Supporting Agriculture in the Peri Urban Region

Discussion Paper

June 2017

Written by Paula Lawrence, Executive Officer
Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council’s Discussion Paper. June 2017

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Consultation and Feedback

The Discussion Paper

The Agriculture Discussion Paper has been written to encourage a dialogue with stakeholders and the community about the role and value of agriculture in the peri urban region. The Discussion Paper frames the key challenges the PUGRC has identified for agriculture in the region and poses questions to illicit further information from stakeholders and the community.

The objective of the Discussion Paper and consultation process is to develop an informed and tested position on agriculture in the Peri Urban region, that can inform Local and State Government planning and policy for agriculture in the region.

Feedback

Stakeholders were invited to provide additional information and comment on the draft Discussion Paper until Friday 10 March 2017. Thirteen submissions were received and these have been considered in this revised Discussion Paper. The names of the submitting organisations and themes of feedback are included in Appendix A at page 67.

Interested individuals are invited to make comment on the draft Discussion Paper until Friday 21 July 2017.

Submissions and comments can be submitted via
- Email: plawrence@moorabool.vic.gov.au
- Mail: PUGRC Agriculture Discussion Paper, c/- PO Box 18, Ballan VIC 3342

Next steps

The community’s feedback will be considered and incorporated into the Discussion Paper.

A Position Paper on Agriculture in the Peri Urban region will be developed based on the feedback received from both stakeholder sand the community. The Position Paper will contain recommendations for Government which have been informed by the PUGRC Councils, stakeholders and the community.

The Position Paper will be released to Government and the community towards the end of 2017.
Executive Summary

The purpose of this paper is to generate discussion on the issues and opportunities facing the agriculture sector and agricultural lands in the peri urban region surrounding Melbourne and Geelong. In particular the Discussion Paper seeks to define the role of Victoria's peri urban agriculture and region.

The peri urban region is often defined as a region where there is fundamental competition for land use between productive agricultural landscapes and the expanding urban settlement (Barr, 2005 in Buxton et al 2009).

In this context, there are effectively two “bands” which may be considered to be “peri-urban” within 100 km of Melbourne and Geelong – the inner band – or “Interface” Councils and the outer band – encompassing the Shire's of Surf Coast, Golden Plains, Moorabool, Macedon Ranges, Murrindindi, Baw Baw and Bass Coast.

For the purposes of this discussion paper it is this outer band that is referred to as the Peri – Urban region, while recognising that productive rural areas within the interface Council areas are also subject to many of the same pressures.

This focus on productive landscapes - their change, ‘dilution and loss’ - is a critical one, but there are other significant layers to the landscape of the peri urban region, which add to the local appeal of the region for new residents and account for the large numbers of visitors. Agriculture also plays an important role in protecting the open spaces which exist between settlements. Agricultural landscapes help to define the character and liveability of rural towns with residents in peri urban towns benefitting from the rural amenity.

The peri urban region contains 10 per cent of Victoria’s productive agricultural lands and is responsible for 17 per cent of the primary produce (ABS. 2011). The industry generates almost $2 billion annually and accounts for 26 per cent of the peri urban region's Gross Regional Product. The agriculture industry (incorporating forestry and fishing) supports 5,268 local jobs in the peri urban region and is the biggest employer in Golden Plains Shire, providing 24 per cent of the Shire’s employment opportunities.

Yet the region has one of the fastest rates of population growth in Victoria. To 2031, the population of the VIC peri urban region will grow by an average of 45.32 per cent in comparison to the Regional Cities at 26.7 per cent (VIF 2016).

Fundamental to the protection of agriculture in the peri urban region is the development of good policy settings across government. The Discussion Paper examines the current policy settings in Victoria and Australia and notes the requirement for a dedicated Peri Urban Policy Statement that will support and strengthen agriculture in the peri urban region.

There has been a broad process of restructure in Australian agriculture over recent decades, although the process has not been uniform geographically or between industry and commodity types. There is a national trend towards the intensification of farms. Roughly ten percent of Australia’s farms now account for half the total output. The Victorian Government has flagged a greater emphasis on intensive farming through the Food and Fibre Industry Discussion Paper, the Animal Industries Advisory Committee and their own concurrent research into the industry.

Changes to agriculture have also included increased off-farm income, linkages to the non-farm economy, declining farmer numbers, ageing profile of farmers and increased part-time farming. These changes are apparent in most Australian peri urban regions.
The Discussion Paper considers the challenges faced by the agriculture industry including infrastructure provision, land use zoning, farm management plans, weed management and climate change.

The Discussion Paper notes that in the face of the challenges to the industry, there are excellent opportunities to further strengthen food and fibre production and encourage diversity in the industry through agri-tourism, local food processing and the vertical integration of agri-business enterprises within dedicated agricultural clusters.

This Discussion Paper is the starting point of a broader discussion about the future of agriculture in the peri urban region and demonstrates the desire of the Peri Urban Councils to get the right policy frameworks and supports in place to successfully support this essential regional industry.

Image: Viticulture in Surf Coast Shire
Introduction

The purpose of this paper is to generate discussion on the issues and opportunities facing the agriculture sector and agricultural lands in the Victorian peri urban region. The importance of Australia’s agricultural sector and lands and in particular those of the peri urban regions adjacent to the nation’s capital cities will become critical as the Australian and world population continues to grow.

The United Nations Food and Agriculture Organization (FAO) have estimated that by 2050, food production worldwide will need to increase by 70 per cent (FAO, 2009). Australia currently produces enough safe high quality food to feed 60 million people. However, the Chief Scientist believes that if our population grows to 35-40 million and climate change constrains food production, we can expect to see years where we will import more food than we export (PMSEIC. 2010).

Highlighting the importance of agricultural land for food production and the pressures placed on the land by urban sprawl and population growth, research by the Victorian Eco Innovation Lab indicates that:

- 16.3 million hectares of land is required to feed Melbourne each year, an area equivalent to 72 per cent of the state of Victoria.

- Increasing urban density as Melbourne grows could reduce urban sprawl by about 50 per cent over the next 20 years, saving 180,000 hectares of land in Melbourne’s food bowl – an area equivalent to almost 5 times Victoria’s vegetable growing land

This Discussion Paper aims to identify the role and value of agriculture in the peri urban region, the obstacles to the sustainability of agriculture in the region and opportunities for sustainable growth through targeted support. The Discussion Paper has considered some international examples and experiences of agriculture.

Where is the Peri Urban Region?

The Victorian peri urban region is within 100km of Melbourne and Geelong and abuts the Melbourne Growth Boundary indicated in red on the map below. The outer region and subject of the discussion paper encompasses the Shires of Surf Coast, Golden Plains, Moorabool, Macedon Ranges, Murrindindi, Baw Baw and Bass Coast. The inner ring also contains agricultural lands and industry.

Map: Victorian Peri Urban Region and Melbourne’s Growth Boundary indicated in red.
Through the consultation process with stakeholders, suggestions were made to broaden the area covered in this Discussion Paper.

The adoption of the Plan Melbourne definition of peri urban was suggested. This defines the peri urban region as “beyond the green wedges and made up of local government areas with a predominantly rural character, located all or partially within a 100km radius of Melbourne (Plan Melbourne 2051). The Plan Melbourne definition includes an area much larger than the PUGRC region. It also does not recognise the significant population growth occurring in the PUGRC Shires.

As a starting position, the Discussion Paper has considered the area defined by the municipal boundaries of the member Shires. This region could be expanded in subsequent work and with the funding involvement of partner Councils and Government.

Located adjacent to the growth boundary of Melbourne and the regional cities of Geelong, Ballarat and Bendigo, the population of the peri urban region is changing rapidly, relative to the existing resident base and is generally growing at higher rates than the aforementioned regional cities.

By 2031, the population of the VIC peri urban region will grow by an average of 45.32 per cent in comparison to the Regional Cities at 26.7 per cent (VIF 2016).

The current exception to the growth across the region is Murrindindi which is actively pursuing population growth again following the fires of 2009. Prior to the 2009 fires, Murrindindi was also growing rapidly.

The Victorian Peri Urban Councils share a number of key characteristics which are replicated across other peri urban regions in Australia. These shared characteristics include:

- Rapidly changing populations – both expanding, and those who have lost population but wish to grow. The region is home to ‘boom’ towns like Warragul and Drouin whose population will increase by 72 per cent by 2031 and towns battling a reduced population base due to a range of factors including the impacts of drought and significant bushfires.

- Significant areas of environmental assets, water catchments and resources production including timber and quarries.

- Large areas of primary production that are being encroached upon by urban development.

- These are traditionally rural communities that face significant pressures from population growth out of the major cities.

- The region is a key day-trip and tourism destination for residents from Melbourne and suburbs.

Source: Id Forecast
The key drivers of growth and change in peri urban areas include personal preferences for lifestyle locations based on amenity, landscapes, small towns and rural settings, and reactions to metropolitan living environments. These shifts have coincided with major national demographic changes, such as a growing number of people retiring or contemplating retirement. The peri urban areas are highly desirable to people transitioning towards retirement or for those with businesses that can be managed part time from Melbourne and part time from a rural base. This is dependent on adequate mobile and broadband coverage which are some of the key inhibitors to business development within the region.

Generally, the more visually appealing and resource rich the areas are, the more they draw people to them as visitors and settlers. Population change in rural communities has been “strongly related to their attractiveness as places to live”, the natural amenities attract people in search of a pleasant environment for recreation and residence (McGranahan in Buxton et al. 2006). This is the experience across the peri urban region where highly attractive and convenient locations are growing rapidly.

The peri urban region is often defined as a region where the fundamental competition is over productive agricultural landscapes under the pressure exerted by expanding urban settlement and by settlement within the agricultural landscapes (Barr, 2005 in Buxton et al 2006). This focus on productive landscapes - their change, dilution and loss - is a critical one, but there are other significant layers to the landscape of the peri urban region, which add to the local appeal of the region for new residents and account for the large numbers of visitors. Agriculture also plays an important role in protecting the open spaces which exist between settlements. Agricultural landscapes help to define the character and liveability of rural towns with residents in peri urban towns benefitting from the rural amenity.

“If the prosperity and liveability of cities lies in their connections with their hinterlands, then cities which destroy these connections will have bleak futures as will their peri urban regions” (Buxton et al. 2008).

How is Agriculture Important to the Peri Urban Region?

The peri urban region contains 10 per cent of Victoria’s productive agricultural lands and produces 17 per cent of the primary produce (ABS. 2011).

The industry accounts for almost $2 billion or 26 per cent of the region’s $7.7 billion Gross Regional Product (Id Forecast).

### Value of Agriculture in the Peri Urban Region

<table>
<thead>
<tr>
<th>Shire</th>
<th>Value of Agriculture (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surf Coast Shire</td>
<td>$700</td>
</tr>
<tr>
<td>Murrindindi Shire</td>
<td>$600</td>
</tr>
<tr>
<td>Moorabool Shire</td>
<td>$800</td>
</tr>
<tr>
<td>Macedon Ranges Shire</td>
<td>$1,000</td>
</tr>
<tr>
<td>Golden Plains Shire</td>
<td>$1,200</td>
</tr>
<tr>
<td>Baw Baw Shire</td>
<td>$1,400</td>
</tr>
<tr>
<td>Bass Coast Shire</td>
<td>$1,600</td>
</tr>
</tbody>
</table>

Source: Id Forecast

**We are punching above our weight in agricultural output, but could we do better?**

The agriculture industry (incorporating forestry and fishing) supports 5,268 local jobs in the Peri Urban region (Id Profile). It was previously a major employer in the region and has been overtaken by a
range of other most other industries except in Golden Plains Shire where it remains the largest industry, providing 24 per cent of the Shire’s employment opportunities.

**Chart: Employment in agriculture in the Peri Urban region.**

A strong and sustainable farming sector contributes to the economic viability of many regional areas. Research by the Rural Bank in 2015 indicated that despite drought and a range of other factors, the value of Victorian farmland has increased by an average of 5 per cent per annum since 1995 (2015).

Their research found that the area of farmland traded in Victoria in 2015 was 309,000 hectares, which is equivalent to approximately 3 per cent of farmland in the State. The total value of the farmland traded in Victoria in 2015 was approximately $1.3 billion (Rural Bank. 2015).

The following table provides an overview of the price per hectare of farmland in the Peri Urban region.

<table>
<thead>
<tr>
<th>Shire</th>
<th>Price/Ha 2015</th>
<th>3 year Ave.</th>
<th>Number of transactions in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bass Coast</td>
<td>$10,826</td>
<td>$11,432</td>
<td>15</td>
</tr>
<tr>
<td>Baw Baw</td>
<td>$14,650</td>
<td>$13,230</td>
<td>50</td>
</tr>
<tr>
<td>Golden Plains</td>
<td>$6,477</td>
<td>$6,521</td>
<td>32</td>
</tr>
<tr>
<td>Macedon Ranges</td>
<td>$4,462</td>
<td>$5,931</td>
<td>12</td>
</tr>
<tr>
<td>Moorabool</td>
<td>$8,384</td>
<td>$8,050</td>
<td>27</td>
</tr>
<tr>
<td>Murrindindi</td>
<td>$6,971</td>
<td>$8,042</td>
<td>42</td>
</tr>
<tr>
<td>Surf Coast</td>
<td>$9,651</td>
<td>$7,808</td>
<td>7</td>
</tr>
</tbody>
</table>
Peri Urban Agriculture

The Peri Urban region’s primary produce includes:

Overall there has been an increase in agricultural output in the region over the last few years – but this is largely a product of the growth in a few strongly performing sectors. The share of output from smaller farm businesses has remained largely stable, even with an increase in smaller farm numbers.

Key Facts on Peri Urban Agricultural Production:

- 80% of Australia’s trout.
- Most of the Australia’s runner stock for strawberry production.
- 21% of Victoria’s egg production.
- 11% of Victoria’s poultry.
- 6% of Victoria’s milk production.
- 5% of Victoria’s pork production.
- Key producer of berries, crucifers, vegetables for seed and fresh pea crops for Victoria.

Peri Urban agriculture is dominated by small livestock producers including dairy herds and sheep which have declined in number over recent years. Growth in the industry is being driven by horticulture, poultry meat, nurseries, flower production, turf production and grape growing. The poultry industry (particularly meat) has undergone a significant period of restructure and geographic movement (RPD Group and VIAS 2000, Henderson. 2003).

The Golden Plains Intensive Agriculture Study indicates that the pig meat and broiler chicken industries have strong growth prospects with projected annual growth rates over the next five years of 8 per cent and 16 per cent respectively (2006). The chicken and pig meat industries have employment multipliers of approximately 2.2, resulting from on-site labour and labour associated with transport, processing, packaging and distribution industries. (Golden Plains Shire. 2006). These sectors may present growth opportunities for peri urban and other rural Councils.
Wine grape plantings and production has increased significantly in the peri urban region in recent years and offers strong linkages to wine production and tourism.

Non-food commodities produced in the region include nurseries, cut flower growing and turf production which are becoming increasingly high value industries.

The peri urban region will be essential for local food production for Melbourne and the region into the future and could become an exporter of primary produce, generating new local employment and new industries for this region if it is protected. The Prime Minister’s Scientific, Engineering and Innovation Council has identified urban encroachment on Australia’s peri urban agricultural lands as one of the top seven emerging and existing food security challenges facing Australia (PMSEIC, 2010)

Agriculture in the peri urban area comprises approximately 2,500 farm businesses.

The region is characterised by many small holdings, both physically and in terms of production scale and value, and many farms rely on off-farm income. In fact 71 per cent of farm businesses have a turnover of less than $100,000 per annum and provide 16 per cent of the region’s value of agricultural output. Grazing is the dominant activity on these properties, although many exist largely as non-productive rural lifestyle holdings.

A number of large scale farm businesses do operate in the region. These businesses account for 2 per cent of the farm businesses in the region and produce 35 per cent of the region’s primary produce.

These large scale businesses are generally intensive agricultural enterprises such as poultry raising for meat or eggs; or high-value activities involving many farm businesses, such as viticulture and horticulture.

The VLGA Food System’s Report cites the rationalisation, consolidation and move towards capital intensive production as the cause for depression and suicide among food producers and the hollowing out of rural and regional communities (2017). Other consequences include reduced employment, the corrosion of social capital and increased environmental impacts.

The peri urban region continues to offer advantages in access to markets and ports and a stable workforce to agricultural enterprises and these advantages account for growth and change in different types of agricultural businesses. These findings are consistent with other studies into the continued importance of peri urban agriculture. However, agriculture in the region is threatened not just by global and national factors, but by decisions at different levels of government in response to local pressures to increase and capitalise on small lot fragmentation.

The peri urban region is the transition zone between large urbanised areas and rural, agriculture-focused areas.

A cultural shift has seen a growing desire for rural lifestyle living, particularly for young families and home business operators which have both a rural and a metropolitan location and context. Peri urban living is seen by many as a better alternative to outer metropolitan suburbs. These trends have driven
land price increases across the peri urban region. In turn, this has stimulated public investment in facilitating infrastructure, such as new schools, health facilities and passenger rail. The increased accessibility and amenity has further driven in-migration.

All of this has occurred in a context of diminished agricultural profit margins in which farm amalgamation has been a major mechanism to ensure economic viability. One of the many outcomes has been a move away from broadacre farming, with low returns per hectare, towards activity that generates higher returns per hectare (e.g. equine, viticulture and horticulture) (Macedon Shire Ranges. 2014).

Equine Use
Equestrian industries are included in the broad definition of agriculture and include racing, stud and recreational equestrian activities. The inclusion of equestrian use into agriculture is a vexed issue for some who believe that the definition should be narrowed to ‘food and fibre’ uses to protect productive agricultural land from equine and non-agricultural use.

