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A NEW IDENTITY FOR THE PERI-URBAN

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Dedication

To Charlie, Harry and Meg

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Declaration of Originality

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Abstract

The story of agriculture in peri-urban Australia is one of short term intensive farming, regularly relocating in the face of urban demand. Planning solutions implemented by governments to protect productive lands from urban growth have not succeeded, with the result that this area of interface between urban and rural lands has become highly contested and confused. The prevailing view identifies this space as having no firm identity, inevitably transitioning to residential use. This study sought to unpack the peri-urban to establish its identity, using its multiple elements as clues. Investigating contextual forces of population, landscape and food by applying the theoretical lenses of planning, valuation, agriculture and landscape resulted in a conceptualisation of the space as wicked, yet multifunctional and collaborative.

Using mixed methods, and recruiting voice as a tool, the study deconstructs the peri-urban landscape, revealing an alternate view of the space which not only captures the contests and wickedness, but potentially finds a new accommodation of them. Pulling the peri-urban apart identified a cacophony of voices, which not only challenges the prevailing view but also reveals that the contestation contributes to a specific peri-urban identity. The research concludes that these spaces are not transitional or temporary, rather their multifunctionality and dynamism give them an identity and integrity in their own right. A critical part of this identity is captured in the idea of a new agrifood market in the space, different in structure from the traditional market, pulling multiple uses and values together. It has an unexpected interface – focused as much on relationships as food production. It is nimble, able to react quickly to consumer demand and its close proximity to urban centres is critical. The ties that bind it are strong, but they are often informal. It is a blue ocean (Kim & Mauborgne, 2006) with significant implications for how we plan, value and manage these messy peri-urban agriscapes.

Chapter 1 The Research Context

1.0 Introduction

> *"To tell a story about agriculture is to also tell a story about land."* (Pritchard, Neave, Hickey & Troy, 2012, p. 7)

This research had its foundations in a concern about the ongoing loss of productive land to urban development in Australia and planning's potential culpability in this. In particular it began as a study of peri-urban land-use and the manner in which Australia's peri-urban landscapes were irrevocably changing, for better or worse. It seeks to research the role of land-use planning mechanisms in this change process and aimed to shift the mindset evident in the theory that this point of rural-urban interface was nothing more than a temporary space. Part of this included an exploration of whether such a shift could assist in keeping peri-urban land productive. The study investigates the peri-urban in both Australian and international contexts, hoping to build a new approach to underpin the conduct of peri-urban planning into the future.

What is the "peri" urban? As population growth continues to be concentrated in capital cities, and with pressure mounting on the fringes of cities to accommodate this growth, attention has once again shifted to the peri-urban space. This recent upsurge in interest in the fringe harks back initially to the 1940s, with international interest in the many concerns associated with metropolitan expansion into the rural hinterlands in North America and the UK, and to a lesser degree Australia. Since the 1980s, the literature has done much to recognise the existence of a rural fringe, using a range of relatively synonymous terms to describe the space, conceptualising its development and likely future trajectories.[1] This thesis picks up the threads of these concerns once more, but seeks to step away from this historical literary lineage. Whilst some may view this as a weakness, this is a conscious decision to enable a broader and renewed perspective.

The use of the term "peri" has particular geographic connotations, suggesting an area adjacent to or adjoining urban areas or cities, situated in the space between what we know as urban and rural. Partnered with the term urban, it raises connotations more akin to developed spaces than its formerly rural status would suggest. It is a place that is *"...neither urban nor rural... a dynamic interface and transitional zone... characterized by a diverse range of land uses, communities and environments."* (Land and Water Australia, 2007, p. 4). The "urban" in peri-urban embeds the idea of a space in transition, narrowing the scope of possibility, reflecting the geographical positioning of the space. It stonewalls emergent ideas of the peri-urban as a place with a future other than an urban one, and a place quite different from either urban or rural spaces.

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[1] For a broader discussion on the history and sociology of knowledge surrounding the peri-urban fringe, consult writers such as Christopher Bryant, Ken Beesley and Martin Bell, who discuss different perspectives and pressures relating to migration and mobility, population, agriculture and so on.

The zone surrounding Australia's capital cities, regional cities and centres has been identified as one of the distinctive characteristics of Australian urbanisation (Bunker & Holloway, 2002). Characterised as an area of rapid population growth, it contains a wide variety of residents and is the source of many different products and experiences. In many places, despite appearing as a ribbon of land between coast and country, it is "*…a theatre where complex shifting interactions of natural resource management, rural production and metropolitan growth/influence is played out*" (Bunker & Holloway, 2002). Peri-urban areas have been described as superficially rural districts within the sphere of influence of adjacent urban centres – zones of transition between the edge of the newest suburbs and the outer limits of the commuter belt (McKenzie, 1996). Some interpret these spaces as rural districts, under the influence of urban property markets (Nelson, 1990), highlighting the intersection of a transitional view with consequences for agriculture and its peri-urban forms (Budge, 2010, McKenzie, 1996).

Moving away from the traditional transitional urban conceptualisations to think about the peri-urban as a distinctive space provides a step towards the view that this research seeks to embrace (Halfacree, 2007; Soja, 1996). The interface nature of these areas, which in fact creates this urban-rural conundrum, suggests a distinct settlement pattern, an identifiable middle landscape between the urban boundary and rural pursuits (Buxton et al., 2006; Davis, Nelson & Dueker, 1994); a distinctive zone between urban and rural areas, or an area being transformed (Buxton et al., 2006). This transformation was noted by Pryor (1968) as suggesting a zone of impermanence, a place of constant and usually irreversible change. The research takes a broad view of the peri-urban, using key characteristics of urban incursion, population growth of significant scale, changing land-use and competition for amenity, productive, biodiversity and opens space resources to identify peri-urban space.

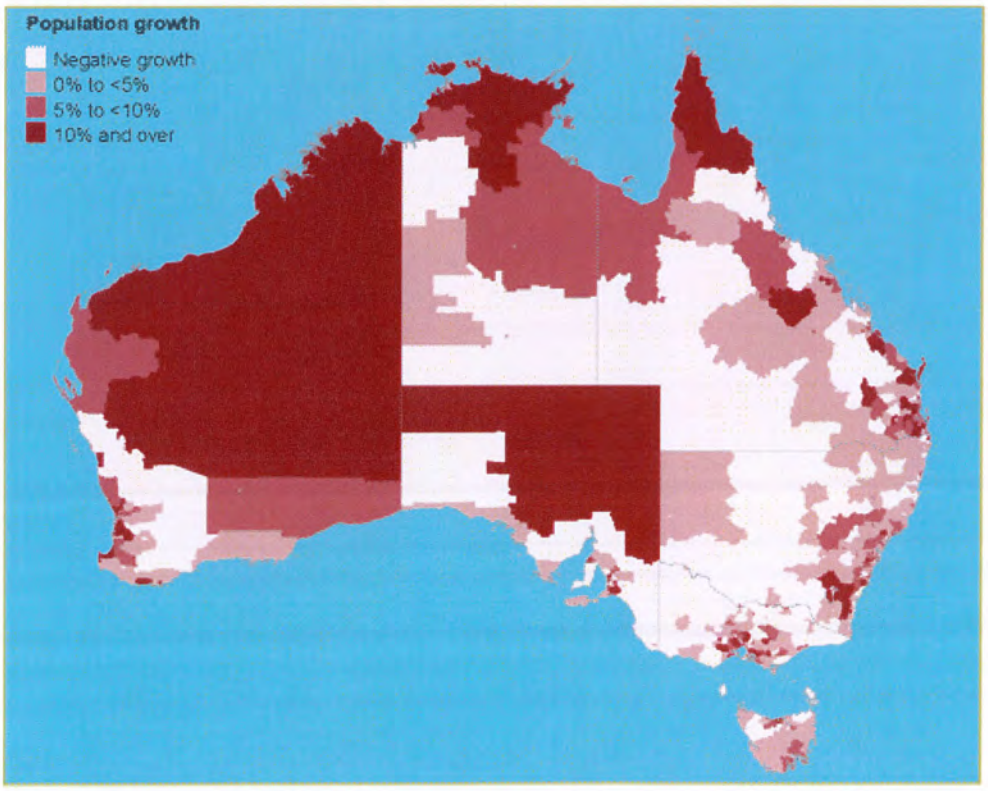
Quantifying the Australian peri-urban is not easy. "*The urban margin or peri-urban fringe, the zone of most rapid growth and change is the least well understood*" (Bourne et al, 2003:251), and this presents a major challenge for the research. Whilst much of the urban population growth has occurred in Australia's peri-urban fringe, there has been very little analysis of what this means in terms of the statistics. Buxton et al (2006) note that whilst researchers have described the extent of peri-urban areas and their scale and development rate in North America, the situation is much less clear in Australia and Europe. A 1995 study estimated that two-thirds of Australia's population growth has occurred in or around the major cities (Australian Urban and Regional Development Review), but again, no specific estimates were made. Whilst Australian Bureau of Statistics reporting includes peri-urban areas, these are merged into the major reporting classifications of Greater Capital City Statistical Area (the category which represents the socio-economic area of each state and territory capital city) and Significant Urban Areas which make developing a nuanced statistical picture of peri-urban population, growth and change highly difficult. Statistics are now available that estimate the turnover of rural land in Australia (Pritchard et al., 2012), but these do not differentiate between rural and peri-urban land, meaning there is a lack of understanding about the extent of change and the limits of the land resource.

Recent data provided by Hugo (2013) gives some insight into the Australian peri-urban situation. Hugo identifies to two formal groupings of peri-urban areas, the National Growth Areas Alliance (NGAA), consisting of 25 local government areas across mainland Australia, and a further 46 areas across the country including Tasmania, which he called adjoining areas. Using data from the 2011 ABS Census, Hugo identifies population growth and change for these areas as follows:

	Alliance LGAs (as a percent of Australia as a whole 2011)	Adjoining Areas (as a percent of Australia as a whole 2011)
Total population	15.9	9.9
Population growth 2006-11	35.4	9.4
Household growth 2006-11	31.6	10.3

Further analysis of population growth (as at 2012) highlights that whilst inland rural areas experienced falls in population numbers, above average growth continues to occur in the peri-urban fringe and particularly in many regions of Western Australia (Australian Institute of Health and Welfare, 2013).

Figure 1.1 Population Growth (Australia 2012)



Across the world, peri-urban regions have been subject to an almost universal expansion of metropolitan areas, albeit the drivers and outcomes have differed (Buxton et al., 2006). Often, they are the fastest growing regions with high strategic, spatial, economic, social and environmental significance.

Universally, because of this significance and growth, they are also usually the most contested areas of land (Buxton et al., 2006) because of the range of competing claims to use the space. Peri-urban Australia features a range of challenges which will underpin the manner in which the nation grows and develops into the future and already, their impacts are clearly displayed both positively and negatively. Highly interdependent and connected, they are in need of initial consideration individually, to determine what they might mean for the greater whole.

The challenges can be broadly described as population, food production and landscape protection. Initially, the research explores these challenges individually, to understand their influence on peri-urban landscapes and the values at work within them. Policymakers, academics and commentators are currently engaged in a critical discourse about an appropriate and sustainable population for Australia (Burke, 2011; Dempster, 2010; Franklin, 2010; Henry 2009; Hugo, 2012) and, related to this, the need to redesign our agrifood systems to respond to consumer demands, food security and pressures of climate change (Budge 2009, 2010; Burke 2010; Caldwell et al 2011; DAFF 2012; Donovan et al 2011; Dixon 2011; Keogh 2011; Three Pillars Network 2012). The response to these matters has critical impact for the sustainability of landscapes and ecosystems. Arguments and debates around these issues continue at the federal level, yet much of the discourse and response activity is occurring at grass roots and local levels. Whilst these matters have been discussed at national forums of government, a lack of collaborative outcomes around these policy issues is concerning. There appears a need for holistic, systemic outcomes.

The literature contains many references to elements of these challenges when discussing the peri-urban; however, there has been limited theoretical exploration of the contextual relationship between them. Discussions and debates about these challenges are relevant to peri-urban Australia because the peri-urban is and will continue to be the location where these issues play out. These are the landscapes that will be most affected by decisions made about population and growth. For example, if a revised policy locates population growth into the urban fringe outside of the regulated boundary, then this has obvious consequences for the landscape values, ecosystems and ongoing sustainability of productive agriculture already occurring in these locations. This research takes a new approach to exploring the peri-urban by applying the lenses of transforming agriculture, land valuation and land-use planning over these challenges.

1.1 The Peri-Urban Challenges

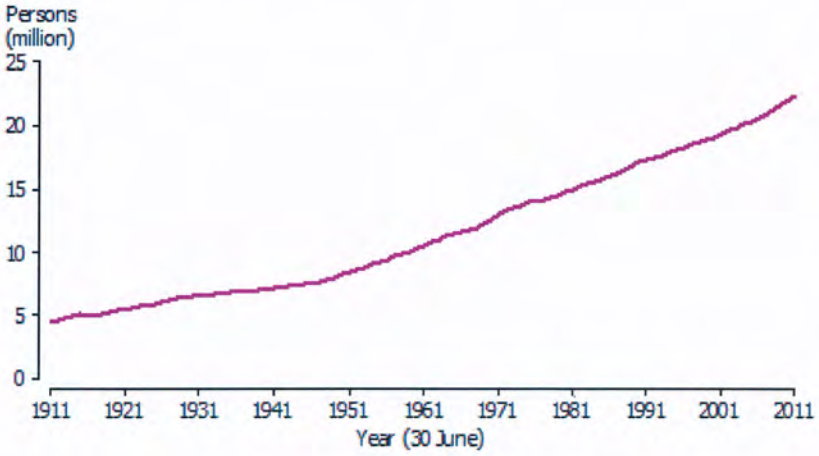
1.1.1 Towards a sustainable population

The dominant characteristics of the Australian population and its settlement pattern are well known and include:

- its relatively small size compared with other countries;
- its high degree of geographical concentration, described as long ago as 1967 by Rose;
- very low population densities across substantial parts of the rest of the nation (McGuirk & Argent, 2011, p. 318).

The Australian Bureau of Statistics (ABS) has mapped Australia's population growth since European settlement since 1788, and Figure 1.1 below shows clearly how population has grown significantly over the last 100 years. According to the Australian Demographic Statistics for the period ending December 2012, the national population grew to 22,906,400 (ABS, 2013). This reflected an increase of 394,000 people since 31 December 2011 and an increase of 94,100 people in the quarter commencing 30 September 2012. During 2012, national population grew by 1.8%, with natural increases responsible for 40% of this growth. All states and territories recorded positive population growth in 2012, with rates ranging from 0.1% to 3.5%.

Figure 1.2 100 Years of Population Growth



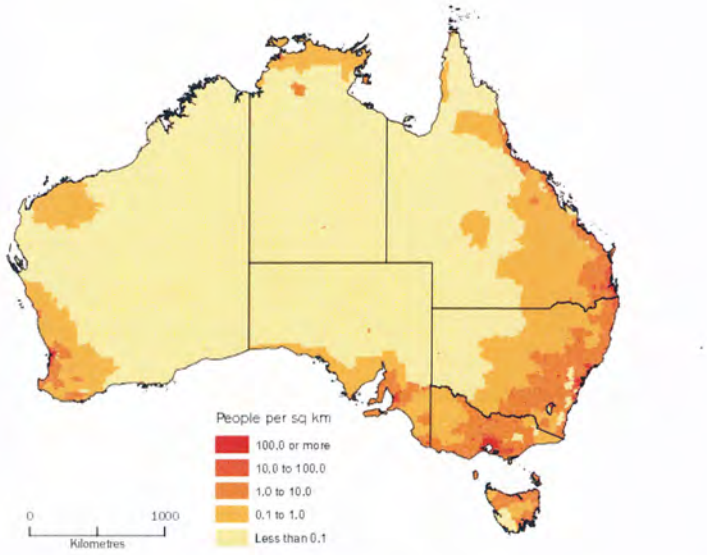
(ABS, 2012a)

The bulk of population growth has been driven by net migration from overseas and it is expected that this will continue (ABS, 2010). Most of this expansion is expected to occur in the major cities, especially the state capitals. This suggests conditions of metropolitan primacy, first noted by Rose in 1966, will continue to prevail in terms of settlement patterns. By June 2011, Australian capital cities were home to two thirds of Australia's population (or 14.7 million people), representing an increase of 2.1m people in the ten-year period to 2011 (ABS, 2012a). Capital city growth between 2001 and 2011 was recorded at 17%, outstripping growth for the rest of the nation, recorded at 11%. The latest estimates suggest

that 75% (or 16.7m people) now live in the major cities, that is, those with a population of greater than 100,000 people (Major Cities Unit, 2010). The figures support claims in the literature of a long established metropolitan primacy as major cities continue to act as population absorbers (Newton, 2008 in McGuirk & Argent, 2011, p. 319).

But it is not only cities that continue to attract record population growth. Whilst a large proportion of Australia's population lives in cities, in 2006, 85.3% of Australians also lived within 50km of the coast (Hugo, 2008). Approximately 711,000 addresses are now located within three kilometres of the coast and less than six metres above sea level (ABS, 2010). This relocation continues, with the 2011 Census recording 503,500 people moving to coastal locations between 2006 and 2011 (ABS, 2012a). The largest population growth outside of capital cities has more recently also occurred along the coast in peri-urban areas with some areas experiencing major increases. Many of those contributing to this growth have come from cities, with the 2011 Census reporting that 35% of new residents in these coastal areas lived in capital cities in 2006 (ABS, 2012a). All states and territories experienced population growth over the ten-year period to 2011, with the largest increases in NSW, Victoria and Queensland. Many of the areas experiencing large growth were located on the fringes of capital cities. Low-density urban expansion is evident on the fringes of all Australian cities as the following depiction shows (ABS, 2013).

Figure 1.3 Population Densities



Australia's population density at June 2012 was 3.0 people per square kilometre (ABS, 2013). The highest population density was recorded by the Australian Capital Territory with 25 people, followed by Victoria (25), NSW (9.1) and Tasmania (7.5). In terms of specific locations, the highest population density occurred within capital cities, with Greater Sydney and Greater Melbourne leading the way.

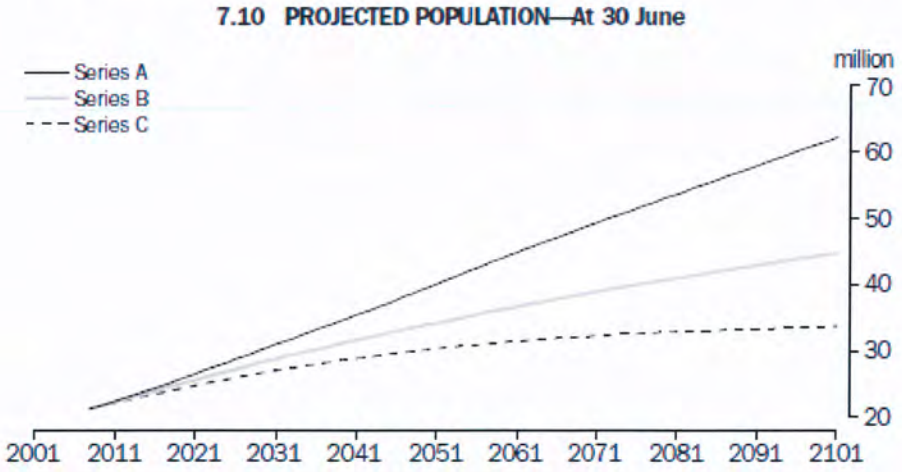
With a clear pattern of growth incursions into the peri-urban, and the articulation of associated concerns reflecting sustainability and other impacts, the issue has become a critical challenge for governments and planners alike. However, there are concerns that the issue has not been fully understood and that the debate, whilst long term, is narrow.

> *It is also easy to overlook the more nuanced aspects of the population debate. We need to open our eyes to the signals coming from the landscape, and to face up to the reality that choices and tradeoffs need to be made. The fact that our ecological impact is currently increasing more quickly than our population is growing does not inspire confidence in our ability to do so.* (Thom & McKenzie, 2011, p. 358)

What we hear in the population discourse does not reflect the hard realities of what needs to be thought about to resolve issues related to population and properly inform government policy (Fincher, 2011). The focus has been on the headlines rather than the "*sustained research and commentary that has occurred in Australia about population growth and its policy implications, analyses...rarely referred to in simplified contemporary discussion*" (Fincher, 2011, p. 337). Considered in this research are a number of reports which queried an appropriate national population, wider impacts of immigration and population growth, environment and carrying capacity, population distribution and social and economic impacts amongst other things (Dunlop, Poldy & Turner, 2004; Grodecki, 2008; Hugo, 2011; Department of Infrastructure and Planning Queensland, 2009).

Recognition of the centrality of population issues for national policymaking emerged as early as 1990, in a report on the need for population policy commissioned by the Hawke Labor government (National Population Council, 1991 in Fincher, 2011). The report found that Australia had reached a crossroads in relation to its population and called for the development of a population policy, one which sought to "*influence and respond to population change so as to advance economic progress, ecological integrity, social justice and responsible international involvement*" (National Population Council, 1991 in Hugo, 2011, p. 255). Whilst little action arose from this report, subsequent research and commentary continues to echo these findings and despite projected populations expecting continued growth, the public discourse now seems to have waned.

Figure 1.4 Projected Populations



Source: Population Projections, Australia, 2006 to 2101 (3222.0).

Note: The graph models high (series A), medium (series B) and low (Series C) population growth scenarios to 2050.

McGuirk and Argent (2011) argue that the prospect of growth at the urban scale induces popular angst that is expressed in one of two ways: tensions around further migration and urban multiculturalism or rejection of policies aimed at urban consolidation. They note the current and future capital city growth, closely linked with international migration, is likely to continue, but identify a growing concern about the impacts of population growth, citing Narushima (2010) who found an emerging disquiet about "*...further pressures on already straining social and economic infrastructure*." Dempster (2010) noted that political consensus on the need to have a population debate was driven by declining quality of life, increasing gridlock in major cities, unaffordable housing, a discernible degree of mortgage stress and infrastructure inadequacies, especially in relation to public transport.
Ritter (2009) also supported the concern around the impacts of growth:

> *When people express unease at a larger population, the concern is not about any particular number of Australians being too high, but what the increase might signify for quality of life for the individual. So what is really going on in Australia's recent population debate? What are the forces eating at the country's sense of comfort and security?* (Ritter, 2009)

Ritter (2009) pinpointed the crux of the issue for most Australians lay with quality-of-life concerns, and that these concerns were not being dealt with in the debate. There were many unanswered questions around it. What do people mean by quality of life? How is it measured? What contributes to it? How will any new population policy measure existing quality of life? Whose quality of life is paramount? For commentators such as Ritter, the solution needs to be multidimensional; the problem is not just one of numbers, but also the consequences of those numbers. As one recently remarked, the discussion was

"*full of populist platitudes...no 'policy', just loose statements about 'a big Australia', 'sustainability' and illegal immigrants*" (Curson, 2010).

When Julia Gillard became Prime Minister in 2010, she responded to the concerns in the community about the predicted scale of population growth by expanding the population portfolio to Sustainable Population and requiring the production of a sustainable population strategy to drive and direct future national growth. This was seen as a positive step and bestowed responsibility for planning properly for the infrastructure, housing, transport and regional needs of the Australian population of the future to the Minister. Reflecting on this, Minister Tony Burke noted

> *...as a nation, we have not been great at coordinating the issues that relate to population. Part of our challenge has been that we've tended to look at most of these issues in terms of what the national number will be as though that provides the answer to how population will then work within the country...we've failed to get down to the local level of what does that actually mean for local communities.* (Burke, 2010)

The unification of population and environment into a single ministry was welcomed by many as, for the first time, providing an institutional structure for addressing a complex issue in a holistic way (Hugo, 2011). It also separated population from the contested issues of immigration, important if the portfolio was to move beyond the static public discourse. There was hope that government would finally move to address the question of population in an integrated and appropriate way.

> *A national population strategy should involve a balancing of the necessity for workforce growth with important environmental sustainability, social inclusion and liveability objectives. It is more than growth management. Environmental sustainability must be an explicit part of all strategies but social and economic sustainability must also be factored in...it is a complex process and this complexity must not be resiled from.* (Hugo, 2011, p. 257)

What does this mean for the peri-urban? It is evidence of explicit recognition at the federal level that population is about more than growth management, and that social, environmental and economic sustainability issues must be considered. However, government has missed an opportunity to put words into action. The impacts, on all these forms of sustainability in the peri-urban, are not understood or measured in terms of the results of population incursions into the space. Stories are emerging from the peri-urban that areas developed in response to population-growth requirements are neither socially nor economically sustainable: large areas of greenfield land is being developed for new settlements, quality of life potentially being sacrificed in the name of affordability for the consumer and profit for the developer. These will be further explored later in the research.

Sustainable Australia – A missed opportunity?

The *Sustainable Australia – Sustainable Communities* strategy was released in 2011 and outlined key directions to "*...help ensure that future population change supports the economic, environmental and social wellbeing of the nation*" (Burke, 2011). The Strategy focuses on population change rather than an arbitrary growth target, arguing that

> *Population change is not only about the growth and overall size of our population. It's about the needs of our population, it's about the skills of the population, it's about how we live and importantly, where we live" (*Burke in Australian Government, 2011, p. 1).

Its main objective is articulated as being *"...to ensure that future changes in Australia's population (size, growth rate, composition and location) are compatible with the sustainability of our economy, communities and the environment"* (Australian Government, 2011, p. 6). Three elements – economic prosperity, liveable communities and environmental sustainability – are described as the foundations of the nation's wellbeing. They are underpinned by a goal that seeks "*...an effort to improve the wellbeing of current and future generations through the more effective anticipation, planning and response to the impacts of population changes on our environment, communities and economy"* (Australian Government, 2011, p. 6).

The national strategy received mixed reviews, despite what seems to be a more rounded approach to thinking about this vexed question of population. Its focus on making Australia more resilient to change, and its recognition that population size is not the sole reason for many of our quality of life problems (Davies, 2011), were highlighted as matters that the strategists got right. However, the strategy was described as underwhelming:

> *I expect a population strategy for Australia should be looking at the range of possibilities for where the country could go in the future; the warrant for different choices; the costs and the benefits; and the various implications and knock-on effects. It should assess whether we want to embark on any of them and, if we do, what is the best way forward. Given how fundamental this issue is to the future of Australia I'd expect to see some pretty sophisticated analysis. There might even be some data, some numbers, some theory and even some analysis.* (Davies, 2011, p. 2)

Others have voiced similar opinions, suggesting that in avoiding population projections, the strategy fails to set out measurable goals and fails to deliver (Wilson, 2011). *"Unfortunately, the limited number of measures set out in the document, together with a series of very broad objectives, do not really add up to a coherent vision for Australia's population over the coming decades"* (Wilson, 2011).

What can we take away from this debate? Despite the recent flurry of activity around the issue of population growth and its impacts on the nation, there is little progress towards the coherent vision for which many in the discourse argue. There is only limited recognition that a population strategy requires the laying of a foundational platform upon which sustainability may then be constructed. The jury is out as to whether the Sustainable Population Strategy will deliver what it promises, and whether indeed what it promises is an appropriate way to address all the issues relative to population growth. On the positive side, the debate recognises that a multidimensional effort will be required to address the interacting dilemmas inherent in the population challenge. Without a focus on this interactivity, population policy will remain at the beck and call of marginal policy decisions and lobbyists (Foran & Poldy, 2002). There has been no space for the debate to take place that would give reasonable outcomes for society, the economy and the environment, and it is arguable whether that space has yet been created. Society must help design that space if it is to occur (Foran & Poldy, 2002).

The emergent understanding of the need for a multidimensional reframing recognises that it must involve a range of disciplines and experts. Cork and Delaney (2005) note that the flow-on effects of population growth for peri-urban areas have been limited to land use planning, a single disciplinary approach. Of some concern are the Sustainable Population Minister's ongoing references to *urban planning* when talking about the population issue, which suggests a more city-oriented approach. A multidisciplinary approach may act as the impetus for new and creative strategies for where we locate population growth and, following on from that, how we protect the integrity of peri-urban Australia (Cork & Delaney, 2005). Convergences between disciplines, such as planning, ecology and architecture, may identify challenges and directions that a single disciplinary approach cannot (Cork & Delaney, 2005). To date, the impacts of the unresolved population challenge on the peri-urban have been dire, yet there is little convergence evident. Until this occurs, it is difficult to see how the actions and debate can make meaningful and appropriate change to the manner in which we plan for population growth.

