section 2 and 3 can be minimised and only Section 4 needs to be completed in detail.

AGRICULTURAL MANAGEMENT PLAN (AMP)	EXPLANATION
▪ If a horticultural enterprise: – Crop type and area of production – Production levels / yields per annum ▪ If a dairy enterprise: – Number of cows or heifers – Area of pasture (ha) Gross Income from the farm business activities for the previous 3 financial years.	
b. **Details of proposed agricultural enterprises**	**Tips**
Production information, for example: ▪ If a livestock enterprise: – Type and number of head – Area of pasture (ha) and stocking rate (dse/ha) – Breeding or fattening operation – Feed lotting or paddock grazing – Agistment or ownership of livestock ▪ If a horticultural enterprise: – Crop type and area of production – Production levels / yields per annum ▪ If a dairy enterprise: – Number of cows or heifers – Area of pasture (ha) Forecast Gross Income from the farm business activities for a minimum of 3 future financial years.	Provide detailed agricultural production information in the form of a business plan – this is needed to establish if the enterprise is a genuine and realistic farming operation with an intention to make a profit.
c. Planned infrastructure	**Tips**
Details of infrastructure required to support proposed farming activities: ▪ List types of infrastructure (i.e. fencing, sheds, services, machinery, irrigators, underground mains, dams, etc.) ▪ Estimate capital investment level.	Provide plans of proposed built infrastructure that will support the farming activity.
d. Markets for proposed produce	**Tips**
For each farming activity, describe: ▪ The nature of the product or value-added products and the annual production levels. ▪ The proposed markets you are aiming for (locally or afar) ▪ Wholesale price of produce e.g. $/kg beef live weight.	Provide a description of the farm business and information that demonstrates that the farming activity has a significant commercial purpose. Information about expected gross income, expenses and capital outlays should be provided.

AGRICULTURAL MANAGEMENT PLAN (AMP)	EXPLANATION
3. Evidence that a new dwelling is required as part of an agricultural use	
a. Details of site management requirements	**Tips**
Description of main farming activities: ▪ List types of activities (i.e. milking frequency and timing, overseeing livestock, farm maintenance schedule, crop sowing, surveillance and harvest etc.) ▪ Outline timing of main activities i.e. are they seasonal, year around, hours of operation? ▪ Frequency and time of activities ▪ Any special care or management required.	Outline expected level of site management required to conduct farming activities – this is needed to determine the need for a new dwelling to enable farming activities to be carried out in an effective and timely manner. Note livestock operations do not normally require on-site living. This section needs to provide evidence as to why the dwelling is necessary and not just convenient.
Describe why a new dwelling is needed for the farming operation.	Based on the type of operation, identify the specific reasons a dwelling is needed on the property, and how this helps the agricultural use.
4. Evidence that the location of the dwelling will not interfere with agricultural use on the site or adjoining land	
a. Detail of dwelling proposal and site	**Tips**
▪ Proposed location for the dwelling ▪ Intended access to the dwelling ▪ Details of works associated with the proposed dwelling (i.e. roadways, replanting, fencing etc.) ▪ Details of vegetation removal to accommodate proposed dwelling ▪ Current use of the land that the dwelling will be located on ▪ Identify any potential for the dwelling to interfere with existing or potential agricultural use on the site ▪ Identify how the interference will be managed or mitigated.	The site plan should provide sufficient detail on the proposed dwelling. This information is focussed on identifying any conflict or interference with the existing or potential agricultural use of the site. Things to consider are paddock configuration, laneways, proximity to potential future waste management (eg effluent ponds), irrigation layout, etc.
b. Adjoining land	**Tips**
▪ Identify proximity from proposed dwelling to each boundary and adjacent farming activity (if any) in each direction ▪ Identify any potential for the dwelling to interfere with existing or potential agricultural use on the site. ▪ Identify how the interference will be managed or mitigated.	Consider the adjacent existing and potential farming activity and appropriate separation distances based on the information in Section 3.5 of this report and Appendix 3.

INDICATORS OF 'COMMERCIALLY ORIENTED FARMING'

As noted earlier, two factors are being used to determine whether a dwelling is appropriate. The first focusses on the concept of genuine commercially oriented farming operation, while the second is to consider how a dwelling helps the operation of that farm.

The next sections describe what might be expected of a commercial livestock operation, and a commercial cropping or horticulture operation. Following this, section X considers the second factor – the need for a dwelling.

LIVESTOCK OPERATIONS CARRYING CAPACITY AND GROSS INCOME

Carrying capacity of a farm is a useful concept for considering how to assess whether a property is a commercially oriented farm. The carrying capacity of a farm is the number of stock that can be carried through most years. Carrying capacity is expressed as 'dry sheep equivalent' (DSE)[15] per hectare. It is based on a combination of factors such as climate, landform, soils, land use and land management. Carrying capacity in a given area also reflects the stocking rate that other farmers have typically achieved on their farms under commercial conditions.

From this, it is reasonable to assume that commercially oriented farms tend to carry stock at close to the typical carrying capacity of a district. In simple terms, this is the stocking rate typically required to ensure returns exceed costs.

The average annual rainfall in the farming area needs to be considered in the first instance. If we assume 800 to 1000 mm and the soils range from productive alluvial soils in the valley floors to medium capability soils of the low hills to poorer shallow soils on the steeper slopes. Given the soils and rainfall, the land has medium to high agricultural capability.

A theoretical maximum carrying capacity can be determined using the following equation:

The potential carrying capacity[16] = (Rainfall/25) – 10 = DSE/ha

Based on rainfall of 800 mm (long term average annual) a theoretical maximum carrying capacity is 22 DSE/ha. In practice, however, this is only ever achieved on properties with both high-level management expertise (to maximise pasture utilisation) on the highest quality agricultural land i.e. the best farms and farmers in the district. Results from the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) Livestock Farm Monitor project[17] (2020/21) show that an average stocking rate of 16.4 DSE/ha was achieved in the major farming area of Gippsland, which had a rainfall of 826mm for 2020/21. In the previous year Gippsland had an average stocking rate of 16.5 DSE/ha and a rainfall of 796mm. In 2018/19 Gippsland had an average stocking rate of 18DSE/ha and a rainfall of 648mm

The current DEDJTR Livestock Farm Monitoring Project report (or a rolling 3-year average) can be utilised to select comparable DSE/ha in Victoria for the equivalent rainfall in Tasmania. The DEDJTR report uses the Victorian Districts of South-West, Northern and Gippsland. This can then be compared to local calculators such as the Tasmanian Institute of Agriculture Research (TIAR) pasture growth rates and local conditions and

[15] DSE or dry sheep equivalent is the standard measure of stocking, where a single unit is equivalent to a 45 kg merino wether. A ewe/lamb is assumed to be 2 units, while beef cattle/steer equates to 10 DSE units and a milking cow is around 15 DSE units.