A recent literature review undertaken by the Corangamite CMA identified over 60 incorporated equine groups in the Corangamite region alone, of which less than ten were racing industry related. A large percentage of these groups; and their members are based in peri urban areas around Ballarat, Geelong and the Bellarine Peninsula.

An example of the value of the equine sector to regions is included in the “City of Ballarat & Central Highlands Councils Agri-Industries Line of Sight & Strategic Plan: From farm gate to the world’s plate” March 2016 paper. Below is an extract from the paper:

“While not necessarily a niche or emerging industry, the Equine industry is important, with much potential for growth due to the rising interest in racing. It generates significant economic flow-on effects including the purchase of large volumes of horse feed from local growers and associated tourism activity”.

The paper reveals:
- The gross value-add of the equine industry to the (Central Highlands) region is $79.9 million, of which
$59.9 million is for thoroughbred racing and $20 million for harness racing.

- Total customer expenditure on and off course on race days equals $12.8 million.
- In 2010-11 there were 576 horses in training in the (Central Highlands) region and there are 385 registered breeders in the region.
- There are an estimated 785 full time equivalent employees in the horse racing industry in the Central Highlands.

“The equine opportunity could be a real winner: The equine sector is something of a quiet achiever of the agri-industries contributing more than $100m to the economy.”

The Corangamite Catchment Management Authorities ‘Community profiling study’ (2014) indicated that:

- 14.9% of people who have properties of 20 ha or less in the Corangamite region (including Golden Plains and Moorabool Shires) use the land primarily for horses (ranked third behind no use and recreation).
- Soil degradation was their greatest concern (39%).
- Only 6% of small horse property owners were Landcare group members.

While the data set is small, results indicate a high concentration of peri-urban horse properties in the Surf Coast, Ballarat, Geelong and Golden Plains Shires.

Issues on and from small horse properties often include biosecurity (weeds, pest animals, and disease), nutrient runoff and water quality, soil erosion and potential for neighbour complaints due to dust, smell and animal welfare concerns for confined horses on overgrazed, bare soils. Basic land management can help achieve address these issues.

The PUGRC does not have a position on the equine industry, but notes there is concern from some individuals about the impacts of the industry on food and fibre production.

**Key questions:**

- Can Melbourne prosper if it continues to expand outwards into the surrounding environments and productive lands?
- What role does Government see for the Peri Urban region in ensuring sustainable city growth and food security?
- How can Peri Urban regions protect their natural resources including food and fibre production, while promoting social equity and liveability and encouraging sustainable economic development?
- Why should the retention of productive agricultural land be a priority for Government and surrounding communities?

**The Need for Good Policy Settings**

“Their location, importance and the rapidity of change make peri urban regions among the most contested areas on earth” according to Buxton et al (2008). Yet Buxton’s research shows that few countries, including Australia, have adequately analysed the future needs and the threats resulting from development in the peri urban region, or implemented peri urban specific policies, planning tools and governance arrangements to adequately protect and support the region.

In Australia, fragmented governance arrangements and inadequate policy responses are the norm for peri urban areas, with little sectoral integration apparent between local, state and commonwealth...
governments, or between state government agencies (Buxton et al. 2008). Additionally, Buxton believes long term, integrated, strategic planning on issues including the potential impact of land fragmentation on the viability of agriculture, landscapes, water supply, infrastructure provision or social impacts is lacking across Government (2008).

Concerns have been mounting that limited agricultural land is under threat and that the loss of highly productive agricultural land could affect levels of food production and the costs of production and transport, and ultimately the cost of food (Houston, 2005).

More recent research by the Victorian Eco Innovation Lab indicates that “increasing urban density and reducing Melbourne’s urban sprawl by about 50 per cent over the next 20 years, could save 180,000 hectares of land in Melbourne’s food-bowl – an area equivalent to almost 5 times Victoria’s vegetable growing land” (2016).

One of the enduring legacies of a ‘pioneer’ nation, such as Australia, is a widespread and continuing belief that there will always be more land available and that technology will continue to deliver greater levels of food production. Despite Australia’s relatively large land mass and seemingly abundant land resources it is increasingly being seen by food security experts and regional authorities as contrary to smart growth management to permanently remove productive land from the resource base. The need to take effective regulatory stances to preserve and manage land has been a difficult message to convey to the wider community and to policy makers with responsibility for long term land use planning and resource management (Buxton. 2006).

Australia does not have a national, whole-of-government approach to address issues of the food system. A National Food Plan was introduced in 2013 by the Labor government but was abolished by the incoming coalition government as one of its first actions in 2013 (Carey et al 2014 cited in Rose. 2017). A scoping study for a National Nutrition Policy has since been in development however there has been no further progress in terms of developing the Policy itself.

In Australia, land use planning for peri urban areas has been the responsibility of the State Governments, emphasising the potential of intervention to control the impacts of urban-generated development in ostensibly rural areas by differentiating and separating uses and controlling land fragmentation.

Table 9 provides a summary of the initiatives that each of the States Governments has pursued in respect to agricultural land protection.

<table>
<thead>
<tr>
<th>State</th>
<th>Response</th>
</tr>
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<tbody>
<tr>
<td>Victoria</td>
<td>• State Planning Policy Framework</td>
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<tr>
<td></td>
<td>o Clause 14.01-1 Protection of Rural Land</td>
</tr>
<tr>
<td></td>
<td>o Clause 14.01-2 Sustainable Agriculture</td>
</tr>
<tr>
<td></td>
<td>o Localised Planning Policy Statements – Macedon Ranges</td>
</tr>
<tr>
<td></td>
<td>• Urban Growth Boundary Legislation, protection of green wedges,</td>
</tr>
<tr>
<td></td>
<td>revised rural zones</td>
</tr>
<tr>
<td></td>
<td>• Policy requirements incorporated in all planning schemes</td>
</tr>
<tr>
<td></td>
<td>• Regional Growth Plans</td>
</tr>
<tr>
<td></td>
<td>• The Victorian Municipal Public Health and Wellbeing Plan (MPHWP)</td>
</tr>
<tr>
<td></td>
<td>2015-2019 includes “Healthier eating and active living” as a priority</td>
</tr>
<tr>
<td></td>
<td>under the strategic direction of “Promoting health and wellbeing”</td>
</tr>
<tr>
<td></td>
<td>• Plan Melbourne 2017-2050</td>
</tr>
<tr>
<td></td>
<td>o Direction 1.4: Support the productive use of land and</td>
</tr>
<tr>
<td></td>
<td>resources in Melbourne’s non-urban areas</td>
</tr>
</tbody>
</table>
Policy 1.4.1: Protect agricultural land and support agricultural production.

Direction 4.5: Plan for Melbourne’s green wedges and peri urban areas.

Policy 4.5.2: Protect and enhance valued attributes of distinctive areas and landscapes.

Plan Melbourne 2017-2050

- Action 17: Support strategic planning for agriculture
- Action 74: Localise planning statements for distinctive areas and landscapes.

New South Wales
- State Environment Protection Policy
- NSW Department if Primary Industries Policy for Protection of Agricultural Land

Queensland
- State Planning Policy
- Conservation and Development of Agricultural Land

South Australia
- No specific State policy
- State strategy references to agricultural land

Tasmania
- State Policy on High Quality Agricultural Land
- Policy requirements incorporated in all planning schemes
- Right to farm legislation

Western Australia
- Statement of Planning Policy
- Agricultural and Rural Land use

Most State Governments have been reluctant to reject major development proposals that affect the agricultural value of land. Tasmania is also the only Australian State to have enacted Right to Farm legislation. Tasmania has very low rates of population growth and its productive farmland is under much lower levels of threat from urban development than in other States. In theory the Tasmanian Policy is the most prescriptive of all the States and has the advantage that once enacted, all provisions in current local planning schemes are deemed invalid if they contradict the State Policy.

The Queensland State Planning Policy on the Development and Conservation of Agricultural Land 1992 aims to protect high quality agricultural land and, when introduced, was the most significant policy initiative by any of the States. This policy notes that productive agricultural land is a national resource and that “good quality agricultural land has a special importance and should not be built on unless there is an overriding need for the development in terms of public benefit and no other site is suitable for the particular purpose”.

A variety of planning responses to urban growth pressures and land management issues in peri urban areas have been developed. They involve a mixture of land use planning, policy, institutional and legislative initiatives, and may vary according to whether land is held privately or publicly, or according to the ideology of governments. Options include market approaches, intervention, voluntary and community based measures, or an amalgam of these. Within each option an array of responses is possible. The main planning interventions are through the use of statutory and strategic tools. Legislation may take the form of enabling legislation for the development of planning schemes or legislation for specific purposes, such as Right to Farm legislation, or for the protection of a green belt, such as the Victorian Metropolitan Green Wedge Protection Act which requires Parliamentary approval for certain changes to Melbourne’s green belt.

The Regulation of Agriculture draft report from the Productivity Commission recommended a range of initiatives aimed at reducing red tape and using agricultural land to its “best and highest use”. One of the more contentious draft recommendations in the draft Report aimed to remove land owners’ right of veto over mineral exploration and excavation on agricultural land (2016, p82). The adopted Report has not made recommendations on the veto rights for mineral exploration but emphasises that issues
of land use and conflict are more effectively managed through improvements to planning and zoning, and the allocation of resource exploration and extraction rights, rather than indirectly through right to farm or right of veto laws (2016). This may signal a concerning direction in Commonwealth policy towards agricultural lands.

To successfully protect agricultural landscapes we require strong policy developed around clear and common objectives.

Across the peri urban region greater support must be provided to Councils managing land supply and the form of our larger towns and rural settlements.

Strategic settlement boundaries need to have bipartisan support and policies should be adopted in the peri urban area to address the leap frog effect of residential settlements encroaching further afield. Success should not be too difficult to imagine. Victoria is already home to a network of country towns which have historically thrived with a compact urban form. Many of these historic towns have significant latent capacity to accommodate new residents without the need to compromise agricultural land with dispersed dwelling developments.

Policy settings to support agriculture in the peri urban region must support and protect high value agricultural lands and also productive agricultural properties. A narrow focus on “high value lands” ignores the successes and the role of shires like Golden Plains Shire which has generally poor soil quality but highly productive agricultural enterprises including broiler farms and an intensive food production area.

The Prime Minister’s Science Engineering and Innovation Council in their 2010 report suggested that given the juxtaposition of arable land and urban population centres, it would be prudent to integrate food production as part of metropolitan land and development strategies. Such strategies could be guided by the following principles:

- National recognition of productive agricultural land as a strategic asset and finite resource.
- Taking a landscape perspective and factoring ‘food miles’ into land use planning.
- Preserving peri-urban land for growing food as part of the land use and development strategies of cities (PMSEIC. 2010).

The Peri Urban Councils have been advocating for the development of a Peri Urban Policy which would provide greater certainty to communities, land owners, Councils and developers on future development across the peri urban region. The peri urban region requires an overarching statement to articulate the desired outcomes for the region, including agriculture, over the longer term. The confluence of conflicting land uses within the region, which include primary production, urban growth, environmental areas and water catchments necessitate a policy which provides greater guidance.

The former Victorian Government committed to the development of a Peri Urban Policy in Plan Melbourne and the Regional Growth Plans. The refreshed Plan Melbourne 2017 to 2050 no longer contains this commitment (2017). The current Plan Melbourne commits to:

1. Identify areas of strategic agricultural land. Protect the right to farm
2. Finalise the Localised Planning Statement for Macedon Ranges and Yarra Valley and prepare Localise Planning Statement for other distinctive areas
3. Support the productive use of land and resources in Melbourne’s non-urban areas Melbourne’s green wedges and peri-urban areas are immensely important to the state’s economy, community and environment and support a wide range of non-urban land uses and activities. For instance, some of Victoria’s most productive agricultural land is located within these areas.
4. Protect agricultural land and support agricultural production. Agricultural production in green wedges and peri urban areas is vital to Melbourne’s long-term food security due to its proximity to markets, access to infrastructure and labour, and quality soils
Key questions:

- How can the Federal, State and Local Governments better support and protect agricultural lands in the peri urban region?
- Why should the Peri Urban region have specific protection under the Planning Scheme or another tool?
- Is there enough or is there too much protection?
- Why should Peri Urban agricultural land be preserved for growing food and fibre?
- What is the role and value of agricultural landscapes and rural landscapes that form the important areas between settlements and have a high landscape value? These areas have significant tourism and economic value and are very important in Shires like Bass Coast and Macedon Ranges.

International Experience in Peri Urban Regions

According to Thebo et al. understanding the role of urban and peri-urban crop production in urban food security at scale remains a major knowledge gap in the field of urban agriculture internationally. Their research, “Global assessment of urban and peri-urban agriculture: irrigated and rain fed croplands” from 2014, highlights a significant role for peri urban and urban agriculture in food production, urban water management and land use planning. The report considered urban and peri urban agriculture surrounding cities with populations of over 50,000 people around the world and they found irrigated food production to be the most prevalent close to, and within cities.

UK experience in Managing Surrounding Countryside

In 1979, the UK Government began a pilot program called “Operation Groundwork”. Its aim was to “bring together a partnership of public, private and voluntary sector interests in a co-ordinated effort to upgrade the environment, to realise the full potential of underutilised land, to convert waste ground to productive use and to improve access to the countryside” (Rotherdam). Initially targeting areas of post-industrial, environmental and economic decline, the program was expanded nationally in 1983. By 1990, the program had been further broadened to include inner-city and town centre areas.

A Countryside Character programme was developed by the Countryside Commission to assist policy development in respect of planning and land management in areas surrounding urban centres. The Commission and Character programme provided support for rural communities and agriculture through Stewardship programmes and demonstration farm projects.

The Commission also worked to protect rural amenity and productivity through Greenways and Quiet Roads which limited vehicle movement. Building on these initiatives, Healthy Walking and Millennium Greens were two programmes designed to encourage recreation without vehicles. The most obvious result of these programmes is the Public Rights of Way network which includes the long distance trails now called the National Trail Network. Today there are fifteen National Trails along with National Cycleways and National Bridleways.

One of the final acts of the Countryside Commission was to establish Land Management Initiatives which were designed to encourage sustainable farming (1999). The aim was to encourage land use that conserved the landscape in a productive, aesthetically attractive manner with benefits to flora, fauna, rural communities and recreational visitors.

In 2001, in response to the Rural White Paper (2000), a new agency, the Countryside Agency began to develop a new initiative focussed on the “Countryside Around Towns”. This was in recognition that
the peri urban countryside was often neglected but could provide attractive settings and opportunities for millions of people to experience the countryside.

The growth of countryside management in the UK was rapid throughout the last few decades of the twentieth century. Unfortunately, many Agencies are stepping back from service delivery in the face of austerity measures and budgetary constraints.

A number of other relevant UK initiatives are as follows:

- **National Lottery Funds.**
  The UK Government has also used proceeds from the National Lottery to support improvement projects for countryside projects. The programme launched in 1994 and directed 28 per cent of the Lotteries income towards ‘good causes’.

- **Areas of Outstanding Natural Beauty**
  An Area of Outstanding Natural Beauty (AONB) is outstanding landscape whose distinctive character and natural beauty are so precious that it is in the nation’s interest to safeguard them. There are 46 AONBs in Britain (33 wholly in England, four wholly in Wales, one which straddles the English/Welsh border and eight in Northern Ireland) and they cover 18 per cent of our countryside.

  AONBs are designated in recognition of their national importance and to ensure that their character and qualities are protected for all to enjoy. They are living, working landscapes, much loved and valued by all who enjoy them.

  The journey to protect these landscapes began in 1943, but the actual protection mechanism did not come into place until a draft 1980 AONB policy statement. The issues faced included lack of project officers across the areas, lack of expertise in areas of planning and production of management plans, various levels of government, industry farmers and land holders wanting different things, and the threat that by protecting these areas economic development would decline.

**Examples from Canada and the United States of America**

**Agricultural Land Reserve - Vancouver**

Vancouver was an early pioneer of legislation to protect urban fringe farmland. The province of British Columbia introduced legislation to establish an Agricultural Land Reserve (ALR) in 1973 after significant loss of farmland around the city. The ALR covers around 5 per cent of the province and includes 4.7 million hectares of land, which is protected by a special land use zone. Land capability is assessed against a “Land Capability Classification” system to determine which land is part of the ALR and an independent Commission is responsible for administering the land use zone and preserving agricultural land in the province. Vancouver’s approach has evolved over time into a package of related measures that now include the Farm Practices Protection (Right to Farm) Act (RSBC 1996) and a city food strategy (City of Vancouver. 2013).

**The Ontario Greenbelt**

The Ontario Greenbelt was established around Toronto and surrounding areas through the Greenbelt Act (SO 2005). The Ontario Greenbelt’s vision is “For fresh air, clean water, healthy local food, and a thriving economy with good jobs Ontario’s Greenbelt is the solution. At almost 2 million acres, it’s the world’s largest permanently protected greenbelt, keeping our farmlands, forests, wetlands safe and sustainable”. A Friends of the Greenbelt Foundation works to help keep farmers successful, strengthen local economies, and protect and grow natural features.
The Greenbelt protects around 1.8 million acres of agricultural and environmentally sensitive land in the region from development. Although farms in the Greenbelt are 33 per cent smaller than the average farm in the state, gross revenue per acre is 12 per cent higher as the Greenbelt is supported by marketing of the region, the produce, walks, cycling trails and there is significant engagement with local communities including schools.

According to the Greenbelt website, the Greenbelt’s natural features contribute to a robust economy as well:

- Its natural water filtration systems save $189 million a year in drinking water filtration costs
- Its wetlands save another $379 million a year in flood control costs
- The pollution-removing activity of its tree canopy is a $69 million a year value

These three benefits alone have saved Ontario $6.37 billion since the Greenbelt’s inception.