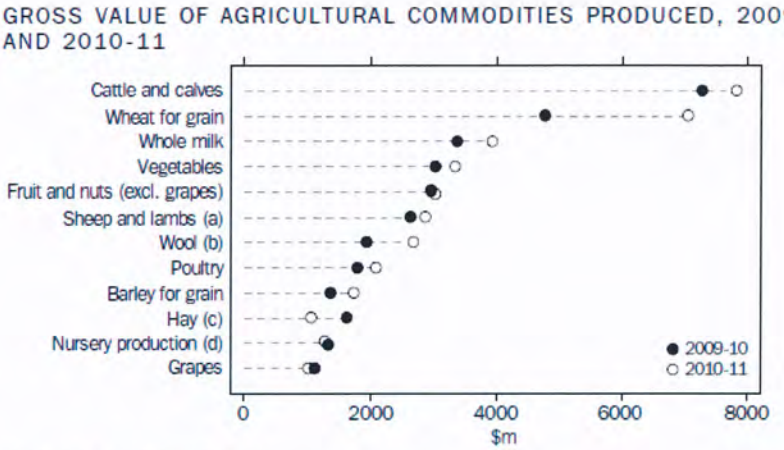
1.1.2 Challenge 2 – the changing face of agriculture

The first big challenge outlined pertains to determining Australia's population size, and the second centres on the changing face of agriculture. Whilst the peri-urban is the focus of the research, its very nature is that it is located across most of Australia's productive land. In most places this has placed significant pressure on its ongoing productivity. *"Since 1945, the expansion of Australian cities has removed more than one million hectares of rural land. If current trends continue, by 2021 Melbourne will have lost another 25,000 hectares of rural land to urban development."* (Planning Institute of Australia, 2012, p. 9).

Recent statistics highlight the changing picture of agricultural use in Australia, suggesting a decrease in the amount of agricultural land from 417,288 hectares in 2007-2008, to 398,580 hectares in 2009-2010, a decrease of 4.5% per annum. The number of agricultural businesses in Australia fell by 4.4%, from 140,704 in 2007-2008 to 134,554 in 2009-2010 (Pritchard et al., 2012). For a long time, agriculture dominated as the linchpin of the Australian economy – until at least the 1950s Australia "rode on the

sheep's back" (Brett, 2012, p. 26). Agricultural products featured prominently in the list of Australian exports and indeed drove the development of a relatively wealthy society. Today, Australia's agricultural businesses are engaged in a much broader mix of activities than the early days, including livestock, cropping and mixed farming activities. The importance of agriculture to the Australian economy has steadily declined (Productivity Commission, 2010), evidenced by a reduction in agriculture's share of Gross Domestic Product (GDP), falling agricultural employment and a fall in agriculture's share of exports from 24% of all exports in 1974-75 to 13.8% in 2011-2012 (Spencer & Kneebone, 2012). Despite these factors, agriculture continues to play an important role in the Australian economy, with gross production value expected to rise to $47.7 billion in 2013-2014, up from $46.0 billion in 2010-2011 (ABARES, 2013; ABS, 2012b; and see figure 4 below). The agricultural export market has expanded, with exports almost trebling in value since the mid-1970s. Increased productivity in agriculture has also occurred, with an average growth rate of 2.8% per year over the twenty years to 2009 (Nossal & Gooday, 2009, p. 4). Farm exports account for 13.8% of total Australian exports, with products such as beef, wheat and skim milk powder contributing significantly to global markets (ABS, 2012b).

Figure 1.5 Gross Values of Agricultural Commodities Produced



(ABS, 2012b, p. 3)

Recent statistics suggest that the downturn reported by the Productivity Commission (2009) has begun to be reversed. In 2010-2011, the estimate of the gross value of commodities highlighted an increase of 19% or $6.4b on the previous year (ABS, 2012). Commodities for which export earnings are forecast to rise in 2013-2014 include barley (4%), wine (7%), beef and veal (2%) and wool (17%) (ABARES, 2013). Crop values have also increased, by 18% in 2010-11, a marked change from the previous trend of decline. The total gross value of livestock produced in 2010-2011 also increased, by 25% compared to the previous year (ABS, 2012b).

Australia's agricultural sector thus plays an integral role in the national economy, as a significant exporter and provider of both food and fibre, despite competition and challenges arising from the more recent mining and resources boom. The national population growth of recent years would be expected to convert into positive outcomes for the agrifood sector. However, outcomes measured to date in relation to productivity and profitability show the limited impact that internal growth has had on the profitability of the sector overall. Australian agriculture is highly export-oriented, which means that returns for producers are highly influenced by global factors, including changes in world prices, and currency movements (DAFF in Senate Select Committee on Agriculture and Related Industries, 2009).

Global demand for agricultural product continues to rise, as a result of increasing world population and also because of higher incomes (Senate Select Committee, 2009, p. 2). United Nations' predictions suggest the world's population will increase to over nine billion people by as early as 2043, with world population reaching seven billion people in October 2011 (UN, 2013). The UN has further suggested that this increase in population will need to be supported by an increase in food production of approximately 50% (UN, 2009). Demand is expected to rise for staples such as cereals, fish, dairy, wheat and meat products (Senate Select Committee, 2009). Much of this demand could be met by import subsidisation actions that reduce supply chain distance, however this response is not favoured by neoclassical economists.

The predicted increases in future global demand offer both opportunities and challenges for Australian producers (Senate Select Committee, 2009). The discourse suggests that our current agricultural system is not well geared to make a response to the task that will be beneficial for producers. The current system of industrial agribusiness and its associated practices require transforming (Brennan, 2011, p. 4). Externalities such as peak oil, a lack of crop diversity and shortages in water, land, energy, technology and knowledge are converging with the increased demand for food arising out of population and economic growth (Brennan, 2011, p. 4). The picture painted by many is not pretty and suggests that a status quo approach would look like this:

> *...continue as we are with farmers increasingly being squeezed between a declining resource base and input costs and being unable to pass those costs up through the supply chain or being able to pass those costs up the supply chain and having more expensive food with the corresponding food security challenges and poor nutrition outcomes for a steadily increasing group of people...* (Larsen, 2009).

Alongside these discussions are other shifts in thinking about agriculture. The use of chemicals to increase productivity, the introduction and expansion of corporate farming models and the interest in the concept of food miles have all presented challenges for agriculture. They also all point to opportunities for the peri-urban, with particular implications that peri-urban producers may be able to benefit from. For example, in some of these areas farming is shifting to a niche form of production or

product, in recognition of the benefits to landscape and in response to the environmental and social pressures brought to bear in these places. Agriculture has been particularly commodities-based, but these new pressures create challenges for the traditional productive model. There is an emerging view, one which directly conflicts with population expansion and greenfield development, that the peri-urban provides a natural and logical space or place for new forms of green – new forms of land tenure combined with innovative modes of agriculture, which synthesize agriculture, nature conservation, infrastructure and communities (Armstrong & Allison, 2003). Here we see the crux of this second challenge.

Agriculture and the peri-urban

The prevailing view of rural and regional Australia is one of declining rural populations, declining rural commodities and the ebb and flow of services (Allison, n.d.; Barr, 2003). When we first look at our productive peri-urban, this view of decline aligns with what we might see – pressures evident arising indirectly from globalisation and increasingly industrial agriculture; finite and reducing natural resources; the impacts of climate change including drought; and the effects of land-allocation decisions that see more housing, less production and landscape degradation. It also aligns with poorly planned peri-urban zones in the past with a host of mixed uses and inadequate land management practices. For those wishing to produce in the peri-urban there are additional challenges, including land prices, the 'right to farm', water availability, sustainability and land management, transport infrastructure, the cost-price squeeze, public perceptions and business administration and legislative issues (Larsen, 2009, p. 6).

Agricultural policy in Australia has moved away from production-linked support, such as subsidies and incentives, towards attempts to contribute to resolving these challenges through the economic and social revitalisation of rural areas. However, not all countries have done this, with Europe, Japan and America amongst other still preferring their use. A broad restructure of Australian agriculture has occurred, characterised by increased off-farm incomes, the forging of linkages to the non-farm economy, a decrease in the number of full-time farmers, an increasingly ageing farming population and increased part-time farming (Barr, 2003; Buxton, Alvarez, Butt, Farrell, & O'Neill, 2008). There is awareness that the challenges to agriculture relate to economic, social, environmental and technological factors, but there is no real evidence to suggest this has markedly influenced policy decisions about land use, production and distribution processes, demographics or landscapes (Larsen, 2009).

Responding to urban growth

The pace of urban growth and the manner in which it has infiltrated peri-urban areas have resulted in an ongoing loss of productive lands. Yet, the role of agriculture in urban and developing environments is gaining increasing recognition throughout the world, suggesting somewhat of a paradox in the way we manage urban growth. There is a new emphasis on the relationship between agricultural production and urban development, and effort to explore the potential for increasing local food-production capacity via urban development. Systems such as urban agriculture are being put forward as tools to achieve this goal, as well as for increasing social, economic and natural capital (de la Salle & Clark, 2013). Yet

despite this exploration being one response to our desire to be food secure, urban development continually encroaches on productive land; land is lost under concrete. Despite the emergence of urban agriculture and new forms of urban farming emerging in the city, urban imperatives, rather than food-production ones, drive the discourse on the fringe.

There are some, however, who are greatly concerned about the impacts of this unfettered urban development on food production systems across the nation (Outer Suburban/Interface Services and Development Committee 2010; Senate Select Committee 2009). There has been little recognition of productive lands as a strategically important resource for our nation (Outer Suburban/Interface Services and Development Committee, 2010), and policymakers have not yet connected agriculture and food in planning and policy processes.

> *...the debate is generally dominated by issues associated with urbanisation, such as the lack of infrastructure. The importance of peri-urban agriculture for a healthy city and the advantages of retaining agriculture are being increasingly recognised in rhetoric, but not in planning strategies, although the urbanisation of agriculturally productive land is of concern around many cities.* (Parker & Jarecki, 2003, p. 2)

Continued pressures on farmers

This unfettered urban expansion throws up a number of challenges for farmers. Firstly, boundary expansions that continue to allow ongoing residential encroachment into peri-urban productive spaces limit the future of the farm in these places. There is strong evidence of the impacts of this, yet little data is available that estimates the extent and availability of productive land in the fringe space and the fertility of those lands at a definitive scale. Whilst Houston estimated the value of peri-urban agriculture in 2005, these numbers have not been updated. There is a view that the growth-management boundaries at the urban fringe can just be expanded when required, which privileges urban growth over productive and other activities that can occur.

Secondly, it creates significant pressures on farmers who try to continue to farm within these increasingly contested spaces. There is a clear historical pattern of farmers regularly relocating to avoid urban development in areas such as the Sydney Basin and peri-urban Victoria, which unfortunately continues as cities continue to grow. For Australian peri-urban producers, this has been a constant battle and one they have failed to win. At the core of this is the problem that urban growth and productive agriculture traditionally shared similar imperatives in their search for land. The very reasons that farms established in particular locations are the same ones that are desirable for urban settlement. Location decisions were driven by the need for good access to markets for perishable goods, favourable soils, climate and water supply (Outer Suburban/Interface Services and Development Committee, 2010, p. 31).

Thirdly, too often, the land is simply seen as remnant or surplus, which impacts upon its treatment and throws up yet another variable to which farmers must respond. The overwhelming political imperative of urbanisation dominates considerations of land use (Parker, 2007). The situation was described by (former) Minister Tony Burke:

> *What we've had as a general process of how we've populated has been continued urban sprawl and unquestioned urban sprawl.*
>
> *That's started to give rise to a whole lot of different sorts of questions. What sort of environmental dividend, or what sort of environmental hit, are we causing as we continue to move to suburbs further and further out? What's happening to areas of food production? In Sydney for example, and I'll put my agriculture hat on for a second. In Sydney you take lettuce and cabbage consumed here in Australia's biggest city and 90% of it is grown within the Sydney basin.*
>
> *But the process throughout Australia of development of urban sprawl has always been this – people move in the first process to where the soils are the most fertile, then when more people move to where the soils are most fertile we put buildings on top of it. That's essentially been how we've governed some of our best soils that we have here in Australia.*
>
> *It doesn't mean that we're going to be faced with a situation of running out of food. We export 60% of what we grow. It doesn't mean that there is a massive food security problem. But what it does mean is that in the past we haven't bothered to plan to make sure that our land use is as smart as it's possible (sic) been.* (Burke, 2010)

Stories of peri-urban farmers provide personal insight into how these pressures affect productive operations:

> *It was in 1958, whilst working for Henry Mounsey, that I bought 20 acres of land on Thompson Road in Cranbourne and it was in 1964 that my wife and I started on our own property in Thompson Road. It was very difficult. We had no money, we had no equipment, we just had our hands, so we had a pretty rough start but after many years of hard work we got our feet, so to speak, on the ground and developed a successful vegetable business, which we operated on Thompson Road for 25 years. In 1983, our three sons decided to join us in our business and it was then that we purchased 14 acres adjacent to our 20 to make 34. We also rented some land in the area because with the three sons involved, we needed more land. But even with all of that, it still was not enough so we started looking for a property then.*

> *Looking back, the way our property was set up on Thompson Road, it had outdated itself. There were new ways of farming and we were very pleased that we were able to later move on. In 1989, we purchased our current property in Devon Meadows. Had we not been able to sell our Thompson Road property for subdivision, there is no way we could have bought the larger property we have now which secures the future of not only my sons but hopefully, also my grandchildren.*
>
> *As the Thompson Road property became inefficient for us to continue farming, so it will be with our current property sometime in the future, even though currently it is a very ideal property…* (Schreurs in Outer Suburban/Interface Services and Development Committee, 2010, p. 59)

The tensions evident in peri-urban Australia continue, even though farmers pack up and move out in the hope of securing a more permanent future on the land. The land use planning dilemma inherent in peri-urban productive lands is complex, and planning has yet to find a way to manage the complexity inherent in agriculture and agricultural enterprise. For the Schreurs, realising a premium price for their property was necessary to fund future expansion and a more appropriate location for their business. Premium price in the peri-urban today usually reflects residential-subdivision potential rather than agricultural potential. The Schreurs have found that the urban development they sought to escape is ever-approaching, and its speed of approach and scale of imprint has surpassed the expectations of many.

Transforming agricultural landscapes

Agriculture has reinvented itself in response to the pressures on the industry, reflecting changes in demands and markets, succession issues, ecological practices and technological advances. Often this reinvention has occurred in the peri-urban. In some places, we hold these producers up as an example of a new way of practising agriculture, yet our institutional and governance responses do not support them. Peri-urban producers have been left to respond to both the urban march and industry change, and their place in the landscape, and their productive activity, has been compromised. Thus, the role and prospects for peri-urban agriculture can be described within the context of four change processes currently occurring:

- the loss of prime or productive agricultural land;
- the process of transition;
- the introduction of varied land uses resulting in a dilution of agricultural activity;
- the transference of peri-urban agriculture to more rural areas (Buxton et al., 2008).

The challenge remains to respond to these four changes in an integrated way.

This pattern is not exclusive to Australia. Throughout the world, this cycle repeats itself as cities expand and grow, such that the UN estimates that by 2050, half of the world's arable land will be unusable (FAO, 2009).

> *More and more of the world's population is becoming concentrated in and around large cities. Ensuring the right to have access to safe and nutritious food to the billions of people living in cities represents a global development challenge of the highest order.*
>
> *Promoting sustainable agricultural production in urban and peri-urban areas and developing food systems capable of meeting urban consumer demand will become increasingly important to global food security. Currently however, the important relationship between food security, agriculture and urbanization is often not sufficiently recognized.* (FAO, 2009, p. 1)

Some countries recognised this challenge early and have adopted strategies and mechanisms aimed at the protection of strategic productive lands. These countries share a common understanding of the need to protect farmland in close proximity to cities and, in particular, the difficulties facing farmers seeking to continue to operate in these peri-urban areas (Outer Suburban/Interface Services and Development Committee, 2010). Mechanisms used in the US, Canada and Europe include legislative and regulatory protection, such as the Right to Farm legislation in British Columbia (Sands, 2011); growth management strategies, urban growth boundaries and green wedges in the UK and the Netherlands; systems to facilitate purchase and/or transfer of development rights for productive lands, voluntary covenants and – in more progressive areas – food security policy. In Australia, however, fewer mechanisms are used and those that are tend to be grounded in land use planning, focused on urban growth boundaries and green wedges, and planning scheme controls on the development of rural land – a somewhat narrow approach, not sufficiently cognisant of the interrelationship between agriculture, food security and urban encroachment.

The FAO advocates for broad actions, at both the global and local/regional level, including the development of

> *...decision-making and planning tools, such as guidelines, criteria and indicators, for policy makers dealing with urban development in relation to agriculture, livestock, aquaculture, land use planning and forestry, as well as urban food system planning and development.* (FAO, 2009, p. 2)

It recommends the establishment of multi-stakeholder platforms for dialogue, action planning and policy formulation on good governance for food, agriculture and cities. This reflects organisational concerns with the manner in which food security and agriculture is currently being compromised by urban

development. It suggests that these matters be incorporated into the agenda of many policymakers and planners in a joined up and connected way, something not evident in Australia.

Living and working on the land

Incorporated into the failings of Australian government and institutions around peri-urban land is a failure to acknowledge change in the manner in which business occurs on the land. Theorists are noting that the structural changes experienced by the agricultural industry have driven new ways of doing business (Van der Ploeg, Jingzhong, & Schneider, 2008; Van der Ploeg & Marsden, 2008). These new models are grounded in regional development theory, involving clusters, cooperatives and the mechanics of regional innovation systems, and are also linked to changing lifestyle values. These new forms of agriculture can involve niche products, smaller land footprints and extremely short value market chains. They are not usually well accommodated by existing land use planning mechanisms, which severely restrict the creation of small lots, often constraints on farm sales activities, and are designed around an enterprise model that sees all business activity take place on one site.

The changes on the land are not only changes in business, however. Along with this restructuring has come a renewed stream of consciousness about where the food that we eat comes from, a desire to experiment with new forms of produce, an explosion of interest in creative cuisine (driven by all forms of media), and the emergence of new movements such as the Slow Food movement (Petrini 2003). We want to know what's in our food, hunt out places where we can buy fresh and high quality produce, and we want to know if it's locally produced. We want to know how far our food has travelled, what inputs went into its creation. We even want information about who produced it and the stories of its creation. The Australian supermarket duopoly, which at one time made decisions about where our food would come from, has been forced to react to this renewed consciousness by introducing place of origin information on their shelves; providing information about growers in their premises; and buying into the marketing power of the new food-conscious media. An interesting part of this new food interest is that it spans generations, which suggests that this consciousness will be intergenerational.

There is great potential for this food consciousness to continue to grow, with the result that at some future point, there will be strong demand for a policy response to this new interest in local food. There are enough examples of sophisticated developments to suggest this is not an overnight fad. However, as yet, most policymakers have not acted upon the link between productive land on the fringe and the delivery of secure food to our cities and what it means – food that we know has been safely produced, rapidly marketed and delivered to people in premium condition. Without an institutional response, policy will have to be driven from the bottom up, because at present it is in the grass roots that awareness lies.

1.1.3 Challenge 3 – space for amenity, open space and ecosystem services

Since white settlement, there has been a contested relationship between population and the environment (McGuirk & Argent, 2011, p. 332) and more recently this tension has become polarising.

Peri-urban areas are valued for a range of reasons beyond population – environmental and cultural assets, natural resources and the settings for a wide range of human activities, such as agriculture, water supply, recreation and tourism. They have also been recognised for their landscape resources, their rich soils, valuable minerals, and scenic amenity. Human interaction has left an indelible footprint on peri-urban landscapes. This was noted in the Australian State of Environment Report (SOE) 2006 report, which recognises

> *...the long sequence of human occupation and interaction with the natural environment of Australia that has shaped and layered the landscape – a natural and cultural heritage that is valuable and worth conserving in its own right.* (Beeton et al., 2006, p, 1)

Urban incursions on the landscape

It is well established that "*...natural systems are in a state of dynamic equilibrium that has taken many thousands of years to evolve.*" (RPDC, 2003, p. 3). Experts agree that of all the activities occurring within peri-urban areas, it is the impacts of urbanisation that hold the potential to create the most significant and negative changes to these natural systems. The State of the Environment Report 2006 (Beeton et al., 2006) warns that the formation of mega-metropolitan centres with increasing population density on the coasts has the potential to displace much valuable biodiversity (Beeton et al., 2006, p. 4). Facilitated by ongoing coastal urban expansion, the report fears that if left unchecked, a contiguous urban coastal zone could be created, stretching from Hervey Bay in Queensland to the Surf Coast in Victoria, mediated only by intermittent protected coastal reserve areas (Beeton et al., 2006, p. 10). The situation was also identified in the 2001 report, but continues to remain of concern as it has exacerbated.

Environmental pressures on peri-urban lands have impacted upon the availability of land, water, energy and other resources (Beeton et al., 2006, p. 10), and are both specific and generic. Efforts to address these pressures have been restricted by the scale and pace of growth with resultant biodiversity loss. The scale of the issues raised also has some bearing on the response or lack thereof. Institutional failings have been recognised explicitly:

> *With a population of 22 million, we haven't managed to find accommodation with the environment...our record has been poor, and in my view, we are not well placed to deal effectively with the environmental challenges posed by a population of 35 million.* (Henry 2009)

Multilevel governance, fragmentation and complexity are compounding this poor record – inherent in inconsistency across jurisdictions, services and planning (Spiller, 2010 in McGuirk & Argent, 2010, p. 332). It is clear that the environmental concerns arising from population growth and its effects, combined with the rising interest in local food production, are pushing the peri-urban to a new level of significance (Buxton et al., 2008). Ongoing failings of governments, institutions and governance to respond are impeding resolution or accommodation.

Scars of past practices

Pillorying urbanisation as the only driver of negative change within the peri-urban landscape would fail to paint a complete picture. Whilst rural production has played a major role in Australia's economic development, it too has had a profoundly detrimental impact on biodiversity and the quality of land and water resources (Williams & Saunders, 2003). Much of our Australian agricultural practice, based on European traditions involving pastures and annual crops, has been ill suited to the landscape within which it is situated (Williams & Saunders, 2003), denying the landscape its inherent ability to manage naturally occurring salt. The food production system now contributes a significant component of the human environmental footprint on the earth (Campbell, 2008). Calls for world food production to double over the next forty years means that *"...food is now competing with energy for land and water resources".* (Campbell, 2008, p. 8)

The thin peri-urban slice of land is being pushed and pulled in ways we never imagined. It has not been immune to the range of practices arising from the manner in which we have occupied and used the landscape over a long period. In some ways, it is the place that best demonstrates the implications of this impact, in a way that is highly visible for most to see. It is important to understand that these practices are not simply bound up in urbanisation, but this is a significant influence and often the starting point for a range of other impacts. New, niche and clever ways of producing food and managing the landscape will be required, as well as a rethinking of current population management processes; and all of this must be reconciled with, or take into consideration, how we manage other competing demands on the landscape.

Biodiversity

This ongoing change has impacts for future natural resource management in peri-urban areas, in particular of fragile, high biodiversity landscapes. Australia is known internationally for its rich and diverse range of native flora and fauna, which has a high degree of uniqueness and underpins its recognition as a region of global biodiversity significance (Buxton et al., 2008). Biodiversity resources include the presence of plants, mammals, birds, reptiles and fish, and estimates suggest that approximately 50% of these resources are located on the periphery of our major cities and within population growth areas (Beeton et al., 2006). Buxton et al. (2007) noted the increasing global challenge of conserving biodiversity, directly linked to the growth in cities worldwide (Global Urban Observatory and Statistics Unit, 1999).

In a context where the number of listed threatened flora and fauna species continues to rise alarmingly, governance failures to protect biodiversity are frequent and well studied. Bohnet and Pert (2010) analysed the changes to drivers and impacts of land-use change in Cairns (Far North Queensland) from 1952-2008. Their results revealed the loss of important coastal lowland habitats, agricultural land and evolutionary landscape relicts, with a predicted high likelihood of further loss of important habitats and areas of high ecological significance. These were expected to be exacerbated if the urban footprint

proposed in the Far North Queensland 2031 Plan was developed (Bohnet & Pert, 2010). Bohnet and Pert (2010) concluded that there was a need to critically review and potentially give more weight to the protection and management of important habitats and landscape features within urban footprints, particularly in regions with an economic basis built on natural and aesthetic amenity. Worth noting is the fact that such failures occur in our planning processes despite their desire to achieve sustainable development and protection of biodiversity.

Using the Bendigo (Victoria) corridor as a case study example, Buxton et al. (2007) identified that, whilst important biodiversity values were in existence, there was a mismatch between planning tools and sectoral characteristics, particularly for its protection. This suggests concerns about the ability of existing planning and management tools to protect biodiversity in our peri-urban lands, as a set of specific elements as well as a whole, and to manage the resources inherent within them. Despite the introduction of protective frameworks, we continue to lose flora and fauna species and eat into stocks of natural non-renewable resources. Buxton et al. concluded that short-term economic gains, i.e. those realisable through urbanisation or commercial opportunities, are consistently and regularly out-competing biodiversity concerns (Buxton et al., 2007, p. 87).

Soils

> *Prime agricultural soils represent the highest level of agricultural productivity; they are uniquely suitable for intensive cultivation with no conservation hazards. It is extremely difficult to defend agricultural lands when their cash value can be multiplied tenfold by employment for relatively cheap housing. Yet the farm is the basic factory – the farmer is the country's best landscape gardener and maintenance workforce, the custodian of much scenic beauty. The market values of farmland do not reflect the long-term value or the irreplaceable nature of these living soils. An omnibus protection of all farmland is difficult to defend; but protection of the best soils in a metropolitan area would appear not only the sensible, but clearly desirable.* (McHarg, 1992, p. 60)

Australia is yet to embrace McHarg's view. The idea that the land, including soil and its productive capacity, should be given a market value that reflects both its limits and its contribution to survival has not been adopted. A significant proportion of prime soils are now lost below the hardstand of suburbia and cannot be recaptured. Sometimes new residents in the peri-urban do not value or understand the soil. There has been a view that we can keep pushing out the urban boundaries to an endless plain of land. But between urban and rural lands we now have the peri-urban – the further we embed the current mode of planning and management, the scarcer our best soils and water will become. So the peri-urban is really being pushed – from agricultural, biodiversity and lifestyle points of view – and we must now push back into this space in a new way.

Loss of productive soils is not the only issue at play; soil erosion is also a concern and long-term farming practices have influenced soil fertility (Swinton, Lupi, Robertson, & Hamilton, 2007). Soil carbon also

plays a growing role in Australia's response to climate change. Rural lands have been identified as having significant potential to store or mitigate greenhouse gases and offset environmental emissions over the next forty years, with soil carbon sequestration potential included in Australia's response to global warming (CSIRO, 2009).

Water

Water too is an important asset in the peri-urban and sits at the centre of significant contest. ABS (2004-2005) statistics highlight that agriculture (52%) is the most significant water consumer in the Australian economy, followed by households (14%), the water supply industry (14%) and manufacturing (5%). Australian agriculture is particularly dependent on irrigation water to sustain production, but for peri-urban production, it is the competition for water resources with other users that is critical. Management of groundwater is becoming one of the most serious challenges to sustainable water use in Australia (Beeton et al., 2006, p. 61) and these concerns are arising from both urban and rural uses in the landscape. Peri-urban water supplies are, however, not only impacted upon by agriculture and irrigation activities. The impacts of climate change on our environment, well documented, include reduced, but more intense rainfall, increased drought, sea-level rise and a warming water column (Beeton et al., 2006). The amount and availability of water for the environment, and the contest between environment and the economy, are significant issues (National Water Commission, 2009).

Urbanisation also impacts on the quantity and quality of water resources. Gurran and Blakely (2007) warn that coastal development at the current scale and under the existing planning frameworks is changing significant hydrological systems and degrading coastal waters, wetlands, estuaries and mangroves. Increasing urban population requires the provision of water supplies, and significant infrastructure in the form of large dams and reservoirs, often situated in peri-urban areas, has been developed to meet this demand (Curnow & Wettenhall, 2005 in Buxton et al., 2006). In many cases, peri-urban residential development has outpaced the development and availability of water infrastructure and supply. Risk factors, such as the unpredictability of supply, population growth in excess of that planned for and overconsumption have resulted in considerable uncertainty. In Tasmania, institutional failures and underfunding due to the pace of development resulted in the Tasmanian Government restructuring water and sewerage services into a regional model. These failings led to a situation where water supply in some areas remained at below NHMRC standards, and in places such as Hobart's Southern Beaches suburbs, over 80% of unserviced lots had on-site wastewater problems and an estimated cost of approximately $70m to connect them to sewer and water services.

Water is critical to human survival, yet the peri-urban development stampede has failed to consider the impact this development will have on the longevity of the natural water resource. The Australian debate about water has focused on improvements to water-use efficiency and the development of markets for water trading, based on an underlying assumption that resolving these will lead to socially and ecologically sustainable outcomes (Cork & Delaney, 2005, p. 151). Whether this debate will move beyond markets and efficiencies, to deal with more gritty questions related to the appropriateness of

development and the impacts of any restrictions on the viability of rural communities, remains to be seen.