[16] The potential carrying capacity, expressed in DSE/ha is a theoretical maximum stocking rate based on rainfall only. It will only ever be possible where there is good soil fertility and structure, and pastures are well managed (CLPR, 1991).

[17] DEDJTR conducts detailed surveys of a sample of livestock farm businesses in Gippsland and other parts of Victoria on an annual basis.

used to calculate Gross Income[18]. As a guideline the Gross Income generated from average quality land with 800mm rainfall should be approximately $100/DSE/ha[19]. The Gross Margin calculators on the NRE website could also be used to estimate expected Gross Income for the type of livestock operation and rainfall category ('Low' or 'High'). There are seven livestock Gross Margin calculators available on the NRE website[20]. The livestock calculators are dated 2018, hence the prices for livestock need to be updated as the Gross Income in the calculators are too low for current (Dec 2021) market conditions.

CROPPING AND HORTICULTURE GROSS INCOME

Cropping and horticultural farms are generally intensive operations and therefore have a higher turnover per hectare than livestock operations The data required in the AMP is sufficient to be able to estimate Gross Income for cropping and horticulture operations.

The expected Gross Income is highly variable depending on the type of crop. Using the NRE 2020 - 2021 Gross Margin calculator (Crops GM_High Rainfall) a range of $1300/ha (for dryland barley) to $20 000/ha (for irrigated seed potatoes)[21]. The Gross Margin calculators on the NRE website can be used to estimate expected Gross Income for the crop type and rainfall category ('Low' or 'High') as they are relatively current. However, as the prices in the calculators become dated this will need to be factored in. There are 7 perennial horticulture, 23 crop, 4 organics Gross Margin calculators available on the NRE website[22].

ROLE OF A DWELLING

If a property can be shown as being a commercially oriented farm, then the proponent must also provide evidence for why a dwelling is needed. If it can be demonstrated that the existing farm business scale is clearly 'commercial' and requires a minimum of 1 FTE, then the dwelling can be assumed to be necessary to provide accommodation for the 1 FTE and family. Under these circumstances the remaining information to be provided in regard to the role of the dwelling can be minimised and only the section on whether the dwelling will confine or constrain agriculture on adjacent land needs to be completed in detail. The following section (Table A1-3) provides general guidance on the need for a dwelling in relation to livestock and cropping or horticulture operations for those farm businesses whose characteristics do not clearly meet the commercial scale.

Table A1-3: Guidance on when a dwelling is needed

TYPE OF FARM		IS A DWELLING NEEDED? IF SO, WHY?
Livestock	Beef (steers, heifers etc.), sheep	Generally, not required - stock can be monitored without residing on the property.
	High value breeding animals – sheep, dairy cattle, beef cattle, horses or other livestock	May be required – monitoring of stock during breeding seasons and of young stock may require a person to be on the property. This would only apply to high value stock (e.g. stud breeding stock) with high value genetic lines or where there is a high threat to animal welfare. (It does not apply to normal production breeding of livestock.)

[18] This section can be expanded in future to show a methodology for calculating expected Gross Income based on rainfall, hectares and carrying capacity.
[19] This is current at the time of writing (Dec 2021) however, for future reference the current livestock price should be used.
[20] https://nre.tas.gov.au/agriculture/investing-in-irrigation/farm-business-planning-tools
[21] Ideally this section should be segregated to provide expected income for cropping (grains), annual row crops and perennial hort.
[22] https://nre.tas.gov.au/agriculture/investing-in-irrigation/farm-business-planning-tools

TYPE OF FARM		IS A DWELLING NEEDED? IF SO, WHY?
	Dairy calf rearing	Generally, not required – more intensive management may be required when stock is very young but this is not year-round.
	Dairy	Generally required
Cropping and horticulture	Vegetables	May be required – e.g. for irrigation management, packing and distribution of product
	Fruit trees	May be required – e.g. for irrigation management, packing and distribution of product
	Non-irrigated crops (e.g. grapes, cereals, oil seeds)	Generally, not required – crops can be monitored without residing on the property

WILL THE DWELLING CONSTRAIN

If the use does not affect agricultural land, how the use will not confine or restrain existing use on adjoining properties needs to be considered. Refer to Appendix 3 for details on land use risk assessment.

LAND MANAGEMENT PLAN

The Land Management Plan (LMP) is primarily focused on identifying whether a new dwelling is likely to have negative impacts on agricultural land uses or has the potential to cause conflict. The LMP needs to provide details of the attributes of the land and its capability, the proposed use and any potential impacts on the land, neighbours and neighbouring land, and how these impacts will be mitigated or managed.

The proposed components of a LMP are outlined in Table A1-4.

Table A1-4: Components of a Land Management Plan

LAND MANAGEMENT PLAN (LMP)	EXPLANATION
What is a LMP?	A report that documents the features of the land, the proposed use and any potential impacts that the new dwelling could have on the land, on neighbours (offsite effects) or on the local environment. The LMP also describes how these impacts will be avoided or mitigated.
When is a LMP required?	Any new dwelling in the Rural zone Any new dwelling in the Agriculture zone, if not on agricultural land and where a AMP is not required.
Rationale for requiring a LMP	To enable the proponent to provide evidence to Council that the conversion of agricultural and will be minimised and that a dwelling is compatible with that site. For instance, that it will not create conflict with neighbours.