Other results from the Greenbelt include:
- 800 farmer-led projects that helped farmers protect water, cut chemical use and conserve wildlife habitats under the Greenbelt Farm Stewardship Program.
- Farmers saved Ontario almost 600,000 kWh in yearly energy use through utility and other retrofits, halving their energy use.
- The City of Toronto has adopted a local food policy for its institutional kitchens, as have health care services and schools across the province.
- Since 2005, the number of farmers’ markets in and around the Greenbelt has doubled to more than 100.
- There are also 200 on-farm markets, giving more people access to a market, a farmer, and a range of other benefits

The Greenbelt has high levels of public support as demonstrated by their recent community engagement process to inform land use planning changes. More than 3,000 people participated in open house activities and 19,000 submissions were received. On 10 May 2016, the government announced proposed changes to the Greenbelt after 12 months of review and includes expanding the greenbelt across 28 urban river valleys and wetlands to protect clean water supplies, providing more support for farming and local food, and a commitment to smart growth in the surrounding towns and cities.

A Greenbelt Council was established to provide advice to the Minister on administering the Greenbelt, and performance measures were established to track the effectiveness of the Greenbelt Plan. (Greenbelt Foundation “About the Greenbelt”, available at www.greenbelt.ca)

**Urban Agriculture, Seattle USA**

In August 2010, the Seattle City Council voted to expand opportunities for urban agriculture in the City of Seattle. These code changes helped to create a more sustainable and secure local food system by increasing opportunities to grow and sell food in all zones.

Seattle’s Land Use Code recognizes five different urban agriculture uses: Animal Husbandry, Aquaculture, Community Gardens, Horticulture and Urban Farms. The urban farms have been extremely successful over the last nine years with many established. Unfortunately, the farms are also being dislocated by urban growth and residential redevelopment which is utilising previously underutilised lots favoured by the urban gardeners (McFetridge. 2015).

**European Union**

An International Workshop on “Agricultural management in peri-urban areas” organised by the UMR Métafort of Clermont-Ferrand (France) and the Land Lab of the Scuola Superiore S. Anna of Pisa (Italy) was held on the 11th and 12th of June 2009 in Pisa, Italy. The goal of the workshop was to
compare the research carried out by French and Italian teams on the role of agriculture in the planning of peri-urban areas, along with the effects on farming and agricultural systems of the new relationships between the city and countryside.

In Italy and France the zoning and plans are not the same, nor are the stakeholders, the models of peri-urban development, the agricultural spatial configurations and organisations.

According to Galli et al. the phenomenon of peri-urbanisation has been increasing for several decades in Europe\(^1\). They believe public authorities are trying to implement effective regulatory procedures to overcome the side-effects of peri-urbanisation, such as urban sprawl, featureless countryside, and, more recently, the environmental damage of more mobility and dispersion. At the same time, they note farming is changing in order to respond to multifunctional issues and also to generate new development opportunities.

Between the years 1990 and 2000, urbanization converted more than 83,000 hectares of agricultural land in Italy. More than 61 per cent of the total or 50,530 hectares was for housing, due to the move of city-dwellers from urban cores to rural areas (Bernetti, 2005-07 cited in Galli et al.).

There are several interesting examples concerning the conservation and management of peri-urban agricultural areas in Europe including:

- In Lombardy (Italy) there are experiences of both a centre made up of farmers’ unions (the Istituto per la Tutela e la Valorizzazione dell’Agricoltura Peri-urbana), and regional universities. These two contribute towards a more effective management of agriculture, environmental resources and landscape around the settlements and cities.
- Peri-urban parks, including the first agricultural park (Parco agricolo sud of Milano) in Italy. Other similar peri-urban agricultural parks that focus on the conservation of local resources are in Asti, Casal del Marmo (Roma), and Prato.
- Local planning tools have given new functions to agriculture in the peri-urban areas through existing urban gardens or the creation of new ones (e.g. in municipalities of Bologna, Roma, Milano and Turin).
- Ile-de-France, has established a public agency, the Agences des espaces verts to manage the acquisition of good quality agricultural areas under threat of abandonment. The acquired areas are rented to farmers with a long-term lease, “in order to protect agricultural landscape and to guarantee more suitable activities for the management of large areas” (Camagni, 1994: p.48 cited in Galli et al.).
- Numerous initiatives such as Interreg programs, Metropole nature, Extramet and Purple (Peri-Urban Regions Platform Europe) deal with peri-urban settlements.
- The EU Cap institution (Common Agricultural Policy) for food processing, aims to promote a multifunctional and high-quality agriculture.
- The amusingly named CIA (Italian farmers confederation) has drafted the “Carta per l’agricoltura perurbana” which is a charter for peri-urban agriculture.
- In 2004 a document edited by EESC (European Economic and Social Committee) aimed to set up town and territorial plans involving municipalities, in order to preserve and manage peri-urban regions, by promoting agricultural areas and activities through plans (Fanfani, 2006: pp. 58-61 cited in Galli et al.).
- In Europe, Fedenatur (European Federation of Metropolitan and Peri-urban Natural and Rural Spaces) identifies areas where peri-urban natural reserves can be institutionalized in order to preserve traditional agricultural characteristics, through several activities: the promotion of qualitative food production (agrarian parks with a shared management); the recreation of city-dwellers and environmental education (agrarian and theme urban parks); the preservation of biodiversity (periurban natural reserves). In 2004, Fedenatur identified 46 agrarian parks in Europe: which include parks in Paris, Barcelona, Lille, Amsterdam and Lisbon. In Italy, there are agrarian parks: South Milan, North Milan, Prato, Rome.

Naples, Palermo, etc. The South Milan Park is the very first agrarian park in Italy and it covers about 46,000 hectares of cultivated land.

The marriage between towns and the surrounding countryside takes on new colours in the light of the modern concept of agriculture as a multifunctional activity. Within the Italian legal system this has been formally enshrined in the new definition of the agricultural entrepreneur set out in Act 228/2001 of the EU legal guidelines. The Professional Agricultural Entrepreneur (Imprenditore Agricolo Professionale-IAP) qualification gives farmers the opportunity to access various tax and credit benefits, particularly for the purchase of land, upgrading housing and other facilities, construction of farming buildings and for purchasing stock (European Commission. 2013). The IAP must have relevant knowledge and professional skills, devoting at least 50 per cent of his working time to agricultural activity and obtaining from it at least 50 per cent of his working income (before, both rates were set at 33 per cent). In addition, the law extends to companies that exclusively exercise farming activity the benefits already applying by law to natural person farmers.

Furthermore the there are several measures within the European Guidelines that aim to support the consolidation of agricultural land parcels and enlargement of holdings: Law 99/2004 provides incentives to land transfers to achieve the minimum level of profitability required by EU legislation for access to investment aids. Artt. 9 and 10 establish tax reductions for farmland mergers, exchange of parcels, correction of land boundaries, and rental of adjacent lands (European Commission. 2013).

Galli et al. believe that within this new legal framework, agricultural activity no longer plays the traditional role as only the manufacturer of products. Rather, they see it as a provider of a range of services to the tourism-related industry, as well as a means for the enhancement, safeguarding and management of the environment and the landscape. They believe that the provision of services is intended to occur in cooperation with other business and cultural initiatives, which take place within rural areas and are conducive to their improved use.

In Italy, Galli et al. note that the safeguarding and enhancement of agricultural activity is left to regional lawmakers and their decisions when agricultural development plans are drawn up and with local administrators when planning instruments regarding the use of the territory are set up (European Commission. 2013).

“In Italy, urban sprawl has been influencing agricultural land use in the peri urban areas. Urban encroachment has led to agricultural land use patterns that marginalise farming to land in areas that are usually far from the city and also less productive; accordingly there has been a transition of agriculture to a more costly and more demanding model in terms of inputs (water, fertilizers, etc.) which has resulted in higher environmental costs”.

“Globally, the dynamic of turning productive farmland into residential use has caused a drastic decrease in the availability of agricultural land, and, consequently, an intensification of farming in the face of an increasing worldwide demand for food. Therefore the preservation of agriculture is an important current issue, as well as the containment of urban sprawl. This sprawl is the result of new investments in infrastructure that irreversibly encroach on the landscape. It is also the result of many political and economic factors (the low price of agricultural land, competition among municipalities, the idea of development based on urban growth, etc.) rather than a rational long term strategy. Another maybe less apparently, is the desire to live outside the city” (Galli et al. 2010).

Case Study: the management of farm buildings in the peri-urban areas of a highly populated area in the south of France.

In the Hérault, the conflict between the protection of agricultural spaces and farmers’ housing has resulted in the creation of “hameaux agricoles” which brings together new farm buildings in one area on agricultural land close to existing built-up areas (Galli et.al, 2010). This new
area is specified in the urban planning documents of the “commune”. The “commune” is the smallest French territorial division. It can be a village or a town. The commune’s territory includes residential areas, natural and agricultural spaces.

Two key factors drove the development of the “hameaux agricoles”: a significant residential development and a crisis in the vine-growing sector. Population growth in the area is one of the highest in France and the resulting urban sprawl occurs mainly in the plain, which is essentially viticultural, with some local parcelling of the landscape. Vine-growing in the Hérault had been experiencing a long-lasting economic crisis, which facilitated the urbanisation of agricultural land via the sale of land by farmers who have stopped their activities or who have wanted to re-capitalise their farms. The small farms are traditionally located in the old centres of villages, which today are surrounded by suburbs.

The difficulties of maintaining farms in the old parts of villages in undersized buildings with bad access, the need for expansion, led farmers to building their farm buildings far away from the residential areas, often right in the middle of the their own agricultural land in direct opposition to the principles of urban planning policies, which prescribe the continuity of built-up areas and the maintenance of existing open spaces.

The objective is to promote the grouping of new farm buildings, which may or may not include the farmers’ dwellings, into a dedicated agricultural area adjacent to the existing built-up areas. These projects are managed by the municipality, via a land and regulation that allows the sale of plots of building land to farmers at prices between the agricultural and the building’s value. At the same time the risk of speculation is reduced by direct re-selling via legal formulas, which require buyers to respect the land’s agricultural assignment during a specified period. Lastly, financial and legal help are provided to the municipalities that develop these projects.

Issues:
- The first grouping of farm buildings changed the social relations within the village. It distanced the links with farmers that were not able to build there but strengthened solidarity links between farmers that benefited from the grouping.
- The absence of farmer’s residential dwellings in the first “hameau agricole” resulted in farm practices based around the commercial nature of the area which was relatively problematic for the residents living close by. Noise and chemical pollution spread not only into gardens but also penetrated inside houses, imposing a continuous monitoring of comings and goings so as to protect themselves from pollution.
- Some farmers have expressed regret that this policy obliges them to buy land to build farm buildings (although at a lower price), while they feel strangled by the wine crisis and would prefer to invest in agricultural production systems.
- Others refused the grouping effect which they perceived as a ghettoization of the profession and in deference to their quality of life, as expressed by one wine-grower who refuses to force his family to live surrounded by tractors.

Benefits:
- For some farmers problems of parking and of manoeuvring agricultural machinery were reduced, while traffic was improved because although farmers had to cross the village, they could choose more fluid traffic routes.
- The farmers benefited from farm buildings that were more suited to their needs.
- It led to the development of mutual help, technical dialogue and exchanges regarding the wine cooperative project from which farmers who did not build in the “hameau” felt excluded.
- Some farmers believe the projects are an opportunity to modernise their farm, improve their farm buildings and maintain a strong dynamic of mutual help.
• Some tenant farmers see it as a possibility of gaining access to property and to capitalize on their business.
• For those who own their farms, the project enabled them to consolidate the family's real estate and wealth.

This list of examples shows the disparity of situations and points of view across the spectrum of farmers involved in these projects.

European Landscape Convention

The European Landscape Convention applies throughout Europe and aims to promote landscape protection, management and planning in all aspects of public policy, such as agriculture, energy, marine and housing. According to the ELC, “landscape policy” reflects the public authorities' awareness of the need to frame and implement a policy on landscape. The public is encouraged to take an active part in its protection, conserving and maintaining the heritage value of a particular landscape, in its management, helping to steer changes brought about by economic, social or environmental necessity, and in its planning, particularly for those areas most radically affected by change, such as peri-urban, industrial and coastal areas.

Key question:
• Is there a role for adopting international ‘best practice' in protecting and sustainably using agricultural lands?
• What are the other projects we should consider?

The Key Issues for Agriculture in the Peri Urban Region

1. Population Growth

The peri urban region is generally growing more rapidly than any other regional area in Victoria and some areas within the region are pursuing population growth. This rapid growth benefits the region and also creates considerable challenges.

The population of the peri urban region is 204,088 persons or 15 per cent of the population of regional Victoria, on a land area of 5 per cent of regional Victoria.

The peri urban region is growing at an average annual rate of 2.5 per cent. This is significantly higher than the rate of growth for Victoria (1.9 per cent), regional Victoria (0.8 per cent) and the Regional Cities at 1.9 per cent.

The growth has been fairly constant over a number of years. Between 2001/02 and 2006/07, more than 12,000 new residences were approved in the peri urban region. This is a similar number to the combined building approval rates for Ballarat, Bendigo and Latrobe over the same period (Buxton et al. 2008).
The patterns of population settlement within the peri urban region are not evenly dispersed and are focused around a few townships. For instance:

- Within the Surf Coast - Anglesea, and Torquay accounted for 55 per cent of the population in 2006.
- The populations of Bacchus Marsh and Ballan comprise 59 per cent of the population of the Shire of Moorabool and Maddingley is the fastest growing town.
- In the Macedon Ranges, Gisborne/New Gisborne is the largest of the townships accounting for 16 per cent of the population followed by Kyneton, Romsey and Woodend for 28 per cent of the population combined.
- In Bass Coast the traditional centre of Wonthaggi accounts for 25 per cent of the population and Cowes and Inverloch together 29 per cent.
- By contrast in Murrindindi the growth is more evenly spread across a number of smaller townships and the rural balance area. The largest centre Alexandra accounts for 15 per cent of the population, and Kinglake and Yea for 18 per cent.
- Bannockburn is Golden Plain’s fastest growing town.

### Table: Fastest Growing Peri Urban Towns

<table>
<thead>
<tr>
<th>TOWN</th>
<th>TOTAL GROWTH TO 2031</th>
<th>ANNUAL GROWTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maddingley (Moorabool)</td>
<td>253%</td>
<td>12.65% pa</td>
</tr>
<tr>
<td>Torquay Nth, (Surf Coast)</td>
<td>189%</td>
<td>9.4% pa</td>
</tr>
<tr>
<td>Bannockburn, (Golden Plains)</td>
<td>173.6%</td>
<td>8.68% pa</td>
</tr>
<tr>
<td>Nth Wonthaggi, (Bass Coast)</td>
<td>131%</td>
<td>6.5% pa</td>
</tr>
<tr>
<td>Warragul, (Baw Baw)</td>
<td>115.2%</td>
<td>5.76% pa</td>
</tr>
<tr>
<td>Gisborne, (Macedon Ranges)</td>
<td>87.3%</td>
<td>4.3% pa</td>
</tr>
</tbody>
</table>

Population growth in Murrindindi Shire has been impacted by the bushfire of 2009.

Source: Id Forecast

The peri urban region is increasingly coming under pressures from the new residents and households seeking high amenity and services, and the intensive forms of farming and horticulture nearby.
2. Rural Land Use Zoning

Planning, zoning and development assessment processes were identified as a significant source of burden for farmers in the Productivity Commission’s report (2016). Of particular concern across the peri urban region is the growing trend of new dwelling proposals unrelated to the use of Farming Zone land for agriculture and land being purchased and used for amenity and lifestyle reasons.

Many of these developments have the potential to distort rural land prices, to further fragment agricultural landscapes already at risk from changing farming practices and create unrealistic expectations from new residents regarding infrastructure provision (e.g. road conditions, rubbish collection).

Under current planning controls, parcels (lots on separate title) within properties are potentially able to be sold, and housing development subsequently sought. As a consequence, the high proportion of small rural parcels in peri urban areas, particularly in Murrindindi and Moorabool Shires represents ongoing development pressure outside of the usual land subdivision process. Murrindindi Council wishes to encourage development of poor quality land in small lots in former mining areas, where it is appropriate. For example where the development supports boutique agriculture, where other agricultural pursuits are not impacted or where the development might contribute to the support of a local hamlet.

Extensive land fragmentation exists across the peri urban region. In 2008, a total of 78,119 parcels (lots) existed in the three rural zones (Rural Living Zone, Rural Conservation Zone and Farming Zone) of the Peri Urban Shires (excluding Bass Coast), and 26,093 properties with dwellings. Buxton et al believes that this pattern of 52,026 lots in excess of properties and not containing houses, defines the potential for housing development without further subdivision (2008). Subdivision under schedules to the rural zones, and lot excisions could add considerably to this total. Macedon Ranges contained the highest number of parcels in all zones.

A total of 41,685 parcels existed in the Farming Zone and 15,821 properties, indicating the possibility of 25,864 houses on lots in excess of existing houses in that zone. In Macedon Ranges, the number of parcels in relation to the number of properties in the Farming Zone is far higher than any other council in the study area. For example, Surf Coast and Macedon Ranges contain similar numbers of properties but Macedon Ranges contained over four times as many parcels at 15,592 parcels of which 13,519 are parts of multiple lot holdings.

The draft Rural Land Use Review completed by Baw Baw Shire Council has estimated that land fragmentation is also a significant issue for the Shire (2016). The Review estimates that 4,500 to 5,000 dwellings presently exist throughout the rural parts of the municipality. The dwellings are located in the central areas of the municipality around Warragul and Drouin and in the corridor extending to north to Neerim South which includes some of the highest quality and most productive land in the municipality.