Ecosystem services

Humans have traditionally modified natural ecosystems to "*...favour those species that yield direct benefits (e.g. agricultural commodities), generally overlooking the unseen but essential ecosystem services (e.g. pollination, soil fertility, insect control and erosion control) that, if lost, are expensive and sometimes impossible to replace*" (Department of the Environment, Water, Heritage and the Arts (DEWHRA), 2009, p. 2). The concept of ecosystems services has formed part of the response to the management of environmental challenges and impacts, and plays a significant role in rethinking how we respond in a sustainable way (DEWHRA, 2009).

Agriculture accounts for a massive and growing share of the Earth's surface, yet is only a relatively recent development in geological and even human history (Swinton et al., 2007). A feature of its development has been its interventions in ecosystems, with both positive and negative effects. In places where agriculture has established, ecosystems have been permanently transformed, with the result that cultivated farmland is now widely recognised as an ecosystem in its own right (Millennium Ecosystem Assessment, 2005 in Swinton et al., 2007, p. 247). Agriculture has provided, and continues to provide, services to ecosystems that can be broadly described as provisioning, regulating and cultural services, whilst also receiving services from ecosystems (Swinton et al., 2007). Most of these services occur serendipitously in an indirect, unmanaged and unvalued way, and often they only become apparent in their absence.

Peri-urban agriculture plays an important role in the response to maintaining the environmental and aesthetic values of the landscape. Agricultural ecosystems rely on a suite of supporting ecosystem services to provide food, fibre and fuel as well as a range of accompanying non-market services to that ecosystem (Swinton et al., 2007). These non-market services include aesthetic and cultural services, land management and remedial actions. These services effectively benefit all people, but as there is no market incentive to provide them, they are very reliant on individual goodwill and a personal commitment to environmental sustainability. In the peri-urban, this is often the case. Only after the land has been converted to other uses does this ecosystems service role become evident. Agricultural ecosystems often retain many elements of native ecosystems, and the conversion of productive land to urban use often results in a diminution of some ecosystem functions (DEWHRA, 2009). In terms of the continuum of human impact, productive land use lies somewhere in the middle, with unmanaged native ecosystems (e.g. wilderness landscapes) at one end and urban development (e.g. built-up landscapes) at the other (Swinton et al, 2007). Different agricultural activities sit at different places on the continuum, but generally modern productivity is cognisant of land as a resource needing to be cared for.

The Millennium Ecosystem Assessment (2005; Swinton et al., 2007) identified a range of supporting ecosystem services that agricultural activity undertakes. These include maintenance of soil fertility, the delivery of regulating services to the environment and the capacity to regulate a range of dynamics, including managing populations of pollinators, pests, wildlife and pathogens, as well as fluctuations in soil loss, water quality and supply and greenhouse gas emissions and carbon sequestrations (Swinton et al., 2007, p. 247). Cultural benefits including open space, rural vistas and cultural heritage are also provided by agricultural landscapes, benefits experienced directly through lifestyle choice or recreational access. These are most difficult services to value as they are essentially intangible, yet they are often those most missed when land use changes as a result of urbanisation or other forms of development. Some of these cultural benefits may be altered by other activities such as mineral resource extraction or forestry; some may be unalterable. The cultural benefits that one extracts may differ depending on personal values and can be shaped by the generations preceding.

1.2 Defining the problem

So, no matter where we look across Australia – Victoria, Western Australia and even Tasmania – the peri-urban is a slice of land that faces big challenges. In some places, it is lucky if it is 20kms wide – in other places, the space is now quite large. Yet, despite its size, it experiences pressure from population growth, in terms of expansion and the way we like to live; from agriculture, and more so in the context of food security; and competition from many to use these landscapes for other things, such as amenity, conservation, open space or ecosystem services. If we didn't have these other pressures and contests – around agriculture and landscape – then we might well agree to use peri-urban land for urban use. But, as we talk about land-use and development in terms of sustainability, we must consider what this means for peri-urban land use.

The key problem for the research lies in the apparent reality that the peri-urban has no identity, and thus no meaning. The main aim of the thesis is to locate a peri-urban identity and then to find out what this identity looks like. It seeks to discover whether planning has played a role in shaping this identity (or not), and how planning might better support both the space and possibly, its emergent identity. The view of the peri-urban as a transitional space suggests it has no clear or apparent purpose. Yet these areas were once identified as the true face of Australia, taking pride of place in the consciousness of the nation's policymakers and people (Brett, 2011), producing food and export income, filling its vast spaces and providing "...*distinctive images of the nation...*" (Brett, 2011, p. 4). More recently, as their role and influence has declined in the Australian political landscape and the nation's consciousness, they appear to have lost this distinct identity. A large gap now exists and remains unbridged and the fringe appears to have become an area with no clear identity or purpose, filled with a mix of often unrelated land uses.

Identity is a complex issue and one considered by a range of disciplines including psychology, sociology, literature, landscape and history. It is recognised that a considerable body of work exists in the field of

social identity theory, the writer acknowledges that whilst this work may have influenced certain aspects of identity and shaped conceptions of the peri-urban, this research seeks an alternate path to a peri-urban identity. For the purposes of this research, aspects of identity are examined drawing on the work of planners, geographers and designers. The work of the environmental historians at the Australian National University (e.g. Bonyhady & Griffiths, 2002) also provided a useful frame when seeking to establish identity, cognisant of the role of power, discourse and the popular in shaping how things become what they are. Planner-geographer explorations of how the characteristics, nomenclature, language and values of particular places (Bonyhady & Griffiths, 2002; Jacobs, 1996; Pedroli et al., 2007; Soja, 1986) have particularly shaped the discussion.

Often the question of identity is explored in relation to contested places and the identity of "...a place besieged can and does overcome divides and even provides bridges..." (Peel in Bonyhady & Griffiths, 2002, p. 182). Sometimes, identity is fixed in the course of struggles over space, something Jacobs (1996) explored in urban areas. However, while this literature is important, it does not often consider the identity of places that are neither urban nor rural (Lewis, 2007), something that the research seeks to change. The search for a peri-urban identity may thus provide clues that centre thinking on an appropriate response to the challenges of the space.

The rationale behind the research thus focuses on the notion of an identity that whilst lost and confused, if located and pinned down, may be used as an enabler for new approaches to the space. The dynamic and changing nature of the peri-urban means locating this identity may be difficult, and so a wicked problem framing is used to aid the research. The reality that wicked problems are rarely mono-disciplinary (Rittel & Webber, 1973), and evidence that planning has struggled with the wickedness of the peri-urban, means that the research will take a wider sweep beyond planning to other disciplines in its attempt to resolve the problem.

That said, planning remains the key discipline considered by the thesis and the research seeks to resolve the problem of peri-urban identity so as to better equip planning into the future. Good planners equip themselves to go into the wicked spaces, despite *"...their misgivings about the appropriateness of past and present methods of planning"* (Rittel & Webber, 1973, p. 158). It is this commitment that pushes the planner to continue to search for solutions, and planning's deliberative practice and belief in betterment means it gives us the space to examine this. Once dominated by a desire for efficiency, planning has evolved, learning to ask questions of actions and outputs (Rittel & Webber, 1973, p. 158). However today, one of the most intractable problems of planning processes is that of problem definition and location, finding where, "*in the complex causal networks the trouble really lies*" (Rittel & Webber, 1973, p. 158), a critical concern for the research. In this case, the research suggests the problem lies with the lack of a clear identity. If planning cannot definitively describe the problem, there will be no objective answer (Rittel & Webber, 1973, p. 155). In complex social processes, such as the peri-urban, scientific ways of problem-resolution are bound to fail because of the inherent nature of the problem itself (Rittel & Webber, 1973). The reality is that more complex problems, such as the peri-urban, are

not able to be resolved by the traditional methods. These are the wicked problems and into this category many planning problems fall (Rittel & Webber, 1973).

The research question and hypothesis

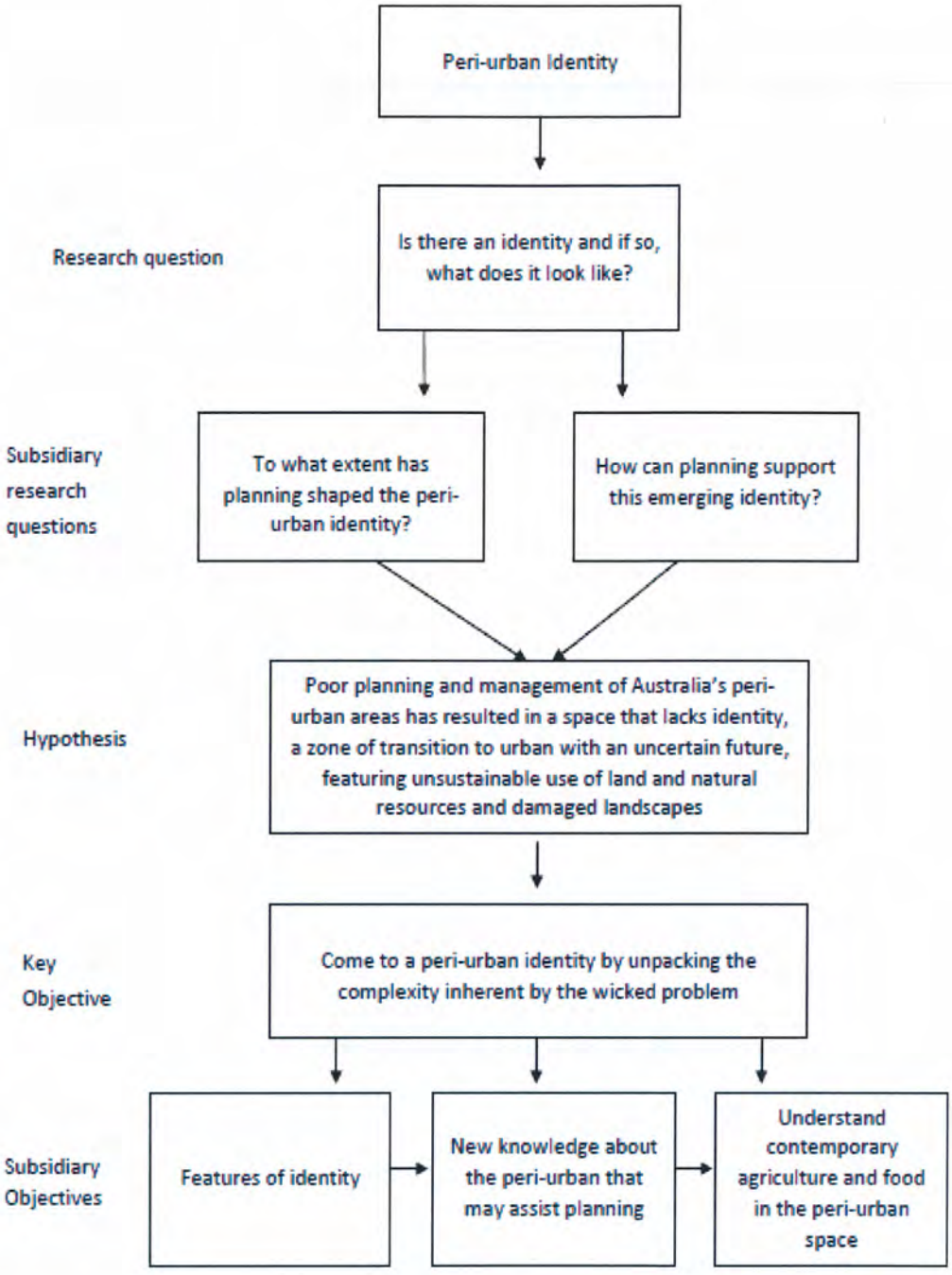
Thus the research seeks to answer the key question - does the peri-urban have an identity and if so, what does it look like? In considering this question, the research will start with the idea that these spaces are not transitional or temporary but rather, their very multifunctionality and dynamism gives them identity and integrity in their own right. The research hypothesises that poor planning and management of Australia's peri-urban areas has resulted in a space that lacks identity, a zone of transition to urban with an uncertain future, featuring unsustainable use of land and natural resources and damaged landscapes.

The research seeks to also answer two subsidiary questions which introduce the question of planning provide licence to explore why the planning system has extensively failed in the management of the peri-urban. Firstly, to what extent has land use planning shaped the current identity (or lack thereof) of the peri-urban? And the second subsidiary question, what is the emerging identity in the peri-urban and how can better land use planning support it?

Research objectives

The research conceptualises the peri-urban as a wicked space, and its key aim is to unpack the complexity expressed by this wicked problem in order to come to an identity for the space. If this can be teased out, then the next aim is consider the features of this identity and what emerges from these. Out of this other objectives will be to capture new knowledge about the peri-urban which may help determine how planning has shaped (or not) the identity of and consider how it can be applied to the way we plan for and manage these spaces in the future. This will involve exploring the idea of the peri-urban as a collaborative space, a setting where multiple parties and assets can be positioned together. Finally, if these objectives can be achieved, the result may be a better understanding of the manner in which contemporary agriculture and food production can continue to interact with the space.

Thus, the roadmap to this point can be diagrammatically depicted as follows:



1.3 Thesis Approach and Structure

The context of the research highlights a range of uses, drivers, contests and challenges that are influencing and pressuring peri-urban lands. This array of factors can be located across a range of dimensions and sectors and whilst they appear to be singular, they are often in fact multifunctional in terms of the role they play in the space. The European Commission (EC) has identified this complementarity, highlighting that the land can be both "*an ecological buffer and source of natural reproduction*" whilst providing new and lasting scope for development as an area of recreation and

leisure for city dwellers (EC, 1988 in Buxton et al., 2006, p. 63). The research adopts a perspective that recognises the multiple and often related roles and functions of the peri-urban and proposes a multifunctional view and framework. It suggests a need for different methods, contexts and scales to be considered in the research undertaking and the framing of the peri-urban as a place of inherent multifunctionality adds further weight to the research challenge.

The research notes the concerns in the literature that suggest a need to consider the multidisciplinary nature of multifunctional agriculture (and rural development), and the proposed use of integrative, trans-disciplinary approaches to do so (Marsden 1999, Knickel & Renting 2000, Fry 2001, Renting et al. 2009 in Zasada 2012). This is important for the study as the multifunctional nature of the peri-urban includes a perspective of agriculture as also multifunctional. The research adopts an integrative, trans-disciplinary approach, using firstly voice and language, and secondly several theoretical lenses, to help make sense of the peri-urban. It also takes clues from the wicked problem discourse and theory, which suggests that such problems will require multidisciplinary solutions. To acquire insights into the complex and interrelated processes that have shaped the peri-urban, by necessity a mixed methodological approach is adopted, one which combines data from varying sources, creating different sensitivity to different real world nuances (Patton 2002). By borrowing and combining distinct elements from pure methodological strategies, it is possible to "*...generate creative mixed enquiry strategies that illustrate variations on the theme of triangulation* (Patton 2002, p.248). So whilst the thesis approach is essentially qualitative, it also crosses disciplines and mixes methods to allow greater insight into the peri-urban identity.

It is important to note that the discursive nature of this thesis is a deliberate endeavour, a decision driven by several factors. A significant part of the planning and management of the peri-urban is urban-centric and determining an identity for the space requires a much wider sweep than what is put forward in the literature around this. Secondly, in order to overcome potential concerns of validity, the research approach sieves the data not once but twice, firstly seeking insights into voice and language, and secondly applying the lenses back over the data, to see if the same themes arise. This decision was made heeding the nature of wicked problems as being ill-defined and ambiguous, dynamic and constantly shifting (Ritchey, 2007; Rittel & Webber, 1973). The strength of the research findings lies in the fact that in many cases, the themes emerged in both passes of the data. The decision to take a discursive approach in data analysis and writing means that along with this strength, the thesis runs the risk of being repetitive; however, this is necessary to ensure the validity of the research is demonstrated.

The thesis is presented in seven chapters, each one reflecting a critical step towards the construction of a peri-urban identity. Chapter 1 provides the background and context to the research project, defining the peri-urban problem and posing the research questions, hypothesis and objectives. Three key contextual challenges to the peri-urban are explored: sustainable population, changes in agriculture and space for amenity, open space and ecosystem services. These challenges can be connected into a multifunctional perspective as a way to converge the set of competing values associated with peri-

urban land. Using multifunctionality also assists the analysis of the peri-urban in a wider context than that which has previously occurred.

Chapter 2 applies the lenses over the peri-urban to identify a broader range of theoretical underpinnings relevant to these landscapes that might help resolve the question of identity. This suggests that the peri-urban today is quite different to that which was once planned for. Agriculture has changed; landscape has altered. The utility and role of the space for city-dwellers has also far greater connotations and importance than was once the case. Other jurisdictions have recognised this, but as yet Australia still needs to. Chapter 2 also outlines the contextual framework, focusing on the complexity and competition identified in the literature and identifying the peri-urban as a presenting a wicked spatial problem. This framing enables the research to describe this emerging complexity and work with it to explore concepts that may assist in understanding its consequences for identity.

Chapter 3 outlines the research design and considers philosophy, approach and methodology. Using Saunders and Tosey's (2012) layers of research design, the idea of an onion is metaphorically used to unpack the various elements of the research design. Each layer works towards the eventual decision on data collection and analysis. Lefebvre's (1991 [1947)] conception of a spatial triad, and Halfacree's (2007) model of rural space are also used to assist in dealing with the wickedness of the peri-urban problem. From this, the methodology is further developed, taking into account the different elements of space and what they mean for each other.

Chapter 4 begins the first stage of the data analysis by locating the voices and language, which then allows other meanings to be drawn out of the data. Critically, the range of voices found in the peri-urban suggest a cacophony, a disharmony of both expression and purpose, which hinders attempts at accommodating the contests and conflicts in the space. Interrogating the cacophony of voices allows each one to be analysed to determine their particular message. This is important because these different versions of the peri-urban may aid the construction of its identity and may also reveal the distinctiveness of the space. Looking at the language also helps to build this identity, providing further clues to its nature and integral aspects, and how it is described. Adopting the notion that words act as clues, the exploration of language and words help to chart how people experience and manage the peri-urban environment. From this evidence emerges of how language is confused in the peri-urban and how mixed messages abound. This analysis of voice, language and words also leads to a rethinking of the peri-urban as a useful space, one which has many resources that are being reconfigured and used in new and interesting ways.

Chapter 5 undertakes a further sieving of the data, with the challenge to hold steady the multiple realities that the peri-urban offers and to creatively work and recraft these realities into something new. In this chapter, the three theoretical lenses of valuation, agriculture and planning are reintroduced, and applied over the data, to confirm the themes identified in Chapter 4 and ensure the validity of the research findings.

Chapter 6 continues the exploration commenced in chapter 5, using the idea that the peri-urban is *a place demonstrating new usefulness* to argue for a new conceptualisation of the space. The emergence of a new market space in the peri-urban suggests a blue ocean has been created, where those within the space have reinvented and rethought its possibility. A new peri-urban identity is noted, one which speaks to usefulness and considerations of process, product and provenance, new business models and a way of thinking about the system. This chapter also highlights some examples that demonstrate this and highlight how planning has been used in some jurisdictions to create conditions where it can emerge and strengthen. It concludes that a multidimensional response that reflects peri-urban multifunctionality provides the best chance of embracing alternative ways and encouraging a wider discourse about the future of these spaces.

Chapter 7 concludes the thesis, outlining the findings, their contribution to the field of knowledge and opportunities for future research.

Expected contribution of the research

The contribution of this research to the literature lies in its multi-disciplinarity and in particular, its effort to create a theoretical and critical conceptualisation of the peri-urban previously unadvanced. It takes a fresh approach to understanding what is happening in the peri-urban areas surrounding Australian cities, seeking to provide insights and perspectives into the space not previously researched. Its search for a peri-urban identity and uncovering of the actively complicit role played by the planning profession in facilitating the ongoing urbanisation of the fringe seeks to make an important contribution to the literature. Further, the application of a perspective centred on multifunctional agriculture seeks to advance the earlier work of Australian writers on the agrifood future of the peri-urban fringe, something that has been overlooked in more recent times.

Finally, it is important to note that due diligence was used to gather information and data from interviews and consultations which comprise mainly comment and the opinions of respondents. The researcher has sought to eliminate bias, limitations of knowledge and misinformed comment where possible, but cannot be held responsible if this has occurred, as this data contained an error from respondents.

Chapter 2 Searching to Really Understand the Peri-Urban

2.0 Introduction

Chapter 1 outlines the challenges regarding the understanding of the peri-urban. It argues that the challenges and demands on the peri-urban simultaneously hide the attributes of the peri-urban identity but also afford an opportunity to explore a new way of thinking about the peri-urban based on a unique and defining identify informed by these very challenges. These contextual clues lead to the idea of a search for a peri-urban identity. They suggest a journey through a complex, multifunctional landscape (Holmes, 2008; McGuirk & Argent, 2011), which will rely not only on what is observed, but also on theoretical and critical conceptualisations previously advanced.

Peri-urban spaces have traditionally been valued for their agricultural and landscape values and more recently for their efficacy as a planning solution to the land requirements of growing populations. These imperatives have resulted in a range of pressures bearing down on the peri-urban, and they shape the focus on the theory. The research investigates the theoretical literature of agriculture and transformations in agricultural landscapes, planning and valuation[2], looking for critical themes and concepts that may help build a conceptual framework, and assist in determining identity. This forms Part A of this chapter. Part B of the chapter then articulates just how a conceptual framework for the peri-urban might be conceived.

PART A Examining the challenges and literatures for a peri-urban identity

2.1 Transforming agri-landscapes: changing food relationships in the peri-urban

Emerging agricultural landscapes are challenging traditional assumptions about the technological methods and business structures underpinning agriculture (Allison, n.d.). Accompanying this is a discourse about these new agricultural landscapes, led by Barr (2003, 2005), who noted "*the interaction of social trends creating a patchwork of social landscapes following divergent trajectories*" (Barr, 2005, p. 1). Barr's work identified transformations in agricultural landscapes, relating to "*the dynamic interplay between economic and social forces which are transforming agriculture*" (Barr, 2005, p. 1). Sometimes underpinned by new and sophisticated inputs that potentially increase the likelihood of sustainability, this transformation is also evident where new forms of trade have emerged, in particular the emergence of microfarms producing niche agricultural products.

Australian agriculture has traditionally presented an image of being highly productive and efficient, leading the world in production practice and being responsible environmental citizens. Holmes (2008), however, suggests this image cannot hide a multitude of economic, social and environmental problems

[2] The addition of the environmental literature was also considered, however much of what was required is embedded in the chapter 1 discussion around the amenity and open space challenge and further explored in the concepts of multifunctional agriculture and ecosystems services referred to throughout this chapter.

and that rural restructuring has become synonymous with rural decline and crisis. Like Barr, Holmes identified divergent demographic trends suggesting a marked spatial deficiency in the fortunes of rural Australia. Holmes concluded that the once dominant "*monofunctional mode of rural occupance*", which saw production values hold sway, has more recently been challenged by complex, often dynamic and contested, multifunctional modes, involving a variable mix of consumption and protection alongside production (Holmes, 2006, p. 158).

So whilst the transformation of the rural landscape is closely linked to the values of those moving within it, this has also been driven by structural change (Barr, Karunaratne, & Wilkinson, 2005). Whilst farming's influence on the national identity and its political clout has undoubtedly diminished, the demand for non-productivity values from agricultural resources has increased (Barr et al., 2005). This provides a new challenge for farmers who are not only reacting to a changed global and technological context, but must now also respond to local impacts of increased urbanisation, climate change and the decline of farming as a lifestyle identity – all things which will ultimately and drastically change the face of agriculture in Australia (Barr, 2003).

Barr conceptualises these transformations in terms of diverging agricultural landscape trajectories, applying a series of lenses to reflect different aspects of the industry's structural change. While he notes a number of different trajectories, the research is particularly interested in two. *Amenity farmscapes* highlight a social transformation (Barr, 2003, 2005) where land prices are being pushed beyond what the farm purchaser can afford, farms are often smaller, farmers older and if they are younger, off-farm income ensures their survival. Intergenerational transfer of farms is unlikely, with farms sometimes instead being purchased by in-migrants to the area. These farmers will remain profitable by intensifying via horticultural activity or transforming in a manner that allows them to meet urban expectations. Barr notes the "*pattern of gentrified beef production, dormitory living and horticultural niche marketing*", that many amenity landscapes display, will be "*much more successful at maintaining population than the competitive farm production landscapes*" evident in cropping and irrigation regions (Barr, 2003, p. 126).

The aesthetic value of these landscapes can secure the future of surrounding small towns, but also creates planning challenges in terms of maintaining a minimum lot size, which usually bears no relationship to a commercially-realistic farm size. Agricultural factors will not drive the transformation of these landscapes, as the main income becomes not related to agriculture but the salary transfers from larger centres (Barr, 2003, p. 127). The survival of these communities thus relies upon amenity protection rather than agricultural production, and the social changes accompanying the attractions of the landscape remain pivotal.

Critically for the research, Barr also identifies the peri-urban as a dynamic and transforming landscape where many of the changes evident in the other landscape transformations converge. These landscapes are "*the perennial challenge to the planning profession*", where current land values make

all but the most capital-intensive agriculture uncompetitive (Barr, 2003). In the peri-urban, intensive agriculture, whilst under constant threat, makes an important and often unmeasured economic contribution (Houston, 2005). Green wedge and urban growth boundaries have not contained the ongoing urban demand. Planning has not yet found an appropriate response to these social changes and Barr argues, neither has agriculture – in these areas "*we are searching for an agricultural pastime that will fill extensive yet fragmented spaces*" (Barr, 2003, p. 127).

Reflecting on the changes in rural landscapes, Holmes (2006) provided another conceptualisation, noting their genesis in the differentiation of rural space, driven by efforts to ensure multifunctional rural resource use. At their core lies "*a radical reordering of three basic purposes underlying human use of rural space – production, consumption and protection"* (Holmes, 2006, p. 143). Once the dominant goal for rural activity was production; now evidence suggests that these landscapes form the basis of a "*complex, contested variable mix of production, consumption and protection*" (Holmes, 2006, p. 501). Initially conceptualised as a post-productive transformation, Holmes (2006) suggests this multifunctional transition drives rural change in Australia, something the research will return to.

Peri-urban multifunctionality

The concept of multifunctionality emerged in Europe, recognising that even the most "mono-functional" production or consumption must also contribute to protection goals, such as those related to the environment, via activities that contribute to ecological and environmental sustainability (Dibden & Cocklin, 2009; Holmes, 2006). The OECD has attempted to conceptualise multifunctionality in terms of agriculture and land, to facilitate understanding of

> *the complex interactions between agriculture and related land use, the multiple goods and services produced by agriculture, the contribution these make to the achievement of wider societal goals, and the impacts on agriculture of the environmental, economic and social domain, including demography and the increasing globalisation of markets and trade.* (Kopeva, Peneva & Madjarova, 2010, p. 3)

Practical activities related to multifunctionality can be grouped into three functions – environmental, economic and social (Kopeva et al., 2010). In its environmental function, multifunctionality links agriculture and related land use to its impacts on biodiversity, climate change, desertification, water quality and availability, and pollution. The economic function sees agriculture as a principal force in sustaining the operation and growth of the whole economy. The social function is linked to maintaining rural communities and their dynamism, improving quality of life for rural residents and ensuring social viability (Kopeva et al., 2010, p. 2).

Multifunctional land use is a key element of rural development in Europe and suggests a range of possibilities for transforming rural landscapes, via landscape maintenance, multifunctional resource use, food security, biodiversity preservation and diversification of activities in rural areas. New forms of

productive activity and responses to these changing landscapes are emerging and need to be explored. The literature explains this in different ways, but underpinning all of these is that there are a range of possibilities for transformation. For this research, the idea of multifunctionality allows us to explore the additional value that agriculture could potentially create around these possibilities.

Transformative possibilities – platforms, related variety and blue oceans

The transformation of productive landscapes has also given birth to new thinking in regional development and regional innovation theory, which has potential impact for both the peri-urban and agriculture. Critically, it is argued that "*regional policy needs to evolve, capitalising on region-specific assets, rather than selecting from a portfolio of policy recipes that owed their success to different environments*" (Asheim, Boschma, & Cooke, 2007, p. 900). Regional development has become increasingly multidisciplinary, and today it centres on the spatial dynamics of regions, as places to live, work and invest, and on people and knowledge, rather than its previously singular economic focus (McCall, 2010). The emergence of new regionalism, underpinned by an institutional logic that sees regions as entities created by people acting through networks, communities, firms, governments and non-market organisations, highlights how the region can act as a medium for social interaction (MacLeod & Jones, 2001, p. 675). This perspective understands that alongside economic, political and cultural globalisation, economic growth and competitiveness shift toward and orient around knowledge, learning and innovation (McCall, 2010).