LAND MANAGEMENT PLAN (LMP)	EXPLANATION
	This evidence will be used to assess the proponent's application for a planning permit.
Key elements of a LMP	**Guidance**
a. Features of the land and current use	**Tips**
Description of the property: ▪ Address ▪ Zone and Municipality ▪ Land area (ha) associated with the title where the dwelling is proposed and any additional titles managed in conjunction. ▪ Land characteristics (slope, soil type, waterways, Land Capability, rainfall) ▪ Existing land uses and water resources (irrigation and stock & domestic) ▪ Existing vegetation (native vegetation and introduced) ▪ Location of existing infrastructure (dams, roadways, buildings, fences etc.) ▪ The availability of power and other services (distance and access to services) ▪ Identification of existing agricultural land.	Outline current site characteristics and conditions – this is needed to establish the "pre-development" status or use of the land. Not all of these may be applicable. Include topographic and aerial maps, where appropriate.
Summarise any current land management issues or assets on the property, including: ▪ Extent of any soil damage or existing active erosion ▪ Infestations of weeds and their status ▪ Any pest animals on the property ▪ Areas of environmental significance such as native vegetation, wetlands or habitat for priority species.	Identify current land management issues and their severity. Demonstrate an awareness of natural resource management issues that could arise in future.
Provide information on any existing third-party arrangements to manage all or parts of the land.	For example, a share farming agreement, leases or rental agreements, contractors to be engaged to reduce fuel loads, spray weeds etc.
Provide information on any current property management plans to address: ▪ Weeds and pests ▪ Soil erosion ▪ Water runoff and waterways (catchment dams, water access, protection of waterways by fencing etc.) ▪ Native vegetation protection ▪ Bushfire.	For example, funded activities through a Landcare grant or an NRM project. Compliance documents such as Farm Water Access Plans.

LAND MANAGEMENT PLAN (LMP)	EXPLANATION
b. Features of the surrounding land	**Tips**
Context information about the surrounding land: ▪ Zone, Municipality, reserves, Irrigation Districts and tenure ▪ Proximity to nearest towns / service centres ▪ Title sizes (ha) ▪ Land characteristics (slope, soil type, waterways, Land Capability). ▪ Existing land uses and water resources (irrigation and stock & domestic) ▪ Existing vegetation (native vegetation and its conservation status) ▪ Location of existing infrastructure (dwellings, dams, roadways, buildings, etc.) ▪ Identification of existing or potential agricultural use and agricultural land in proximity to the site.	Outline current characteristics and conditions of land surrounding the site – this is needed to establish the "pre-development" status or use of the surrounding land. It also provides regional context for the subject land and activities. Most of this can be shown in a map.
c. Proposed use	**Tips**
Proposed changes to the property: ▪ Proposed site for dwelling ▪ Details of proposed use – including any farming activities (i.e. type and quantity of livestock, details of hours of operation, main seasonal activities, offsite impacts) ▪ Current and intended access to and through the property ▪ Details of works associated with the proposed use (i.e. roadways, replanting, fencing etc.) ▪ Details of native vegetation removal to accommodate proposed development or land use ▪ Details of water requirements for the intended land use e.g. provide an estimate of annual domestic, stock and general water requirements (incl. firefighting etc.) and source (e.g. dams) ▪ Any other land management actions or changes proposed (as relevant to the context, site characteristics and proposal).	Outline proposed changes in use. This information is focussed on identifying the likelihood of conflict arising. Specifically, to ascertain whether the proposed development is likely to: ▪ To confine or restrain existing use on adjoining properties ▪ Existing use or potential agricultural use on agricultural land on the property or on adjoining properties.
d. Potential impacts of intended use	**Tips**
Identify potential impacts: ▪ Identify extent of conversion of agricultural land on the property ▪ List potential impacts of intended use on neighbours.	Identify any potential adverse land management impacts or conflicts that could arise with neighbours. This should be based on an assessment of the current use compared to the intended use and any effect this could have on neighbouring landholders and land uses. Consider things like: ▪ Impacts on livestock or people from noise, traffic, dust

LAND MANAGEMENT PLAN (LMP)	EXPLANATION
	▪ Impacts of any lighting, plant or equipment installations on people or farming activities ▪ Impacts of farming activities (cultivation, spraying, harvesting) on people or livestock ▪ Impacts of livestock on people or other livestock and farming activities ▪ Refer to risk matrix and agricultural activity conflict tables and separation distances table contained in Section 3.5 of this report and Appendix 3.
e. Management of impacts	**Tips**
For each potential impact, identify how they will be managed or mitigated.	Document actions that will be taken to minimise or mitigate any potential conversion of agricultural land on the site or offsite impacts. This could include things like altering the location of the dwelling to the least productive land, altering the location of the access road to avoid fragmentation of agricultural land, buffers, plantings to reduce sound or visual impacts, etc.
f. Summarise	**Tips**
If the use does not affect agricultural land, how the use will not confine or restrain existing use on adjoining properties. If the proposed use is located on agricultural land, how the proposed use minimises the conversion of agricultural land and is compatible with agricultural use.	

Appendix 2: Definitions and background information

Enterprise Scale incorporates common terms, statistics and research. It is founded on existing definitions in legislation and dictionaries for primary industry and agriculture. A glossary is included at the front of this document. Additional information on some of the terms in the glossary as well as other common terms and explanatory text for the concepts is included in this Appendix.

Agricultural land is defined under the State Policy on the Protection of Agricultural Land 2009 (PAL Policy) and the Tasmanian Planning as meaning;" all land that is in agricultural use or has the potential for agricultural use, that has not been zoned or developed for another use or would not be unduly restricted for agricultural use by its size, shape and proximity to adjoining non-agricultural uses".

Agricultural use is defined under the State Policy on the *Protection of Agricultural Land 2009* (PAL Policy) and the Tasmanian Planning Scheme as; "*use of land for propagating, cultivating or harvesting plants or for keeping and breeding of animal, excluding domestic animals and pets. It includes the handling, packing or storing of produce for dispatch to processors. It includes controlled environment agriculture and plantation forestry".*

Diversification. Successful farming businesses look for opportunities to diversify, create efficiencies as well as opportunities for expansion to achieve economies of scale. Other than water resources, availability of suitable land for sale is a limiting factor.

From a planning perspective it is important to discern the difference between a commercial scale primary production farm business seeking to diversify and a small scale producer or hobby farm seeking to diversify. Commercial scale operations are generally capable of managing any potential conflict such that production factors are not impacted and the dominant use continues to be primary production. Small scale producers on the other hand may find it more difficult to maintain production and manage diversification due to limited land and water resources. There is generally greater financial pressures and highest and best use pressures for the deployment of resources, which can result in primary production being limited for higher order values such as visitor amenity.