Similarly, in Moorabool Shire, over 70 per cent of all parcels in the Farming Zone are less than 20 hectares in area (Buxton et al. 2008)

The Farming Zone covers the largest area, affecting 88 per cent of the area of the rural zones and is the default zone used outside of townships and urban areas. The Rural Conservation Zone has been applied rarely except by Macedon Ranges Shire. The Rural Living Zone is used typically for smaller

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2 The investigation area in the Planning Sustainable Futures for Melbourne’s Peri Urban Region was Bass Coast, Golden Plains, Moorabool, Macedon Ranges, Mitchell and Murrindindi.
areas, including formalised ‘estate’ style rural residential areas. The specific nature of planning controls within these zones varies, particularly in terms of subdivision size and other site area based triggers for permits. Additionally, a variety of overlays exist that directly influence development, most particularly the large areas of potable water catchments covered by the Environmental Significance Overlay with various localised provisions and the use of the Vegetation Protection Overlay and Bushfire Management Overlay, common in areas with high levels of vegetation on public and private land, an important landscape and amenity attribute in peri urban regions (Buxton et al, 2008).

Zones often are matched inadequately to lot and property size. All zones contain a wide range of lot sizes. For example, in the Farming Zone in Murrindindi, 27 per cent, or 2185 lots, of the total number of lots are sized under 2 ha. The Rural Living Zone is most adequately matched to lot and property size in all LGAs displaying a high proportion of lots in the size ranges 0-2, 2-4 and 4-8 hectares. Most LGAs include a high proportion of lot and properties 0-2 ha in the Rural Conservation Zone. On the other hand, properties 40 hectares or larger comprise almost 28 per cent of all properties. Given that larger properties remain important for agriculture and biodiversity, containing most of the remaining vegetation on private land, these larger properties provide a range of future options (Buxton et al. 2008).

The pattern of housing development on smaller rural lots has been a feature of the study region over the decade to 2007 in all zones. Since the late 1990s, 75 per cent of the 4,181 recorded housing approvals within the rural zones of the five municipalities occurred on properties of less than 20 hectares in area, and almost 60 per cent on properties less than 8 hectares. In the Farming Zone, over 60 per cent of all housing approvals occurred on properties under 20 ha in area.

A recent review undertaken for Moorabool Shire Council reveals that land consolidation to create larger, more financially sustainable farms has led to a surplus of dwellings on rural properties that are unrelated to the agricultural use of the land. Landholders are increasingly seeking approval to excise these dwellings from the farm with the aim of selling the dwelling as rural residential. This usually includes two hectares surrounding the dwelling (Moorabool Shire Council. 2014).

This trend of small lot development has implications for water yields particularly through the proliferation of small dams and effluent disposal, and for vegetation management, agricultural activity, urban related services, transport costs and the cross-subsidisation of dispersed infrastructure provision and impacts on the amenity of the region (Buxon et al. 2008).

The aims and objectives of planning policy and practice suggest a tension between protection of land as a resource from non-farm uses, the desire to reduce the impacts of new forms of urban expansion, and the pressures of market-driven resource allocation and public preferences.

Planning approaches have to varying degrees in peri urban areas included the objective of supporting agriculture by reducing the market for small holdings particularly through controls on subdivision and uses, and using differentiated zoning, including where ‘high quality or productive’ agricultural land resources have been identified.

The zoning and subdivision of land into smaller lots is an intervention into the land market which raises the price of rural land. These interventions also reduce the comparative viability of larger agricultural landholdings by limiting their capacity to expand and absorb neighbouring properties (Buxton et al. 2008).

The report of the Rural Zones Review, in 2004, recommended the replacement of the rural zones with four new zones: Farming Zone, Rural Activity Zone, Rural Conservation Zone, and Rural Living Zone which came into effect in 2006. The zones were subsequently revised and new provisions came into effect on 1 July 2014.

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3 Bass Coast, Moorabool, Macedon Ranges, Murrindindi and Mitchell
1. **Farming Zone** - replaced the Rural Zone as the intended main zone for rural areas and prohibits some uses formerly included in the Rural Zone. Non-agricultural commercial uses, for example, were directed to the new Rural Activity Zone.

2. **Rural Conservation Zone** - replaced the Environmental Rural Zone for land with environmental significance. All agricultural uses require a permit in this zone and intensive animal industries and most non-agricultural commercial uses are prohibited.

3. **Rural Living Zone** - was maintained for rural residential areas.

4. **Rural Activity Zone** - intended to be applied only to selected areas suitable for a wider range of tourism, commercial and retail uses in addition to agriculture.

The zones also include a Green Wedge Zone and Green Wedge A Zone. While neither of these are applicable to the peri urban region, there are some that believe the Green Zone provisions may provide a better model for peri urban areas than the Rural Zones.

Each zone retains the right to apply for a permit for one house for each existing lot. Every zone except for the Rural Conservation Zone allows the right to apply for approval for additional houses for each lot, subject to requirements.

The Farming Zone and Rural Activity Zone allow the excision of an existing dwelling. Buxton et al believe these rights for the construction of additional dwellings on each lot may lead to the proliferation of large numbers of houses in many Victorian rural areas, including the peri urban region and have important implications for the planning and environmental quality of large areas of land (2008).

Key features of the new rural zones are:
- Allow Councils to approve more than 1 dwelling on farm properties.
- Removes the requirement for a Section 173 Agreement preventing further subdivision as part of a dwelling excision.
- Reduce the default minimum size of rural living lots (hobby farms) from eight to two hectares.
- Removing the requirement for planning permission for farm-gate sales.
- Remove permit requirements for farming related development such as netting and crop support structures.

Forty hectares is the default minimum lot size and is generally considered to be a viable farm size. More recently, intensive farms on 20 ha lots have become more common place. Across the peri urban region, questions have been raised about the applicability of a standard minimum lot size of 40ha in the Farming Zone.

The growth of niche and intensive agricultural sectors in the region and the pressures for food production and for young farmers to get a foot hold in the industry necessitate a wide ranging discussion with industry and government about broadening the Farming Zone to support a range of minimum lot sizes based on use, where a dwelling can be legitimately incorporated.

Within the Farming Zone there are areas of low agricultural value where development is effectively discouraged by the need to maintain 40Ha minimum for dwellings allowed as of right. There are areas that are old mining townships where housing has disappeared and with small titles that could be amalgamated to a size that would provide rural living options and provide a means to support an increase in Council rates base and take development pressure off valuable agricultural land.
Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council's Discussion Paper. June 2017

Table: Building Approvals in the Rural Zone 1996 to 2007. Source: Buxton et al. 2008

The data and maps suggest high levels of housing development in all areas, not only those designated for rural housing (such as the Rural Living Zone). This has predominantly occurred on smaller lots suggesting activities that may be sub-commercial, non-farming or non-broad acre farming are predominant in this process.

Key findings include:

- Between 1996 (2000 for Mitchell and Moorabool) and 2007, 4181 dwelling approvals were granted in the rural zones of the study area.
- The vast majority of new housing development is occurring on lots smaller than considered agriculturally viable in these landscapes, regardless of zone provisions.
- Trends over the decade to 2007 do not indicate a pattern of reduction in development occurring.
- New housing approvals do not generally occur on recent or formal subdivisions, but rather within the existing fragmented pattern of properties and lots.
- In at least two of the municipalities over 5,000 lots are potentially available for consideration, regardless of the limitations presented by the planning system. A similar pattern is evident in other areas. The trends in scattered development would not appear to have sent clear signals to the market that would result in any anticipated reduction in future demand for small lot housing leading to consequent pressure on the planning system.

The North Central Catchment Management Authority has been working with Councils to consider the development of two agricultural planning zones. The first would aim to protect the land for the primary use of agriculture; while the second zone would aim to balance demand for rural residential living in an agricultural setting (2017).

The loss of land and productive soils through subdivision is a critical issue across the region. The development of shared information platforms like the Corangamite Catchment Management Authority’s soil health knowledge base http://www.ccmaknowledgebase.vic.gov.au/soilhealth/ may assist to reduce subdivision approvals. The opportunity is how do we incorporate this type of information into planning and land zoning – and value and protect high value soils?
Key questions:
- Why should the Farming Zone be the default zone for land outside of urban areas?
- Should there be a Zone for land which is not productive and does not have carrying capacity for agriculture?
- Would a Tourism Farming Zone enable low scale tourism and commercial use that does not impact on the surrounding agricultural uses? For example cellar doors, farm gate sales.
- Should agricultural uses be narrowed to food and fibre?
- Should there be a further review of the suite of Rural Zones under the VPP to address the absence of an effective agricultural protection / priority zone?

2.1 Farm Management Plans as a tool for managing subdivision.

Farm Management Plans (FMP) are usually required to support an application for a planning permit to establish a dwelling on land less than 40 hectares. The FMP should demonstrate that the land is to continue to be used for productive agricultural purposes and that the dwelling is required for, and secondary to, those agricultural purposes.

There are concerns that FMPs do not always reflect the true intentions of the applicants and often overstate the agricultural activities. Ongoing monitoring of agricultural use and enforcement can be difficult for Councils to undertake and over time the agricultural activities diminish and the dwelling becomes the primary use of the land.

The use of Section 173 agreements outlining the requirements of the FMP, has been suggested as a support to ongoing enforcement of farming activities.

Key questions:
- How can we better manage existing subdivisions of lots under 40ha? Excisions? Rural living appropriate zoning?
- Why should we prevent urban residential encroachment into the agricultural landscape?
- How can we minimise the adverse amenity impacts of Farming Zone Uses on surrounding areas with regard to buffer distances? Should we include permit conditions to manage silo heights and other impacts of essential farm infrastructure?
- Would a Planning Practice Note strengthen the level of justification required, the decision criteria and lessen the subjectivity that is involved in these types of applications?

3. Value and Use of Land

A significant reason for policies designed to prevent or to reduce the potential for new dwellings to be established in rural areas, is due to the perception that the addition of a dwelling on a lot will increase the value of the land above its base ‘agricultural value’. This in turn is believed to make it more difficult for legitimate farmers to purchase additional land for agricultural purposes.
As shown on the following chart, smaller lots in rural areas tend to be more highly valued than broad acre equivalents. The existence of a dwelling on a lot has a more considerable impact on the per hectare value of a small rural lot, than it does on a larger rural lot.

4. Intensive Agriculture

Over the last three decades, the number of farms in Australia has halved, replaced by a smaller number of larger, more capital intensive, farms (specifically, the average land area per farm has increased 30 per cent and the average total capital value per farm has increased 16-fold), despite declining total broadacre land area. Roughly 10 per cent of Australia's farms now account for 50 per cent of total output, yet small farms still make up the majority of farms (Moorabool Shire Council. 2014).

The trend towards the optimisation / intensification of farms is creating opportunities for greater productivity and efficiency while also in some cases attracting the ire of neighbours and surrounding communities. The Victorian Government through the Food and Fibre Discussion Paper (August 2015) flagged greater levels of intensive farming as a possible future direction for the Victorian agriculture sector. Additionally, the Government has established an Animal Industries Advisory Committee to ‘overhaul farming zones’ and to examine intensive agriculture.

For the Councils of the peri urban region, the interplay between intensive farm businesses and the encroachment of residential dwellings into farming areas will be a significant and ongoing challenge unless greater policy direction and support is delivered by the State Government. The issue is critical to the region and the PUGRC will be advocating strongly to ensure the interests of both primary producers and residents are protected.

High profile applications for intensive animal production businesses including those in Murrindindi and Yarra Ranges have thrown into sharp focus the challenges in managing and balancing the impacts resulting from the intensification of primary production and the expectations for rural amenity and peaceful enjoyment expected from rural lifestyle property owners and neighbours.

Problems have arisen because of the adverse impacts of intensive operations established before a permit has been issued; where there is a dispute on the definition of intensive animal husbandry; and where different farming practices have been implemented or proposed which were not specifically addressed when the current planning scheme was written and as practices have change over time.
Objectors complain that the planning scheme does not provide sufficient protection from the impacts of intensive animal husbandry. Proponents complain that the scheme is too restrictive and prevents farmers from maximizing their productivity by not recognizing new innovative farming methods. Councils complain that the scheme is imprecise and difficult to enforce and many have expressed difficulty with definitions in the scheme. It has also been noted that industry information and codes of practice are in many cases out of date and do not reflect contemporary practices of the industry.

A significant part of the challenge in assessing, monitoring and taking enforcement action against “intensive” animal and other farms is the current definition. The current definition in the Victorian Planning Scheme is as follows:

“Land used to keep or breed farm animals, including birds, by importing most food from outside the enclosures. It does not include: a) an abattoir or sale yard; b) emergency and supplementary feeding if incidental to the use of land for extensive animal husbandry; or c) the penning and housing of animals, including birds, for brooding, weaning, dipping or other husbandry purposes if incidental to the use of land for extensive animal husbandry”.

The definition fails due to the ambiguity of the word “most” in relation to food from outside as it could indicate any quantity above 50 per cent. The application of the definition has been challenging for Councils and farmers during times of drought when supplemental feeding is required for drought affected stock and for producers of high quality animals where supplemental feeding is used to fatten animals, as was the case for the Blackmores application.

The PUGRC and others believe that a more appropriate definition of ‘intensive farming’ is required. David Lindenmayer et al. use the term ‘land use intensification’ which removes some of the negative associations from this type of farming. Another suggestion may be ‘sustainable land use intensification’ which would then enable a greater consideration of the potential impacts on water catchments and land carrying capacity.

The Victorian Government has undertaken several reviews which seek to address provide clarity around the definition of intensive animal industries along with the issues of amenity impacts, siting, assessing, monitoring and approving applications for intensive animal industries and to support their operations. The Animal Industries Advisory Committee, Chaired by Mr Lester Townsend has been reviewing the issue and handed their report to Government on 29 April 2016.

The Committee notes in their report that they believe “the planning controls over intensive animal industries have let down rural communities. They have let down producers and investors – those operators who wish to innovate or expand – and they have let down their neighbours”4. Further that poorly-run, or poorly-sited operations have caused significant environmental or amenity impacts.

They believe that the current Farming Zone and other rural zone provisions do not adequately manage competing land uses in Victoria’s rural communities – in some instances they believe farming operations are prioritised, and on other occasions dwellings. The Committee cites out-of-date planning controls as hindering investment and innovation creating uncertainty for industry, planners and the wider community.

The Victorian Government responded to the Committee’s report in October 2016. They supported 19 of the Committee’s recommendations including introducing clear land use definitions for animal industries into the Victorian Planning Provisions5. The broad focus of the Government’s centres around four key areas:

1. Improve strategic planning for animal industries.

2. Clarify planning requirements and support early decision making.
3. Support the planning permit application process.
4. Ensure timely and effective enforcement.

The establishment of a panel of animal industries specialists to provide technical support to Local Government will greatly assist in the successful establishment and management of existing intensive animal industries in rural and regional Victoria.

The Government has also committed to the development of a codes of practice approach to intensive animal industries that is complemented by industry specific technical guides. This work was already underway by Agriculture Victoria who were reviewing the code for intensive animal industries. The review aimed to enable consistent outcomes for investors and the community and provide confidence and clarity for current and future activity and investment in intensive agriculture.

Mornington Peninsula Shire Council, in their submission, noted that the employment of an Industry Liaison Officer (ILO) resulted in significant improvement to community sentiment towards and operations by intensive animal industries within the Shire. The ILO is responsible for investigating and responding to complaints, liaising with the community and providing advice to prospective land owners. The ILO could be a shared resource between Councils.

The Productivity Commission in its Regulation of Agriculture Report has found that the current process for setting standards for farm animal welfare does not adequately value the benefits of animal welfare to the community (2016). Further that the process for setting standards would be improved through the creation of a statutory agency responsible for developing national farm animal welfare standards using rigorous science and evidence of community values for farm animal welfare. The proposed Australian Commission for Animal Welfare (ACAW) would have responsibility for developing the national standards and the standards would be implemented and enforced by state and territory governments (Productivity Commission. 2016). A national agency could prove positive in streamlining and simplifying animal welfare regulations across Australia, particularly for large multi-state producers. The middle ground on regulation across the states may however be difficult to find with some states required to increase regulation and burden on industry.

The peri urban region is generally supportive of intensive animal production, and in particular Golden Plains and Baw Baw Shires are actively encouraging the location of these types of industries through precincts and other local support.

Key questions:
- How can we support intensive agricultural practices and properties while maintaining the rural amenity for neighbouring residents?
- Is land use optimisation a better term for intensive agriculture? The term implies that land can support greater productivity up to an optimum level, beyond which the land degrades and the property become economically unviable⁶.

5. Push / Pull Effects on the Region

According to Buxton et al the peri urban region is subject to a ‘push-pull’ phenomenon (2008). The focus and opportunities of the region are pulled towards the urban areas (Melbourne, Geelong, Ballarat, Bendigo) by its proximity, transit corridors, employment and pushed towards a rural focus by the local agriculture along with visitors, semi-retirees, weekenders, amenity migrants, social migrants and recreational as well as resource demands.

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⁶ Sussex Farm submission

Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council’s Discussion Paper. June 2017
The duelling influences of the ‘push/pull’ are a mixed blessing for local government and agriculture. They provide a ready source of population to maintain growth and viability, but the characteristics which make the region attractive are threatened by the pressures of growth and the threats to vulnerable vegetation, landscape amenity and liveability.