An important concept in regional development literature is the platform, "*a tool of local policy and governance meant for the planning and implementation of a regional innovation system (RIS) with a sustainable and long lasting competitive advantage*" (Harmaakorpi, 2006; Lazzeretti, Capone, & Cinti 2010, p. 27). Some of this literature highlights the need for the promotion of "related variety" in local economic activities as a necessary step to build a competitive advantage within the innovation system (Cooke, 2007; Lazzeretti et al., 2010). Variety has increasingly become recognised by regional scientists as a critical condition for economic growth, a view inspired by the work of Jacobs (1969). In this regard they argue that cities (or regions) with a diversified set of industries will be characterised by high economic growth, because local diversity will spark creativity, new ideas and innovations (Boschma, Minondo, & Navarro 2010, p. 2).

A number of studies have now confirmed the importance of related variety for regional growth (Bishop & Gripaios, 2010; Boschma & Lammarino, 2009; Frenken et al., 2007) and this may hold some promise for peri-urban production. Using Tuscany as an example theorists have highlighted how the idea of related variety can create potentialities for an area (Lazzeretti et al., 2010). With a high quality of life and an abundant supply of food production, art, culture and nature, Tuscany is considered to be an attractive region, which has drawn together or reconfigured idiosyncratic resources into an "internationally renowned image" (Lazzeretti, 2010, p. 35). Whilst not all peri-urban areas will hold all these assets, they may still hold the potential to combine different assets to create a more viable future. In the case of Tuscany, the area plays a central role in the Italian food industry leading the way in

producing traditional Italian product, with a focus on high quality. This reputation for fine product is boosted by the wine sector, which, together with food, has had a positive effect on the Tuscan restaurant industry (Lazzeretti et al., 2010, p. 36).

The Tuscan commitment to achieving the principles of "slow food" also places particular focus on the traditions and quality of food production, "*the rejuvenation of old occupations, traditional food workmanship and the preservation of native, ancient varieties of vegetables and fruits*" (Zanni & Nosi, 2004 in Lazzeretti et al., 2010, p. 36). This focus on food, the agrarian life and the combination of this with other assets and forms of enterprise such as tourism, reflects new combinations of production, protection and consumption, such as Holmes (2006) described. Complementing all of this is the hospitality industry, which in Tuscany has a focus on agri-tourism, and the generation of a range of local and regional place-based brands and tourism trademarks. The focus on food, wine and hospitality is underpinned by a strong commitment to training across all these areas from food preparation and cooking through to hotel management and territorial agencies.

The Tuscan potential also extends to the area's cultural, artistic and environmental heritage and the significant diversity of art and culture as well as considerable built and natural heritage. Training centres of excellence have been developed around these attributes, and governance has included regional legislation aimed at protecting ancient rural trades and promoting actions that safeguard, restore, improve and popularise rural agricultural production processes and activities (Lazzeretti, 2010, p. 37). Using the southern Tuscan area of Maremma as a case study, Lazzeretti and his colleagues highlighted how the relationship between these assets and resources can be used to create new value, in this case experiences that hold potential for an art and food platform to be created. One in particular, wine and architecture, arises from the commissioning of world-renowned architects to build huge wine cellars. Changes in the way that one winery was interpreted led to a place where the vineyard leverages off the quality of the architecture to enhance the wine experience. Maremma now hosts six of ten "wine temples" that have managed to link the primary function of cellars *"...to the aesthetic or artistic value of an architectural oeuvre"* (Lazzeretti et al., 2010, p. 39). Some of these facilities are now used for territorial promotion through events and activities, adding a further dimension to the relationship between the various assets of the region.

Thus, the concept of related variety highlights shared or complementary competences in a cognitive sense – that is, some degree of closeness or nearness gives place to effective communication and interactive learning (Boschma & Lammarino, 2007; Lazzeretti et al., 2010; Nooteboom, 2000). Whilst often focused on relationships between industrial sectors and economic activities, related variety has also been found to link to creativity (Lazzeretti et al., 2010). Creativity turns into a source of innovation because it facilitates relatedness among places, sectors, products and professions, which generates renewal, ideas and innovations through cross-fertilisation and serendipity (Lazzeretti, 2009; Lazzeretti et al., 2010, p. 28). In this way, culture plays an important role, as does place-based know-how.

This view of innovation expressed through regional development platforms and innovation-systems thinking is useful for this research, as it finds convergence with the transformations taking place in the peri-urban, especially around agrifood. The Tuscan experience, where key assets and resources were aligned into new forms of value, expresses a method for how this occurs. Creativity and culture emerge as important elements of business, and as pathways for new development trajectories. Combinations of skills, knowledge and assets align with place characteristics, and particularly place-based know-how, to demonstrate how related variety can work to the benefit of peri-urban areas. These combinations may provide important clues to locating a peri-urban identity, and highlight changes taking place that cannot be ignored.

These processes of rural transformation in some cases are underpinned by ideas of white space (Hamel & Prahalad, 1994) and blue oceans (Kim & Mauborgne, 2005a; 2005b; 2005c; 2007; 2008). White space is a concept formulated around the idea of capturing the spaces-in-between, the niche built on adapting and leveraging off existing spaces. A strategic management concept, it describes the point where changes in technology, lifestyles, regulation, demographics and geopolitics intersect. To locate the white space there is a need to constantly challenge everything around you, including the norms, and expand peripheral vision to take in those things not normally seen, such as new ideas in other industries. Getting to the white space requires constant questioning and a willingness to embrace the unconventional and less experienced. Participation must occur on an equal basis and voices that raise questions, without holding the answers, must be listened to. Patience and open-endedness are critical, as to see the future first requires not only a wide angle lens, but also a multiplicity of lenses (Hamel & Prahalad, 1994). Those engaged in rural transformation activities such as agritourism have found the white space between farming and the tourism/leisure industries.

Blue ocean thinking builds on the concept of white space, suggesting is time to stop seeking traditional modes of survival, and open our minds to creative, integrated thinking. It allows a reconsideration of how things are done, creating a diversion point which may lead to thinking differently about the peri-urban. We can use it to help unpack how things do come together in the space, but equally to think about how they could come together in the peri-urban. Again arising from management theory, it urges those in modern business seeking to succeed to undertake a rethinking, to try and develop compelling new value propositions capable of transforming existing market space and creating new ones (Leavy 2005: 13). Kim and Mauborgne (2005a) noted that the business world was composed of what they termed "blue oceans of new market space": lucrative and growing markets, where participants "*...have moved beyond conventional logic towards a goal of value innovation – the simultaneous pursuit of differentiation and low cost.*" (Kim & Mauborgne in Leavy 2005: 14). They describe a market composed of two oceans – red and blue (Kim and Mauborgne 2005a; 2005b; 2005c; 2007; 2008). Red oceans are filled with existing industries, or known market space, highly competitive, with limited prospects for growth. Blue oceans reflect unknown market space or untapped markets, where demand is created rather than contested (Kim and Mauborgne 2005a; 2005b; 2005c; 2007; 2008). In a blue ocean, there

is abundant opportunity because the rules of the game are not set (Kim & Mauborgne 2005a; 2005b; 2005c).

Developments in the peri-urban landscape hint that those involved have created a blue ocean. This is a new space quite different to what once was; it does not look purely urban, it does not look entirely rural. In the peri-urban, there are those who do not seek to replicate or compete with contemporary commodity-based ideas of production, who do not necessarily conform to what it is these landscapes have been earmarked for. Beneath the messy peri-urban agri-scape there are clues leading to a new form of thinking and action, one for which there is no theoretical space or language. Those who seek to determine a new future for peri-urban spaces have taken the old and are seeking to make it new (Mientka 2006). They are not doing this through technological improvements or productive efficiencies; rather they have taken old processes and reinvented them, turning the place on its head. The drive to create a peri-urban blue ocean arises out of existing tensions. For producers, it may be a desire to do something different; or perhaps recognition that existing business strategy cannot be sustained. In some cases, it is linked to the transformations we are seeing in agriculture, particularly highlighted in Barr's transforming landscapes. Key to this reinvention is "*...an urge to explore, the ability to find or invent something new*" (Mientka 2006, p.3).

Deriving value from land

The drive to preserve land for amenity purposes that is part of the peri-urban landscape transformation means demand for land in these areas severely impacts upon productive operations and their ability to grow (Argent et al., 2011; Barr, 2005). Many peri-urban landscapes, with their high amenity and aesthetic, fall within these areas, where land prices have risen higher than many producers can afford. The literature tends to identify a limited future for agriculture in these areas of high amenity; however, not all writers see this as being the case. Mason (2006) describes his experience of these transforming rural landscapes in Europe, where urbanisation is occurring at a rapid rate and new business models and activities have emerged to support continued production. There is a new era of rural development where

> *...agriculture is seen and dealt with as part of a mix of disciplines and stakeholders in the rural environment. The family farm where off-farm income brings urban capital into rural areas, agritourism, direct marketing activities such as farmers markets, natural resource and landscape management, regional identity through regional branding of regionally specific produce and products, organic farming and 'care' farming that caters for intellectually handicapped people are just some of that mix. The Europeans refer to this transition as multi-functionality. Free trade and the cost/price squeeze of agricultural production contribute to this transition scenario as well.* (Mason, 2006, p. 19)

In these landscapes where amenity is now valued over production, the cost/price squeeze has forced producers to look for new diversification opportunities, some not necessarily relying on what's grown in

the soil It is here that those with the capacity to think about the attributes of the peri-urban have, knowingly or otherwise, searched out the cognitive proximity to identify common elements and strategic interventions to create a new future. In these landscapes, multifunctionality has become a goal, although not always named up or even consciously acknowledged; amenity-based activity and production enterprise are starting to blend, offering a new future. It is from these landscapes that evidence of a new focus on localised food is emerging, one which seeks to shrug off the challenges of free trade and reinvent the reality and experience of food production at the local level, exploiting local, creative and cultural know-how.

So, despite the focus on amenity, productive activity has pushed back, with new business and management models emerging to support a new form of agriculture. This includes activities such as direct marketing, not-for-profit food production and distribution organisations, farmers markets and other initiatives aimed at the promotion and sale of local food. Many of these activities combine amenity characteristics with production and other activities, in the mix of the consumption, production and protection roles that Holmes (2006) described. All of these activities form an important part of the multifunctional transition scenario that Mason describes.

Localised food systems

Inherent in these new business models is a shift from global back to local, evident in the emergence of localised food systems. Some in the literature suggest this reflects a reaction to the rapid development of the conventional western food system into a contemporary system dominated by a globalised mass-producing market. This has involved *"...an incredibly complex set of participants and linkages to provide an almost unlimited variety of intensively processed, packaged and fresh foods from every corner of the earth"* (Schiff, 2005, p. 17). In Australia, the literature suggests the domination of two major supermarkets, a diminution of smaller operators and reduced bargaining power and prices for farmers (Palmer, 2009; West, 2008).

Steel (2012) describes the food system as now underpinned by supermarkets or food boxes, "*...a perverse system where we have excluded the human in the one thing that we want to share. The food system has become decoupled from the person.*" In the peri-urban some of these factors driving this systemic change, such as peak oil, climate change and concentrations of market power, may potentially be more easily mitigated. Ostrom (2006, p. 66) argues that "*local food has become the unifying theme of a social movement to challenge and reshape the modern agrifood system.*" She suggests that "local" is being used as "*the antithesis of a globally organised system where food travels great distances*", is controlled by huge corporations and "*wrought with environmental, social and nutritional hazards*" (Ostrom, 2006, p. 66). When some scale develops around local and regional production, local food systems potentially emerge. This is not just an explicit response to globalisation, but in some cases is also linked to quality and loyalty. Mason (2006) recounts a story from his Churchill Fellowship tour in Canada, where he was travelling on a bus, listening to two women converse about their purchasing preferences:

> *Essentially...they had decided to buy food that they knew was local when they had the opportunity to do so...They spoke of freshness, food miles and support for local farmers and food processors as the basis for their respective decisions to seek out local food.*

These consumer-driven food systems are unique because of their indigenous focus. They feature concern about food miles travelled, support for local farmers and an expressed desire for food freshness, all linked to the consumer's own locality. Despite an emergent body of work around localised food systems, there is no consensus on a definition (Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clark, S., Lohr, L., Low, S & Newman, C., 2010). Ostrom (2006) describes this failure to develop shared meanings about what constitutes local food as a constant source of tension (Ostrom, 2006, p. 65). A scan of the literature reveals that the distance between production and consumption can act as a key indicator of whether a food product can be deemed to be of local origins. Just how far a distance can be deemed local varies across regions, companies, consumers and local food markets (Martinez et al., 2010); however, in the US, the legislated definition requires a distance of "*...less than 400 miles from its origin, or within the State within which it can be produced*" (US *Food, Conservation and Energy Act 2008* (*Farm Act*) 2008).

The creation of a spatial definition of what constitutes the "local" in local food systems has involved identifying marketing arrangements, such as farmers' participation in farmers markets or direct selling to schools (Martinez et al., 2010). In the US, localised food markets are accounting for a small but growing share of US agricultural production. A United States Development Agency (USDA) study in 2009 found that production of locally marketed food is more likely to occur on small farms located in or near metropolitan areas and typically involve small farmers, heterogeneous products and short supply chains (Martinez et al., 2010). Between 1997 and 2007 in the US, the number of farms selling directly grew by 105% and direct sales grew by 48%. This equated to $1.2b sales by 137,000 farms. In these markets, farmers will often be involved in performing advertising and marketing as well as storing, packaging and transporting functions. This, in itself, increases the complexity – farmers become multi-taskers and potentially, their farms multifunctional. The ongoing exposure to the farmer strengthens the local food system and brings benefits to the business, allowing the consumer to interact with an identifiable individual who understands their responsibility to provide the consumer with high quality product.

Evident in this renewed interest in local food is a keen desire to understand food provenance, described as *"...the identifiable geographical origin and associated production methods and traditions of a food"* (Martinez et al., 2010) and knowledge about where food comes from. Playing an increasingly important role in the urban food-consumer's choices, it is a key aspect of emergent systems. People are now being encouraged to factor provenance into their purchasing choices, reflected in a growing push for country and region of origin branding in Australia. Food provenance is "*...gaining currency beyond savvy chefs and clued-in cooks, evidenced by the masses of farmers markets popping up across*

Australia" (Bainger, 2010). Explaining this focus on food provenance in Australia, Bainger noted that, whilst the wine industry successfully tapped into regional recognition decades ago, the food industry, whilst embracing this view now, was much slower to follow.

Accompanying this interest in food provenance is growth in place-of-origin branding and marketing. Bainger (2010) notes a shift at supermarket level where both major players are responding to the pressure to provide information about product origin. Packaging has been redesigned to include stories of producers and the process of production. "*We've put their history, how long they've been working with us and what their story is, because customers are telling us they want to know more*" (Brooks, in Bainger, 2010). "*More and more we're trying to label food according to its provenance, but there are restrictions with a supermarket chain, you can't do it for everything*" (Cooper, in Bainger, 2010).

In Europe, the characteristics of local food and provenance underpin the concept of *terroir*, or sense of place (Martinez et al., 2010). This refers to the geographical area through the name of the product, brand or signals of quality, and to the reputation of the place in terms of culture, history and other features (Aurier, Fort, & Siriex, 2005; Cox, 2008 in Martinez et al., 2010). At its most superficial, this interest in food provenance arises out of a desire to know where food comes from, but its driving forces are somewhat deeper. The desire to know the 'where' of a product's origin, has become one of knowing the 'how' of production: what has gone into the product and what is the story of those who produce it? Consumers are interested in *terroir*, and attracted by the sense of place that the product engenders. Part of this desire for information is related to the growing awareness of the limitations of the human ecological footprint and the need for food to be sustainably and ethically produced.

New tensions emerge from this. When society asks producers to tell the story of their food, there is an inherent expectation that this food has been produced sustainably. And, in doing this it is, whether consciously or not, asking farmers to care for the landscape, provide landscape-based recreational spaces and respond to the rapidly changing demands of consumers (Fikse, Baeten & Tielemans, 2012). Here agriculture becomes focused not only on production but also on protection activities, and in these circumstances this requires a response to competing claims of society on production areas and methods used by farmers. "*Climatic, geographical and socio-economic changes and societal pressures all contribute to influence and determine opportunities for continuity and growth of the farm*" (McElwee & Schoorlemmer, 2012).

It is important to note that these consumer-driven local food systems are not a new phenomenon – they turn back the clock to a time when people grew much of their fruit and vegetables in their back garden; when many lived on farms, in a state of self-sufficiency. Estimates suggest that in the early 1900s, almost 40% of Americans lived on farms, compared with 1% in 2000 (Pirog, Rosman, Askram & Larabee, 2009). At this time, communities gained knowledge of the quality of foods through their own activities and by way of direct contact with farmers; there was little processing or packaging, and food consumption was often driven by local seasonality. This flowed back into the decisions made on the

farm about crop-selection and product. The rekindling of interest in local food is manifesting in a range of ways. In Italy, the Slow Food Movement seeks to respond to the loss of the traditional role that food production and preparation once played in everyday life (Gaytan, 2003 in Martinez et al., 2010). In the USA, the strong support for these new food systems is evident at all levels of government. A growing number of programs and policies are in place to support local food initiatives and include the Community Food Projects Grants Program, the Farmers Market Nutrition Program and the Federal State Marketing Improvement Program amongst others (Martinez et al., 2010). State and local government interventions include farm-to-institution procurement, especially in the education and health sectors, as well as promotion of markets, consumer incentives and creation of State Food Policy Councils (Martinez et al., 2010).

The emergence of the community supported agriculture (CSA) movement also highlights the growing consumer interest in all aspects of the food production and marketing chain. Originating in the 1960s in Switzerland and Japan, there is increasing evidence of the success of CSA projects in many countries (Martinez et al., 2010). Mason (2006) describes his visit to a CSA organisation in the Netherlands where a three hectare farm has around 200 members, who regularly tended crops planted by the person who leased the land. In this situation, the members paid the lessee an amount to plant and manage the crop and in turn received guaranteed quality and variety of fresh food.

> *...CSA is very family oriented which provides a sound basis for educating children on the benefits of the relationship between healthy soil, healthy food, a healthy environment and their own health – a strong basis for future sustainable communities.* (Mason, 2006, p. 13)

Microfarms

Another feature of agriculture in the peri-urban is the emergence of specialist productive enterprises, often requiring a smaller land footprint than traditional broadscale farming. Institutional mechanisms have not necessarily facilitated their emergence and in many cases have failed to respond to this emergent trend. Despite this, there is a developing consensus within the literature that microfarms are becoming an important component of a new Australian agricultural landscape in many regions (Barr, 2003; Tonts & Black, 2002). These farms produce products such as timber, wine grapes, fruit, organic produce, specialist horticulture such as saffron, garlic, wasabi, specialist livestock and – increasingly – hydroponic glasshouse production for berries and tomatoes. They are often highly innovative and productive, playing an increasing role as the weekend amenity landscape for urban dwellers. Allison (n.d.) argues that there is reason to believe they make a significant contribution to local and regional economies, something supported by other writers, including Houston (2005) and the findings of the National Land and Water Audit over a number of years.

One study found that food-based microenterprises could act as an alternative to mainstream commodity agriculture in regions and increase visibility and consumption of local food in local communities (Institute for Regional Development (IRD), 2012, p. 2). The *Make it to Market* project identified a number of

microenterprises in the region that had established successful local food businesses centred on niche and value-added products "*well beyond the typical agricultural profile of the region*", such as goat and rabbit meat, hazelnuts, goats cheese, berries and potted herbs (IRD, 2012, p. 9). Farmers markets were found to play a critical role in the emergence of these businesses as incubators for their growth and development. Microenterprises identified during the project were selling product into markets beyond North West Tasmania, into other areas of Tasmania, mainland markets and overseas. The project concluded that these microenterprises are often overlooked, in particular their innovative work, the formation of new collaborations and their ability to survive, diversify and supply niche agrifood product into a range of markets (IRD, 2012, p. 19).

The contribution of microenterprise to local and rural economies is not limited to the development of local food systems and new niche product. Besides the diversification opportunities for local rural economies, microenterprises in North West Tasmania were also found to be providing and responding to "*pressure points in rural areas...local...sustainable employment, lower environmental impact, a connected...lifestyle and work life balance*" (IRD, 2012, p. 19). Alongside this was the role that these businesses play in strengthening and growing enterprises and enterprise skills that generate social value within local food systems, suggesting that these businesses create opportunity for social enterprise.

The emergence of the new microfarm in the peri-urban presents significant challenges for land use planning and valuation. Peri-urban planning mechanisms usually rely on upholding a standard minimum lot size for valuable agricultural lands, but this, as a practice to limit population growth and alienation of land, constrains potential for diversity and resilience. These new operations often utilise a smaller land footprint, so only require relatively small parcels of land. Often, these types of operations are not supported in planning schemes as being appropriate for rural areas, and do not require the larger land footprint ascribed as the minimum lot size for agriculture. Further, the reality that many of these micro-enterprises seek to combine the multifunctional assets of the peri-urban, some of which are intangible and difficult to value, creates particular challenges for valuation processes.

Nested markets and multifunctional agriculture

The scale and depth of the rural landscape transformations suggest a new development trajectory based on diversity, but particularly multifunctionality. Whilst Australian planning schemes support mixed use development, multifunctionality goes deeper than this to consider a diversity of values and motivations, and a simultaneous and interrelated provision of multiple functions (Van der Ploeg et al., 2000 in Knickel & Renting, 2000). Rural development processes have traditionally been driven by different imperatives, aimed at securing positive externalities such as:

> *...landscape quality, biodiversity, environment and food; reduction of poverty and major inequalities including prospects for emancipation; and safeguarding family farming,*

> *including the harmonious development of town and countryside relations and guaranteeing food security.* (Van der Ploeg, Jingzhong & Schneider, 2012)

These diverse drivers and their importance move and shift with time, but a key commonality is that they respond to market failure (Van der Ploeg et al., 2012). Paradoxically, from the response to this, new "*nested*" markets emerge, segments of a wider market that must be recognised, underpinned by new coalitions of producers and consumers (Van der Ploeg et al., 2012). The markets are embedded or nested in normative framework and associated forms of governance, rooted in social movements, institutional frameworks and policy programs out of which they emerge (Van der Ploeg et al., 2012). They are often focused, underpinned by a specific brand, objective or relations of solidarity, and frequently are grounded on local and regional resources. The nested market can involve the redistribution of resources in order to achieve specific objectives, suggesting a role for the state, and multifunctionality frequently emerges as a feature (Van der Ploeg et al., 2012).

In Europe, nested markets have arisen in response to the problems raised by the "supply chain funnel", a structural hole that developed between consumers and producers, characterised by large distances and large networks controlling the distribution of food (Carahar, 2004). They are distinguishable from the traditional, general markets for a number of reasons, including:

- producers, processors, distributors and consumers share the definition of quality, and flows of communication are two way;
- production, processing and consumption are linked through short and decentralized circuits;
- links between producers, processors, distributors and consumers are patterned in a horizontal, web-like way, strongly contrasting with hierarchical patterns (Van der Ploeg et al., 2012).

This suggests that there are places that, whilst generating a complex set of issues for the management of land, water and vegetation, are also engendering innovative and novel arrangements on a significant enough scale to create a fully functioning and growing market. This is an important point, which shapes the way this research considers the peri-urban. The characteristics of these nested markets are evident in at least three countries (as noted by Van der Ploeg et al., 2012), and in some cases, are becoming mainstreamed. These same characteristics are often evident in the peri-urban. If producers in the peri-urban are creating new markets around food in these spaces, which reflect the attributes of nested markets, then the potential may exist to put an economic value on it, something which has not yet been successfully done. This would also suggest that the mode of production occurring in the peri-urban, and the space itself, has enormous unrecognised validity, and potentially provides insight into the peri-urban identity.

Of interest to the research is the reality that nested markets merge many of the multifunctional aspects of the peri-urban into what appears to be a valid business model. These markets are collaborative, bringing enterprises or interests together, capturing more of the peri-urban's multiple functions and features – introducing new ways of doing and thinking and creating new meaning for peri-urban spaces.

Key observations (Barr, 2003, 2005; Brett, 2011; Meroni, 2011; Sands, 2011; Van der Ploeg et al., 2012) provide insights into their validity and propose pathways for the peri-urban based upon it. The evidence and characteristics of new nested markets (Van der Ploeg et al., 2012) suggest exciting possibilities for the peri-urban. The characteristics of these markets are such that in the peri-urban, they may help us to unpack and understand the relationship between city and country (Brett, 2011) and position the peri-urban as the space where these places can be reconnected.

So, the peri-urban offers a unique context for agriculture, a transformed landscape where new and interesting enterprises are blending the different assets and resources of the space into a business model, one which raises particular challenges for traditional land use planning and valuation processes. There are a whole range of productive activities hitherto ignored for a range of reasons – the country was traditionally focused on commodity production and broadacre agriculture, but as the edge embedded itself further and further into this space, a transformation has begun to occur. Building on the multifunctionality of the space, food producers and others are seeking to derive a capital gain from the inherent assets of the peri-urban that they now protect and preserve and that many within urban areas see as valuable.

2.2 Valuing peri-urban land

Looking closely at the peri-urban challenges highlights how this transformation in agriculture continues to be threatened by increasing land prices and related demand from urban developers, suggesting the influence of the land market and valuation processes on the space. Frequently, these lands are not zoned for residential use and lie outside the limits of urban growth boundaries, but this continues to remain a problem. The manner in which we value land forms a critical challenge arising out of the three pressures converging on the peri-urban, and whilst valuation is a consistently resonating theme in the literature, it is consistently omitted from deliberations around the peri-urban. Perhaps this is because value is a difficult concept in the peri-urban. It has dualistic connotations, referring not only to aspects of the market but also to the worth we as individuals place on the less tangible assets of the peri-urban, such as open space, amenity and ecosystem services.

Thus, the concept of value has several applications when thinking about peri-urban spaces. Value can be personally attributed: a code or set of considerations that individuals apply to all areas of their life, including lifestyle-related decisions. Value can also be applied in an economic sense, i.e. in relation to worth of an object, as tangible or intangible. Obviously the valuation of tangible objects is more easily approached than that of intangible ones. Finally, value as worth is the value that the market applies to a commodity or service, be it land, a natural resource or an exchange.

Over the period of Australia's national development, land value has been influenced by several factors, but none of these relate to the more intangible factors. The fortunes of export markets drove the numbers of people seeking entry to land-based export industries and inflated land prices. Ongoing

urbanisation, technological developments and changes, and industrialisation have all influenced the price and value attributed to land over a long period of time. Continuing and strong inflation over the second half of the twentieth century, and monetisation of land tenure resulting from it, led to very strong increases in the value of land over this period (Scott, 1986), but this was accompanied by the disparate development of rural and urban land prices during the latter part of the twentieth century.

Highest and best use of peri-urban land

In order to understand the influence of valuation on the peri-urban, it is useful to think about how the process occurs. Valuation processes use established principles and logical methods to enable an estimation of the price that land (and interests in land) may be expected to realise if offered for sale on reasonable terms and conditions (Rost & Collins, 1971, 1984). Land purchase is deemed by most participants as a long-term investment, and the price is most usually indicative of utility, expectations of future benefits to be derived from the land and an inherent sense of satisfaction conferred by its ownership (Rost & Collins 1971, 1984). The market value of land is governed by supply and demand principles and is expressed in dollar terms, and is based on the idea of a willing buyer and willing seller acting rationally and understanding the land's *"...situation, character, quality, proximity to conveniences or inconveniences, its surrounding features, the then present demand for land..."* (Isaacs, 1907, p. 441 in Rost & Collins, 1971).

Sometimes, in this process of land exchange, a seller will receive a higher price than market value would suggest appropriate. In these circumstances, the landowner benefits from economic rent. This concept of rent originated in terms of land, and has since been expanded to describe a return above the opportunity cost of an asset or service (Carew, 1985). Economic rent can be any excess payment for a service, good or property above and beyond the minimum amount at which the person receiving payment would still have agreed to the deal. The concept has great use for thinking about value in the peri-urban. The existence of an inflated peri-urban land market suggests that buyers are prepared to pay above the opportunity cost of the land asset, and purchasers have regularly been willing to pay above the ascribed market price to secure land. This suggests that economic rent plays a role in rewarding the owner of attractive, developable land. It highlights that buyers make their purchase decisions speculating that the economic rent will be mitigated in the longer term, testimony again to the hegemonic position of urban land.

The theory of valuation puts forward guiding principles for valuation processes, requiring accurate factual information in relation to the area and dimensions of land, nature of tenure, location, tenancies, physical characteristics, amenities and services, title and tenure etc. (Baxter & Cohen, 2009). The valuer undertakes a critical examination of market transactions, and comparable sales data for sales of land similar in nature, then establishes comparability of sales for the purposes of the valuation. Location plays a particular part in this practice and in economic rent, as the sales investigated need to reflect the particular benefits or otherwise of these locations and be closely aligned to the location at hand. Sales and valuation dates are also important, as whilst the ideal situation would be the existence of

comparable sales from the same period, this is not always the case and can be misleading in periods of great change (Rost & Collins, 1971, 1984), such as the peri-urban experiences.