Estimated value of agricultural operations (EVAO) is a measure of the value of production from farms and a measure of their business size. The EVAO is an Australian Bureau of Statistics (ABS) construct used to estimate the relative size of agricultural activity undertaken by a business. It is similar to Gross Income or turnover. In 2015 the ABS increased the minimum value of Estimated Value of Agricultural Output (EVAO) a farm business activity needs to be included in their survey data. Previously the EVAO was $5,000, this has now been increased to $40,000.

Farming and Primary Industries

The Tasmanian *Primary Industry Activities Protection Act* 1995 states:

(1) In this Act –

farm means an area of land that –

(a) is primarily being used for, or in connection with, primary industry; and

(b) is not Crown land, or land owned by the Forestry corporation, that is used for Planting trees, establishing forests or growing or harvesting timber; and

(c) is being used, or being prepared for use, by the occupier of the land as a primary production business within the meaning of the Income Tax Assessment Act 1997 of the Commonwealth (see below).

primary industry includes the following:

(a) planting, growing or harvesting crops;

(b) breeding, rearing or managing livestock;

(c) agisting livestock;

(d) obtaining dairy, wool, eggs or other produce from livestock;

(e) obtaining juice, seeds or other produce from crops;

(f) planting trees, establishing forests or growing or harvesting timber;

The Income Tax Assessment Act 1997 of the Commonwealth; Tax ruling 97/11 – Income Tax; am I carrying on a business of primary production, states as follows:

Subject to all the circumstances of a case, where an overall profit motive appears absent and the activity does not look like it will ever produce a profit, it is unlikely that the activity will amount to a business[23].

The Macquarie dictionary defines 'primary industry' as:

'Any industry such as dairy farming, forestry, mining, which is involved in the growing, producing, extracting, etc. of natural resources'.

There are many definitions of the term 'Industry' when considered on its own. The term is defined in the Oxford Geography online dictionary as:

'a sector of the economy in which firms use similar factor inputs to create a group of related products and/or services. The extraction of natural resources, including agriculture is primary industry'.

Based on this definition and many others 'Industry' is an activity where the economics of the activity needs to be considered.

Farm business. The Macquarie Dictionary (online accessed 8/12/21) defines 'farm' as *a tract of land devoted to agriculture* and 'business' in economic terms, *as the sale of goods and services for the purposes of making a profit.* Hence farm business is a business which makes a profit from the growing of produce for the purposes of selling to make a profit.

Farm business activity. A farm business activity is a single crop or form of production.

Gross Margin. The Gross Margin of a farm business activity is a commonly used indicator of its relative 'profitability' and is calculated as the margin between the Gross Income and the Variable costs of that farm business activity. As such the Gross Margin represents the funds available to meet the Overhead Costs of the business, the interest and capital requirements, and provide a return for the business owner. Variable costs are generally around 33% of Gross Income.

Land values. If adjacent unconstrained farming land becomes available for purchase at prices that reflect agricultural use, rather than non-agricultural development potential, successful farming businesses have the

[23] Source: ATO webpage (last updated 18 May 2018) https://www.ato.gov.au/business/primary-producers/primary-production-activities/ accessed 3/11/21

opportunity to invest in purchasing this land primarily to expand their farm business and improve economies of scale and to manage their risks.

However, as pointed out by Robinson[24] there are other reasons for purchasing farming land and an asset is priced at its highest and best use within a supply and demand framework.

Marketing and conversion of land for 'lifestyle use' or visitors accommodation in the Tasmanian Primary Industry zones is influencing the value of land. As a result, land prices reflect this potential non-agricultural use and it is often difficult to achieve a return on investment if purchasing the land for primary industry purposes.

The continued incremental conversion of agricultural land to non-agricultural use is resulting in increased biosecurity risks and constraint on adjacent agricultural operations due to a reduction of suitable land available to purchase. This means increased resources need to be devoted to managing the risks, and farm businesses find it difficult to expand their farming activity in proximity. Both these factors impact on the long-term viability of farm businesses.

Production issues in relation to scale. TIAR (Dr Peat Leith) categorises agriculture into 'commodities' and 'niche'. Commodities dominate the EVAO (as supported by ABARES); niche farm business activities make a much smaller contribution to the economy. It is not possible to analyse the EVAO contribution for 'niche' agriculture as these are not captured as a category in the Australian Bureau of Statistics (ABS) data. Whilst it is possible to segregate for example berry production, the EVAO reflects the larger producers such as Costas, who do not fit the niche category. Producers with a Gross Income of less than $40,000 per year are not included in the ABS data.

There are very few examples of smaller farm businesses being viable, that is producing Gross Income of more than $300,000 per year from farm business activities and the Sprout producer survey[25] confirms the Gross Income for the majority (94%) of respondents was less than this.

There are considerable disadvantages with smaller scale 'non-viable' farming businesses, aside from the obvious issues of economies of scale, including:

a) Smaller businesses cannot devote the time to skills development and training; for example, a larger business can afford to send one employee to specialist training offered at field days and discussion groups. Part time farmers are more likely to be working off farm. The result is that the levels of technical proficiency are generally higher in larger businesses.
b) Larger businesses can afford more modern (and costly equipment), that is safer for workers and the environment, and more efficient (e.g. modern boom sprayers with satellite guidance, and safety features).
c) Smaller non-viable businesses are commonly based on the enthusiasm and labour contribution of a sole person or couple. As a result, there is commonly no long-term plan or opportunity for the business; such businesses tend to be ephemeral (the businesses last while the owners remain enthusiastic and capable). Where those businesses focus on the production of a single or a small number of products, the risks to longer term viability are high. A good example is saffron production in Tasmania; until recently it was presented as a remarkable development, but the loss of markets through the major supermarkets has put the industry in jeopardy.

   (see *http://www.abc.net.au/news/rural/2018-04-13/saffron-worlds-most-expensive-spice-comes-at-big-cost-to-growers/9653774*).

[24] Robinson Sewell Partners Newsletter 16 SEP 2021, WHY FARMING ASSETS NEVER PAY FOR THEMSELVES BUT CREATE SUBSTANTIAL WEALTH – Article dated 14 Sept 2021 by Ian Robinson

[25] Sprout Tasmania is a non-profit organisation set up in 2011 to foster and support the State's start-up growers and producers. They conducted a survey of Small Scale Producers in March 2021. Data from the survey has been supplied by Sprout Tasmania and is preproduced with permission.