Proximity to population centres can benefit farmers as they provide access to infrastructure, labour and amenities. The Australian Food and Grocery Council has stated that “intensive agriculture such as feedlots and horticulture operations are often located close to population centres due to access to labour, energy (electricity, gas), water and transport links. Food processing facilities are often located close to population centres for the same reasons” (cited in Productivity Commission Report).

However, the encroachment of residential land use and urbanisation of rural areas often has detrimental effects on productive agriculture. The Voice of Horticulture highlighted the following example from Yarra Valley as a detrimental effect of urbanisation.

“Some councils, like Yarra Valley in Victoria, have imposed limits on the use of tree crop netting that is visible from roads as it is perceived to decrease the rustic amenity of day-trippers. However, netting is an essential risk mitigation measure and it is unreasonable for councils to impose these types of restriction: (cited in Productivity Commission Report).

Other concerns include those from the Surf Coast local area studies for Anglesea, Moriac and Winchelsea. The studies note the region under the pressure of competing influences could be more vulnerable to wider economic impacts such as rising food prices, interest rates and fuel costs.

The extent to which the peri urban region looks outwards for employment and services versus its ability to maintain or increase economic self-sufficiency is an issue of increasing importance of the peri urban Shires.

Key questions:
- How can we manage the proximity to Melbourne and Geelong without being absorbed by it?
- Should the peri urban region have greater access to funding for community infrastructure to manage demand from residents of neighbouring Shires?

6. Municipal Rates

The Victorian Local Government Act enables local government to use differential rates within municipalities to more equitably distribute the amount of rates paid by different categories of residents. The current rating system employed by local governments in Victoria is based on land valuations and value of improvements. The valuations incorporate sale prices and improvements to neighbouring properties. Unfortunately, for farm owners neighbouring rural lifestyle properties can inflate the value of rural land and as a result, cause higher council rates, making it more difficult for farm businesses.

The application of differential rate in the rural zone causes tensions between the productive farmers and the rural lifestyle land owners. The farmers believe that more accurate identification of the ‘true’ farm enterprises would enable Councils to apply a higher rate to rural lifestyle holdings and ease the rate burden on farmers.

Farmers and the Victorian Farmers Federation have lobbied for many years for farm rates to be lower. The VFF believes that Council Rates may account for at least 10 per cent or more of farm costs. Further, the VFF argues that farmers in VIC pay an average of $4,000 more in rates expenditure than commercial rated businesses (VFF. 2015).
Rate income is the primary source of income for Councils and is directed towards most of the essential works, services and administration costs. Council rating strategies are adopted annually to ensure rate income, grants, and fees and fines will cover the required services, infrastructure and administration. A reduction to any of the income areas results in an increase in other areas as illustrated in the diagram below.

Clear direction and clarity from State and Local Government on the use of properties within the Farming Zone for purely agricultural pursuits may remove or reduce the level of speculation that inflates rural land prices and results in higher ratings assessments for rural land holders. The establishment of clear settlement boundaries for residential development may also assist to mitigate the impacts of speculation on farm prices.

One possible method of solving this problem could be to apply differential rates to land based on actual long term yearly use, and valuing the agricultural land based on income it generates and not according to its market value. Those lands which are being use for agriculture on a year in year out basis over the long term (measured in 3-5 year increments) should attract lower council rates, so as to encourage use of all land in an agricultural zone to be used predominantly for agricultural purposes.

If land is owned and not being used for agricultural purposes, or exists in an agricultural area and is not economically viable as a farm, the council rates structure could be higher; making it significantly more expensive to own and or land bank. This valuation methodology could be based on an analysis of the land’s actual ability to generate income. The higher the actual income generation, the lower the council rate imposition. The less economic income generation activity on the property, the more the owner pays for the privilege of living in the Farming Zone. (White, Miller and Logan et al, P.137)

On 1 July 2016, rate capping came into effect in Victoria. Rate capping limits rate increases on the general rate and municipal charges to CPI, unless an exemption has been granted by the Essential Services Commission. The Minister for Local Government will set the level of the rate cap each year and for 2016/17 it is 2.5 per cent.

Some ratepayers, including farmers, will still find that their rates bills have increased by more than 2.5 per cent from the previous year. There are a few reasons this may happen, including:

- The change in the value of property in relation to the value of other properties in the municipality. This is also called re-valuation and Councils undertake this process on a regular basis.
- Other charges and levies in the rates bill that are not subject to the Government’s 2.5 per cent cap, such as the waste charge.
- The rate cap may be applied differently depending on whether your property is classed residential, commercial or rural. These type of rates are classified as differential rates.

### 7. Viability of the small farm (traditional) business model

According to Buxton et al, agricultural businesses need to double their size every 20 years to off-set declining terms of trade (2006). The larger farms achieve the largest productivity gains. In areas where farmers are unable to increase the area of land under production, they may rely on productivity
improvements through mechanisation, new crops or moving into more intensive forms of agricultural production, such as horticulture etc.

Generally only the top 5 to 10 per cent of Victorian farms achieve positive return to capital invested. The largest 10 per cent of farms produce over 50 per cent of agricultural outputs while the smallest 50 per cent of farms produce only 10 per cent of farm outputs. Large farms are mainly located in the north and west of Victoria. Irrigated production accounts for 30 per cent of Victoria’s agricultural production. The number of dairy farms has fallen by 80 per cent and while milk production has increased by 50 per cent, the number of cows has not changed.

Australia is losing farmers at the rate of 7-10 every day (Rose. 2017)

Over the past 20 years the number of farms in Australia has halved, whilst the average farm size has doubled from 210ha to 430ha. Agriculture has become increasingly intensive and industrialised, and productivity has grown by 2.1 per cent.

Since the 1980s, industries such as dairying and horticulture have seen significant growth in production from fewer farms, while industries such as beef cattle and viticulture have involved a modest increase in producer numbers in Victoria (Barr & McKenzie, 2007). The latter industries are increasingly components of agricultural activity (including part-time agriculture) in peri urban landscapes.

Twenty hectares is now regarded as the minimum sized required for an intensive horticulture farm to support a family. Many types of agriculture and some types of horticulture can be undertaken in quasi-industrial formats and buildings, and are not dependent on highly arable soils. Small scale farms have low economic value but comprise a substantial proportion of rural land, and are important in land management.

Larger acreages require more expensive machinery and more chemicals. Research by the U.S. National Research Council in 1984 and cited in Kimbrell (2002), concluded that “well managed alternative farming systems nearly always use less synthetic chemical pesticides, fertilizers and antibiotics per unit of production than conventional farming. Reduced use of these inputs lowers production costs and lessens agriculture’s potential for adverse environmental and health effects without decreasing, and in some cases increasing, per acre crop yields and the productivity of livestock management systems”.

The large monocultures used in industrial agriculture undermine the genetic integrity of crops making them more susceptible to disease and pests.

Output vs Yield

Agribusinesses and Economists are generally focused on:

\[
\text{YIELD} = \frac{\text{production}}{\text{unit of single crop}} \quad \text{- for example tonnes of wheat / hectare}
\]

This is monoculture planting.

Smaller farms rarely compete with this ‘monoculture’, single crop yield. The smaller farms tend to plant crop mixtures (intercropping). They are more likely to rotate or combine crops and livestock with the resulting manure performing the important function of replenishing soil fertility.

These small scale integrated farms produce far more per unit area than the larger farms

Productivity of small farms = total agricultural output balanced against total farm inputs and ‘externalities’. This is known as the inverse relationship between farm size and output.
The attitude of small farmers to engaging in productive agriculture is determined to a large extent by their motivation for owning a small farm. Motives have changed over the years and can be categorised as follows:

- **Industrial Agriculture Farms** - engage in agriculture as a commercially oriented enterprise. These types of farms subscribe to the slogan "get bigger or get out". This style of farming can have adverse impacts on small rural towns and on biodiversity. The automation of farming will be most noticeable in this style of farming and the resulting loss of jobs.

- **Productive Farms** - these enterprises are strongly dependent on farm income, although now many are often supplemented by off-farm income.
  - Almost two thirds of Macedon Ranges Shire Council’s agribusinesses rely on off-farm income (MRSC Agribusiness Plan).

- **Lifestyle Farms** - provide for the general enjoyment of rural lifestyle, including recreation and/or conservation. These enterprises are typically non-commercial, might be on less productive soils that have been excised from a commercial farm, less dependent on farm income and are often more strongly oriented towards environmental conservation than productive agriculture. That is, there is less reliance on the productive capacity of a farm.

Some lifestyle landholders employ low technology, environmentally sustainable farming practices to produce small batches of quality food for local/ regional markets. However, the remainder are typically non-commercial enterprises.

The replacement of agriculture by amenity lifestyle owners often occurs because the amenity value of the land is greater than the farming value. In some parts of the peri urban region, farming activity has declined and lost value resulting in the land becoming available for alternate uses and ownership, including residential purposes. Some farmers seek to realise the highest value of the land for superannuation purposes (PUGRC. 2008).

- **Investors** - diversify and grow an investment portfolio. A proportion of these landholders are likely to be absentee owners, but open to leasing, contracting or share farming opportunities in productive agriculture.

- **Multi-objective Landholders** – landholders who are characterised by a diversity of motivations.

The motivational differences in land ownership have important implications for the types of investment strategies that can be implemented to encourage greater use of land for productive agriculture, including extension programs. For instance, successfully engaging with ‘life-stylers’ can be more challenging than with commercially orientated farmers (Moorabool Shire Council. 2014).

As noted above, off farm income has become common place in the agricultural industry. There is a requirement for farmers to find off-farm income and linkages to the non-farm economy to maintain farms faced with the growing competition between productive agricultural landscapes and expanding settlement in the peri urban environment. Climate change adaption strategies including the inclusion of renewable energy and energy efficiency can assist farmers to reduce costs, increase cash flow and off farm income.

Transition to renewable energy can be facilitated through Environmental Upgrade Agreements (EUAs) to local businesses. EUAs are a finance mechanism to help businesses undertake upgrades of their premises that improve their environmental performance and energy and resource efficiency. EUAs provide off-balance sheet debt, no upfront costs and other favourable terms that often mean a business's loan repayments for upgrades can be covered mainly - or even entirely - by savings on utility bills. Since mid-2016, a number of Victorian councils have begun to offer EUAs, including four of the eight WAGA councils and one other member of the Peri Urban Group, the Shire of Macedon...
Ranges. EUAs deals so far have all included installation of solar PV as well as other energy efficiency measures. The third party administrator for councils’ EUAs, the Sustainable Melbourne Fund, estimates that there is particular opportunity for EUAs to assist with upgrades of food processing, viticulture and other agricultural facilities in the state. Reducing the energy costs of these facilities, which can be the most substantial cost after labour, would directly release funds for their owners to invest in other improvements and expansion.

8. Transition – Ageing Workforce & Encouraging Younger Farmers

According to the Australian Bureau of Statistics (ABS), the median age of farmers is 53 years compared to a median age of 40 for the rest of the workforce (2011). The ABS also reveals that 23 per cent of Australia’s farmers are aged over 65 years and will be considering retirement in the coming years (2012).

The agriculture and fisheries industries have:
- The highest median age workforce in Australia at 53 years.
- Particularly high proportion of workers aged over 55 years (35.8 per cent).
- Disproportionately low number of workers aged less than 35 years (23.6 per cent).

The Australian Farm Institute (AFI) notes that in comparing the age of farmers with that of the entire Australian workforce, there is a tendency to forget that the average capital value of farms is now $3.3 million, and $4.25 million in the case of crop farms (the cropping sector doesn’t have many small farms, unlike the livestock sectors) (2013). They believe comparisons should be made between farmers and CEOs and in this instance farmer age is more consistent.

Further, a very large proportion of farmers are also owner-operators, as mechanisation and alternative practices including uses of pesticides, has reduced the labour input to agriculture to a much greater degree than has occurred in the rest of the economy. This means there is a significant barrier to entry into farming that does not apply to many other occupations.

There is little inter-generational transfer of farms, as the children of farmers often do not want to pursue farming in favour of more stable employment options off the farm and lack of support for young farmers.

The Rural Industries Research and Development Corporation (RIRDC) considered young farmers in their 2014 report, New entrants to Australian agricultural industries – where are all the young
farmers? Their study found that the number of farmers aged under 35 years of age had fallen by 75 per cent since 1976. Rose notes that the percentage of farmers under 35 is now 13%, compared to 28% in 1981 and that young and entry level farmers need better access to land and training (ABS 2012 cited in Rose. 2017).

The key factors in the declining numbers of young farmers has been falling numbers of farms due to farm aggregation, leaving fewer opportunities for younger people to enter agriculture and delayed entry to the workforce due to longer years spent in tertiary education.

However, recent research by Pratley reveals that from a low point in 2012 when there was just over 900 students enrolled in Australian agricultural courses, the number of students studying agriculture has almost doubled to over 1,500 enrolments in 20167. He believes that the increase in interest is due to the decline of the mining sector, the recent strong performance of the agriculture sector, and a range of initiatives by industry groups and the universities.

According to the PMSEIC, the role of agriculture and food training in schools has been recognised for some time. Where implemented, these programs address a number of important education and lifestyle issues in children. The opportunity exists through well-structured programs to generate interest and enthusiasm for food and food production. The programs involve children in healthy outdoor activities, such as gardening, to demonstrate issues related to land and environmental management and to teach respect for plants and animals. Importantly, these programs also show children the value and importance of science based decision making and emphasises the key role played by science in all aspects of food from production to consumption.

While many public sector programs have been initiated, there is no consistency in programs across Australia. Further, many schools do not offer such programs. The Primary Industries Education Foundation (PIEF) has attempted to document the programs currently underway and provides support in the form of resources and information to schools. A national stocktake of current Australian education initiatives on agriculture, fisheries and forestry was undertaken in March 2010 and 122 programs were identified as shown on the table below:

<table>
<thead>
<tr>
<th>National</th>
<th>ACT</th>
<th>NSW</th>
<th>Qld</th>
<th>Vic</th>
<th>SA</th>
<th>WA</th>
<th>Tas</th>
<th>NT</th>
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<td>2</td>
<td>41</td>
<td>45</td>
<td>23</td>
<td>28</td>
<td>19</td>
<td>10</td>
<td>6</td>
<td>221</td>
</tr>
</tbody>
</table>

Table 4.2 A stocktake of Australian education initiatives on agriculture, fisheries and forestry (http://www.primaryindustrieseducation.com.au/its.htm).

Key questions:
- How can we better support Agricultural Colleges, and encourage a greater understanding of farming and food production in young people?
- How can we support generational change in farming?
- How can we support young people into farming?

9. Employment and the Potential Impacts of Automation on Agriculture

The industry distribution of the labour market is changing. A little over a century ago, the majority of Australians worked in the agriculture sector, yet today it employs only a tiny fraction of the labour
market. Manufacturing took over as a major employer in Australia before it too was disrupted by changes to the global marketplace and now also employs a far smaller portion of the workforce. In November 2014, there were 756,700 more jobs in the Australian labour market than five years earlier. The largest numbers of new jobs were in:

- Health Care and Social Assistance (up by 190,700)
- Professional, Scientific and Technical Services (124,600)
- Education and Training (92,700)
- Construction (76,500)
- Retail Trade (74,200).

Over the five years to November 2014, employment gains in the growth industries were partially offset by falls in the following three industries (although some sectors of these rose):

- Manufacturing (down by 79,200)
- Wholesale Trade (27,900)
- Agriculture, Forestry and Fishing (24,100).

*Agriculture, Forestry and Fishing* as an employment category, employs 322,000 workers and accounts for 3 per cent of national employment. According to the National Farmers Federation, employment in the agriculture sector fell by 27.2 per cent in the last decade making this the sector with the largest drop in employment levels for any sector in that period (NFF, 2013).

The NFF in their *Blueprint for Australian Agriculture* also highlight that in the three decades since 1981, the number of farmers has dropped by 100,000. They believe that almost 300 farmers are leaving their properties each month across Australia.

Although the trend in employment in agriculture has been in decline, there was some jobs growth in 2014. Over the five years to November 2019 employment in agriculture is expected to rise by 3.7 per cent or 12,000 people, but at a lower rate than the average for all industries.

The vast majority of jobs in this category are in the Agriculture sector (284,200). Around 21,000 people work in Aquaculture, Forestry and Logging, and Fishing, Hunting and Trapping combined.

Around 84 per cent (270,500) of agricultural jobs are in regional areas, so there are good opportunities for employment in this industry outside the capital cities. Employment is concentrated in a small number of occupations. Farmers and Farm Managers account for almost half of the workforce.

Almost half the workers do not hold post-school qualifications, and those who do are significantly more likely to have completed vocational education and training than university studies.

*Agriculture, Forestry and Fishing* has the oldest age profile of any industry. About 59 per cent of workers are aged 45 years or older and just 10 per cent are aged 15 to 24 years (compared with the all industries averages of 39 per cent and 15 per cent, respectively).
Agriculture, Forestry and Fishing has traditionally been an important part of the employment and economic wealth of the peri urban region. The category of Agriculture, Forestry and Fishing is the highest employer in Golden Plains Shire. The table below shows the levels of employment in Agriculture, Forestry and Fishing in the Peri Urban region and highlights the process of change occurring in this sector through less numbers of farms, mechanisation and increased numbers of owner / operators.