The role of utility is another dimension that must be considered. The literature suggests that peri-urban utility appears to reside not in productivity but in its urban potential. Understanding the potential utility of land is a pivotal exercise for both valuation and land use planning practice. Land and its potential utility is regulated and controlled by land use planning schemes, which place restrictions on what can occur on a parcel of land and may constrain the realisation of some or all of the potential uses (Baxter & Cohen, 2009; Rost & Collins, 1971, 1984). A technical and physical approach underpins the allocation of land uses to land (Gilpin, 1986), identifying which lands will be preserved for environmental or recreational reasons, which areas will be available for urban development and what land will be focused on agricultural production. Land use planning incorporates functional planning matters, such as projected economic and population growth, with spatial elements, such as where this growth will locate. This determination of the land's potential utility is something which the valuation process must take into account.

Valuers have traditionally determined the potential utility of land by identifying its highest and best use, originally defined as "*that available use and program of future utilisation of a parcel of land which produces the highest present land value.*" (Babcock, 1932, p. 57 in Whipple 2006, p. 145) The concept has long been seen as the cornerstone on which the willing buyer, willing seller principle is based (Baxter & Cohen, 2009). Established land valuation principles require the land to be valued in accordance with its highest and best use, "*...the most advantageous use of the land, having regard to planning and all other relevant factors affecting its present and future potential*" (Jacobs, 1988, in Hyam, 2009, p. 184).

Critically, it is a concept that is based entirely on profit and does not take into account the wider implications of use and development (Baxter & Cohen, 2009). Thus, in the contemporary context, "*the obligation to behave to the benefit of the wider community and environment mitigates the essence of this concept*" (Baxter & Cohen, 2009, p. 22). This suggests some alignment with the concept of sustainability, where economic, social and environmental aspects are considered, and hints at aspects of social responsibility. In the last twenty years, new dimensions including legal and political constraints, market strength and preferences, conformability with community objectives and the ability to generate sufficient revenue to satisfy investors (Graaskamp in Jarchow, 1997; Whipple, 2006, p. 150) have challenged the highest and best use concept, resulting in the emergence of the concept of most probable use:

> *...the most probable use of a property which is physically possible, appropriately justified, legally permissible, financially feasible and which results in the highest value of the property being valued.* (Australian Property Institute, 2008, para 3.4.5)

Further, other factors besides utility now influence determinations of the best use of the land, including the tools that enable environmental banking in New South Wales, the creation of use rights that enable access to coal-bed gas extraction in many peri-urban areas and the sale of water rights.

Whipple (2006, p. 145) suggests that highest and best use is no longer an appropriate term because "*it omits from consideration major factors underpinning the land use decision process.*" He comments that it is an imperfect rule, especially from the wider community viewpoint, "*because it is socially neutral – it does not ensure that both social and private goals in the use of the land can be attained.*" This suggests an inherent relationship with land use planning, which also has a remit to consider these things. The community today defines its objectives and guides the use of land in a way that gives expression to them, something that most usually occurs through the process of consultation in land use planning (Whipple, 2006). The emergence of participatory planning has meant that the social theory of property has undergone fundamental change, and a redistribution of the power of decision-making over land is a consequence of this (Ratcliff, 1972, p. 69; Whipple, 2006, p. 146). What this means for valuation is that there is a recognition that decision-making powers of landowners are no longer absolute, and the goal of individual wealth maximisation in land use is not the sole allowable criterion of value (Whipple, 2006, p. 147). Baxter and Cohen (2009, p. 22) note, *"...in the present day, the obligation to behave to the benefit of the wider community and the environment mitigates the essence of this concept."*

Highest and best use of land requires only those uses that are legally possible to be taken into account, yet the continually high land prices in the peri-urban do not reflect this. Even though the land may hold potential for other purposes, if it is not legally possible, or allowable, then valuation should not consider it, yet the use of comparative sales creates a dilemma for this. Weight may be given to its potential utility and the probability of consent being given for an alternative use, but this does not run to speculative considerations where the land is not already suitable for that use. It is also worth noting this does not therefore count intangible or indirect benefits derived from the land either. The concept of present market value provides the opportunity to value this potential utility but must exclude all purely speculative considerations.

Valuing productive lands – where are the tools?

Over and above this dilemma, property researchers have given only minimal attention to rural property markets in comparison to the extensive research attention given to commercial and residential property markets (Eves, 2005). There is little in the literature that helps to understand the forces at play in these markets and the reality of how valuers value productive land on the urban fringe. This is surprising given that rural land investment has at times provided a better market return than other investment forms, such as shares and bonds (Baxter & Cohen 2009; Eves, 2005, 2008). The variety of influences on the peri-urban economy includes globalisation and international trade, environmental changes, economic transitions and structural adjustment in productive industries. The price of land in many peri-urban areas reflects all of these factors, as well as other externalities, including renewed interest in lifestyle and landscape values, and changes in the liveability of cities, both of which mean residents

look to these productive landscapes for recreational and living opportunities. Reed and Kleynhans (2009) note that this rural transition has manifested differently in various countries, but suggest the consequences have been the same, wherever you look:

> *...rising agricultural land prices that are not always related to the production potential of the land (Hendy 1998, pp. 144-149). Buyers are willing to pay a premium for agricultural land and while primary production is not the decisive factor in their purchase decisions, non-agricultural factors play a role in buyers' motivations...* (Reed & Kleynhans, 2009, p. 327)

So the notion that these lands are valued for more than their productive activity creates a conundrum for valuation, but there is another aspect to the problem. There is emerging argument in the literature that it is time for a more *rural* specific focus in relation to valuation, beginning with the valuation education process. Within the profession, whilst a large portion of the property and valuation industry is based in urban areas, by far the largest part is focused on rural and regional areas (Clarkson, 2010), and these include the peri-urban. Clarkson notes that the education process for valuers does not reflect this, being significantly urban-based and lacking consideration of rural and urban fringe valuation techniques, and calls for a more solid background in rural industries as part of valuation education (Clarkson, 2010).

> *Rural property is often seen as being harder to value, and yet the approach, enquiry, and decision-making are essentially the same as that for the valuation of all classes of urban property. What is significantly different is the fact that for rural lands the value lies in the productive capacity of the land itself, and the fact that there is usually not a clear appreciation of the factors that affect rural production. This necessitates an appreciation of the physical features and characteristics of the land and its environment, the nature of the business to which the rural land is put and its vagaries.* (Baxter, 2009 in Clarkson, 2010, p. 5)

Clarkson highlights a key concern – that productive land-valuation processes are conducted by valuers with urban education and experience; this results in the potential for the particular nuances and assets of fringe and rural lands to be overlooked in valuation processes. He notes that it is the "*ability to understand seasons, soils, management, costs, prices, yields, subsidies, global markets etc. that establishes the rural valuer as distinct from an urban practitioner*" where some of these aspects are thought of quite differently or as irrelevant (Clarkson, 2010, p. 5). He argues that changes in business models for agriculture and legislative systems require specific understandings by the practitioner, many of which are uniquely relevant to rural industries.

Whilst the practical process of valuing rural lands is receiving consideration in the literature, this does not consider what recent land market inflation implies for valuations. In the process of valuing these lands, it is what is *not* written by the valuer that attracts our interest: if land is valued in accordance with

its physical, economic or legal possibilities, and the market ascribes a greater value than its highest and best use allows, how does this impact upon future valuation processes? Should the valuation profession revisit valuation methodology and practice for productive areas given the anomalies arising between valuation and price? The valuation profession's own recognition that rural valuation is a neglected area of the profession would suggest that, even for this reason alone, these matters require more thought.

Valuing intangibles in productive landscapes

The multifunctional rural transition discussed earlier "*has resulted in increased uncertainty and complexity in performing agricultural land valuations*", because the motivations underpinning it "*are diverse and not well understood*" (Prag 1995a:1-12, Healy and Short 1978:185, 198, Deller et al. 2005:131 all in Reed & Kleynhans 2009, p. 326). With only limited clues from the valuation literature, we must find an alternative perspective to look at how we might value peri-urban places. There is a need to ascribe a value to the peri-urban and rural landscape that reflects intangible assets, the opportunity to use rural lands and a willingness to pay for the preservation of these landscapes (Sinclair, Docking, Jarecki, Parker, & Saville, 2004). The European and Canadian literature provides clues to how this might occur, recognising multifunctionality as a key business model that incorporates all the non-food production activities and aspects of productive land (Dijst & Willis, 2005; Vanslembrouck & Van Huylenbroeck, 2005). However, there is an explicit recognition of the difficulty of pinning down specifics, the challenges of measuring intangible values and the need to deal with externalities that deepen the landscape complexity.

Productive agricultural landscapes provide many types of values, which are both economic, providing a direct monetary benefit, and non-economic, providing a non-financial benefit such as enjoyment (Reed & Kleynhans, 2009). A multifunctional view of agricultural land recognises that land is no longer used solely for agricultural production; that non-agricultural considerations such as proximity to natural amenities and open space, together with recreation and conservation opportunities, have established themselves as new drivers of agricultural land prices (Reed & Kleynhans, 2009). The challenge to this is that the environmental amenities and ecosystem services provided by agriculture are not always explicit, and so are hard to define and value (Vanslembrouck & Van Huylenbroeck, 2005). They are reflected in personal and economical value in the landscape, and generate both aesthetic and psychological benefits (Dillman & Bergstrom, 1991 in Vanslembrouck & Van Huylenbroeck, 2005), yet are often overlooked.

Sometimes, decisions of highest and best use can generate costs and benefits for third parties not directly involved in the decision and these can be conceived of as externalities. Often these relate to the intangible values in the peri-urban. These can be positive, such as when the landscape is regenerated to create aesthetic benefits, or negative, resulting from a landowner clearing high amenity landscape for another purpose. Externalities can be generated but not accounted for in the land-use decisions of private individuals and thus can fail to accrue maximum value for the wider community

(Rama, Harvey, Heaney & Peterson, 2012). Be they negative or positive, they are not always evident at the time of their generation and can in fact accrue over a period of time, a further complication for valuation. Rama et al argue that the values communities ascribe to land use vary over both time and location are rarely compatible, giving rise to tradeoffs which must be managed if the total value to the community is to be maximised. They suggest a range of alternate methods for maximising the highest value from land-use including market based instruments and a move toward regional governance in terms of decision-making about value. Finally, they note that the presence of unpriced values and externalities make it difficult to formulate policy that enables land to be directed to its highest value use (Rama et al 2012), seemingly furthering the argument for alternate methods of valuing these intangible values.

So, despite the fact that productive landscape attributes such as amenity are not tradable in the market, they still play a unique role in producing public goods and contributing to the total value of the landscape. Whilst a site may bring a big price because of its high amenity, there is no explicit value assigned to this. The producer, who may facilitate this high amenity through its care and maintenance, cannot charge for any enjoyment a non-farmer may receive from engaging with the landscape or for any activity undertaken in relation to its maintenance for these purposes (Vanslembrouck & Van Huylenbroeck, 2005). The challenge of valuing preferences for environmental goods has not yet been resolved and forms a critical gap in both practice and theory, which directly impacts on attempts to value productive spaces for their inherent assets and the benefits to society. What this means is that the environmental outcomes of land use, such as agriculture, are thus "*a bundle of products which remain outside of the market and pricing framework*" (Coggan, Whitten & Langston, 2005, section iv).

A major difficulty in valuing intangibles, such as ecosystem services, lies in the fact that we usually think in economic terms, and also in the reality that our knowledge of what the service is and entails is incomplete. The Markets for Ecosystem Services project sought to build regional Australia's capacity to create markets for ecosystem services and to explore a range of different mechanisms for their ongoing provision. The project focused particularly on market mechanisms as the tool by which landowners were rewarded "*...when their land produces valuable food and fibre products – even when their production reduces the production of ecosystem services*" (CSIRO Sustainable Ecosystems, n.d.).

The project noted that the environmental outcomes of land use decisions are products that remain outside of any market and pricing framework (Whitten & Shelton, 2005) meaning their value cannot be easily assessed, as market prices, nor captured by landholders as the value of their provision.

> *With no market for goods such as ecosystem services, those who demand the production of these goods cannot signal this to the suppliers of the good, and those who can produce these goods are not rewarded for the benefits that they provide. As a result, environmental goods remain external to the production process and the provision of these goods is often less than what is desired.* (Whitten & Shelton, 2005, section iv)

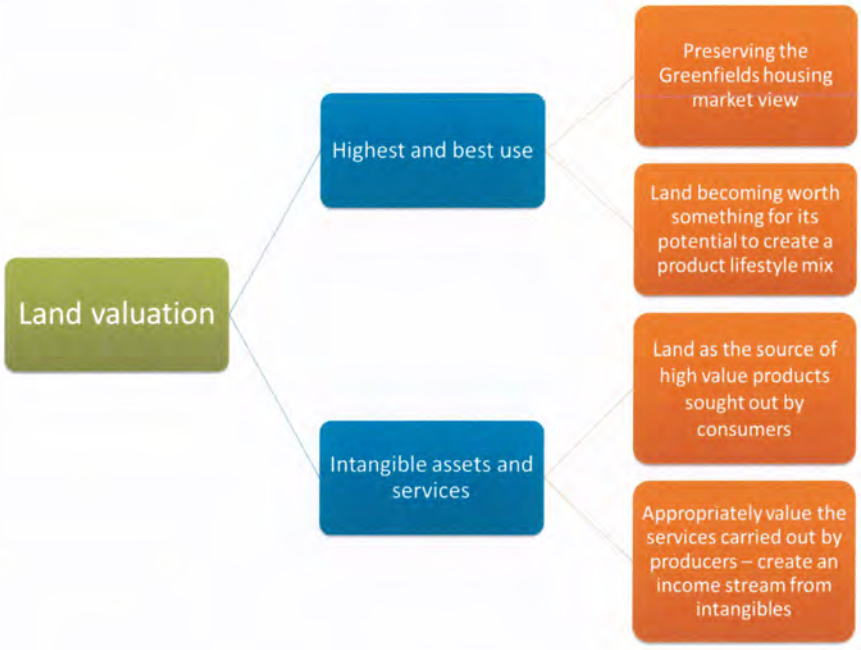
The project found that agriculture would change if a market-based approach was adopted for these intangible roles. It proposed a scenario whereby traditional agricultural outputs accounted for 50% of the total farm income, and additional benefits were achieved via plantations, land rehabilitation, carbon trading, salinity mitigation and biodiversity. Under this scenario, the farm would have a range of clients, and benefits would be sold to different purchasers in "*a mature market place that has defined the flows of valued services from the farm*" (CSIRO Sustainable Ecosystems, n.d.). What was especially critical in terms of the project was that despite the absence of markets, the process of valuing the environmental benefits had the potential to provide "*new discipline into regional planning*", something with great promise for the peri-urban.

Valuing peri-urban land as something of use

Finally, underlying these issues of valuation and the market are the key questions of use and the value attached to use. Each of these pushes us to think about highest and best use, and as a consequence, what this means for valuation, the market and the price. The valuation of land and the implications of use become a subtheme in the research. Whilst thinking about value can lead one to formal valuation processes, it can also lead to thinking about more personal processes of valuation, the ones where people ascribe their own interpretations of value on the land. In the peri-urban, land says something about who we are and what we want to be: a lifestyler, a producer, a developer. We value specific landscape attributes, and we do this in our own unique way. We see different uses for the land, but underpinning these differences is the idea that the peri-urban is useful.

Thus in the peri-urban, this type of value ascription places worth on land for other reasons, as the source of sought-after, high-quality products (including food, amenity or experience), suggesting land is valuable for its ability to create a particular product or lifestyle mix. It is here that the transformation in agriculture, with its multifunctional business model, and the valuation challenges converge. This suggests that these intangible multifunctional values, such as open space, amenity and ecosystem services, must become a more entrenched part of the valuation layer, connected into the market considerations that currently dominate in the space in a much stronger and more logical way. Perhaps one way of doing this is to start to think about how to put a market around these things in the peri-urban, taking clues from other attempts, as Figure 2.1 depicts.

Figure 2.1 A New Valuation Ideal



The evidence gathered in this review suggests the existence of other forms of value that could be translated into a valuation, or dollar value. Despite the difficulties, there are examples of where this has been done, such as with the creation of water markets. In British Columbia, productive landscape loss was valued, encouraging new ways of thinking about the value of productivity with a resultant increase in the dollar valuation and worth of land and agriculture (Ipsos Reid, 2008). In Europe, multifunctional agriculture means that ecosystem and amenity services provided by productive land are often measured and could potentially be considered in valuation processes (OECD, 2001). The Markets for Ecosystem Services Project also attempts to weave other values into measurements of productive land worth. There is a groundswell that is challenging how land valuation is done, perhaps implicitly, but it has not yet been fully embraced by the valuation profession, which has remained static in terms of how it values these places, perhaps because it is such a difficult issue to pin down.

2.3 The Challenge of Land Use Planning

The third big challenge for peri-urban spaces in Australia comes in the form of land use planning. It is suspected that as a profession, planning has not fully understood the peri-urban, or its identity. Rather, it appears to have accepted an identity of urban transition, instead of a distinct planning space. Whilst some writers consider the planning implications of the urban-rural fringe, there are few, if any, peri-urban planning tools to be cited out of this work. Much of the literature fails to recognise the peri-urban as a distinct planning space which seems unlikely when you look back through planning history. Steel (2012) references ancient history when talking about land use and layout and highlights how, at one time, the market was located in the centre of the city, close to every-day life, remnants of which are still evident in some places such as the UK. The history of planning suggests this connection to food and

the market was once a fundamental principle of thinking and designing space. The planning literature once frequently referred to a town and country relationship, and the role the hinterland played for city life, reflecting attempts to capture the qualities that we see evident in the peri-urban. Analysis of historical urban planning models provides evidence that this relationship has been recognised (Bryant, Russwurm & McClellan, 1982; Howard, 1898 in Le Gates & Stout, 1996; Kaplan et al., 2004; Knox 1994; Rose, 1966).

The literature of planning in relation to the peri-urban zone considers the range of pressures upon the space, and in some cases makes reference to earlier planning concepts, such as the concentric zone, as remaining concepts of use in considerations (Bryant 2010);. Bryant and Chahine (2011) noted that research on peri-urban agriculture has come a long way since it was first studied in the 1940s, and that the focus has increasingly developed on understanding the role of individual and collective actors at the local scale in creating dynamic and viable peri-urban agriculture territories. But they argue that there is still a long way to go, as dynamic, locally based processes of support do not necessarily flow from protective territorial action, and in many cases, these protective and supportive actions do not exist. Bryant, with Johnston, in 1992 published a major synthesis of the impacts of urbanisation on agriculture internationally, and reviewed and analysed the different types of planning and program responses to the issues. Other parts of the literature theorise problems of both rural and peri-urban life, but in many cases, the gap between this academic discourse and its implications for planning in particular is not bridged. This leaves us with a gap and the need to bridge this in thinking about the reorganisation of space and the implications of this reorganisation for peri-urban planning.

Defining the peri-urban: a new form of settlement

Despite numerous attempts in the literature, there is not as yet one accepted definition of the peri-urban.

> *The term "peri-urban area", cannot be easily defined or delimited through unambiguous criteria. It is a name given to the grey area which is neither entirely urban nor purely rural in the traditional sense; it is at most the partly urbanized rural area. Whatever definition may be given to it, it cannot eliminate some degree of arbitrariness.* (OECD, 1979, p.10)

A range of terms, typologies and classifications have been adopted to describe these areas, including the urban/rural fringe, rurban, exurban and perimetropolitan. All of these are used to describe spaces that are neither urban nor rural, yet in some way embody elements of both (Iaquinta & Drescher 2000). Often these are dependent on the writer's perspective and none has been used to the extent of the term "peri-urban". Planning writers agree that the space is dynamic, diverse and changing, and identify and analyse areas of peri-urban growth and migration, and the contests between land uses. Peri-urban characteristics are clearly noted, but the challenge presented is that the boundary where urban becomes peri-urban, and then becomes rural, is often blurred. *"In some cases, it is difficult to identify the outer boundary of a peri-urban area. They occur at the fringes of high growth, large population*

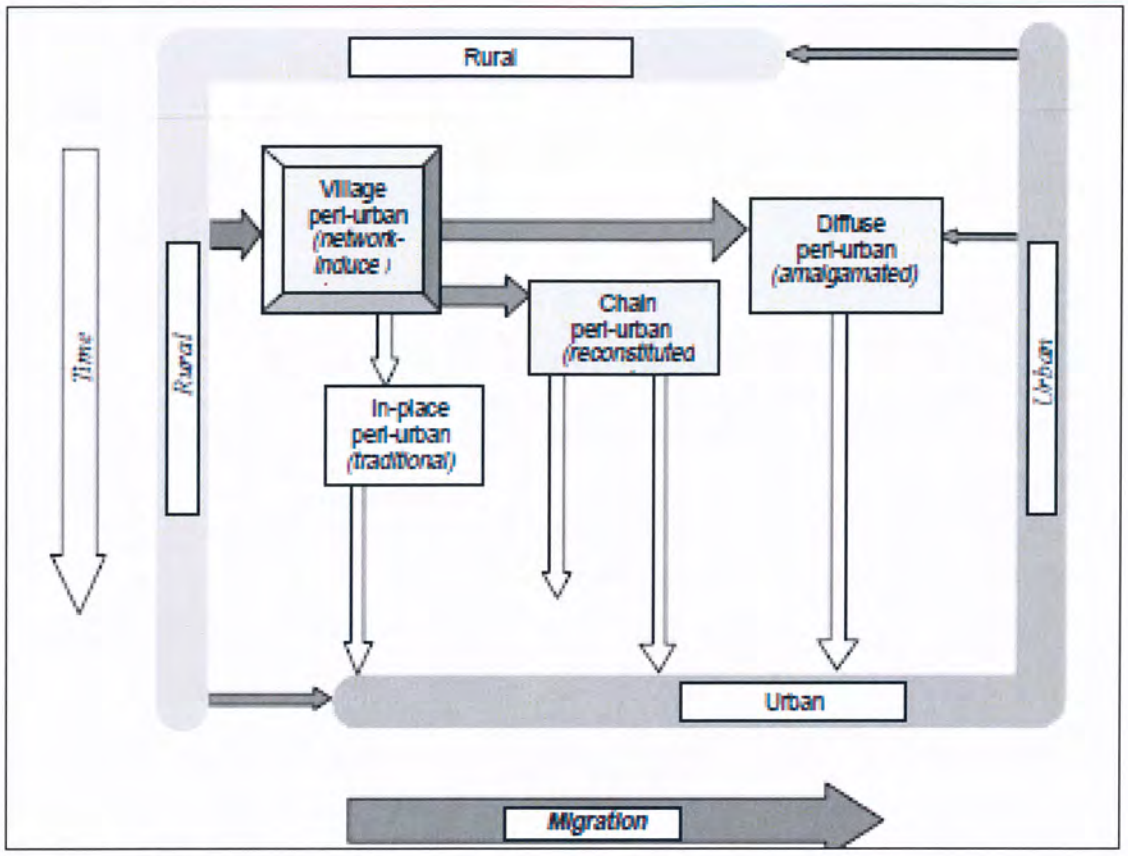
centres located primarily in coastal areas, but also in some inland regional locations." (Land and Water Australia, 2007, p. 4).

Iaquinta and Drescher (2000, p.13) identify five classes of institutional arrangements that arise in the "complex continuum from rural to urban" which fall what the literature has identified as peri-urban. Each of these are connected to a specific peri-urban type, and argued to arise from a specific demographic process underlying the process of urbanisation as follows.

- village peri-urban: network-induced (sojourning, circulation, migration) – these areas can be described as peri-rural, are not geographically close to an urban area, yet still experience substantial urbanisation;
- diffuse peri-urban: amalgamated (diffuse migration) – areas close to the city which have experienced significant in-migration from multiple places, often more heterogeneous and prone to conflict;
- chain peri-urban: reconstituted (chain migration) – geographic translocation of a village population to a specific location in the urban periphery;
- in-place peri-urban: traditional (*in situ* urbanization) – areas close to the urban area that are absorbed into the urban environment, either by expansion of the city fringe or reclassification;
- absorbed peri-urban: residual (traditionalism with succession/displacement) – areas close to or within the urban context for a considerable time, where traditional institutional arrangements derived from the culture of original settlers are maintained, even though those settlers are no longer in the majority.

Iaquinta and Drescher (2000) conceptualise the peri-urban as a dynamic, transformative and reciprocal arena linked by economic activities and geography, as well as the social fabric of individual and family networks. Dynamic, because of the flow of migrants and density and heterogeneity of activities, transformative because of a relationship of mutual change between it and its migrants and reciprocal because the mutual influences of migrants and their social environment but also because of individual linkages between the areas of out- and in-migration which transmits change in both directions. They create a typology which is useful to understand the space and where the different types will locate in terms of urban rural continuum.

Figure 2.2 Peri-urban typology within institutional contexts



(Iaquinta & Drescher, 2000, p.18)

The lack of one single definition or typology for the peri-urban suggests uneasiness felt about a settlement form that cannot be easily classified according to the longstanding "*urban rural binary*" (Willis, 2005). An alternate emerging point of view suggests the peri-urban should be treated as a distinctive zone spanning the landscape between contiguous urban development and rural countryside (Ford, 1999). On the ground, peri-urban spaces can contain residential, commercial and rural residential development interspersed with and/or following highways, and various agricultural uses. The first step when working with these spaces should be to look at the area, its roles and functions, as a whole, taking into account the complex mix of agriculture, environment, demography, migration, overall wellbeing and other factors (OECD, 1979). This challenge requires a comprehensive policy approach unlike that undertaken to date.

There is only limited adoption of the peri-urban as a new (or newly recognised) form of settlement in the literature. Adopting this view requires critical thinking about how to shape its direction and impacts, rather than how to precisely define it (Willis, 2005, p. 10). However, this challenge is exacerbated by its messiness and fuzziness (Scott & Collier, 2012), because it is subject to many layers of influence, moving out from the local level.

> *It has many definitions... it involves a wide variety of stakeholders, actors and institutions; and it shows levels of complexity, innovation, transition and emergence. It is shaped as much by socio-cultural discourses as direct functional relationships: and the peri-urban is often difficult to define with geographical boundaries.* (Ravetz, 2010, p. 3 in Scott & Collier, 2012)

Another view of the peri-urban characterises these areas as dynamic urbanising processes leading to closer subdivision, fragmentation and conversion of rural lands (Low Choy & Sutherland, 2008). Research in South East Queensland suggested that long term peri-urban populations are stabilising and maturing from their original form (Low Choy & Sutherland, 2008, p. 2). This suggests some form of maturity for these settlements, which is also demonstrated by changes in who inhabits the area, the resultant challenges and the specialisation and intensification of agriculture towards new, non-traditional, rural industries (Low Choy & Sutherland, 2008, p. 2). Adopting this view will require us to stop seeing the peri-urban as a zone in transition or an interface between urban and rural lands; accepting an identity for the space. Thirty-five years after the OECD (1979) first investigated agriculture and land protection mechanisms to address urban encroachment in peri-urban areas of the world, this area is still viewed by some as inevitably transitioning into an urban or semi-urban area.

Urban-centric land-use planning

Land-use planning *"...is the systematic assessment of land and water potential, alternatives for land use and economic and social conditions in order to select and adopt the best land use options (*van Lier & de Wrachien, 1987, pp. 4). It has been defined many times, including as an intervention with an intention to alter the existing course of events (Campbell & Fainstein, 1996) and as the generic activity of purposeful anticipation of, and provision for, the future (Selman, 2000). Critical to its undertaking is making decisions and informing actions in ways that are socially rational, linking *"...scientific and technical knowledge to either actions in the public domain, processes of social guidance or processes of social transformation."* (Friedmann, 1987, p. 38). Planning seeks to identify and implement the land uses that will best meet the needs of people whilst safeguarding resources for the future. In its processes, "*...all kinds of land use are involved: agriculture, forestry, wildlife conservation, urban and industrial expansions tourism and amenities.*" (van Lier & de Wrachien, 1987, pp. 4-5). In conflict situations, planning should provide guidance and be iterative and continuous (van Lier & de Wrachien, 1987). Land-use planning thus seeks to order and regulate land; it is about strategy and design, and intervening to achieve a balance of economic, environmental and social factors and goods with the end game of improving communities and their quality of life. It should be a decision-making process that "*facilitates the allocation of land to the uses that provide the greatest sustainable benefits*" (WCED, 1987, para 10.5).