Nevertheless, there is an increasing level of interest in small scale producers with the biennial Small Farm Living Field Day in Lilydale in September 2021 attracting the biggest crowd to date (Lauren Bird (NRM North cited in Tas Country 24/09/21). Organisations such as Sprout Tasmania who exist specifically to support the success of small and emerging food producers in Tasmania are finding an increasing demand on their services.

Statistics. Data is extremely relevant for Enterprise Scale as it provides the basis for developing the agricultural profiles of a study area and understanding the importance of a particular farm business activity in the local, regional state and national context.

Spatial data provides information on the physical extent of farm business activities. The LIST (Land Information System Tasmania) is the most comprehensive publicly available spatial dataset for Tasmania. There are over 900 layers available. LIST map allows rapid desktop assessment at a local scale. Spatial data can also be downloaded and imported into GIS to allow for regional analysis.

The most comprehensive statistical data available on agriculture is the Australian Bureau of Statistics (ABS) data based on the most recent Agricultural Census. Note that the ABS census data for agriculture includes all farming establishments with an Estimated Value of Agricultural Output (EVAO) greater than $40,000. The EVAO minimum value of $40,000 was instated for 2015–2016; previously data has been collected for farming establishments with an EVAO of greater than $5,000. ABS data is based on all land within the study area, not just land within the zones designated for agriculture.

ABS data is available at Statistical Area Level 2 (SA2). SA2s are smaller than Local Government Areas (LGA), so data from SA2s within can be added together to provide data for municipalities as a whole, however, there are generally some anomalies. SA2 data can also be aggregated to regional SA4 level and in Tasmania these are represented by Hobart, Launceston and the NE, South East and West and North West

Profile ID data is available for Tasmania for each of the Local Government Areas. This information is primarily based on the ABS data but it does also use other information. Councils subscribe to profile id and make demographic information about their municipality, available for community access.

The Tasmanian Agri-Food Score Card, is published annually and reports on the value and market destinations of the State's agriculture, food and beverage production.

Sprout Tasmania[26] conducted a survey of 'Small Scale Producers' in March 2021. They applied for and received funding from the State Government to conduct the survey. The anonymised results have been made available to help inform and characterise 'Small Scale Producers' as described in this report.

Optimum Standards conducted an Agritourism Survey in July 2021, as part of an Australian Government funded Recovery for Regional Tourism Program which is part of the COVID-19 Relief and Recovery Fund. The 'Opening the Gate' project is an initiative to assist farmers, food producers and existing agritourism business explore opportunities to diversify, value add and connect with visitors. Future collaboration with this project and the sharing of the anonymised survey data could lead to better understanding of Enterprise Scale in relation to Agritourism opportunities.

The annual Livestock Farm Monitor Project is Victoria's primary source of farm level information for sheep and beef production. The results of the annual survey provide farm-level data which is collated to provide financial and production performance on a regional basis. The performance of livestock farms in Tasmania from areas

[26] Sprout Tasmania is a non-profit organisation set up in 2011 to foster and support the state's start-up growers and producers.

of comparable climate and land quality can be compared with regional averages reported on in this project. It provides useful baseline information on livestock farming production and performance.

ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences) provides research, analysis and advice for government and private sector decision-makers on issues affecting Australia's agriculture, fisheries and forestry industries.

The ABARES[27] report is utilised in this paper for reporting on statistics for Tasmania for the rest of this section. However, the ABS has recently (14 May 2021) released the Value of Agricultural Commodities Produced for Tasmania 2019-20. Hence Enterprise Scale is a 'living' document which will need updating to reflect changes.

In 2018–2019, the gross value of agricultural production in Tasmania was $1.6 billion with the highest value commodities being milk ($457 million), followed by cattle and calves ($342 million) and potatoes ($127 million). These commodities together contributed 57% of the total value of agricultural production in the state.

The commodities reported on were (in order of value):

Milk, cattle and calves, Potatoes, Wool, Cherries, Sheep and lambs, Apples, Strawberries, Hay, Carrots, Wine grapes, Onion, Eggs, Cut flowers, Beans.

An additional category 'Other commodities' includes the total value of commodities not published as well as those with small values. Other commodities had a gross value of agricultural production of just over $250 million. Which represents 15.6% of the total 1.6 billion gross value of agricultural production in Tasmania in 2018–2019. The other commodities category would include berries (other than strawberries) and other significant contributors.

We are aware from work undertaken in 2020 that the rapid growth of berries (particularly raspberries), in select areas, is not adequately captured in the data and there is a lag between the reported data and the actual production currently occurring. In the Wesley Vale area for example based on Google Earth imagery 103ha of polytunnels present in 2020, was not captured in the 2015–2016 ABS Commodity data. This represents an annual Estimated Value of Agricultural Output (EVAO) of $5,007,406 based on an average of 11,049kg /ha for berry production (from the Australian Horticulture Statistics Handbook 2017/18) and an average of $4.4/kg (based on ABS 2015–2016). Whilst these figures are dated and there are large variances between kg/ha and $/kg between the different types of fruit, these figures provide context on the rapid change at local levels in agriculture production which are not necessarily reflected in the data.

In 2018–2019 around 18% of farms in the state had an EVAO of more than $1 million and accounted for an estimated 62% of the total value of agricultural operations. At the other end of the scale 27% of farms in Tasmania had an EVAO between $50,000 and $150,000[28]. These farms accounted for 4% of the total value of agricultural operations in 2018–2019.

The ABARES report, 'About my region', also cites the ABS data as indicating there were 2,171 farms in Tasmania with an EVAO of $40,000 or more in 2018–2019.

Scale trends. Farming practices are changing with the use of more intensive production systems and techniques. Where there is scope for farms to increase in land area there is also scope for improving economies of scale and thus becoming more profitable. Agricultural output will be improved by the smaller farms being combined to create fewer but larger scale farming businesses, and this has occurred to some

[27] About my region – Tasmania available on line at https://www.agriculture.gov.au/abares/research-topics/aboutmyregion/tas

[28] Note: only farms with an EVAO of more than $50 000 are included in this statistics, whereas ABS data 215-16 includes business with an EVAO over $40,000.

extent in some areas. For example, at a national level the average size of farms has increased by 23% whilst at the same time farm numbers are decreasing[29].

Medium sized to larger titles which do not have non-agricultural development are more attractive for increasing land area for farms as the purchaser is paying only for agricultural assets.