<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment Nov 2014</th>
<th>Employment % of Total</th>
<th>5 Year Change to Nov 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental, Hiring and Real Estate Services</td>
<td>48.6 '000</td>
<td>2</td>
<td>13.5 38.6</td>
</tr>
<tr>
<td>Public Administration and Safety</td>
<td>157.2 '000</td>
<td>5</td>
<td>35 28.7</td>
</tr>
<tr>
<td>Arts and Recreation Services</td>
<td>74 '000</td>
<td>3</td>
<td>11.5 18.4</td>
</tr>
<tr>
<td>Electricity, Gas, Water and Waste Services</td>
<td>34.5 '000</td>
<td>1</td>
<td>5.1 17.4</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>337 '000</td>
<td>12</td>
<td>36.3 12.1</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>198.9 '000</td>
<td>7</td>
<td>20.5 11.5</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>334.3 '000</td>
<td>12</td>
<td>33.8 11.2</td>
</tr>
<tr>
<td>Education and Training</td>
<td>235.4 '000</td>
<td>8</td>
<td>23.5 11.1</td>
</tr>
<tr>
<td>Professional, Scientific and Technical Services</td>
<td>238.2 '000</td>
<td>8</td>
<td>20.3 9.3</td>
</tr>
<tr>
<td>Transport, Postal and Warehousing</td>
<td>149.9 '000</td>
<td>5</td>
<td>12.3 9</td>
</tr>
<tr>
<td>Information, Media and Telecommunications</td>
<td>66.6 '000</td>
<td>2</td>
<td>3.4 5.4</td>
</tr>
<tr>
<td><strong>Agriculture, Forestry and Fishing</strong></td>
<td><strong>84.5 '000</strong></td>
<td><strong>3</strong></td>
<td><strong>4 5</strong></td>
</tr>
<tr>
<td>Construction</td>
<td>230.7 '000</td>
<td>8</td>
<td>1.7 0.8</td>
</tr>
<tr>
<td>Other Services</td>
<td>104.1 '000</td>
<td>4</td>
<td>-0.5 -0.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>295.8 '000</td>
<td>10</td>
<td>-7.1 -2.3</td>
</tr>
<tr>
<td>Financial and Insurance Services</td>
<td>111.8 '000</td>
<td>4</td>
<td>-4.8 -4.1</td>
</tr>
<tr>
<td>Mining</td>
<td>11 '000</td>
<td>0</td>
<td>-0.5 -4.2</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>107.5 '000</td>
<td>4</td>
<td>-7.2 -6.3</td>
</tr>
<tr>
<td>Administrative and Support Services</td>
<td>86.2 '000</td>
<td>3</td>
<td>-10.8 -11.2</td>
</tr>
</tbody>
</table>

The Chart above shows that Health Care and Social Assistance (337,000 employees) is the largest employing industry in Victoria, followed by Retail Trade (334,300) and Manufacturing (295,800).
Together, these three industries account for one third of employment across the state.

Over the five years to November 2014, employment increased in 13 of the 19 industries. The strongest growth was in Rental, Hiring and Real Estate Services (up by 38.6 per cent), Public Administration and Safety (28.7 per cent) and Arts and Recreation Services (18.4 per cent).

Manufacturing employment fell by 7,100 or 2.3 per cent, but it remains Victoria’s third largest employing industry, and there was some jobs growth in this sector over the year to November 2014 (a rise of 18,400 or 6.6 per cent).

Employment in agriculture increased by 5 per cent.

9.1 Automation and its potential impact on Agriculture.

The 2015 Centre for Economic Development Report, Australia’s Future Workforce predicts that forty percent or five million of Australia’s current jobs may be replaced by computers within the next ten to fifteen years. For the regions, this may be as high as sixty percent of jobs being lost to automation.

Farming is an industry that is process based and highly repetitive in nature and is considered to be one of the areas for further automation and digital disruption. Nathan Taylor, CEDA’s Chief Economist, predicted that farms of the future may have just two employees. There would be a PHD qualified person to oversee the animal health and farm productivity and someone on a significantly lower wage who did general maintenance and oiled the machinery.

A leading expert in the development of automated solutions and robotics for industry, Professor Salah Sukkarieh of the Australian Centre for Field Robotics believes Australia will have fully automated vegetable farms by 2025. A fleet of robots may be responsible for crop management and would include drones for data gathering. In February of this year, a Japanese company announced the world’s first indoor robot run farm (factory) that will produce 11 million heads of lettuce each year. The lettuce farm will only require employees for planting lettuce. Prospero is a prototype planting robot developed in the USA that autonomously plants crops, checking for optimal planting location and nutrients and communicates wirelessly with other robots in the field.

Key questions:
- What is the highest and best use of our local workforce?
- What is government’s role in working with the agriculture industry to transition towards new methods of farming and new crops that will generate regional revenue and employment?

10. Identifying current and future agricultural areas – Mapping

Identifying rural locations which are well suited for the development of rural industry is key to the future of agriculture across the peri urban region. Critical to this task will be the mapping of key transport and processing corridors or sites.

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It is critical to ensure that mapping / identification of the ‘best agricultural land’ does not jeopardise areas with less productive soil profiles or lower rainfall statistics. Some of the more marginal farming locations can be appropriate locations for more intensive farming activities such as broiler farms or piggeries. These activities are not heavily reliant on soil or rainfall conditions, however they do require uncompromised farming landscapes to accommodate biosecurity buffers etc.

It is also critical to note that climate change may improve the viability of some currently marginal areas and may change the use and crop types in many areas.

The aim of mapping would be to:

- Develop a definition of prime agricultural land that would be protected for agricultural production and to recognise areas not suitable for agricultural use that may be more suited for rural living purposes.
- Develop approaches to the use and development of land with low agricultural qualities. Such land may be targeted as the preferred locations for carbon sequestration, rural living or intensive farming that is not reliant on high value land.
- Protection of high value agricultural land from its conversion to more intensive agriculture that is not reliant on the quality of the soils, or its removal from agricultural production to be exclusively used for rural lifestyle or tourist activities.

Key question:

- Should we protect important agricultural land and landscapes through identification and mapping?

11. Infrastructure to Support Agriculture – Roads and Mobile Coverage

According to McKinna et al, infrastructure including roads, bridges, rail, energy, water treatment, irrigation modernisation and mobile phone coverage are impacting the capacity and competitiveness of the Australian agrifood sector (2014). The availability of utilities including reticulated water, sewerage and gas is also a critical factor in the viability and sustainability of agricultural businesses.

Moorabool Shire Council’s Agribusiness Analysis of the Parwan Precinct confirmed that the provision of services is essential for agribusiness ventures; specifically natural gas, as well as adequate road access. These aspects and the provision of Class A water supply were perceived critical to activating intensive agribusiness development.

Similarly, the Golden Plains Intensive Agriculture report, highlights good road access for B-double and semi-trailer movement as a basic requirement.

In general, heavy vehicle movement for a typical five shed broiler farm may involve 5 to 8 B-double movements per week (feed supply) plus an average of 10 to 12 semi-trailer movements per week. The latter movements will fluctuate with the timing of growing cycles. Most farms use LPG for heating, which also involves regular delivery (Golden Plains. 2006).

The Australian Government’s Agricultural Competitiveness White Paper found that transport costs make up more than 20% of farm gate value. The White Paper states that “better infrastructure will reduce freight costs, by speeding up delivery times and cutting vehicle operating costs”. Further, that Australian roads and railways are under pressure due to an expected increase of 70% in domestic freight by 2030. That equates to an additional 300,000 trucks on the road network13.

The map below shows the current freight movements within Australia and the vital role that Victoria plays in moving freight between Melbourne, Sydney, Brisbane and Adelaide.\(^{14}\)

The sheer volume of growth forecast for freight in Australia and the increasing specifications for high productivity freight vehicles is expected to require greater levels of investment into HPV accessible roads. The challenge of systematically addressing ‘first mile’ and ‘last mile’ blockages to support increases in productivity and lower transport costs for producers will remain a priority for the foreseeable future.

The challenge for the peri urban region is that roads funding already consumes, on average, nearly half of each Council’s annual capital works budgets as illustrated in the table below.

<table>
<thead>
<tr>
<th>Shire</th>
<th>2016/17 Capital Works Budget</th>
<th>2016/17 Roads (&amp; Bridges) Budget</th>
<th>Roads Funding as % of Capital Works Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUGRC Average</td>
<td>$18,642,143</td>
<td>$7,494,714</td>
<td>40%</td>
</tr>
<tr>
<td>Regional Cities Average</td>
<td>$53,723,250</td>
<td>$16,011,125</td>
<td>29%</td>
</tr>
<tr>
<td>Interface Councils Average</td>
<td>$63,571,700</td>
<td>$13,929,800</td>
<td>21%</td>
</tr>
</tbody>
</table>

Table: Comparison of Roads Funding. Source 2016/17 Council Annual Reports.

11.1 Mobile and Internet Coverage

Limited or non-existent mobile and internet coverage is also a significant infrastructure challenge across the peri urban region. Mobile and internet coverage is required by agribusinesses for both commercial uses including livestock sales and property management, and in emergency situations.

These areas are also prone to high fire danger as shown in the map below.

**Bushfire Risk Map for the Peri Urban Region**

The map below highlights the limited nature of the mobile telephone and Internet coverage away from the key transport trunks and the metropolitan area.

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The industry cannot prosper without access to this technology into the future.


12. Invasive Weeds and Pests

It is estimated that the annual cost of invasive plants to Australian agriculture is $4 billion through yield losses and product contamination. In 2006–07 an Australian Bureau of Statistics survey estimated the direct cost to agricultural businesses in Victoria of controlling invasive plants to be $253 million. During the same period, more than 94 per cent of agricultural businesses reported undertaking activities, costing almost $3 billion, to prevent or manage weeds, pests, and land and soil problems (ABS. 2009).

One of the greatest dangers to Agriculture is the spread of invasive weeds such as serrated tussock.

Many believe that the issues of weeds, pest and fire control compliance are partially a result of the rapid influx of new landholders with little experience in land management or animal management. Concerns have also been raised about the prevalence of domestic animals an exotic plant species being released in agricultural areas by inexperienced land owners.

Once allowed to establish, large infestations of some species can be very difficult to manage and the cost may greatly exceed the value of production from the land. The cost to the natural environment is also high, with invasive plant invasion being ranked second only to habitat loss in causing biodiversity decline (DEPI).

Weeds and their management are a significant issue for land owners and Local Government across the peri urban region. During Macedon Ranges Shire Council’s consultation on their Agribusiness Strategy, participants identified the management of weeds, pests and fire safety compliance by new landholders as a constraint.
The issue of managing invasive plants (weeds) and animals (pest animals) on roadsides is principally regulated by the *Catchment and Land Protection Act 1994 (CaLP Act)*. However, responsibility for controlling these pests is affected also by other legislation, including the *Road Management Act 2004* and the *Local Government Act 1989*.

Since 2005, the Department of Primary Industries (DPI), the Department of Sustainability and Environment (DSE) and the Municipal Association of Victoria (MAV) have been examining the relevant legislation with a view to identifying who is best placed to deliver control operations for weeds and pest animals, and where responsibility resides for funding such activity. The legal advice received by different organizations is not consistent and thus attempting to use legal advice to resolve this issue is not likely to prove effective. However, what is apparent from the legal advice is that responsibility currently may vary depending on the category of pest and the status of the road. Thus in some situations the Victorian Government may be responsible, while municipal councils may have responsibilities in other situations and some of these may be shared with adjoining landowners. From an operational perspective, the Working Party was concerned that this may not inspire confidence that the existing arrangements will provide for effective control of the spread of roadside weeds and pest animals in Victoria.

The *Invasive Plants and Animals Policy Framework (IPAPF)* represents the overarching Victorian Government approach to managing existing and potential invasive species across the whole of Victoria. It is aligned with the high-level approach specified in the Biosecurity Strategy for Victoria.

Through to 2015, the Victorian Government has provided a base funding amount of $5,000 per year (exclusive of GST) to eligible Councils for weed management. Remaining funds were allocated based on the total number of kilometres of rural roads managed by eligible councils. The maximum funding available per year (including the base allocation) was capped at $50,000 (exclusive of GST) per council.

The VIC Government provided $5.4 million for two years of weed management programs in the 2017/18 Budget.

The Corangamite CMA believes that there is opportunity to engage with the equine industry as peri urban land managers through specific targeted horse property management programs, to better support sustainable land management in these peri urban zones. A pilot ‘Horsecare through Landcare’ program is currently being developed to cater for this sector of land managers in Corangamite, and potentially beyond. The program aims to tap into the horse owner’s passion as an entry point to improved land management. This is through implementing a horse farm plan (fencing, water, shelter, paddock size etc.) and good agronomic practices (species selection, weed control, fertiliser, lime etc.).

The Rural Industries Research and Development Corporation completed a study in 2007, aimed at assisting the equine industry to achieve improvements to environmental management (Frizenschaf. 2007).

*We need to ensure that “leisure & lifestyle farms” do not become a haven of Serrated Tussock, Paterson’s Curse and lousy sheep because their owners have no idea how to manage a rural farm.*

**Key question:**
- How do we become more collaborative and proactive in our approach to invasive weeds and pests?
13. Climate Change

Australian agriculture is highly dependent on the climate and its variability. The Prime Minister’s Science, Engineering and Innovation Council notes that climate affects almost every aspect of food production: the plants and animals used, average production and production variability, product quality, what areas are farmed, what soil types are preferred, the management systems and technologies used, input costs, product prices and natural resource management (PMSEIC.2010).

The atmospheric concentrations of greenhouse gases such as carbon dioxide (CO2), methane and nitrous oxide are increasing as a result of human activity (Intergovernmental Panel on Climate Change, 2007). These greenhouse gases are keeping the earth warmer than it would otherwise be. The atmospheric concentration of CO2, the main anthropogenic greenhouse gas, was 392 parts per million (ppm) or 40 per cent above the pre-industrial concentration of 280ppm (PMSEIC.2010). Furthermore, the rate of increase of CO2 concentration is itself increasing, being larger during the last 10 years (1.9 ppm per year), than it has been since measurements began in 1960 (1.4 ppm per year). This is in response to accelerated growth in CO2 emissions and a reduction of the proportion of these emissions absorbed by the oceans (Canadell et al, 2008).

There is strong evidence that these changes in atmospheric composition are affecting the climate at global and continental levels, including in Australia. Temperatures have increased across the food production areas of Australia, with average maximum (day-time) temperature rising by 0.7°C and the minimum (night-time) temperature by 1.1°C since 1910, with much of this change occurring since 1950.

These increases are highly likely to have been influenced by increasing atmospheric greenhouse gas concentrations. These temperature rises have made droughts more severe because temperatures are higher for a given rainfall level. Temperature extremes have also changed with an increased number of hot days (Figure 2.3) and hot nights and a decrease in cold days and nights. Exceptionally hot years are now occurring over 10–12 per cent of the area of Australia, about twice the expected long term average.

Rainfall has also changed, with southern and eastern Australia becoming drier. These changes are likely due to a combination of altered synoptic pressure patterns such as the location of the subtropical ridge, natural climate variability and perhaps land use change. The reductions in rainfall and increases in temperature in south-eastern and south-western Australia have resulted in record low river flows.

\[ \text{Figure 2.3 Average number of hot days (above 35°C) each year for Australia since 1957 (Bureau of Meteorology, 2010).} \]
Extreme rainfall events have also changed in some cropping regions with heavy rainfall increasing over the western tablelands of New South Wales but decreasing in the southeast, southwest and central east coast.

Farming in the Australian environment, therefore, involves significant challenges in juggling these climate risks as well as price risk. One response to this has been to establish effective networks of farmers such as Landcare groups to share information, technologies and experiences. This has enabled more effective and innovative approaches for sustainable production across the food value chain.

The Councils of the Central Highlands Region of Victoria, which includes the peri urban Councils of Golden Plains and Moorabool, have joined Deakin University to undertake the Future Landscapes project. Future Landscapes is a climate change adaptation project that will help the Central Highlands Councils to better understand the impacts of projected climate change on the region’s natural assets and respond effectively to protect and improve agriculture and natural resources across the region.

The Project aims to provide Councils with valuable information, climate scenario modelling, case studies and materials to ensure simple adaption actions are integrated within their operations, plans and policies.

On the other side of the Peri Urban region, Murrindindi Shire has joined six other Shires, Goulburn Broken Catchment Management Authority and Department of Environment Land Water and Planning in the Climate Smart Agricultural Development Project16.

The Climate Smart Agricultural Development (CSAD) developed a spatial assessment tool to model regionally important agricultural commodities under climate change scenarios. This spatial tool can inform climate change adaptation planning undertaken by Local Government and the natural resource management and agricultural sectors.

The project was a partnership between Murrindindi Shire and six other councils, the GBGA, GB CMA, and DELWP.

The CSAD project developed a spatial tool that modelled 17 different agricultural commodities under climate change scenarios. The tool incorporated modelling on soils, climate, topography and crop requirements for a mixture of grain crops, timber, vegetables, fruits and pastures. These include both currently grown and potential options for the Goulburn Broken region.

The project has developed maps that are available on each partner council GIS system, summary reports for each partner council highlighting expected changes and recommendations to sustain agricultural production, and technical reports for each commodity modelled.

A Storymap site has also been created, to assist in disseminating the information further into the community. Project information is available at www.gbga.com.au/climate-smart-agriculture-development.html

One of the main objectives for CSAD is to enable Councils to fully recognise the importance of agriculture, climate adaptability and security of food production and to facilitate decisions about land use planning that deliver sustainable and enduring benefits, ensuring the longevity of agriculture and enhancing the wellbeing of the community.

We need to stop developing our most productive lands for non-productive purposes.
Growth Opportunities – Alternative Food Networks, Agri-Tourism, Food Processing & Clusters

1. Alternative Food Networks

According to Moorabool Shire Council’s Investment Needs Strategy, there is a growing community interest in food quality, food trustworthiness and a greater appreciation of socio-cultural traditions, which are contributing to the developing interest in alternative food networks. The term alternative food networks (AFNs) broadly covers newly emerging networks of producers, consumers, and other players that embody alternatives to the more standardised industrial mode of food supply (Moorabool Shire Council. 2014).