Australia's land-use planning history suggests a limited focus on the explicitly rural and less on the peri-urban. Its development highlights an ongoing urban influence and from the period following the Great Depression in the 1930s, the need to raise low-level housing standards was at the forefront of

government agendas in this area (Petrow, 1995). Urban reformers highlighted the need to act on the obvious neglect of town planning, clearly apparent in the slums observed in many cities; the result of chaotic, uncoordinated development (Petrow, 1995). Land use planning became driven by a need to address the consequences of rapid growth and development, arising initially out of the Industrial Revolution, and significant population movement towards areas where this was occurring.

Some argue that planning seeks to create a utopia, a good place, which is partly responsible for its inability to respond to contemporary challenges confronting society at present, in particular those that relate to the increasing primacy of the city or the "citification" of societies across the world (Steel, 2012). Population growth drives much of its activity, and planning now needs to respond once more to an unfolding crisis relating to living conditions (affordable housing), food security and the infrastructure demands resulting from this growth. These concerns are evident in the peri-urban and exacerbated by unease about the environmental impacts and agriculture and the effects of urbanisation. Processes and tools used to plan for land use have been influenced by the emergence of a sustainability ethic, but whilst this concept is rooted in the work of early nineteenth century theorists (Le Gates & Stout, 1996), governments have become increasingly responsive to calls to make planning mechanisms better, faster and more responsive to the urban growth and development demand. In response, planning across Australia is being reformed, not to plan for betterment, but with a view to "increasing certainty" or "fast tracking development". Moves in the early 2000s to separate the strategic aspects of plan and policymaking from the administration of planning regulation have been unsuccessful in the main. As a result, in the fringe areas, political imperatives favouring urban or developer interests often drive the outcomes of planning.

Contests and complexity

The literature highlights the complex nature of the peri-urban, contested and valued for a range of different reasons. As yet, a comprehensive or uniform solution to the inevitable issues arising out of urban growth impacts has not become evident in the planning literature. Coastal areas of eastern and south-west Australia reached crisis point in the mid-200s due to rapid, predominantly residential, development, which planning restrictions struggled to halt (Armstrong & Allison, 2003). In many cases, this was further complicated because statutory requirements were not upheld in the face of strong political pressure, suggesting that a role for political economy and the presence of significant power imbalances. And so, as attempts to satisfy the demand for land to facilitate population growth continued, peri-urban lands became increasingly mired in contests around values and uses.

That interests and value complexities exacerbate land use planning challenges is noted in the literature, particularly the observation that residents' cultural and lifestyle values play a significant role on the urban fringes. Strong environmental values have emerged in these areas and contributed to an enrichment of images associated with the fringe (Bunker & Holloway, 2001), potentially attracting larger numbers of residents to live in these areas. Language too plays a role here, *"...reinterpretations of the landscape discourse can reveal changing or competing ways of viewing the urban fringe..."* (Qvistrom, 2010, p.

220). In the development plans, rich images of the peri-urban landscape are often evident, visions of life in a promised land; however, the manifestation of this potential on the ground does not always appear to deliver the promise. Research in the UK has highlighted a strong sense of place in the fringe green areas and an attachment of those who live there to the 'ordinary landscapes', challenging the conventional planning focus (Scott & Collier, 2012). This same research suggested that many of the concerns about the fringe centre on the speed, scale and quality of landscape change there, which is reflected in "*the perceived placelessness and homogenisation of new developments*" that often fail to respect the character of the landscape (Scott & Collier, 2012).

Much of this complexity and conflict arises out of the motivations driving the different actors that choose the peri-urban as a place to live or work. One useful conceptualisation identifies four types of actors in the peri-urban landscape, who all act as landscape managers, yet are driven by different imperatives:

- *the seekers* (seeking a changed or alternative lifestyle), including tree/sea change lifestylers, blockies/homesteaders, religious communities and alternative lifestylers;
- *the survivors* (those who have adapted or shown initiative to survive the negative aspects of urbanisation), including DIY homebuilders, the horse community, truckies and adaptive farmers;
- *the speculators* (those who have taken advantage of opportunities presented by peri-urbanisation and regional growth), including farm stays and retreats, the pet industry, boutique farmers, recreational providers, landscape suppliers, the equine industry, developers and real estate agents;
- *the strugglers* (those who struggle with peri-urban change), characterised by the holding on farmers (Low Choy et al., 2007).

Each of these actors manages their part of the landscape in potentially different ways, and each will be motivated differently to respond to its unique challenges with both positive and negative outcomes. Aesthetics and restoration are of primary importance to many non-farm rural landowners (Milburn, Brown, & Mulley, 2010). US studies have shown that the majority of North Americans would prefer to live in small towns and rural areas, based on aesthetic notions linked to landscape features, personal meaning and perceptions (Milburn, Brown, & Mulley, 2010). There are however, those who live in these areas out of necessity or tradition, or because they lack any other real option and so are pushed to the city fringe.

Underpinning individual motivations is their contribution to a redefinition of rural space (Marsden & Flynn, 1993), and this too adds to peri-urban complexity. Planning processes have yet to facilitate agreement over the kinds of landscapes and places that different individuals, groups or communities value and/or want (Scott, Carter, Brown, & White, 2009), or acknowledge the different outcomes that will be sought from them. Whilst planning approaches acknowledge the plurality of society today, the multi-sided conflicts that result (Healey, 1997) are difficult to accommodate. In many cases, this manifests in the continuing complexity of the space. As the dynamics and values of different relational networks jostle together (Healey, 2003), this creates tensions that planning is expected to resolve, yet struggles with.

The outcomes of "sea-change" and its implications for non-metropolitan coastal Australia can be closely compared with those of the peri-urban change. In some cases, the process of sea-change occurs in the peri-urban fringe. Gurran and Blakely (2007) investigated two alternative perspectives of the sea-change phenomenon in Australia. The first saw coastal migration as incidental to "*continued metropolitan primacy*", therefore unlikely to affect or change the overall urban or economic structure. The second perspective, however, considered this migration as a significant and enduring phenomenon, with major environmental and socioeconomic impacts (Gurran & Blakely, 2007, p. 113). It also noted that the sea-change phenomenon, whilst named for coastal development, can impact on inland areas (hence the use of the term tree-change to describe it).

Gurran and Blakely (2007) found that sea-change has come to represent the wider social and economic transformations resulting from rapid population growth and associated urbanisation of coastal areas (Gurran & Blakely, 2007, p. 113). They observed that "*...the importance of this phenomenon is in what it means for affected communities, and valued coastal landscapes and ecologies*" (Gurran & Blakely, 2007, p. 128). Regardless of differing views about its scale and significance relative to metropolitan Australia, the phenomenon demands specific policy responses targeted to the particular and divergent needs of environments and communities experiencing it (Gurran & Blakely, 2007). The risk is that without specific policy action, the result may be the transformation of these places into the very places that people sought to leave in the first place (Gurran & Blakely, 2007, p. 128). Arising out of this work is a need to measure the extent to which this may have already occurred.

Stuck in a development paradigm

A further theme emerging in the literature relates to the reality that planning seems to be stuck in a development-centred paradigm. A shift in the development pattern of Australian cities in the early twentieth century saw the introduction of low-density suburbanisation, the spread of which, post-World War Two, aligned with rising affluence and car ownership (Buxton et al., 2006, p. 198). This new pattern of development was characterised by separated uses, single detached dwellings on allotments and plentiful private open space. Since this time, there has been little change, with population growth and suburbanisation continuing to impact on the peri-urban. More recently, there has been some move back to infill development in inner-urban areas, but this has not significantly contracted peri-urban incursion.

In the US, land development has followed two paths – expansion of urban areas or large lot development in rural areas, the latter claiming more than one million acres in the thirty years to 1990 (Heimlich & Anderson, 2001). Studies in the US and Canada have estimated that the infrastructure and servicing costs associated with sprawling subdivision and development cannot be recouped through the additional taxes generated by this development (Mason, 2006). Mason cites evidence from the Cost of Community Services Analysis, which illustrates that whilst agriculture is not a significant generator of tax revenue in Canada, its minimal servicing requirements result in a cost benefit equation

comparable to commercial and industrial developments (Mason, 2006). Daniels and Bowers (1997) estimated that for every dollar of property tax collected, residential development required between $1.05(US) and $1.67(US) in public services compared with farmland $0.21(US) to $0.75(US) in public services. As with other jurisdictions, US development imposes direct costs on the communities experiencing it, as well as indirect unmeasured costs in terms of productive land losses (Heimlich & Anderson, 2001).

More recent Australian work has measured the expected costs of developing new housing on the fringe areas of Sydney. The Centre for International Economics (2010) modelled costs and benefits of four different development scenarios: the proposed Sydney Metropolitan Plan 2005 scenario; "fringe greenfield"; urban renewal and the "least social cost" scenario (CIE, 2010, p. 11). Items that were measured in the analysis included transport costs, physical infrastructure costs, social infrastructure costs , environmental impacts, impacts upon existing residents and transformation benefits (the value people place on living in different areas above and beyond the cost of providing dwellings in these places) (CIE, 2010, p. 12). Whilst it could be argued that this exercise was not a fair comparison, as it does not cover the operating costs which are higher in rural areas than urban ones due to economies of scale and distance, it is useful as a base statement of the cost of development in the fringe. The study found that costs for greenfield fringe development were mainly higher than those of existing areas, including transport costs, reflecting the need to connect into transport networks and provide new services. Congestion and its mitigation were expected to mean higher costs for those living on the fringe due to distances away from areas of activity (CIE, 2010, p. 13). Physical infrastructure costs for water and waste provision were also expected to be higher for these areas. Social infrastructure costs were found to be large, costing approximately $18.5b to 2036. Environmental costs too were expected to be higher.

In Australia, expectations that planners will exercise leadership in land-use matters to ensure a sustainable and equitable approach are not always matched by the disjointedness and inconsistencies of planning. The modelling of the cost-benefit equation of allowing fringe residential growth, and of developing greenfield areas in many cases, is limited, happening only for the large metropolitan planning exercises rather than the more local ones. Local authorities are often stuck in "go for growth" strategies that potentially cost more than the benefits they deliver, particularly when the limitations of rural residential development, such as servicing, higher infrastructure costs, environmental degradation and social consequences, are taken into account. This situation has been acknowledged at the national level, when in 2010, former Prime Minister, Julia Gillard, commented publicly about the deficiencies of continued development on the fringe areas.

> *"Too often, Australians buy their dream home on the urban fringe but they get a nightmare lifestyle with long commutes, stuck in traffic, not able to move around their community the way that they want to, not having the schooling options they seek for their children, too far*

away from local health services. This...is about planning. It is about making sure as we build new communities that there are the services and lifestyle that people need." (Franklin 2010)

Gillard's comments also highlight a further issue. Constitutionally, land use planning is a policy and regulatory responsibility of state governments (Budge, 2009, p. 6), meaning the federal government has little power to intervene in matters of land-use planning. Usually, if there is to be federal involvement, it has occurred via backdoor mechanisms, such as environmental powers. State governments have delegated the administration of planning schemes and development control plans to local government authorities. Each state sets its own priorities in its own ways and a topical analysis suggests a heavy focus on urbanisation as the driver of activity in the peri-urban. As a result, there is no uniform approach to the planning and management of these lands. The land use planning system has, using institutional structures and policy measures, attempted to exert influence on land use and speculation by introducing initiatives that seek to constrain or direct urban expansion (Land and Water Australia, 2007). Subsequent regional planning initiatives including zoning, growth boundaries and urban footprints currently lead the way as the response mechanism for addressing impacts of rapid urban expansion; despite these, however, the approval of speculative or out of sequence residential development proposals in many fringe areas continues, a consequence of the political economy.

2.3.1 Planning responses to peri-urban growth challenges

Strategic land use plans

Metropolitan planning activity as a result of the difficulties experienced in managing metropolitan growth emerged many years ago. Most states have prepared strategic metropolitan land use plans, "*...as a result of problems with population growth, infrastructure, pollution and congestion coupled with the need to protect agricultural land, water catchments and environmental assets"* (Buxton et al., 2006, p. 220). Corresponding to this has been an emergence in regional planning activity as a response to population growth and its associated impacts on regional communities. Whilst regional strategic planning first emerged in Australia in the 1970s, it has risen and fallen since this time (Buxton et al., 2006). It has again emerged as a response mechanism to continued growth, and the most mature Australian model at present exists in South East Queensland.

Much of the emphasis on the peri-urban to date has been on metropolitan centres (Low Choy et al., 2007). This is somewhat paradoxical, given the idea that peri-urbanisation is a phenomenon linked to a number of spatial contexts, many of which have no relationship to the metropolitan at all (Low Choy et al., 2007; see also Iaquinta & Drescher 2004 and their village peri-urban type). The current approach continues to assume the "primacy of the cities" in the peri-urban discourse (Gurran & Blakely, 2007). Strategic land-use planning for metropolitan areas embeds the prevailing view of these fringe lands as transitional, available for urban expansion, using them as urban land banks. Metropolitan primacy is notable in several states, including NSW, Victoria, South Australia and Western Australia (Collits, 2002), highlighted by population statistics in relation to the number of people living in cities and the significant role of cities in economic activity. This city orientation results in the peri-urban area being defined by

an expanding city that constantly absorbs its fringe area and creates a new fringe further from the city centre (Golledge, 1960, p. 243 in Buxton & Low Choy, 2007).

The needs of a growing population and its land consumption implications are driving the interest in strategic metropolitan planning (Budge, 2009). Traditionally, metropolitan planning failed to recognise the role of agriculture on the fringe (Buxton et al, 2006, p. 216) and its contribution to the life of the city. The 2005 Sydney metropolitan planning process offers a picture of this failure. Prior to the commencement of the process, agriculture in the Sydney Basin had been estimated to generate $1b a year in farmgate sales (Gillespie & Mason, 2003 in James, 2008) and farms in this area provided 90% of perishable vegetable lines sold at the Sydney Markets (Sinclair et al., 2004 in James, 2008). The proposed strategy document stated the retention of agriculture in the Sydney Basin was important, but it worked on the assumption that agriculture could operate outside the designated growth areas (Parker, 2007). Whilst data was available to support the contribution of urban and peri-urban agriculture in the area, the proposed strategy did not include any actions to protect, preserve or make space for agriculture in its thirty-year planning horizon for Sydney (James, 2008).

When this omission was questioned with the strategy planners, James (2008) received the following response:

> *[According to a Department of Primary Industries report] we don't, NSW and the metropolitan area, don't actually need the Sydney Basin to survive ... our GDP would not be affected, you would still be able to get fruit and veg and everything else without having any agriculture in the Sydney Basin... at the end of the day if they were all relocated another 50/100 kilometres outside the metro Basin it wouldn't make any difference to production. So, in some ways, that disappeared as an argument. You don't need agricultural lands.* (Metropolitan Strategy Representative, personal communication, May 15, 2007 in James, 2008, p. 6)

This provides a disturbing insight into how peri-urban lands are overlooked in planning processes and highlights a significant lack of understanding. This one-dimensional view entrenches these lands as expendable, and the food production activities that take place within them as simply relocatable. It does not recognise a value for the amenity of these lands and their ecosystem services. It ignores the role of agricultural production and suggests that productive land must be infinite. The view that urban development can keep pushing into these lands without impact is highly speculative and underestimates the role of local agriculture in meeting Sydney's food needs.

The prevailing view of the peri-urban is seen to be responsible for the vague attention paid to it in metropolitan and regional planning and policy development (Buxton & Low Choy, 2007). Contemporary drivers of change are resulting in rapid impacts that transform and define rural and peri-urban areas, with the result that our traditional methods of planning for these areas must be questioned (Buxton &

Low Choy, 2007). This suggests a need to reform the governance and management of Australia's principal urban regions (Gleeson, Dodson, & Spiller, 2010) and this should include their interaction with, and influence on, the peri-urban. Responses to sustainability and security threats, in particular, climate change, resource insecurity and social inequity are being constrained by urban governance failings (Gleeson et al., 2010, p. 1). A dearth in effective institutional arrangements for the planning of urban development and coordination of required support services is resulting in productivity, sustainability and liveability deficits in these places. Urban planning has been unable to address a deficit of knowledge around how to effectively manage and resolve the growth of cities. The approach to the impacts of city growth on the peri-urban is disjointed, preserving the traditional urban-rural dichotomy, something that will be addressed later in this thesis.

Urban growth boundaries

Some areas have adopted urban growth boundaries (UGB) as the policy mechanism to concentrate growth in and around cities (Nielsen-Pincus et al., 2010). Usually mapped, they delineate a boundary that defines areas where development can and cannot occur. UGBs provide an opportunity to shape the location and scale of future growth while preserving the capacity of the surrounding natural and agricultural resources. Whilst this might be true in theory, in practice this is not always achieved. As the name suggests, UGBs have an urban focus, and a resulting preoccupation with determining the limits of urban growth and encroachment into the fringe areas. They frequently arise out of metropolitan planning processes, or as a response to growing pressures around urbanisation. As a result, debates around these mechanisms invariably focus on urbanisation issues from a metropolitan growth perspective, such as infrastructure, rather than any recognition of protecting the values associated with the fringe land. One result is that the importance of peri-urban agriculture for a healthy city and the advantages of retaining agriculture are increasingly recognised in rhetoric but not in planning strategies (Parker & Jarecki, 2003, p. 2).

Victoria has used UGBs (and green wedge policies) as a way to control urban growth and to provide a reasoned and considered mechanism for protecting rural lands. However, these have not been fully successful in protecting peri-urban agriculture, or the land resource, from urban encroachment. UGBs have also been accused of increasing the price of land by limiting supply, but a Victorian study found no evidence to suggest that this was the case (Buxton & Taylor, 2009), however, anecdotally, spaces designated as future urban are often the subject of speculation. Recent planning processes, such as the *Melbourne 2030 Strategy*, have been criticised for failing to recognise the impact of metropolitan growth on the peri-urban and the importance of peri-urban spaces to agricultural production (Buxton & Scheurer, 2005). The introduction of a UGB for Melbourne in 2002 aimed to reassert a measure of state control over the direction and type of urban development in Melbourne (Buxton & Scheurer, 2005). Representing the long-term limits of urban development, it identified the point where non-urban values and land uses should prevail in metropolitan Melbourne (Parbery, Wilkinson, & Karunaratne, 2008). Aimed at pushing urban development on the fringe into identified corridors, it sought to redirect investment to defined activity centres, thus discouraging the speculative activity that has dominated

fringe areas for some time (Buxton & Scheurer, 2005, p. 2). A statutory mechanism, changing it necessitates the approval of both Houses of Parliament.

The rate and scale of Melbourne's population growth has differed from what was originally predicted and required an update of the strategy (Department of Planning and Community Development (DPCD), 2008). This proposed revised upward growth for Melbourne, to "*capitalise on the availability of affordable Greenfield land*", and an expanded UGB to facilitate an additional 284,000 dwellings in areas identified for growth (DPCD, 2008). Legislation to enact this new strategy also included a highly contentious growth areas infrastructure contribution to provide infrastructure and oversee development in these areas. Whilst this was defeated in 2010 in the Victorian Parliament (Outer Suburban/Interface Services and Development Committee, 2010), the UGB was extended, despite criticism of the potential to accelerate the conversion of high quality agricultural land to residential development (Larsen, 2009, p. 3). Critically, the proposed conversion process planned to investigate the environmental significance of the lands in question, but not their importance for food production capability. This was interpreted as sending a clear message to the market that the boundary remained amendable (Larsen, 2009).

South East Queensland's regional planning framework also includes a UGB, delineating a proposed urban footprint sufficient for growth to 2031. It includes a prohibition on urban development beyond this footprint and a limitation on lot sizes. The 30 year Plan for Greater Adelaide also proposed to use this mechanism; however, the draft urban footprint was revised as a result of community feedback over the loss of valuable productive horticultural areas (Department of Planning and Local Government (South Australia), 2010). The Far North Queensland Regional Plan 2009-2031 established an urban footprint through a growth boundary, but was criticised for its potential to impact upon sensitive ecosystems (Bohnet & Pert, 2010). The use of UGBs has thus not been without controversy.

Green wedges/greenbelts

Another planning mechanism, green wedges or greenbelts, involve the adoption of a long-term strategic mechanism to prevent ad hoc poorly resourced suburban sprawl (Buxton & Goodman, 2002). Green wedges have been used across the world as a containment mechanism for urban growth. They derive from the early writings of Geddes, Howard and Mumford, reflecting their ideas on maintaining the connections between town and countryside, and of the urban fringe (Buxton & Goodman, 2002). Green wedges and greenbelts in Australia appear as a broad inclusion zone excluding inappropriate development (Land and Water Australia (LWA), 2007). Objectives of greenbelt planning are articulated in the literature as countryside access, agricultural and landscape protection, prevention of urban spread and as relief to cities with lifestyle and health benefits (Buxton & Goodman 2002; LWA, 2007). Originally purposed to protect agricultural production, environmental assets and natural resources, they have also been used to site airports, mining and landfill sites, amongst other things (LWA, 2007). Internationally, these objectives appear universally (Buxton & Goodman, 2002; LWA, 2007; Scott & Collier, 2012; Van Dijk & van der Wulp, 2010) but while the objectives for preserving land in green wedges seem uniform, the implementation differs between locations. The literature outlines several

approaches, including protection of green wedges by land purchase (or purchase of development rights), land reservation and open space zoning (Buxton & Goodman, 2002).

There has been some success using forms of green to contain urban growth, but their existence has not abated the continuing pressure to release peri-urban, greenbelt land for urban use (LWA, 2007). Land-use planning and development industries continue to significantly influence the patterns and form of development in these areas, despite green spaces and UGBs, driving land use change, which discourages predictability and stability (LWA, 2007). This has had a marked and negative effect on private investment in sustainable natural resource management and agriculture with the result that the quality of environmental and land care can differ markedly in these areas, depending on the landowner's aspirations and intentions (Low Choy et al., 2007, Parbery et al., 2008). A more systematic analysis of planning that goes beyond focusing on the merits of UGBs or greenbelts is required to overcome this (LWA, 2007).

There is a long history of the use of greenbelts and since the 1940s they have been increasingly used with the express purposes of preventing unrestricted urban sprawl and achieving township connectedness, ensuring heritage protection and to facilitate urban regeneration. Many remain in place today. In England, current planning policy protects existing greenbelts from inappropriate development, unless exceptional circumstances allow it. Planning policy has formalised greenbelts throughout England and Scotland, protecting almost five million acres of land (Buxton & Goodman, 2002). But in the UK they are currently suffering heavy criticism. A recent English study investigating the management of environmental change at the rural-urban fringe found that many people located in the peri-urban thought that greenbelts were subject to reactive and protectionist policies. Further, the study found that their operation rarely addressed wider environmental, economic and social opportunities within the fringe itself, exacerbating development pressure elsewhere outside the greenbelt (Scott & Collier, 2012). Land use planning in greenbelt areas was described as remaining reactive to development pressure and lacking both forward thinking and positive management. Along with concerns about agriculture's future in the greenbelt areas, it concluded that the planning environment stifled new ways of diversification and led to fringe landscapes suffering from poor management. Finally, it found that many people regarded *"...the Green Belt as a tool for fossilising the countryside around large towns and cities*" (Scott & Collier, 2012, p. 13), again highlighting a deficiency of planning.

Protection of agricultural land policies

A key mechanism used by most Australian state governments focuses on agricultural land preservation and uses state-mandated policy to implement an approach that aims to achieve this. Buxton et al., (2006) summarised the policy responses of various state governments to this issue in the following table.

Table 2.1 State Agricultural Land Protection Mechanisms

State	Response
New South Wales	State Environment Protection Policy NSW Department of Primary Industries Policy for Protection of Agricultural Land
Queensland	State Planning Policy Conservation and Development of Agricultural Land Strategic Cropping Policy
South Australia	No Specific State Policy State Strategy References to Agricultural Land
Tasmania	State Policy on the Protection of Agricultural Land Policy requirements incorporated in all planning schemes Right to Farm Legislation
Victoria	State Planning Policy Policy requirements incorporated in all planning schemes Urban Growth Boundary Legislation, protection of green wedges
Western Australia	Statement of Planning Policy Agricultural and Rural Land Use

(Buxton et al., 2006, p. 218)

Agricultural land protection policies, whilst now an accepted tool for attempting to constrain the conversion of productive lands to other land uses, have met with mixed success. Despite their existence, land continues to be converted. The utility of the approach has been diminished by exceptions being made to the rule, again suggesting a role for political economy. As a result, the research suggests that the primacy of productive use is often not upheld at the practical (development control) level because often, high level policymakers or politicians are responsible for decisions on development approvals.

Most state governments have been reluctant to prevent major development proposals that may affect the value of agricultural lands (Buxton et al., 2006). Tasmania supports its protection of agricultural land policy with right to farm legislation and is the only state in Australia that has enacted such legislation (Buxton et al., 2006). However, it is very rarely practically applied, and it could be argued that a functioning right to farm statute would not have necessitated such agricultural land protection policies in the first place. There is some advantage in the Tasmanian policy, in that all provisions in planning schemes are deemed invalid if they contradict it; however, in practice, local authorities, carrying out their role as planning authorities, make decisions that, whilst adhering to the broad requirements, effectively overlook the fundamental outcomes sought by the policy. Local authorities have expressed their ongoing dissatisfaction with the policy content with the result that there is little ownership of the policy. Further, by implementing the policy solely through planning processes and schemes, important decisions about the broader future of productive land are pushed down to the local level.

A key antagonism inherent in the implementation of these policy mechanisms by local authorities has been the demand by landowners to develop part or all of their productive land for residential purposes.

Many of these policies allow some form of residential development, usually only a single dwelling in particular circumstances; however, some contain an exception to the rule when there is an overarching need for the development in terms of public benefit and there is no other suitable site for the purpose (Queensland Government, 1992 in Buxton et al., 2006). In Queensland, the right to build a dwelling on a title (no matter what land use is implicated) means the impact of the policy is watered down before it has been applied. This allowance for dwelling development creates ongoing tensions and exceptions to the rule.

Other problems are also inherent in these policies. For example, the Tasmanian state policy operates from the perspective of traditional broadacre farming operations and encourages larger scale farming enterprises. It is not tailored to respond to the development of niche enterprises on smaller land footprints around or outside of the broadacre operation. Policy objectives are linked to zoning and development control standards because planning schemes are its delivery mechanism. In most cases, whilst policies espouse a range of principles that must be adhered to, the delivery focus has been on minimum lot sizes (often 45-100 hectares) rather than the encouragement of alternative models and structures that may reflect new ways of doing business in Australian agriculture. This has created problems for those seeking to establish new enterprises in peri-urban areas as well as restricted capital-raising opportunities for new farmers seeking to facilitate the establishment of these enterprises on their land.

Agricultural and rural zoning

Agricultural protection policies are often accompanied by or implemented through zones or development controls articulated in planning schemes. Rural zoning is a policy tool designed to limit land use change on agricultural lands (Nielsen-Pincus et al., 2010). These zones are delineated in a number of ways, by soil types, existing or desired land uses, lot sizes and land prices (Coughlin, 1991 in Nielsen-Pincus et al., 2010). Most often they are determined by land capability.

Zoning is the key land use planning technique used in Australia, a mechanism that divides a land area into different spatial categories and presents this by way of a colour-coded plan map and associated development controls (Sperling, 1997). Incorporated into the plan is a list of allowable uses for the land as well as development controls that articulate the manner in which use and development of that land can occur. The use of zoning to determine land use has been subject to different interpretations, including "*...the law and market working together to produce impersonal privatised spaces which maximise exchange value and minimise sustainability*" (Sperling, 1997, p. 27). Sperling criticises planning for the dominance of this market view, noting that in NSW it has been characterised by a dominant belief that the planning system is a development control or approvals system that exists to provide a framework for the development of land; land being the commodity delivered to the market through planning (Sperling, 1997, p. 26). This market interpretation is critical when we think about the prevailing peri-urban view and what it means on the ground for the maintenance of these spaces and their inherent production.

Rural zones have traditionally been used as a key mechanism to influence the use and development of land in rural and peri-urban areas. Issues around lot size and tenement provisions, and rights to subdivide or develop a dwelling, in rural zones have concerned local authorities for some time; however, no approach has yet proven to be truly successful. The right to develop a dwelling has become one of the principle problems in the zone, going back to the scattered village model of the United Kingdom and tended to create a less efficient outcome than the village with defined boundaries, or open country. A Victorian review that aimed to simplify planning schemes and improve approval processes found that in 1995 there were over 200 rural zones affecting rural activities, businesses and communities. These were predominantly focused on establishing minimum lot sizes, with tenement provisions, rather than on recognition of environmental management and sustainable agricultural practices (Municipal Association of Victoria (MAV), 2010). To overcome this, three rural zones were introduced – *Rural, Rural Living and Environment Rural* zones.