Bigger is not always better but based on the statistics it is clear that most Tasmanian farms are too small to be efficient, profitable and 'viable'. Hence, it is not surprising that the smaller farms have a greater interest in diversifying into alternate income streams such as agritourism or value adding (pers. comms. 26/08/21 Allison Clarke, Optimum Standards).

Viable. A definition for a viable farm was developed by David Armstrong in 2010; 'A viable farm is one producing sufficient income to provide for at least one family and provide full time employment (FTE) for at least one person. On this basis the long-term viability of farms producing less than $300,000 Gross Income is questionable. Off-farm income would be required to support a family and the labour input required would be less than one FTE'.

In 2010 AK Consultants the threshold of $150,000 Gross Income was used and this aligned with the ABS categories, however, this was changed in 2018 to $200,000 and in 2021 to $300,000. It is questionable whether this threshold is high enough and whether it should be $500,000 to align with the higher ABS category and mainland RMCG metrics for viability. The threshold will vary depending on a range of factors including farm business activity type, however, for Tasmania and for the purposes of a conservative Gross Income in the statutory planning context $300,000 is considered appropriate at this time. At this Gross Income level other factors such equity, resources and connectivity would need to be favourable, to maximise profit, allow efficient production and minimise inputs. Gross Income is only one of the characteristics considered in determining farm business scale. Determining when and how to review and potentially increase this threshold requires further consideration.

Hider (2004) describes three factors which influence viability and which require constant monitoring in the farming sector:

- Cost-price squeeze and the need for farmers to intensify or diversify leading to new technologies such as bird-scaring devices or new management techniques such as night harvesting
- Community expectations where the consumer is concerned about the quality of the product, the production method and the impacts on the neighbours
- Increasing desirability of the rural lifestyle.

In order to be able to respond to these pressures and remain viable farmers need to be able to:

- Increase the scale of their operations by acquiring more land.
- Intensify their operations in order to increase productivity or improve quality
- Seek to produce new products that will deliver a higher return.

from (Hider, 2004)

Although this reference is from nearly twenty years ago it remains relevant.

[29] Australian Government - Australian Institute of Health and Welfare, Australia's Food and Nutrition 2012 in brief, available online at http://www.aihw.gov.au/WorkArea/

Appendix 3: Constraints and separation distances

EXISTING SEPARATION DISTANCE GUIDELINES

There are a range of activities associated with grazing and cropping and Learmonth et al. (2007) detail the common range of issues associated with sensitive uses, such as residential use which can constrain agricultural/primary industry activities. Common conflict issues associated with residential use include spray drift from chemicals which would include fungicide, herbicide, and insecticide, noise from equipment (irrigation equipment, tractors, harvesters, aircraft etc. including during the night and early morning), irrigation water spray drift (generally not potable water), odour from fertilisers and chemicals, and dust during harvesting and ground preparation. The types of activities associated with irrigated cropping which may affect residential amenity are generally much more frequent and of greater concern than activities associated with hobby scale grazing activities. These are generally limited to fertiliser spreading, perhaps weed spraying and fodder conservation, and occasional cultivation and re-sowing of pastures.

There are no Tasmanian specific guidelines on separation distances between agriculture and sensitive uses, however, examples from interstate can provide guidance on recommended buffer designs. Queensland published a fact sheet in 2006. This states that to adequately mitigate the risk of direct impacts of irrigated cropping activity requires a 60m wide separation distance to residential land use which includes a 40m wide vegetated buffer. The Western Australia Department of Health (DOH, 2012) has published guidelines relating specifically to minimising conflict between agricultural/primary industry activities and residential areas through management of buffer areas. This study particularly focuses on spray drift and dust generation and recommends a minimum separation of 300m to reduce the impact of spray drift, dust, smoke and ash. Through the establishment of an adequately designed, implemented and maintained vegetative buffer, this minimum separation distance can be reduced to 40m which includes a 20m wide vegetated buffer.

These guidelines focus on separation distances between agricultural use and residential areas. They do not take into account wind direction, slope or elevation, nor how these separation distances or buffers might be altered if there is only one sensitive use rather than a residential area.

Tasmanian Planning Scheme Attenuation Code provides a list of activities and attenuation distances for sensitive uses. These are Level 1 or Level 2 activities which have the potential to cause emissions. Dairies for example are listed as a Level 1 activity and require a 300m attenuation distance to a sensitive use. Frost fans require a 2000m attenuation distance.

Another area of guidance is *The Code of practice for aerial spraying* (2014) which states: an agricultural product may not be discharged:

(i) over or within 100 metres of the agreed boundary of areas within a Planning Scheme or Special Planning Order which are not zoned primarily for agricultural, forest or associated use (agreed boundary means a boundary agreed to between owners of adjoining properties);

(ii) within 100m of a dwelling or occupied buildings without permission from the occupants.

The Code prescribes the minimum standards applying to users of agricultural chemical products when these products are applied by aerial spraying operations in Tasmania. We interpret this to mean that if a grower wishes to aerially spray within 100m of an existing sensitive use, they will need the approval of the occupants, hence a minimal separation distance of 100m would be appropriate to avoid this potential conflict issue.

Whilst it is acknowledged that any spray applications need to be contained on the property, introducing sensitive uses in close proximity to these activities introduces a requirement for more rigorous risk assessment and risk management processes.

LAND USE CONFLICT RISK ASSESSMENT

OVERVIEW

The assessment of Rural Land Use Conflict follows the approach detailed in the Land Use Conflict Risk Assessment Guide[30] prepared by the NSW Department of Primary Industry. Land Use Conflict Risk Assessment (LUCRA) is a system to identify and assess the potential for land use conflict to occur between neighbouring land uses. The LUCRA aims to:

- Identify and address potential land use conflict issues and risk of occurrence before a new land use proceeds or a dispute arises
- Objectively assess the effect of a proposed land use on neighbouring land uses
- Increase the understanding of potential land use conflicts to inform and complement development control and buffer requirements
- Highlight or recommend strategies to help minimise the potential for land use conflicts to occur and contribute to the negotiation, proposal, implementation and evaluation of mitigation strategies.

There are five key steps in a LUCRA:

- Gather information about proposed land use changes and associated activities
- Gather information on adjacent existing and potential land use
- Evaluate the risk level of each activity associated with the proposed land use change
- Identify risk reduction management strategies
- Record LUCRA results.