AFNs can cultivate a sense of ownership by local people, businesses and institutions, whilst at the same time creating niche markets for local enterprises, including tourism, craft and agricultural products (Moorabool Shire Council. 2014).

Short food supply chain (SFSCs) approaches form a part of AFNs and are designed to enhance the image of the farm and / or region as a source of quality foods. They seek to redefine the producer / consumer relationship by giving clear signals as to the origin of the food product.

This approach requires soundly based quality assurance arrangements and quality control process that guarantee standards of best practice relating to such things as husbandry, animal welfare, application of feed and medicine and environmental protection. Quality marks or certificates of special character can be used to certify that a product or service has certain qualities (e.g. the French and American wine appellation systems).

Marsden et al. (in Moorabool Shire Council. 2014) identify three main types of SFSC:

- **Face-to-face**: consumers purchase a product direct from the producer/ processor on a face-to-face basis. The personal interaction engenders authenticity and trust.
- **Spatial proximity**: products are produced and retailed in a specific region (or place) of production, and consumers are made aware of the local nature of the product at the point of retail.
- **Spatially extended**: where information about the place of production and those producing the food is provided to consumers outside the region.

AFNs and SFSCs provide producers with an opportunity to develop and service niche markets in the region and Melbourne instead of the longer ‘industrialised’ food supply chains. Experience elsewhere shows that satisfying these markets has stimulated rural development and tourism, created employment opportunities, encouraged entrepreneurship and strengthened social cohesion (Moorabool Shire Council. 2014).

2. Agri-Tourism

The peri urban region is one of Victoria’s great tourism regions, boasting areas of cultural heritage, environmental and landscape significance. These include the Great Ocean Road, Otway Ranges, Macedon Ranges and Hanging Rock, Strezlecki Ranges, Angahook-Lorne and State Park, Lake Eildon, Philip Island. There are also rail trails, gourmet deli trails, the Walhalla Township and Mt Baw Baw. Surf Coast and Bass Coast have a huge influx of tourists in summertime, which places a demand on the physical and social infrastructure.

Tourism is encouraged in the peri urban region as it adds value to agriculture activities.

Interest has been shown in supporting and growing farming-related tourism or agri-tourism on farms as well as in defined precincts across the peri urban region. Based on the levels of off
farm income being required to support small farms, diversification of farm income is urgently needed to support the industry in the peri urban region.

Agri-tourism typically consists of a network established around a theme. For example, a wine route, where the nodes of the network include:

- Vineyards.
- Agri-tourist farms and farm stays.
- Producers of complementary products (cheese, olives etc.).
- Restaurants.
- Local authorities.
- Changes to the Farming Zone provisions also enable a number of other business opportunities that may help underpin agri-tourism networks.

For successful agri-tourism requires:

- Consistent opening hours of outlets.
- Food and produce quality.
- Awareness of the importance of landscape.
- Capacity for reciprocity among landholders.
- An awareness of the importance of direct selling, contact with tourists and communication through tourist information and marketing materials.

The successful establishment of agri-tourism delivers two key outcomes for communities:

- It can increase the profitability of local enterprises.
- It can open up the opportunity for new farm activity, which can:
  - Lead to a change in farm operations and the way they are organised.
  - Improve the sustainability of farm operations.

The Planning Scheme supports tourism developments the reformed rural zones in the following ways:

<table>
<thead>
<tr>
<th>Tourism activity</th>
<th>Green wedge zone (GWZ)</th>
<th>Rural conservation zone (RCZ)</th>
<th>Farming zone (FZ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed &amp; breakfast</td>
<td>No permit required (max. 6 guests)</td>
<td>No permit required (max. 6 guests)</td>
<td>No permit required (max. 6 guests)</td>
</tr>
<tr>
<td>Camping &amp; caravan</td>
<td>Permit required</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Host farm</td>
<td>Permit required</td>
<td>Permit required</td>
<td>Permit required</td>
</tr>
<tr>
<td>Group accommodation</td>
<td>Permit required, 'in conjunction with' other activities (max. 40 dwellings)</td>
<td>Permit required, 'in conjunction with' other activities (max. 6 dwellings)</td>
<td>Permit required, 'in conjunction with' other activities (max. 6 dwellings)</td>
</tr>
<tr>
<td>Residential building (e.g. backpackers' hostel)</td>
<td>Permit required, 'in conjunction with' other activities</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Residential hotel (includes motel)</td>
<td>Permit required, 'in conjunction with' other activities (max. 80 bedrooms)</td>
<td>Permit required, 'in conjunction with' other activities (max. 80 bedrooms)</td>
<td>Permit required, 'in conjunction with' other activities</td>
</tr>
<tr>
<td>Restaurant</td>
<td>Permit required, 'in conjunction with' other activities (max. 150 patrons)</td>
<td>Permit required, 'in conjunction with' other activities (max. 150 patrons)</td>
<td>Permit required, 'in conjunction with' other activities</td>
</tr>
<tr>
<td>Outdoor recreation facility</td>
<td>Permit required</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Exhibition centre (e.g. art gallery)</td>
<td>Permit required</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Function centre</td>
<td>Permit required, 'in conjunction with' other activities (max. 150 patrons)</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
</tbody>
</table>

Suggestions:

- Working with Tourism Victoria and Regional Tourism Organisations to develop tourism related business regionally.
The Rural Activity Zone could be utilised to develop identified tourism precincts. It is important to note that including land in the RAZ does not always lead to land being used for the designated purposes. A site specific approach may be more appropriate as this responds to land owner initiatives as they arise.

Proper planning policy is needed to facilitate and guide tourism into the Farming Zone. The lack of provision for tourism is a problem with the FZ.

Ensuring that the tourism activities are in support of the agricultural entities and not purely commercial.

Key questions:

- **Should the table of tourism uses be broadened to allow for additional and larger tourism facilities on farms?** For example wine trails are hard to achieve under the FZ as wine tasting facilities and accommodation are highly constrained in the Farming Zone (PUGRC. 2005).

3. **Food Processing**

The food and beverage / food processing sector is Australia’s largest manufacturing industry and was worth $20 billion in 04/05. The industry employs around 210,000 people and in excess of 40 per cent of food processing occurs in rural and regional areas. Meat processing is the largest employer with recent growth largely in the inner regional areas. Recent jobs growth in the food and beverage industries has been predominantly in non-metropolitan areas and this trend is likely to continue. This is especially important for the social fabric of Australia across regional and rural communities due to the long-standing trend towards farm aggregation and, accordingly fewer farmers.

![Figure 3.6 Food processing employment by region and census (DAFF, 2009).](image)

4. **Establishing Agricultural Clusters**

In terms of agricultural industries, a cluster is regarded as a group of farms and / or allied food and agricultural enterprises, individuals, organisations and agencies who share resources / outputs and work together on shared interests and toward a common goal.

Clusters provide farmers and other landholders with a new way of engaging with other farmers, other landholders and customers. The benefits of clustering accrue to the cluster as a whole and secondarily to the individual landholders making up the cluster, and their customers. Clusters can:
• Encourage the growth of local networks, which can induce change in management behaviours, including the dissemination of local knowledge among producers to help them learn about techniques, technologies, practices and the environment, which will make them more successful. Especially important for small and medium sized farmers who lack the resources to access needed managerial information (i.e. achieve agglomeration economies).
• Support entrepreneurial activity within communities.
• Interact across sectors and industries to provide further leveraged benefits (e.g. wine and tourism).
• Reduce a large burden of transaction and agency costs for individuals.
• Create a regional brand identity.
• Assist regions to move from producing basic commodities to providing sophisticated consumers with lasting branded experiences.
• Provide new avenues for technology transfer.

Looijen and Heijman (2013) have been able to identify the agricultural clusters through-out Europe.

Begalli et.al, in his research of Italian wine industry clusters stated: “This research presents the results of a study carried out for the Progetto Integrato di Filiera (PIF), initiated by the Soave Wines Consortium under the 2007–2013 Rural Development Plan of the Veneto region. The research examines a system of companies as a case study and reflects on the concept of the wine cluster, its identity and its governance mechanisms.

Specifically Begalli found that the clustering of the wine industry in Veneto provided “benefits at (the) company and territory levels” which included:
• More effective brand recognition through the realisation of economies of scale in marketing and communications strategies.
• A higher added value for the cooperatives’ supply of both bulk and bottled wine.
• Territorial brand recognition extends its impact to different wine chain supply levels. In this way, bargaining power with intermediates can be strengthened and control of the final market segments characterised by value for money competition can be enhanced.
• The reinforcement of cooperatives’ competitive positioning and ability to address and manage territorial governance, thanks to the establishment of a stable network.
• The achievement of market objectives, which strengthens the relationships between members and the cooperative, and enhances shareholders’ cohesion.
• The emergence of stable strategic networks, which facilitates territorial governance and relationships between private and public institutions as well as those between businesses operating in different industries. This also aids the development of integrated territorial marketing strategies.
The wine and food industries are pervasive in the Veneto region, and play a key role in the activation of innovative territorial governance models and strategies. As a consequence, the vital role and the multifunctional goals of these industries should be considered in public policy creation.

5. Agribusiness Roles in Local Government – VLGA Case Study (Rose. 2017)

Focus: Agribusiness roles in Local Government
- Dedicated agribusiness officers in Mornington Peninsula Shire and City of Whittlesea have uncovered and exploited significant assets to deliver community-wide benefits. This includes a $1b local food economy in Mornington Peninsula.
- There is substantial economic opportunity yet to be realised through sustainable agricultural production on peri-urban land. The economic value of peri-urban agribusiness has been significantly under-estimated (cf Foodprint Melbourne research), a problem that can be addressed by dedicated agribusiness officers.
- Agribusiness support delivered through local councils fills a capability gap that otherwise constrains the economic viability and sustainability of small to medium scale local farming.
- Agribusiness roles foster community connections and contribute to multiple council objectives (particularly economic development, municipal health and wellbeing, and sustainable green wedge management).
- Agribusiness officers are particularly well suited to local government. These roles are potentially better placed here than in the previous state-based extension officer model, as this tier of government connects more directly with the community and is the level at which farmers hold many compliance requirements.

What do agribusiness officers do?
Agribusiness officers are facilitators and connectors who work closely with established and first-generation farmers, colleagues across council and diverse community groups. Their work falls into three categories:
- Direct farmer engagement to support innovation, compliance and business viability
- Region-wide education & extension to share R&D, connect farmers in the region, build capability
- Strategic development to attract business, identify best use of the landscape, secure additional resources, and support integrated policy and council decision-making.

Why do councils – particularly interface councils - need them?
- Economic development – grow the local food economy and earning capacity of constituents
- Land use tensions – especially in peri-urban and growth areas the asset of productive agricultural land can be undervalued and permanently lost; the interface is a unique planning area
- Community-wide health and social outcomes – including access to local food, social connectedness
- Engage the farming community – in council process, to improve council reputation, for farmer welfare.

VLGA Recommendations:
1. Councils conduct a comprehensive audit to assess the potential of their agricultural landscape assets.
2. Agribusiness officers can best enable farmers and facilitate community-wide outcomes when located within the Economic Development unit, working closely with others and with actions integrated into key strategic documents (i.e. the Economic Development Plan or Green Wedge Management Plan).
3. State and/or Federal level funding to support agribusiness officers in local government would achieve valuable outcomes for the state since these roles are crucial in interface councils.
Key questions:

- Should the peri urban region identify and support alternative food networks?
- Would more flexible Zone provisions be a more effective and responsive way of supporting innovation in farming enterprises, rather than applying the RAZ and then hoping that the affected landowners will take up the opportunities?
  - OR is the Farming Zone already too flexible? Does the Planning Scheme need to provide clearer policy direction to assist decision makers with innovation, rural tourism etc.

Possible Solutions to Agricultural Land Management Issues

4. Transferable Development Rights or Agriculture Enterprise Credit Scheme

One of the main drivers for the subdivision of agricultural land is often a farmer entering the last stages of their working life and selling land to fund retirement or the absence of family to continue the farm. The key to saving productive agricultural land is to ensure it is not subdivided for residential development purposes. The concept of Transferable Development Rights (TDRs) or Agriculture Enterprise Credits (AECs) addresses this issue directly, by separating land from its ability to be capitalised through subdivision and sale.

TDRs are explained by Barrese (P.236, 1983) as: “TDR plans operate in the following way; one area is designated as a “preservation area” and a second designated “transfer area.” Restrictions are placed upon development in the preservation area. As compensation for the loss of speculative land value, the owners in the preservation area are given some quantity of “development right certificates” (DRC’s).”

Mr Ed Beil, a famer in Sydney’s peri urban region has based his similar concept for AECs on the Heritage Floor Space Scheme which provides floor space credits to developers who protect and renovate heritage buildings. Beil’s scheme for agriculture would enable farmers to earn Agriculture Enterprise Credits based on the value of the food produced by the farm. These credits could be purchased by developers and used to increase the density of a development in an urban area. This system would provide much need boost to farm income and encourage the retention of farms and productive use of farms, while supporting increased urban density rather than sprawl.

In both cases, farmers could realise some additional value from their properties without having to sell for subdivision or take farming land out of the agricultural production system.

TDRs are used commonly in the US. Barrese (p.239) gives several examples of where the TDR concept has been used in managing heritage in the US. It is noted that in some areas the recipients of the TDRs are not supportive. Two examples from Barrese are below:

17 http://www.australianfoodsovereigntyalliance.org/blog/2014/06/01/how-to-save-sydneys-urban-fringe-farms-and-benefit-developers/
LOCATION: Hillsborough Township, New Jersey
PROPOSED GOALS: “to add flexibility to develop proposals, to preserve land for public and agricultural purposes, to prevent development on environmentally sensitive areas and to aid reducing the cost of providing streets, utilities, and services”

BASIS FOR TRANSFER AREAS ELECTION: “this ... permits owners of lands in the (transfer) Districts to increase the density of development on that tract in exchange for dedicating separate ... lots of either open space, school site or other public use." This ordinance has the greatest potential for abuse. Not only need there be no relationship between the transfer and preservation areas, but the ordinance does not specify either. Any landowner can offer a tract of land for "public use" in exchange for the right to develop a parcel. Often, this results in a designation of neighbouring land as open space-preserving the view for the landowner and reducing his property tax bill.

LOCATION - New York City
PROPOSED GOALS: To protect Historical Landmarks
BASIS FOR TRANSFER AREAS ELECTION: "The City Planning Commission may permit development rights to be transferred to adjacent lots from lots occupied by landmark buildings." Day (1984, P.6) notes that Montgomery County in Maryland USA also used TDR’s to protect their agricultural land.

TDR’s were a part of the Victorian Town Planning Act (1983-4) version according to Day (p.6) who outlined s59C of the Act allowed for TDR’s to be used in Victoria. The 1982 Central City Development Manual for Melbourne also allowed for TDR’s to be used.

5. Farm Economic Viability Assessments

Farm economic viability assessments would potentially be a higher level assessment than is currently required under Farm Management Plans. Essentially, these assessments would require an Agronomist to review a proposed farm management plan for any agricultural development where the land size was below 40 hectares.

Any subdivision of agricultural land below the 40 hectare minimum would require such an assessment. Subdivision of larger lots would not require such an assessment. To ensure integrity in the process, an applicant would pay Council for the assessment, and Council would either complete the assessment in-house (if Council contained in-house expertise) or outsource the work to a consultant Agronomist. The Agronomist would be required to consider if the lot size is viable and sustainable economically over the long term, to have the subdivision approved.

The aim of this process would be to ensure that small farm lots could not be developed into large residential lots by stealth and with the corresponding loss of agricultural land over time.

6. Tenement Control

Tenement controls were historically used in rural and peri-urban areas of Victoria to minimise development in inappropriately subdivided areas; however, they are now only significantly used within the Shire of Yarra Ranges (Matthews.2013). Over time tenement provisions have largely been removed from planning schemes due to complexities of administering them over time, and for rural equity reasons, according to Hansen Partners (Baw Baw. 2016).

Recently, there has been resurgence in interest in the control, as evidenced through its recent inclusion in the South Gippsland Planning Scheme (South Gippsland Shire Council 2010), and as a...

According to Matthews (2013), there has little assessment of how planning tools have performed ‘on the ground’, particularly where the existing allotment pattern contradicts the strategic aims for an area.

Tenement controls operate by restricting development within groups of lots known to be in the same ownership (tenement holding) on a specific date (known as the ‘effective date’), by limiting the amount of dwellings that can be constructed to a specified number (usually, although not exclusively, one) per holding, as opposed to one per lot.

The Chart below graphically explains the way in which tenement controls work. The example assumes all the lots are vacant.

- Block A – is a single lot greater than 40ha in size. A permit is not required for the use of a dwelling on the land, whether or not it is a separate tenement.
- Block B – is a single lot less than 40ha, therefore a single dwelling is not an as-of-right use and a permit would be required. Under tenement control, a council would support the grant of a permit for a dwelling if the lot was a separate tenement at the Specified date.
- Block C – three lots in the same ownership (separate tenement) at the Specified date. The three lots combined are in excess of 40ha but each lot is individually below 40ha. A council would support a permit for 1 dwelling only on the combined site.
- Block D and E – these are single lots less than 40ha. A dwelling would not be supported on either unless they were separate tenements at the Specified date (same as Block B).

Example of Tenement Control Application.

<table>
<thead>
<tr>
<th></th>
<th>C (42 ha)</th>
<th>E (20 ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (50 ha)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D (15 ha)</td>
<td>B (35 ha)</td>
<td></td>
</tr>
</tbody>
</table>

Case study – Tenement Use and Control of Growth in the Dandenong Ranges

In response to significant population growth in the late 1960s, the State Government approved Statements of Planning Policy 3 (Dandenong Ranges) and 4 (River Yarra in 1971), which explicitly identified the Dandenong area as being primarily for recreation and conservation, rather than new residential development.