As a result of the review, a Right to Farm project was conceived as a response to concerns about increasing tensions between agricultural producers and newer lifestyle residents relocating into the peri-urban and productive lands of Victoria (MAV, 2010). In particular, there were concerns that unreasonable constraints might be placed on agricultural activities, including spraying, harvesting, operating hours, noise and stock movements (MAV, 2010). Arising out of this and subsequent projects, new rural zones were identified, with objectives relating to:

- identifying the importance of agriculture as an industry and providing greater protection for productive land;
- providing a wider choice of zones with clear purposes and controls;
- discouraging ad-hoc and incompatible use and development;
- recognising the changing nature of agricultural activities and reducing potential for conflict between agriculture and other sensitive land uses;
- recognising that rural areas are places where people live and work;
- recognising and protecting rural areas that are environmentally sensitive;
- removing the need for permits for minor matters (MAV, 2010).

Whilst this more fine-tuned approach was seen to be the way forward for resolution, its success has not yet been determined.

Other planning responses

It is difficult to find much commentary in the literature that takes a holistic or integrated approach to planning or management of peri-urban areas (Adell 1999; Allen 2003; Bunker & Houston 2003; Buxton et al., 2006). Many of the approaches outlined have been used in multiple jurisdictions, developed and implemented incrementally or, as some describe, tentatively, without connection to other actions, policies or initiatives impacting on the peri-urban. The resultant failures highlight the complexity of these issues and challenges and the difficulty that policymakers and practitioners have in integrating and

managing their complex interplay (Buxton et al, 2006). The continued use of urban planning tools as "solutions" and the failure to understand the value and contribution of productive land use to society exacerbate this ongoing failure and overlooks European and American solutions centred on market-based tools.

Measures to achieve the environmentally and productively sustainable use of farmland include purchase and/or transfer of development rights, conservation covenants and tax incentives (Freshwater, 2009). In the European Union, farmers receive compensation when they voluntarily cultivate farmland according to management and maintenance agreements that recognise clearly defined natural and landscape values (Freshwater, 2009). In other jurisdictions, markets are emerging that reward producers for the provision of ecosystem services. A strong program of agricultural land purchasing has occurred in the US, where landowners sell agricultural conservation easements to government or private conservation trusts, effectively banking the land. Payment is structured on the basis of the difference between the value of land for agriculture and the value for its highest and best use, which is usually seen as residential (Armstrong & Allison, 2003). The literature notes that these programs help farmers to pass on farms to their children, or new farmers to purchase productive lands at realistic and not speculative residential value (Armstrong & Allison, 2003).

Transferable development rights preserve farmland solely for farming activities and open space and prevent urban development from occurring in these protected areas. They are used to shift development from agricultural areas to designated urban growth zones close to municipal services, usually at higher development densities than normal (Armstrong & Allison, 2003). These schemes reward both developers and farmers: developers, by purchasing development rights, gain the ability to build at higher density; farmers receive financial incentives not to subdivide land for development (Buxton et al., 2006). In Australia, where in most states development rights are not attached to land titles, the legal aspects of these schemes are more complex and require resolution before they could be introduced (Buxton et al., 2006).

Development rights can also be purchased in some jurisdictions to facilitate land preservation for agricultural or environmental reasons. In this approach, landowners voluntarily sell the rights to develop their land to a government or non-government organisation, such as a private land trust, after which a permanent covenant is placed on the land preventing its future development. In the case of agricultural land, this ensures that it is retained as farmland or open space (Armstrong & Allison, 2003; Outer Suburban/Interface Services and Development Committee, 2010). Whilst generally reducing the market value of the land, because it no longer has development potential, this effectively allows a farmer to raise capital by cashing in part of their equity (Outer Suburban/Interface Services and Development Committee, 2010). This has a positive effect on the land's ongoing agricultural use and makes it more affordable for other farmers to purchase. The system is extensively used throughout the USA, preserving 728,500 hectares, expending approximately $4 billion on purchase of development rights programs (Outer Suburban/Interface Services and Development Committee, 2010).

Thus the literature of transforming agriculture, valuation and planning demonstrates the complexity and competing uses evident in the peri-urban and suggests a difficult space, one with contested and potentially multiple identities, and with no firm concepts to aid its understanding. Despite the wide range of tools and mechanisms for protecting farmland, the peri-urban presents as a constantly changing and dynamic landscape influenced by unchecked, and potentially unsustainable, residential development. This contradicts the very notion of sustainable, fair and orderly development that modern land use planning in Australia seeks to achieve. The planning literature has recognised this conundrum, but as yet has not responded to the challenges that spin out of it. Despite the introduction of measures to slow development, an increasing number of Australians are opting for low density, peri-urban living environments, which development and transport policies (generated by all three levels of government) have stimulated (Sutton, Goetz, Fildes, Forster & Ghosh, 2010).

The situation in many parts of Australia thus looks like this:

> *Available planning tools are often vague and difficult to apply, and land use policies are inadequate... The discretionary nature of planning tools has led to widespread misapplication of these tools. Regional planning is effectively non-existent. There is insufficient coordination between local councils, regional management authorities and state government, and insufficient integration between state government agencies. Such extensive failure to achieve integrated cross sectoral policy and planning responses points to serious institutional failures.* (Buxton, 2007, p. 39)

Further, there is increasing evidence that the assumptions of metropolitan land development strategies and detailed land use plans "*...have not considered the multi-dimensional role and impact of food production and consumption. We have little grasp of the importance of food in the economy of our cities"* (Budge & Slade, 2009, p. 9).

It is not contested that part of the peri-urban conundrum lies in the politics of the place. Here, the pushes and pulls of politics emanate from quite different directions and reflect the big challenges referred to earlier. Planners and decision-makers are required to deliberate and mediate a range of interests, including those of developers, environmentalists, users of recreation spaces and residents, just to name a few. Here the notion of the planner as a deliberative practitioner becomes useful, so well captured by Forester in his seminal work about the dilemmas inherent in planning practice (Forester, 1999). There is no doubt that the peri-urban is an extraordinarily difficult space because it is highly complex and politicised, full of power imbalances and challenges. Somehow, the research must deliberate and consider all of this complexity, using insights from the literature reviewed above.

PART B: Developing a Conceptual Framework for the peri-urban

2.4 Reframing the peri-urban problem as wicked

Applying the literature of productive agriculture, valuation and planning to these peri-urban challenges not only reveals a complex space but also exposes concepts that may be useful for understanding the question of identity. The peri-urban is a productive space undergoing a transformation, evident in the changing landscapes, the emergence of local food and a focus on provenance. It is highly valued for its open space, recreation and aesthetic resources, and acts as a bridging space between city and country, suggesting some redundancy for the traditional urban-rural dichotomy. Opportunities for further transformative potential lie in the idea of related variety, and the creation of a platform around the unique assets and values in the space. It is revealed as multifunctional.

The peri-urban problem is ill-defined, ambiguous and there is no clear consensus as to how its challenges should be resolved. It is dynamic, constantly moving, and the literature demonstrates that it displays interacting issues that are evolving in a changing social context, all signposts of a *wicked* problem. Problems can be both wicked and tame, and planning is quite distinct from the tame problems that scientific and engineering methods can resolve (Rittel & Webber, 1973). Wicked problems are strongly stakeholder-dependent and often, attempting their understanding and resolution will bring forth new forms of wicked problems (Ritchey, 2007; Rittel & Webber, 1973). Tame problems are relatively well defined and stable, and solutions can be tried and abandoned (Ritchey, 2007). Wicked problems are much harder to work through than tame ones, because they exhibit incomplete, contradictory or changing requirements and constraints, and often involve a large group of stakeholders with divergent interests. The result is limited, if any, consensus about what the problem is and how to resolve it (Lacey, 2009; Ritchey, 2007). Thus developing solutions to highly complex, wicked problems is difficult and can, in fact, create new problems.

The term wicked problem was originally proposed by Horst Rittel, in a seminar referred to by Churchman (1967), where he described the term as referring to "*...that class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing*" (Churchman, 1967, p. B141). Often the proposed solutions to the problem turn out to be worse than the symptoms (Churchman, 1967, p. B141). Churchman argued for the need to raise awareness about wicked problems, and commit to an honest acceptance of their intractability, to shift the focus to creating innovative adaptation strategies and approaches to live with them through action-based research and other social processes (Xiang, 2013).

Applying the wicked problem conceptualisation to Australia's peri-urban landscapes reveals how context will influence problem-definition and resolution, and highlights complex interdependencies that paradoxically compete, thus readily fulfilling the requirements for a wicked problem. At present, peri-

urban spaces appear as mosaic jumbles: patchworks of production, dwelling development and aesthetic landscapes amongst other things. Actors in the space ponder how to deal with conflict; there is no accommodation of values or interests; iteration is constrained to repeating the same pattern over and over again whilst recognising its inherently problematic consequences. Ownership of the problem is often minimal. There is only limited cognisance amongst policymakers and those with influence in the peri-urban that disjointed attempts to manage the complex interplay between influences on the peri-urban are in fact contributing to the problem. Policymakers and practitioners understand the contextual reality of the interdependencies of issues associated with sustainability (of population, agriculture and landscapes), but are immune to the nuances associated with this. Solutions to date have been piecemeal; they have focused on one aspect of the problem in isolation from the others. They highlight institutional inadequacies and governance failures and may have compounded problems by providing beneficial solutions for some stakeholders at the expense of others (Lacey, 2009).

Stakeholders and experts often disagree about the nature and causes of wicked problems and how best to address them. Power relationships play a significant role in efforts to address and resolve wicked problems. A key consideration in problem resolution is the manner in which power is dispersed amongst stakeholders (Roberts, 2000). If one set of interests is privileged over another, then this is more likely to result in stakeholder disengagement or disenfranchisement from the process. A key part of tackling wicked problems involves achieving sustained behavioural change; however, a key barrier is a passive and disengaged public (Australian Public Service Commission, 2007). Some of the key policy failures evident in Australia at present, around areas of welfare, health, crime, education and the environment, are advanced as examples of this apathy.

Rittel and Webber (1973) suggest ten criteria for a wicked problem, which can be seen as a consequence of at least one of the characteristics outlined below (Xiang, 2013):

The problem formulation suffers from indeterminacy – the wicked problem's precise formulation as a problem with unique and determinate conditions for resolution is virtually impossible because the values and interests of those involved are diverse, often conflicting and change over time and across generations. Thus there is no definitive formulation (Rittel & Webber, 1973) and our view of the peri-urban will be influenced by our values in relation to landscape, the meanings we ascribe to the context and concepts. For a developer, the problem may be getting approval to rezone the land for development; however, for an environmentalist, the problem may be landscape degradation as a result of its development. Neither of these versions is right or wrong, rather reflective of different lenses used arising out of our values. The nature and extent of the problem can be dependent upon who has been asked (Australian Government, 2007).

Further, wicked problems have many interdependencies and are often multi-causal (Rittel & Webber, 1973). In the peri-urban, its tensions appear at different places on the conservation-farming-development spectrum. Sometimes, in the peri-urban, producers will sit on the development side, using

land as their superannuation. Other times, the producer is the conservation or biodiversity protection agent in the landscape. Resolving the peri-urban problem is complicated by the pluralistic, diverse views of stakeholders about the nature of the problem and how to address it and the role that power relationships play.

Non-definitiveness in problem solution – a solution that is rigorous and final with definitive results cannot be attained because the problem and the repercussions of its solution are indeterminate. Wicked problems usually have no clear solution (Rittel & Webber, 1973). Dynamic problems are unlikely to have definitive solutions; rather, problem solving often ends when it is considered that enough has been done. A clear solution to peri-urban complexity is unlikely because of its chaotic and contested nature. Barr (2003) saw several ramifications of the contextual challenges taking place in and around the peri-urban, including those driven by amenity and lifestyle desires and changes in production models. He did not pin it down to just one. Multifunctionality suggests that for many places, there will be no one dominant solution, but rather an accommodation of multiple ones. For many, the inherent difficulty of this 'no solution' view lies in planning's function of improving some characteristic of the world where people live (Rittel & Webber, 1973), grounded in planning's utopian desires and its betterment aims.

Non-solubility – wicked problems can't be completely solved because of these preconditions of indeterminacy and non-definitiveness. Wicked problems can be suppressed or overcome, but never eliminated. Therefore, at best, "*...they are only ever re-solved, over and over again"* (Rittel & Webber, 1973, p. 160). Further, the extent and significance of the wicked problem can continue to reveal itself, and this is true of the wicked peri-urban. The constant evolution and mutation of the problem (Ritchey, 2007) contributes to this non-solubility. What has been unveiled to date is transitory - its physical boundaries constantly shift, change and move, creating an unstable environment, with a high degree of difficulty.

Irreversible consequentiality – every implemented solution to a wicked problem is consequential, triggering irreversible and unstoppable ripple effects throughout the entire system (Xiang, 2013). Every solution to the peri-urban to date has left traces that cannot be undone. Attempts to address urban pressures and ad-hoc metropolitan expansion led to policy changes that resulted in further intrusions into the peri-urban. These policies have had unforeseen consequences on peri-urban landscapes. The designation of rural living areas as a solution to these problems has seen land speculation occur, with large areas of land held by absentee landholders who provide limited, if any, care for the land. In some cases this has resulted in fire hazards and the introduction of weeds and aesthetic impacts on the landscape, most of which have consequences for agricultural production.

Individual uniqueness – each wicked problem has one or more distinguishing property of overriding importance that makes the individual problem and its potential solution one-of-a-kind. This means that they cannot be categorised, and solutions for other wicked problems cannot be immediately transferred. Rittel and Webber (1973) noted that wicked problems are socially complex and hardly ever sit conveniently within the responsibility of any one organisation. Murdoch (2006) highlights how planning

was able to reinvent itself using the map as a new technology, but suggests this inevitably failed because the cultural and ecological dimensions that are necessary to engage with heterogeneous complexity were not considered. Peri-urban complexity lies inherently in its social bases rather than any technical complexity; it lies in the values present in these areas and the way they jostle and rub together.

Collaborative networks need to be mobilised when thinking about wicked problems (Lacey, 2009). Negotiation of conflicts requires coordinated action by all of value holders, collaborating and interacting with those from a range of backgrounds. It may need to be a social resolution, accommodating rather than resolving, taking different forms for different value sets. Whilst there will be a role for technical inputs in the process, these will not sit above any other inputs. The ecosystems services concept may help deal with this because it brings together multiple interests evident in the landscape to respond to socially complex issues. It suggests that we can create approaches that introduce new forms of measurement for services provided to the environment from a range of different and non-aligned sources. Using a market-based approach may allow the interaction of these different sources and interests and support an alternative approach to their accommodation.

Wicked problems involve changing behaviour. They require us to "*remain in the mess*" (Ritchey, 2007, p. 5), something which is not easy. Nor is it easy in the practice of planning, with its functions of improvement and betterment and desire for certainty, or valuation, with its focus on ascribing economic value. The peri-urban landscape presents as an unstructured mess of land uses and interests, a moth-eaten fabric of development. It is potentially subject to many prospects, driven by amenity imperatives or other outlooks such as Barr (2003) identifies. The limited response to the wicked peri-urban problem, especially at institutional level, highlights the difficulties that remaining in the mess poses for government and governance. Traditional policy-thinking and problem-solving processes suggest that problems should be resolved in an orderly and linear process; however, this approach fails to recognise the interactions and uncertainty between stakeholders and causal factors (APSC, 2007; Rittel & Webber, 1973). Thus, behavioural change on the part of traditional decision-makers and stakeholders will be necessary – they will need to remain in the landscape for a while (Gill, 1997), accept that the problem will take time to understand and consider, and to see through to that which lies beneath.

2.5 Concepts to examine the peri-urban

The previous section argues that the interaction of various challenges (planning, land value and agricultural uses) renders the peri-urban a complex and layered space exhibiting the characteristics of a wicked problem. The question then is how to extract identity from a wicked spatial problem. Within the literature on the peri-urban challenges several useful concepts are identified. These include:

- the capacity for collaboration to respond to multiplicity;
- the concept of related variety as an organising frame;
- design thinking as alternate problem-solving method;

- the layering of the landscape;
- the peri-urban as a system; and
- the peri-urban as multifunctional.

These ideas can be brought together to create a conceptual framework which can respond to the wicked problem.

Collaboration as a response to multiplicity

Collaborative strategies have been suggested as one of three methods for dealing with a wicked problem, especially in relation to matters of public policy (APSC, 2007; Roberts, 2000). A key step in responding to wicked problems is to mobilise collaborative networks (APSC, 2007; Lacey, 2009). The planning discipline has something to offer here, because it proffers a participatory approach and space where people can work with problems and improve things. Collaboration's potential to result in a collective contribution and build bridges in complex linked systems (Bellamy, Head, & Ross, 2012, p. 1) positions it well as the basis of the conceptual framework advocated for addressing the wicked peri-urban problem.

Where problem solution requires behavioural change, the best strategy is usually grounded in collaborative process (APSC, 2007). Understanding that different groups of individuals will hold diverse values in planning and problem-solving processes is critical to participatory problem-solving, even though "*...what satisfies one may be abhorrent to another...what comprises problem-solution for one is problem-generation for another*" (Rittel & Webber, 1973, p. 169). Collaboration provides a process through which parties who see the aspects of a problem differently can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible (Gray, 1989, p. 5). There is no right and wrong; rather it seeks the best chance of accommodating differing views.

In the peri-urban, collaborative process allows for many voices, languages and functions, which then must be resolved and crafted into solutions such as an identity for the space. Ensuring that both the real and perceived issues are heard is critical; as is determining who will speak for voices that cannot speak for themselves. Giving participants the time to listen to each other and talk until the real issues emerge (Boully, McCollum, Vanderbyl & Claydon, 2005). Reflecting upon a community engagement process in part of the Murray Darling Basin, Boully and her colleagues concluded that "*...if we 'talk and talk and talk until the talking starts' - joint discovery is...possible",* and the subsequent experience more rewarding than individual achievement (Boully et al., 2005, p. 15). In this case, solutions developed collaboratively were more creative and received greater support and had higher stakeholder commitment.

Related variety as an organising frame

The act of collaborating suggests a focus on commonalities and relationships, bringing us to the concept of related variety and creativity. Collaborative models are emerging as a vehicle by which smaller scale economies and businesses can conceive, develop and sustain competitive advantage (McCall, 2013), thus advancing regional economies. In this view, collaboration is central to a business model and responsible for driving innovation. Emerging thinking argues that there is an important role for government as the facilitator of the necessary preconditions for innovation at a suitable scale, usually regional, including mandating collaborative effort (McCall, 2013).

By encouraging competing values to interact, and through the mobilisation of networks, collaboration increases the potential to create transformative possibilities. For regional development, collaboration allows an entry point into the wicked spaces, offering a range of benefits including:

- the potential to overcome scale and scope deficits that restrict access to new markets;
- the opportunity to access government support that may not otherwise be available;
- sharing of risk, and profit, which provides increased financial security and stability based on both commitment and strategic planning;
- enhanced sustainability of current operations;
- collaborative intelligence, which results in a widened, accessible and cost-effective market intelligence base; and the
- development of new relationships which in turn potentially drive new services and product innovation (McCall, 2013).

Acknowledging "related variety" as a critical contributor to building competitive advantage in a region (Cooke, 2007; Lazzeretti et al., 2010) creates further impetus for collaboration. As mentioned earlier, this implies the existence of cognitive relationships amongst different industries and businesses (Lazzeretti et al., 2010). Underpinning the idea of related variety is the idea that the more variety, the better. As a key driver of regional growth, it stresses the "*economic importance of bringing together different but complementary pieces of knowledge*" (Asheim, Boschma, & Cooke, 2011, p. 894; Boschma & Frenken, 2011; Frenken, Van Oort, & Verburg, 2007). It "*links knowledge spillovers to economic renewal, new growth paths and regional growth*" (Asheim et al., 2011, p. 896). It suggests that a region's long-term development is dependent on its ability to diversify "*into new applications and sectors whilst simultaneously building on their current knowledge base and competences*" (Asheim et al., 2011, p. 896). For the peri-urban, the concept of related variety can aid the collaborative process by firstly enabling a focus on the different pieces of knowledge and activities in the peri-urban and reframe them in terms of complementarity rather than conflict.

Design thinking as an alternate form of problem-solving

Design plays a key role in creating cutting-edge and controversial proposals to draw attention to the plight of these valuable fringe areas (Armstrong & Allison, 2003; Koolhas in Lootsma, 1999). These proposals argue for a reimagination of urban-rural space and push for a view of it as both related and

layered. Unlike efforts to plan the peri-urban landscape, this reimagining could include the manner in which we design cities and "*program the urban surface*" (Allison & Armstrong, 2003; Wall, 1999, p. 233). Wall (1999) notes a renewed interest in the *instrumentality of design*, a context that allows the concept of landscape to invoke prospects much broader than landscape function, "*the functioning matrix of connective tissue that organises not only objects and spaces but also the dynamic processes and events that move through them*" (Wall, 1999, p. 233).

This design view identifies landscape as an "*active surface, structuring the conditions for new relationships and interactions among the things it supports*" (Wall, 1999, p. 233). Whilst Wall's analysis responds to urban conditions, he could have been speaking of the peri-urban with his description of *"a dynamic agricultural field, assuming different functions, geometries, distributive arrangements, and appearances as changing circumstances demands"* (Wall, 1999, p. 233). He argues this dynamism and change requires a response that revises practices of landscape and urbanism; to reflect that the city has adopted a polycentric and weblike sprawl (the regional metropolis), focused more on the infrastructures and flows of material than the static political and spatial boundaries (Wall, 1999).

New kinds of urban sites have emerged on the urban surface, peripheral sites or "*middle landscapes that are neither here nor there*". This has been accompanied by an increase in mobility and access and a paradigm shift that now includes a dynamic view of cities (Wall, 1999). These conditions demand planners and designers revise their approaches, and create potential to graft new activities onto "*strategically staged surfaces...living connective tissue between increasingly disparate fragments...*" (Wall, 1999, p. 235). For the peri-urban, we can argue that a key part of this grafting process should connect these activities to a new form of productive space, "*one which synthesises agriculture, nature conservation, infrastructure and communities*" (Armstrong & Allison, 2003) in a multifunctional way.

> *The design, planning and integration of productive rural land, albeit in a new form, is an essential component of urban conurbations. These can be spaces between urban areas, which are hybrids between productive lands, nature conservation areas, areas of recreation, transport and communication infrastructure and communities.* (Armstrong & Allison, 2003, p. 6)

Thus, to work with the wicked peri-urban problem we must address *how these spaces connect,* and the concept of collaboration and the relationships in the space will be of use. Attempts to do this will require creative and inventive responses (Lacey, 2009), using new connective approaches, concepts such as related variety and regional development platforms, and innovative, comprehensive solutions that can be modified in the light of ongoing experience and on-ground feedback (APSC, 2007). This requires an openness to share data and information that may not have traditionally been shared (Boully et al., 2005) and is critical to the type of knowledge-sharing and collaborative efforts that the regional development literature, for example, espouses. "*One cannot understand the problem without knowing about its context; one cannot meaningfully search for information without the orientation of a solution*

concept; one cannot first understand, then solve" (Rittel & Webber, 1973, p. 162). For the peri-urban, this means that alternate problem-solving approaches will be useful; we must turn traditional solutions to these problems on their head and challenge the traditional way of thinking about these areas.

Using landscape to capture complexity - interminglings, interferences and layers

Reimagining urban-rural spaces such as Wall suggests requires us to think about the space and how it is ordered. There are clues in the literature that may help to approach this task, in particular arising out of the work of Lefebvre (1991 [1947]; 1991[1974];), Halfacree (2004) and Soja (1996) which will be examined in more detail in the next chapter, which conceive of space as a totality. Landscape theory is one discipline where complexity of space is also dealt with. As a product of the human interactions at work within the space, landscape shapes identity and it was this that suggested an important role for the landscape in the research. Landscape creates the canvas upon which interactions in space play out. Importantly, it reflects contested notions about what people value in the environment, and references a range of assets, perceptions and values. How landscape theory deals with these intermingling and interferences may hold potential for attempts to frame a peri-urban identity. This analysis of the peri-urban has consistently brought to bear the idea of landscape, as a point of convergence between human and natural activity; something highly influenced by positive and negative impacts of activities occurring in these spaces. Thus thinking about landscape may help provide the clues to the peri-urban identity itself.

"We do not really know how to organise the overall landscape in order to ensure its different functions..." (Batisse, 2000). Linking the peri-urban to landscape theory locates a way of looking at, examining and reading our surroundings that seems missing from current practice (McConville, 1991). The concept of landscape, as the ground layer of the peri-urban, is attractive, important yet ambiguous, with the capacity to create a range of connotations, some of which are personal (Meinig, 1979). The idea of landscape is anchored upon human life, a unity, a wholeness and an integration of community and the environment that must be understood in living terms (Meinig, 1979). These concepts of wholeness and integration have use for the peri-urban, as well as the synergies between the shared dilemmas of the two spaces. Peri-urban challenges are among those that landscape theory has sought to resolve, including the competing values and perceptions held by actors within the landscape; the convergence of humanity and nature; and the multiple influences and assets that the peri-urban displays.

Interpretations of landscape highlight the intermingling of physical, biological and cultural features, which any glance around us can convey (Meinig, 1979). The interminglings within the peri-urban landscape are quite evident in our glances around it, no matter which landscape perspective we hold. Acknowledging these intermingling can help us to understand the accumulation of the features and codes that the landscape embodies (Meinig, 1979), the spatial relations that play out within it, and perhaps clues to an identity. Central to the content of a landscape is the land use pattern that it displays (McConville, 1991). In the peri-urban, this pattern highlights the pursuit of varied goals, many of which are interconnected. This means that the interrelationships between them need to be defined, the middle

ground potentially sought and the consequences of this incorporated into decision-making frameworks and processes. Using landscape may allow us to accommodate the messiness and complexity in a way not yet achieved, and to build an identity for the space that reflects this.

Recognising landscape theory as a valuable doctrine for the purposes of this research supports the conception of new approaches to resolving the wicked peri-urban problem as both desirable and achievable. In Europe, new concepts of landscape are being explored as a result of the challenges evident in existing ones (Armstrong & Allison, 2003; Lootsma, 1999; Meroni 2007). These approaches are multidisciplinary, combining landscape architecture, planning and design to develop new and confronting views of urbanisation and management of fringe areas, the sustainability impacts of continuing with the status quo and seeking to highlight the urgent need for renewed approaches. In these concepts, landscape is emerging as "*...the ground structure that organises and supports a broad range of fixed and changing activities at the urban and rural edge*" (Armstrong & Allison, 2003). Landscape is the human interpretation of the physical world (McConville, 1991); it is more or less than the entire surface of the land. Land use planners have tended to see landscape in a physical sense, as areas suitable for open space and recreation, nature reserves and the like (Armstrong n.d.; Department of Infrastructure, Planning and Natural Resources, 2004). Some in the literature argue that to read the landscape in this way is superficial, ignoring the rich and complex contribution that landscape can play (Allison, n.d.). Low Choy (2008) notes the confusing milieu of land uses, values and aspirations at play in peri-urban landscapes and argues for new conceptual frameworks for these areas that move away from this traditional planning view. Corner (1999) suggests that we use landscape as a concept for much more than the traditional scenic purposes, for diverse and rich ends, embracing urbanism, infrastructure, strategic planning, and speculative ideas alongside nature, the environment and spiritual connections to the land, a view that sits well in the frame of this research.

Barr (2003) identifies the relationship between the structural changes taking place in agriculture, their influence on social landscapes and the resulting emergent landscapes. This has important ramifications for the manner in which we think about the peri-urban. He describes the peri-urban landscape as "*the perennial challenge of the planning profession*" (Barr, 2003, p. 127): a landscape where agriculture is likely to be intensive, as a response to high land prices; where subdivision is occurring regularly; where land use raises the spectre of conflict; and where, as yet, we don't have a clear or singular form of activity that will dominate at the expense of the others. As a result, we don't know how *to fill the extensive yet fragmented spaces* (Barr, 2003) that these landscapes present. Barr's revelation of the complexity of rural landscapes represented an important advance in understanding the wicked peri-urban problem and what it means for identity. He accepts that these are complex spaces and that some of them have unclear futures. He does not seek to cure their inherent endless complexity, but rather to place the peri-urban in its context and find an accommodation of the forces at play there. Critically, Barr recognised that the peri-urban landscape is a landscape in its own right that, despite its complexity and messiness, has its own identity and integrity.

Meinig (1979) too accepts the endless complexities of landscape, viewing landscape as a kind of archive, full of clues about cultural character and historical change; more than a set of data, rather an integration or a composition (Meinig, 1979). Proposing a new way in which to conceptualise landscape, ten different lenses were applied to the same scene, highlighting that *"...even though we gather together and look in the same direction at the same instant, we will not – and cannot – see the same landscape"* (Meinig, 1979, p. 33). Whilst we may see many of the same elements, they take on meaning "*only through association and must be fitted together according to some coherent body of ideas" (*Meinig, 1979, p.33). In this lies the central challenge – *"...that any landscape is composed not only of what lies before our eyes, but what lies within our heads"* (Meinig, 1979, p. 34).