RISK EVALUATION

The risk evaluation and definitions are drawn from the Land Use Conflict Risk Assessment Guide[30]. A Risk Ranking Matrix (Table A3-1) is used to rank the identified potential land use conflicts. The risk ranking matrix assesses the environmental, public health and amenity impacts according to the:

- Probability of occurrence
- Consequence of the impact.

The risk ranking matrix yields a risk ranking from 25 to 1. It covers each combination of five levels of ‘probability’ (a letter A to E as defined in Table A3-2 and 5 levels of ‘consequence’, (a number 1 to 5 as defined in Table A3-3) to identify the risk ranking of each impact. For example an impact with a ‘probability‘ of D and a ‘consequence’ of 3 yields a risk rank of 9.

A rank of 25 is the highest magnitude of risk: A severe event that is almost certain to occur. A rank of 1 represents the lowest magnitude of risk: A rare event with negligible consequences. A risk ranking greater than 10 is regarded as high and priority is given to those activities listed as high risk.

[30] Department of Primary Industry, NSW (2011) Land Use Conflict Risk Assessment Guide.

Table A3-1: Risk Ranking Matrix

	PROBABILITY					
		A	B	C	D	E
Consequence	1	24	24	22	19	15
	2	23	21	18	14	10
	3	20	17	13	9	6
	4	16	12	8	5	3
	5	11	7	4	2	1

Table A3-2: Probability definitions

LEVEL	DESCRIPTOR	DESCRIPTION
A	Almost certain	Common or repeating occurrence
B	Likely	Known to occur or 'it has happened'
C	Possible	Could occur or 'I've heard of it happening'
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Table A3-3: Consequence definitions

LEVEL	DESCRIPTOR
1	**Severe** Severe and/or permanent damage to the environment. Irreversible. Severe impact on the community. Neighbours are in prolonged dispute and legal action involved.
2	**Major** Serous and/or long-term impact to the environment. Long term management implications. Serious impact on the community. Neighbours are in serious dispute.
3	**Moderate** Moderate and/or medium-term impact to the environment and community. Some ongoing management implications. Neighbour disputes occur.
4	**Minor** Minor and/or short-term impact to the environment and community. Can be effectively managed as a part of normal operations. Infrequent disputes between neighbours.
5	**Negligible** Very minor impact to the environment and community. Can be effectively managed as part of normal operations. Neighbour disputes unlikely.

RESULTS

Table A3-4: Results Example

ACTIVITY	FREQUENCY	POTENTIAL CONFLICT	CONSEQUENCE	PROBABILITY	RISK RANKING
Impacts of dwelling on adjoining agriculture					
Disturbance to livestock (young steers).	Daily for intermittent periods throughout the year.	Stock grazing on adjacent property are disturbed (startled) by activity associated with the proposed dwelling.	4	D	5
Disturbance to livestock (sheep)	Daily for intermittent periods throughout the year.	Stock grazing on adjacent property are disturbed by activity associated with the proposed dwelling.	4	E	3
Restricting land management activities on adjoining agricultural land.	Three to four times per year.	Farm operations (e.g. cultivation, herbicide spraying) on adjoining land has to be timed or modified to avoid impacting residential amenity of the proposed dwelling.	3	C	13
Impacts of proposed new discretionary use (visitors accommodation) on existing adjoining use					
Outside dining	Daily in summer	Farm operations (e.g. fodder conservation activities) on adjoining land has to be timed or modified to avoid impacting amenity of the visitors accommodation.	4	D	5

FARMING ACTIVITIES – POTENTIAL SOURCES OF CONFLICT

Tables A3-5 to A3-12 describe the frequency and intensity of the management activities associated with a range of farming activities. These tables are a broad guide only and site specific, cultivar specific and seasonal variations occur. Aside from these specific issues associated with these activities Learmont et. al. (2007) also provides a comprehensive list of potential land use conflict issues (see Table A3-13). These tables provide information on the typical activities associated with livestock grazing and various crops which could cause land use conflict.

Table A3-5: Farming activity – Grazing

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Pasture sowing Herbicide spraying Cultivation Drilling	Spray drift, noise Noise, dust Noise, dust	Ground based or aerial – often very early in the morning
Graze	Noise at certain time eg weaning calves Livestock trespass	Tractor
Forage conservation Mow, Rake, Bale, Cart bales	Noise, dust	Tractor
Fertiliser spreading	Noise	Tractor
Insecticide spraying	Spray drift Noise	Ground based or aerial – often very early in the morning

Table A3-6: Farming activity – Irrigated Grazing

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Pasture sowing Herbicide spraying Cultivation Drilling	Spray drift, noise Noise, dust Noise, dust	Ground based or aerial – often very early in the morning
Graze	Noise at certain time eg weaning calves Livestock trespass	Tractor
Forage conservation Mow, Rake, Bale, Cart bales	Noise, dust	Tractor
Fertiliser spreading	Noise	Tractor
Insecticide spraying	Spray drift Noise	Ground based or aerial – often very early in the morning
Irrigation	Spray drift Noise	Potentially turbid and not potable Pump

Table A3-7: Farming Activity - Poppy crop

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Pre-cultivation spray	Spray drift Noise	Ground based or aerial – often very early in the morning
Cultivation – several passes (2-4 times)	Noise	Tractor Dust is unlikely as soils are likely to be moist
Lime spreading	Noise	Tractor
Drilling	Noise	Tractor
Herbicide sprays (2 times per crop)	Spray drift Noise	Ground based or aerial often very early in the morning
Insecticide & fungicide sprays (2-3 times per crop)	Spray drift Noise	Ground based or aerial – likely to be very early in the morning
Irrigation	Spray drift Noise	Potentially turbid and not potable Pump
Harvesting	Noise	Tractor
Potential forage crops after harvesting, cultivation Broadcast seed & harrow, Irrigate	Noise Noise Noise, spray drift	Tractor Tractor Pump

Table A3-8: Farming Activity - Potato crop

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Pre-cultivation spray	Spray drift Noise	Ground based or aerial – often very early in the morning
Cultivation – several passes (2-4 times)	Noise Dust	Tractor Dust is unlikely as soils are likely to be moist
Planting	Noise	
Herbicide spray	Spray drift Noise	Ground based or aerial – often very early in the morning
Insecticide & fungicide sprays (5+ times per crop)	Spray drift Noise	Ground based or aerial – likely to be very early in the morning
Fertiliser Spreading	Noise Odour	Tractor From manure/organic fertilisers
Irrigation	Spray drift Noise	Potentially turbid and not potable Pump
Harvesting	Noise	Tractor