The Upper Yarra Valley and Dandenong Ranges Authority was commissioned to create and implement a Regional Strategy Plan (RSP). As part of the RSP, three strategies were identified and implemented to permanently reduce the number of developable lots in the Dandenong Ranges:
1. Acquisition of land by the State Government. Due to associated costs, this was generally limited to lots adjoining public land or at extreme risk of wildfire, such as the western face of Mt Dandenong.

2. Restructure and consolidation of ‘old and inappropriate’ subdivisions, in consultation with affected landowners.

3. Tenement controls. These were already in place in the rural areas of the Shire of Upper Yarra, various parts of the Shire of Sherbrooke and within the Melbourne and Metropolitan Planning Scheme (MMPS) in some non-urban zones by the mid-1970s (MMBW 1977, 81 cited in Matthews. 2013). Tenement controls were also widely used by the Town and Country Planning Board in planning instruments designed and implemented in rural areas of Victoria, particularly in coastal locations, to minimise development within fragmented and often quite large land parcels still held in common ownership.

The tenement controls were introduced within the RSP, and significantly expanded in scope. Tenement controls had previously been applied to farming areas or the urban fringe however in Dandenong the tenement control was being applied over previously zoned residential land. The tenement controls under the RSP were also implemented as an outright prohibition on development, rather than as a permit trigger, as had been the case under previous planning schemes. Matthews (2013) believes that consequently, the tenement control contained within the RSP was significantly stronger, as its operation was not subject to merits review.

According to Matthews (2013), the cumulative impact of buy-backs, restructure plans and increasingly strict planning controls (particularly with regard to vegetation removal and landslip) have fostered greater community acceptance of the limited capacity of the Dandenong Ranges to absorb additional residential development over the last 30 years. However, she notes that the majority of holdings (62 per cent) remain unchanged since the introduction of the tenement control and the RSP. While the lots which make up a tenement holding remain as individual parcels of land, the potential remains for them to be sold off separately and applications for planning permits to be made and approved.

Matthews (2013) identifies administration as a key limitation of tenement controls. A search of Council property files indicates that the circumstances under which 20 of the 22 permits issued for additional dwellings in the Dandenong Ranges during the 1980s is unclear. Due to the complexity involved in identifying a tenement holding, it is possible that some of these approvals were mistakes. Even during the current decade, three of the five permits granted for additional dwellings in tenement holdings do not mention tenement within the associated delegate report. Matthews (2013) suggests through mapping of Shire land ownerships and tenements would assist with the consistent application of a tenement control.

4. Right to farm laws

Right to farm laws originated in the United States, with the first laws passed in 1963 in Kansas. The main purpose of these was to grant immunity to farmers from nuisance lawsuits brought by neighbours who are adversely affected by agricultural activity. By 1994, all states in the United States had enacted right to farm laws and similar laws are in place in all Canadian provinces.

Right to farm laws in Australia are only applicable in Tasmania. The Primary Industries Activities Protection Act 1995 (Tas) was introduced to stop the common law action of nuisance being used to prevent farmers pursuing the normal, legitimate and statutorily authorised activities which form a necessary part of good agricultural practices (cited in Productivity Commission Report).
In Victoria, the Sale of Land Act 1962 previously provided a general warning to purchasers about amenity impacts of surrounding agricultural activities. In 2014, this section was deleted, and replaced with a checklist that real estate agents must make available to buyers.

In NSW, the Department of Primary Industries has released a Right to Farm Policy, which expresses support for producers’ right to farm, to the extent of what is lawful, echoing the Right to Farm Policy put forward by the Greater Hume Shire Council in 2012.

In Western Australia, the Agricultural Practices Disputes Board, instituted by the Agricultural Practices (Disputes) Act 1995, was repealed due to the very limited number of disputes to resolve.

**Key questions:**
- Is there another solution?
- Would any of these solutions make a significant difference to supporting agriculture?

**Conclusion**

The purpose of this paper is to generate discussion on the issues and opportunities facing the agriculture sector and agricultural lands in the peri urban region surrounding Melbourne and Geelong. In particular the Discussion Paper seeks to define the role of Victoria’s peri urban agriculture and region.

As shown in the Discussion Paper, the agricultural lands of the peri urban region are a key element of the region’s identity, economy and health. They play a dual role in the region’s economy by both being a local employer and generator of economic activity from farm produce and through their role in supporting the region’s tourism offering through agri-tourism experiences including farmer’s markets, cellar door sales and other farm based experiences.

The Paper highlights that the agriculture industry (including fishing and forestry) supports more than 5,268 jobs in the region and accounts for almost $2 billion (or 26 per cent) of the region’s $7.7 billion in Gross Regional Product. The peri urban region produces 17 per cent of Victoria’s primary produce including 21 per cent of egg production, 11 per cent of poultry and 6 per cent of milk production. The region also provides 80 per cent of Australia’s trout production.

Unfortunately, the agricultural land across the region is under significant pressure from residential encroachment and subdivision for residential estates and rural lifestyle holdings. Additionally the approval of bulky retail and light industrial in the Farming Zone adds to the segmentation of use and further subdivision of farming land.

The Discussion paper examines the broad range of policy settings covering agriculture land use and protection in Australia and Victoria. The Paper has also considered international experience and examples that may be applicable to the Victorian peri urban issues.

Local and international examples indicate that the solution for protecting productive agricultural land lies in a combined approach across regions and with State or Provincial Government involvement. It also requires a multifaceted approach which contains a range of controls and initiatives which do not adversely impact on the farmer, but rather assist to build stronger farms supported by the surrounding communities and authorities.

The Discussion Paper recognises that the ageing of Australia’s farmers and the limited numbers of younger farmers able or willing to move into the industry is also placing pressure on land use, agricultural employment and production. Of significant concern across the region is the potential...
impact of significant numbers of retiring farmers, seeking to release the equity in farms to fund retirement. Currently these farmers are often able to obtain a higher return on their farm investment through sale as residential land.

The range of other pressures that are impacting on the viability of the sector and opportunities to strengthen local agriculture including climate change, invasive weed management and the trend towards the intensification and automation of the industry were examined. The challenge for the sector is that automation may eliminate low to mid skilled employment opportunities in the sector and place further pressure the smaller producers who will be unable to compete with the large economies of scale produced through automation.

The forecasts for population growth and requirements for food production into the future should be cause for alarm and urgent action to protect a key part of Victoria’s food bowl from further segmentation and loss of farm land. In fact, 16.3 million hectares of land is required to feed Melbourne each year, an area equivalent to 72 per cent of the state of Victoria.

The impacts of climate change will also further alter the areas and food that can be produced in the region over the longer term.

The Councils of the Peri Urban Group of Rural Councils have identified the protection of productive agricultural land as a priority not only for the health and sustainability of the peri urban region, but that of Melbourne and Victoria.

The key questions passed throughout the Discussion Paper have been devised to illicit additional information and an indication of support or concern regarding the challenges raised and the solutions that have been posed.

Through the development of the Discussion Paper and consultation with stakeholders and the community, the Peri Urban Group of Rural Councils hopes to build a compelling case for additional support for this important resource for the region and Victoria.
<table>
<thead>
<tr>
<th><strong>Glossary</strong></th>
<th><strong>Definition</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Agriculture</strong></td>
<td>The science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products.</td>
</tr>
<tr>
<td><strong>Agriculture Cluster</strong></td>
<td>A cluster is regarded as a group of farms and / or allied food and agricultural enterprises, individuals, organisations and agencies who share resources / outputs and work together on shared interests and toward a common goal.</td>
</tr>
<tr>
<td><strong>Agriculture Enterprise Credit (AEC)</strong></td>
<td>Farmers could earn Agriculture Enterprise Credits based on the value of the food produced by the farm. These credits could be purchased by developers and used to increase the density of a development in an urban area. This system would provide much need boost to farm income and encourage the retention of farms and productive use of farms, while supporting increased urban density rather than sprawl. Also see TDR.</td>
</tr>
<tr>
<td><strong>Agribusiness</strong></td>
<td>The businesses collectively associated with the production, processing, and distribution of agricultural products.</td>
</tr>
<tr>
<td><strong>Agri-food</strong></td>
<td>The business of producing food agriculturally (as opposed to through hunting, fishing, gathering, etc); food so produced.</td>
</tr>
<tr>
<td><strong>Agri-tourism</strong></td>
<td>Tourism activities and experiences related to agriculture. Common examples include farm based experiences, cellar door sales, farmer's markets, farm stays.</td>
</tr>
<tr>
<td><strong>B-Double</strong></td>
<td>A B-double consists of a prime mover towing two semi-trailers, where the first semi-trailer is connected to the prime mover by a fifth wheel coupling and the second semi-trailer is connected to the first semi-trailer by a fifth wheel coupling.</td>
</tr>
<tr>
<td><strong>Broadacre</strong></td>
<td>Broadacre is a term used, mainly in Australia, to describe farms or industries engaged in the production of grains, oilseeds and other crops (especially wheat, barley, peas, sorghum, maize, hemp, safflower, and sunflower), or the grazing of livestock for meat or wool, on a large scale (i.e., using extensive parcels of land).</td>
</tr>
<tr>
<td><strong>Farm Economic Viability Assessments (suggestion)</strong></td>
<td>These assessments would require an Agronomist to review a proposed farm management plan for any agricultural development where the land size was below 40 hectares.</td>
</tr>
<tr>
<td><strong>Farm Management Plan</strong></td>
<td>The construction of a dwelling on land that falls within a Farming or Rural Conservation Zone may require the preparation of a Farm/Land Management Plan as part of your Planning Permit Application. A farm management plan is a plan which shows what an agricultural property is like now, intended works, timeframes and the likely financial return. It would generally describe the layout of the property, the physical characteristics of the land in terms of soil type, slope, conditions of rivers or streams and other physical features including dams, wood lots, scattered trees, fences and any physical improvements proposed. The plan should also describe the current and intended use of the land as a farm.</td>
</tr>
<tr>
<td><strong>Farming Zone</strong></td>
<td>Is the main land use category in rural areas.</td>
</tr>
<tr>
<td><strong>Horticulture</strong></td>
<td>The cultivation of a garden, orchard, or nursery; the cultivation of flowers, fruits, vegetables, or ornamental plants. The science and art of cultivating such plants.</td>
</tr>
<tr>
<td><strong>Peri Urban</strong></td>
<td>Peri-urban areas (also called rurban space, outskirts or the hinterland) are defined by the structure resulting from the process of peri-urbanisation. It can</td>
</tr>
</tbody>
</table>
be described as the landscape interface between town and country, or also as the rural—urban transition zone where urban and rural uses mix and often clash.

**Paterson's Curse**  
Paterson's curse is poisonous to grazing animals. The plant contains pyrrolizidine alkaloids which cause cumulative chronic liver damage, loss of condition and sometimes death. Pigs and horses are most susceptible. Ruminants (sheep, cattle and goats) are less affected because the alkaloids are largely broken down in the rumen.

When Paterson's curse displaces legumes in a pasture, nitrogen fixation is reduced and soil fertility declines unless fertiliser is applied.

**Regional Cities**  
Comprises the 10 largest cities in Victoria – Geelong, Ballarat, Bendigo, Shepparton, Wodonga, La Trobe, Wangaratta, Horsham, Mildura, Warrnambool.

**Rural Activity Zone**  
Is intended to be applied only to selected areas suitable for a wider range of tourism, commercial and retail uses in addition to agriculture.

**Rural Conservation Zone**  
Applies to rural land with environmental significance. All agricultural uses require a permit in this zone and intensive animal industries and most non-agricultural commercial uses are prohibited.

**Rural Living Zone**  
Used for rural lifestyle holdings.

**Serrated Tussock**  
Serrated tussock is a perennial grass native to South America. It is a serious weed of pastures and native grasslands. Serrated tussock is a serious weed of pasture with significant impacts on carrying capacity and a reduction in agricultural return. Its presence greatly affects land value. Livestock are unable to digest the plant due to its high fibre and low protein content, resulting in a loss of condition and in extreme cases starvation. The seeds of serrated tussock also contribute to vegetable fault in wool thus impacting on quality.

**Tenement Control**  
Tenement controls operate by restricting development within groups of lots known to be in the same ownership (tenement holding) on a specific date (known as the ‘effective date’), by limiting the amount of dwellings that can be constructed to a specified number (usually, although not exclusively, one) per holding, as opposed to one per lot.

**Transfer Development Rights (TDR)**  
TDR plans operate in the following way; one area is designated as a “preservation area” and a second designated “transfer area.” Restrictions are placed upon development in the preservation area. As compensation for the loss of speculative land value, the owners in the preservation area are given some quantity of “development right certificates” (DRC’s). See also AEC.

**Viticulture**  
The culture or cultivation of grapevines; grape-growing; wine production.

**Zone**  
Zones indicate the primary character or use of the land, whether it is residential, industrial or rural, and determine the types of uses that may occur in that zone.

Some local areas have special planning controls (known as overlays), such as areas of significant vegetation or special heritage significance. These controls are in addition to the zone controls and ensure that important aspects of the land are recognised.
References


Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council’s Discussion Paper. June 2017


Council of Europe, European Landscape Convention (Florence 2000), http://www.coe.int/en/web/landscape/the-european-landscape-convention


Day, Phil. 1984, “Carrots or the Stick?: The scope for incentives in development control” Urban Greenbelt Foundation “About the Greenbelt”, available at www.greenbelt.ca Policy and Research, Vol. 2, no.3 pp.5-10


Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council’s Discussion Paper. June 2017


Supporting Agriculture In The Peri Urban Region. Peri Urban Group of Rural Council’s Discussion Paper. June 2017


Appendix A – Discussion Paper Contributors

The PUGRC is grateful to the following organisations and individuals who took the time to provide feedback and express their support for the Agriculture Discussion Paper.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Comments</th>
<th>Action</th>
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</thead>
</table>
| City of Melton             | • Supports  
• Interested in being updated on, or being involved with future work or advocacy. Work alongside PUG Councils to advocate for support.  
• Willing to share resources and information as required                                                                                   | • Noted and submission acknowledged. Will approach to inquire if they would share the discussion paper with their community. |
| Coliban Water              | • Intensification of agricultural activity or rural residential development must be coupled with measures such as waterway riparian buffering with native vegetation and fencing.  
• Farm Management Plans are ineffective from a statutory level; however, Land Management Planning that identifies areas or zones for protection, and which are then registered on property titles, will allow for ongoing land activity across multiple ownerships.  
• Planning Zones and Overlays must provide clear direction to planning officers in councils and current or future landowners on allowable actions that apply through the planning permit conditions and approvals process.  
• Support the concept of Transfer Development Rights (TDR) or Agriculture Enterprise Credit (AEC) if these concepts were used to eliminate the ongoing subdivision of land and the potential over-reliance on rural land as a superannuation support.                                                                 | • Noted  
• Noted  
• Agree  
• Noted                                                                                           |
| Victorian Planning Authority | • Strongly supports the ongoing protection of high-quality agricultural land in peri-urban areas  
• It is essential that state planning policy supports the ongoing protection of significant agricultural lands and that the statutory planning framework sufficiently manages associated use and development.  
• Ongoing threat from residential encroachment and land fragmentation. Planning is well placed to manage this challenge.  
• The Govt should also ensure it sufficiently supports the agricultural industry, as only some of the issues identified…..can be addressed through the State Planning Framework.  
• At present, state policy support for the protection of ag land is provided at clause 14.01.1, providing clear strategic intent to retain ag land broadly. A shortcoming in the Bacchus Marsh context is the absence of reference to food security for Melbourne’s food bowl. Regionally based land use planning objectives that acknowledge this key role of peri-urban areas are required.  
• State policy should also provide support for, and even identify ag employment precincts or clusters.  
• Updated Regional Growth Plans that provide more guidance on implementation are also needed. These should address                                                                                   | • Included in recommendations in Discussion Paper                                     |
 Karnataka, India. The project aims to improve crop yields, reduce <ref>pests</ref> and increase resilience to <ref>climate change</ref> through the adoption of sustainable <ref>agricultural practices</ref> and the establishment of local initiatives.

### Landcare
- Need to stop developing our most productive lands for non-productive purposes.
- Equine industry needs to be greater recognised as a peri urban land user.
- International examples – Washington State, USA. Legislation in place around intensive horse keeping in peri urban areas.
- Invasive weeds – potential key question ‘How do we become more collaborative in our approach to invasive weeds and pests?’
- Change questions to open questions

### Barwon Water
- Supports the development of ag in the peri urban region where projects are feasible and viable.

### Mornington Peninsula Shire
- Revise intro to reflect inner peri urban
- Suggestions for revision of layout
- Move international examples to an appendix
- Consolidate pressures into 1 section
- Done
- Noted
- Noted
- Noted

### Goulburn Broken Greenhouse Alliance
- Revision and expansion of project content
- Completed

### Individual
- General comments and support for paper
- Noted

### Western Alliance for Greenhouse Action
- Support inclusion of climate change as a key risk
- Agree

### VLGA
- Food Systems and the Role of Local Government Paper
- Cited

### North Central CMA
- North Central Victoria Regional Sustainable Agriculture Strategy
- Two agricultural planning zones
- Cited
- Noted

### DELWP
- Relevant directions and policies from Plan Melbourne 2017-2050
- Note Plan Melbourne and Regional Growth Plans as the policy framework for managing agricultural lands
- Note the definition of peri urban in Plan Melbourne
- VIF 2016 figures
- Already included
- Already included
- Noted and referenced
- Updated where necessary.