Table A3-9: Farming Activity – strawberries after establishment (3yr rotation)

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Fungicide	Spray drift Noise	Ground based likely to be very early in the morning
Herbicide spraying	Spray drift Noise	Ground based likely to be very early in the morning
Cultivation	Noise	
Fertiliser	Spray drift Noise	Ground based likely to be very early in the morning
Planting	By hand Noise	Tractor & traffic
Inter-row maintenance herbicide and/or mowing	Spray drift Noise	Ground based likely to be very early in the morning
Irrigation		
Harvesting Dec -March	By hand Noise	Tractor & traffic

Table A3-10: Farming Activity – cherries (after establishment)

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Fungicide	Spray drift Noise	Ground based likely to be very early in the morning
Herbicide spraying	Spray drift Noise	Ground based likely to be very early in the morning
Insecticide spraying	Spray drift Noise	Ground based likely to be very early in the morning
Irrigation		
Frost fans	Noise	
Harvesting Dec - March	By hand or machine Noise	Tractor & traffic
Pruning June - Sept	By hand	Tractor & traffic

Table A3-11: Farming Activity – vines (after establishment)

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Fungicide spraying Sept – March (max 10 times per crop)	Spray drift Noise	Ground based likely to be very early in the morning
Herbicide spraying Autumn and summer 2-3 times	Spray drift Noise	Ground based likely to be very early in the morning
Insecticide spraying	Spray drift Noise	Ground based likely to be very early in the morning
Irrigation		
Frost fans	Noise	
Pruning, training June - Sept	By hand	
Harvesting March - May	By hand or machine Noise	Tractor & traffic

Table A3-12: Plantation Forestry

MANAGEMENT ACTIVITY	ISSUES LIKELY TO CONSTRAIN THE ACTIVITY	COMMENT
Ground preparation	Spray drift, noise, dust Vehicle movement	Windrowing, Ripping, pre-emergent herbicide. Once per rotation
Planting	Dust from fertiliser Vehicle movement	Manual, once per rotation
Herbicide/ fungicide / insecticide	Spray drift	Ground and aerial; likely to be early in the morning. Annual.
Pruning/ thinning	Dust, Noise, Vehicle movement	Use of loud machinery and regular heavy vehicle movement. Intermittent
Harvesting	Dust Noise	Use of loud machinery and regular heavy vehicle movement. Once per rotation

Table A3- 13: Typical rural land use conflict issues – from Living and working in Rural Areas. Learmonth et. al.

Issue	Explanation
Absentee landholders	Neighbours may be relied upon to manage issues such as bush fires, straying stock, trespassers etc. while the absentee landholder is at work or away.
Access	Traditional or informal 'agreements' for access between farms and to parts of farms may break down with the arrival of new people.
Catchment management	Design, funding and implementation of land, water and vegetatin management plans are complicated with larger numbers of rural land-holders with differing perspectives and values.
Clearing	Neighbours may object to the clearing of trees, especially when it is done apparently without approvals or impacts on habitat areas or local amenity.
Cooperation	Lack of mutual co-operation through the inability or unwillingness on behalf individuals to contribute may curtail or limit traditional work sharing practices on-farm or in the rural community.
Dogs	Stray domestic dogs and wild dogs attacking livestock and wildlife and causing a nuisance.
Drainage	Blocking or changing drainage systems through a lack of maintenance or failure to cooperate and not respect the rights of others.
Dust	Generated by farm and extractive industry operations including cultivating, fallow (bare) ground, farm vehicles, livestock yards, feed milling, fertiliser spreading etc.
Dwellings	Urban or residential dwellings located too close to or affecting an existing rural pursuit or routine land use practice.
Electric fences	Electric shocks to children, horses and dogs. Public safety issues.
Fencing	Disagreement about maintenance, replacement, design and cost.
Fire	Risk of fire escaping and entering neighbouring property. Lack of knowledge of fire issues and the role of the Rural Fire Service.
Firearms	Disturbance, maiming and killing of livestock and pest animals, illegal use and risk to personal
Flies	Spread from animal enclosures or manure and breeding areas.
Heritage management	Destruction and poor management of indigenous and non indigenous cultural artefacts, structures and sites.
Lights	Bright lights associated with night loading, security etc.
Litter	Injury and poisoning of livestock via wind blown and dumped waste. Damage to equipment and machinery. Amenity impacts.
Noise	From farm machinery, scare guns, low flying agricultural aircraft, livestock weaning and feeding, and irrigation pumps.
Odours	Odours arising from piggeries, feedlots, dairies, poultry, sprays, fertiliser, manure spreading, silage, burning carcases/crop residues.
Pesticides	Perceived and real health and environmental concerns over the use, storage and disposal of pesticides as well as spray drift.
Poisoning	Deliberate poisoning and destruction of trees/plants. Spray drift onto non-target plants. Pesticide or poison uptake by livestock and human health risks.
Pollution	Water resources contaminated by effluent, chemicals, pesticides, nutrients and air borne
Roads	Cost and standards of maintenance, slow/wide farm machinery, livestock droving and manure.
Smoke	From the burning of crop residues, scrub, pasture and windrows.
Soil erosion	Loss of soil and pollution of water ways from unsustainable practices or exposed soils. Lack of adequate groundcover or soil protection.
Straying	Fence damage, spread of disease, damage to crops, gardens and bush/rainforest
Theft/vandalism	Interference with crops, livestock, fodder, machinery and equipment.
Tree removal	Removal of native vegetation without appropriate approvals. Removal of icon trees and
Trespass	Entering properties unlawfully and without agreement.
Visual/amenity	Loss of amenity as a result of reflective structures (igloos, hail netting), windbreaks plantings
Water	Competition for limited water supplies, compliance with water regulations, building of dams, changes to flows. Stock access to waterways. Riparian zone management.
Weeds	Lack of weed control particularly noxious weeds, by landholders.
	Based on: Smith, RJ (2003) Rural Land Use Conflict: Review of Management Techniques – Final Report to Lismore Living Centres (PlanningNSW).

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