Landscape can thus be visualised in expansive, potentially unusual ways, adding to its wickedness; a less quantifiable object than it is an idea (Corner, 1999). It is a way of seeing, remaining open to interpretation, design and transformation and in this way, the nature of landscape itself has been revised. It has been subject to a rethinking, about what landscape actually is or might become – both as idea and artefact (Corner, 1999). Landscape's scale and scope can serve as a metaphor for inclusive multiplicity and pluralism – its diverse and competing forces can align to create new alliances (Corner, 1999) and new collaborations. In this way, landscape can become the unifying aspect, where divergent views find some common ground. Conceptualising the peri-urban landscape in this way offers the opportunity to unpack its complexity and pull apart the space whilst recognising its multiplicity.

> *...even though we gather together and look in the same direction at the same instant, we will not – we cannot – see the same landscape. We may certainly agree that we will see many of the same elements – houses, roads, trees, hills...but such facts take on meaning only through association; they must be fitted together according to some coherent body of ideas.* (Meinig, 1979, pp. 33-34)

Thus, the conceptual framework recognises that differing views exist simultaneously in the landscape, like positive and negative ions, rubbing together with uncertain results. Sometimes, those that view the landscape as something aesthetically beautiful will use it as a commodity, seeking to make a living from it. Evidence of this is found in peri-urban tourism, where high value landscapes are utilised as scenic backdrops for accommodation or other value-added tourism or commercial experiences. Sometimes, we will seek different things from the landscape at different times of our lives – our particular needs at the time may shape the values we hold, suggesting our value position is temporal. It can shift like the landscape itself to be dynamic and fluid, rather than static and permanently stable, reflecting that what is important to us now may not be so in twenty years' time.

The peri-urban as system

Adopting a systems approach for the research allows the understanding of connections and networks, and enables the peri-urban to be envisaged as a system of interactions and interconnections of human activity and physical processes. Soft systems thinking accepts that individuals will see the same concept

or element of the system from multiple perspectives, thus recognising the plurality of views and values that exist in the system (Bosch et al 2007). An attraction of soft systems thinking for the research is its ability to respond to and accommodate complexity and uncertainty in systems (Bosch et al 2007), such that the peri-urban offers. A way of mentally framing what we see in the world, it looks at the whole first, with its fit and relationship to its environment as a primary concern, and then focuses on processes, patterns and relationships (Morgan 2005: 5). Critically, it seeks to account for increasing connections and interactions between individuals within society, arguing for a response focusing on the social and cultural dimensions of the human factor (Morgan 2005; Checkland 2001 in Rosenhead & Mingers 2001).

Rather than being bogged down by complexity, this approach sees potential for a rich interpretation of society's purposeful activity which often completely differs from one person to the next. This allows all the different actions identified to be used in a process where they are rubbed up against the perceived reality to see if an accommodation between the conflicting viewpoints can be found as a basis for action to be taken (Checkland 2001). This plurality can then be recognised and responded to, using the particular lens adopted by those involved, to develop actions that could "make things better in their eyes". This is extremely useful for the research approach which adopts interpretive lenses based on multiple values and experiences. It allows participants in the process to create their own meaning and the researcher to recognise this. Importantly, it means that we can acknowledge all the different values and assets as valid in the space. Recognising and respecting conflict, soft systems thinking too uses the idea of "mess" to think about the environment where the conflict exists (Ackoff 1974). A problem or opportunity can be abstracted from a mess but they do not exist in isolation. They are interconnected and this interconnection is highly evident in the peri-urban. Its use of interpretive lenses and models may help to form views and ideas about complexity, how it can be comprehended and how to act purposefully within it.

Checkland (in Rosenhead & Mingers 2001) described the complexity of perceived reality where the world is complex and mysterious, and far more complex than any of our ways of constructing it. This suggests that one way of making complexity manageable is to take a broader perspective. The research seeks to do this when it takes a wide sweep across a range of theoretical bodies - to facilitate a honing in on the real and manageable, on what might be useful, though applied in a new context. It requires robustness to achieve. Checkland reflected this process can lead into a learning process; one where the accommodations between the differing views can be made, thus underpinning action to improve things.

Thus, new ways of thinking are required if we are to successfully manage the complex problems associated with sustaining and enhancing the condition of our landscapes (Bosch et al 2007). Considering the peri-urban landscape as a system aids a focus on connections between objects, events and ideas. Ackoff (1974; 1995) described this as being fundamentally about relationships; again a critical point for this research. Often in the peri-urban it is the relationships between the objects, events and ideas which give them their meaning. Using this approach allows us to remain constructively in the mess, as the wicked problem literature also suggests we do, and coexist with uncertainty, complexity,

uniqueness and conflict as well as the unintended consequences that arise from the wicked peri-urban problem. Using different methods such as the discourse texts helps to get in behind the perceived reality, to get at the soft systems by locating and probing dissenting voices and views.

Using multifunctionality to manage complex landscape challenges

Suggestions of collaboration and relatedness, alternate forms of problem-solving and landscape multiplicity, hint at the need for a multifunctional conception (Dijst et al., 2005; Holmes, 2006; Kopeva et al., 2010; Vanslembrouck & Van Huylenbroeck, 2005). The European view of multifunctionality highlights the multiple roles that landscape plays and the changes to the different parts of the landscape roles (Kopeva et al., 2010; Vanslembrouck & Van Huylenbroeck, 2005; Zasada 2012). It encapsulates the emergent thinking that land is important to people for a range of reasons – productive, amenity and recreation among them. In Australia, there is growing evidence of irrevocable change in the rural landscapes that once predated the peri-urban perspective. No longer simple, the changes are reflected in farm employment, the emergence of landscape amenity products, diversification into mixed farm operations (including tourism accommodation) and technological advancement (Barr, 2003, 2005). Allison (n.d.) argues that there needs to be a reinterpretation of productive rural lands in the light of how these changes, and the peri-urban land hosting them, have developed. This is also necessary because of the transformations evident in the agricultural sector and these landscapes, which are not yet reflected in land use policy and plans. Thus, governance must reflect this change and consider how it respond to a multifunctional view; recognising the role of ecosystem services, better understanding environmental impact and committing once more to the maintenance and restoration of environmental integrity.

The concept of multifunctionality has great utility for the peri-urban, allowing us to explore an alternative way of looking at peri-urban landscapes. This idea has been linked to theoretical perspectives relating to landscape, agriculture and economics, highlighting its utility across different disciplines. The OECD uses an economic or sectoral definition, considering multifunctionality as referring to

> *...the fact that an economic activity can have multiple outputs, and by virtue of this, may contribute to several societal objectives at once. Multifunctionality is thus an activity oriented concept that refers to specific properties of the production process and its multiple outputs.* (OECD, 2001, p. 11)

Multifunctionality is underpinned by an interpretation of land as being capable of serving more than one purpose and of fulfilling several needs simultaneously (Selman, 2009). The same area of land can provide "*...key ecological, economic, sociocultural and aesthetic functions simultaneously and to mutual benefit.*" (Selman, 2009, p. 45) The literature notes distinctive features of multifunctional landscapes which make them highly meaningful:

- *elements interact rather than simply collocate* – this leads to beneficial interaction among local economies, the environment and social objectives (Gallent et al., 2004 in Selman, 2009);

- *they are synergistic* – the interaction of landscape-functions in a positive and complementary way creates a more self-sustaining landscape, often as a result of fortunate accident rather than any good planning;
- *they are integrative* – the landscape is a system rather than mere scenery, defined in terms of its functions, goods and services and its temporal cultural associations;
- *they are holistic* – landscape planning shifts in emphasis and considers the entire land use matrix, including the urban fringe (Antrop 2004; Gallent et al., 2006 in Selman, 2009).

Resilience could also be added as a fifth feature, in that these landscapes hold the capacity to recover after fire, drought and other challenges.

European studies that conceive agriculture as multifunctional underline its important contribution to goals of sustainable development, rural vitality, environmental protection and food security and safety (Dobbs & Pretty, 2001; Selman, 2009; Stringer & Pingali, 2004). They call for a greater recognition of the multiple functions of agriculture, including a better understanding of its contribution to societal goals and the role it plays in providing non-commodity goods and services, shaping the environment, impacting social and cultural systems and contributing to economic growth (Cazemier, 2012; PURPLE, n.d.; Stringer & Pingali, 2004). When applied to agriculture, multifunctionality suggests the delivery of valued non-food functions that cannot be produced by other economic sectors (Dobbs & Pretty, 2001), including contributions to maintaining sustainable landscapes. When we think about this in a market sense, it raises questions for how we view the market, suggesting something different to pure economics, leading us to think about alternative valuation and planning methods.

The adoption of multifunctionality in European jurisdictions particularly has opened the way for a renewed and integrated focus on the undervalued potential of the urban fringe (Selman, 2009). Increasing concern about the social-ecological disconnect, the failings of sustainable development approaches and the increasing community claim on the environment have led to calls for a new perspective of the fringe that can integrate all the ecological, economic, socio-cultural and aesthetic functions that we seek from these landscapes. The multifunctional qualities of peri-urban areas should be perceived as an advantage – providing vital resources to support urban populations; enhancing quality of life for cities (PURPLE, n.d.); and creating advantage that can be built upon to increase the profile and understanding of the role these areas play, whilst simultaneously increasing their value.

This renewed focus could be aided a model peri-urban functionality, which could be depicted as follows:

Landscape (f) = x (set of resources) + y (values) + z (assets),

Resources = natural, agricultural and mineral
Values = economic, social, environmental, cultural, spiritual and intrinsic utility
Assets = land-use activities and other assets

Integrating the resources, values and assets of the space into such a model frames an exploration of the dynamics of the relationship between landscape elements.

The process of rural transformation has been also conceptualised as a multifunctional rural transition, where a mix of consumption and protection values emerge to challenge the dominance of production values (Holmes, 2008). This perspective helps us to start to manage the contests and challenges that the landscape poses; to understand that this leads to much greater complexity and heterogeneity in rural occupance at all scales, and exacerbates the tensions and contests. In the Australian context, there is evidence of this transition, which allows a more complex interpretation of what occurs in rural space (Holmes, 2008). As with other changes, this is not mirrored in the way we plan for or value these spaces.

> *Understanding the balance of economic, social and environmental processes which shape the contemporary countryside, and the interrelationships between them in particular localities, will require far more than the rigidly sectoralised forms of knowledge which have characterised rural research. A synergy between previously discrete knowledge bases is now needed.* (Marsden, 1999, p. 504)

The utility of multifunctionality for the Australian context lies in providing a coherent interpretation of the diverse trajectories of rural change currently occurring (Argent, 2002; Barr, 2005; Holmes, 2006, 2008), and in allowing a layered view of the peri-urban space. The intensive re-evaluation of Australia's rural lands are underpinned by the emergence (or re-emergence) of interests that were previously unthought of, ignored or excluded, such as the new class of rural residents and animal welfare organisations such as People for Ethical Treatment of Animals (Argent, 2011). The same can be said for the peri-urban. Agriculture's significance for society is now considered to be much broader than food and renewable resource provision (Vanslembrouck & Van Huylenbroeck, 2005). It is being increasingly bestowed with responsibilities for the achievement of environmental improvement, sustainability and positive ecological effects. Restructuring has resulted in new economic and social structures based upon secondary industry, amenity and retirement services, public land industries and the services sector (Economic Research Service, 2000 in Barr, 2005). All of this highlights the multifunctional rural transition that Holmes (2006) identified and suggests an alternative conceptualisation for the peri-urban.

This multifunctional rural transition thus acknowledges the relationship between productive activity and landscape that occurs in peri-urban spaces, but multifunctionality in these spaces can lead to clashes of meaning and value which are difficult to accommodate in planning and managing these areas. Landscape is a commonly cited element of multifunctionality (Cahill, 2001). Agriculture too plays a key role in shaping the multifunctionality of the peri-urban landscape. New agricultural landscapes also have emerged from the interaction between productive activity, the environment and natural resources giving rise to different values in the landscape (Vanslembrouck & Van Huylenbroeck, 2005). These

values can be personal or they may be the collective values of the market and they bring particular challenges to the valuation process.

Conceptually, multifunctionality offers much for the Australian peri-urban landscape: it is open to a multitude of perspectives and meanings; it has utility for productive activity and recognises the different lenses we use to view landscape, seeking to accommodate them into a common approach. It recognises that rarely do differing interpretations of the landscape exist in isolation; many in fact bind together to become contested (Low Choy, 2008). Policy approaches in the peri-urban have not recognised the escalating demand for multifunctionality from land and water resources (Barr, 2003). Instead, peri-urban planning is bound up in regulation focused on size and scale, rather than reflecting "*...the structural change in agriculture and the dynamic interplay between social and economic forces*" underpinning peri-urban and rural transformation (Barr, 2003, p. 123).

2.6 A Conceptual Framework for the Peri-Urban

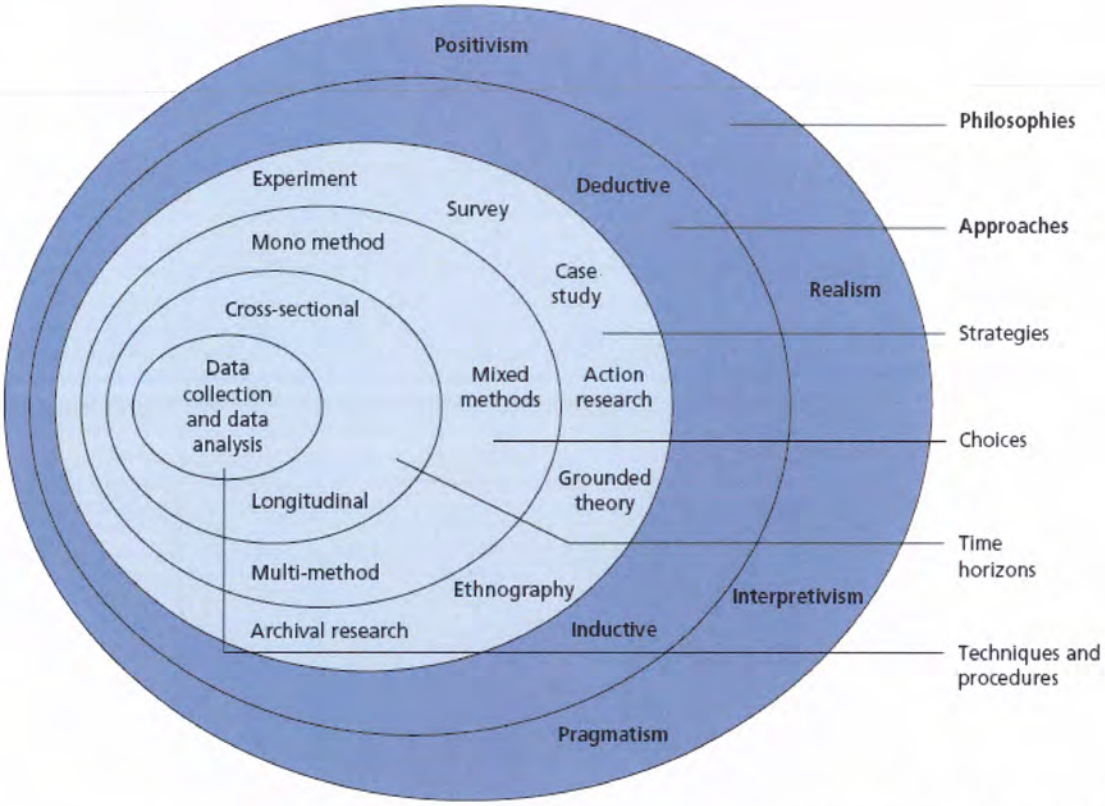
This chapter began by articulating the key challenges within peri-urban landscapes. The interactivity of these challenges and their impact suggest that the peri-urban is usefully conceived of as a wicked problem. Part B of the chapter then considers the ways of looking at the peri-urban which might best reveal more of these challenges, and of the peri-urban, in order to yield identity. Several useful concepts are identified. By structuring the peri-urban as a wicked problem it is then possible to the hold these concepts in tandem one with another to unpack the complex spatial interactions and demands within the space. These concepts form a conceptual framework and are summarised in a matrix in Table 2.2 (see over page).

The next chapter on methodology considers the philosophical and methodological responses to the questions and concepts outlined in this chapter.

Table 2.2 The conceptual matrix

Concept	Characteristics/ features	Rationale – justification
Collaboration	- Participatory - Enables interaction of competing values - Multiple voices, languages and functions - Often creative recrafting of space - Mobilisation of networks	Allows things that may be contradictory to be held together.
Related variety	- Recognises cognitive relationships between values and assets - Variety and multiplicity viewed as positive - Links to new futures - Reframes values with the lens of complementarity	Allows different but complementary pieces of knowledge to be brought together.
Design thinking	- Doesn't fear controversy or conflict - Suggests creativity, inventiveness and openness - Views space as a dynamic field, an active surface - Takes a connected view of space	Helps other kinds of unpacking and provides alternative ways to form bridges through its undertaking
Landscape theory	- Landscape too is complex, contested and layered - Theory considers concepts of wholeness and integration - Acknowledges the intermingling of the physical, biological and cultural - Adopts multidisciplinary stance to develop confronting views and new collaborative alliances - Also searching for coherent view of space	Landscape and what it yields helps particularly when overlaid with a multifunctional perspective
Soft systems thinking	- Peri-urban as system of interactions and interconnections of human activity and physical processes - Accepts reality of individual value positions - Sees potential for a rich interpretation - Looks for accommodation between conflicting viewpoints and works with plurality	Ability to respond to and accommodate complexity and uncertainty in systems
Multi-functionality	- Identifies that one space can have multiple drivers, roles, motivations, values and purposes - Enables multiple lenses Suggests an interactive, synergistic, integrative and holistic space - Highlights undervalued potential	Allows a complex interpretation of space, based on a multitude of perspectives and meanings, which in turn enables a coherent interpretation of diverse trajectories of change

Figure 3.1 The layers of research design



(Saunders & Tosey, 2012, p. 108)

Research philosophy and approach

Complex social problems often feature little agreement around the critical values and/or objectives, and attempts to resolve them are often grounded in majority preference, rather than a more comprehensive method (Lindblom 1959). Lindblom urges the problem-solver, in his case the policy-maker, to find ways to simplify the process, in the light of limits on man's capacity to be comprehensive. With this advice in mind, the research design considered carefully what might constitute acceptable knowledge in relation to the research problem, and the process by which this knowledge could be developed (Saunders & Tosey 2013).

The research adopts a phenomenological interpretivist philosophical stance, and uses a deductive approach involving action research and grounded theory and the application of mixed methods across cross-sectional lenses. This approach requires the layering or sieving of data in a logical and clearly focused manner to extract the information that responds to the research questions. Problem-solving, and especially that related to policy-making and wicked problems, has been acknowledged as a messy business (Lindblom, 1959; Friedmann, 1987). In this case, as with many complex problems, consideration of how to incrementally unravel it will be required. This not only necessitates a data-sieving process, an incremental approach which will see the data gradually layered upon itself to see

what it reveals, but will also reference matters other than those most familiar to the peri-urban and a commitment to seeking a diversity of views, via differing values and interests.

This interpretivist stance also means that the research will look for rich insights into the subjective meaning of the data gathered about the peri-urban, studying social phenomena in its natural environment and conducting research amongst people. Saunders and Tosey (2013: 58) note that this approach will require the researcher to adopt an empathetic stance, to enable an understanding of the subject's social world and the meaning given to it from their personal point of view. Interpretivist research is value-bound (Saunders & Tosey 2013), and this is an important asset when thinking about identity. This will allow the researcher to determine whether personal constructions of the peri-urban are influenced by what the subject values, by what their mind structures when it tries to understand its own personal and particular reality.

Through a process of accommodation and assimilation, the research seeks to construct new knowledge from the experiences of the research participants (Piaget, 1967). The worldview of the subjects will provide an interpretive lens through which the researcher can both see the world in a meaningful way and construct and reconstruct their interpretation and hence their meaning (Harris & Jimenez, 2001). Interpretative enterprise involves a dynamic sense of forming and reforming meaning, or a negotiation of meaning, between researcher, participant and reader (Harris & Jimenez, 2001). This negotiation is important in attempting to construct an alternate view of the peri-urban, given its contested and wicked nature, and will also provide some structure to the science of muddling through.

3.1 Research Methodology

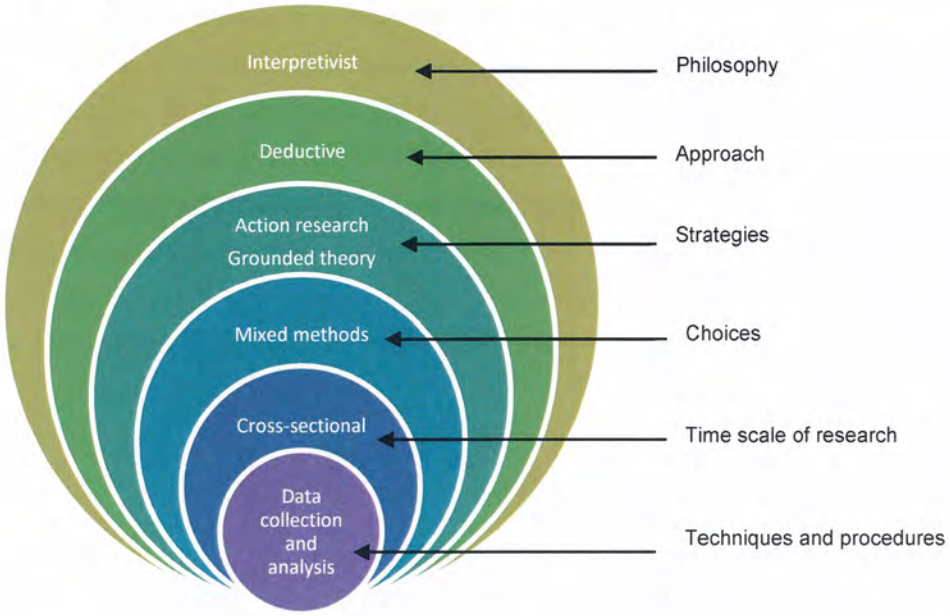
A process of deductive reasoning is used to support the research approach. Deductive reasoning allows the researcher to develop a hypothesis based on existing theory and then drive the process of data collection to examine the possibilities to reach a specific, logical conclusion (Bryman & Bell, 2007). In a deductive approach, the existing literature acts as the foundation and the research then seeks to confirm or refute the underlying theory. Whilst one might feel the act of constructing an identity for the peri-urban, with its open minded interpretation of the space, is an inductive endeavour, the starting point of the research, with its focus on theory and hypothesis, suggests it is not. However it is worth noting that many social research processes actually use elements of both.

The use of grounded theory aids the researcher to derive a general, abstract theory of a process, action or interaction grounded in the views of the research participants (Creswell 2003). This guides the research design, suggesting the need for multiple stages of data collection and the refinement and interactions of categories of information (Strauss & Corbin, 1990, 1998 in Creswell 2003: 14). Grounded theory encourages a strong focus on determining the interrelationships evident in the data and suggests a role for methods such as interviews and observations, as well as consideration of documents, historical records and other texts.

The research adopts an action research process, allowing a more detailed exploration of the interactions and relationships that it was expected the data would reveal. Action research allows the researcher to seek to discover the particular features of the specific problem, providing the time and space to design an intervention (Schön, 1983). Critically, in processes of action research or learning, the researcher must construct an understanding of the situation as it is found – and then, because the situation is problematic, it must be reframed. Sometimes this may happen iteratively. The effort to reframe the problem "*...yields new discoveries which call for new reflection in action*" (Schön, 1983, p. 132). This reflection in action philosophy is critical for the research.

Returning to the metaphor of the onion suggested by Saunders and Tosey (2013), the research design can be shown as follows.

Figure 3.2 Adaptation of the research onion for this research



Research methods

Interpretive research most often uses a qualitative approach to research design as the means of gathering data and information, and most often uses small samples and in-depth investigation (Saunders & Tosey 2013). Qualitative research

> *...is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations...At this level, qualitative research involves an interpretative, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.* (Denzin & Lincoln, 2005, p. 3)

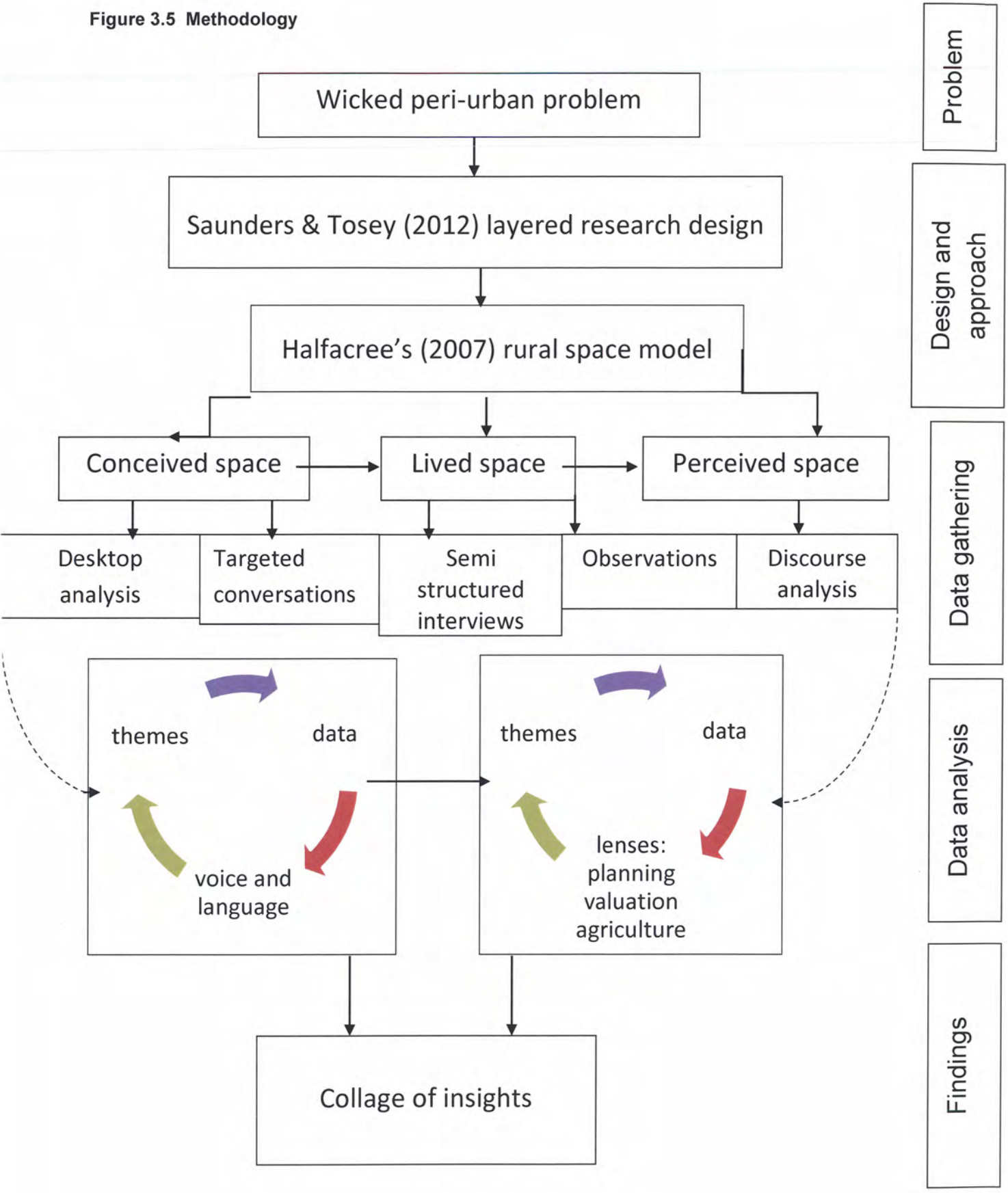
explore with them what this means for the manner in which they live and work within it. In order to understand the conceived space, expert opinion and experiences of the peri-urban challenges from other perspectives will be sought. Personal interviews and conversations will facilitate this data-gathering from a range of disciplines including agriculture, land use planning, valuation and landscape design, overlayed by both practical and academic perspectives. The discourse will also be examined in order to understand the perceived space. This will also enable the study of subtle nuances in attitudes and behaviours which impact upon social processes over time (Babbie, 2011).

The complex value positions expected in the peri-urban mean that subjectivity must be accounted for, but the selection of methods ensures it can be reality checked. A process of self-conscious reflexivity will allow the researcher to make explicit their influence on the research (Hennink et al., 2011). Reflexivity implies that the researcher understands that they are part of the social world they investigate (Berg, 2007, p. 18 in Hennink et al., 2011) and assumes they are explicitly aware of their own values, identity and ideologies (Hennink et al., 2011) and have come to terms with it.

The construction of new ways of thinking must embrace emergent understandings, continually evolving, developing and redeveloping throughout the interpretive enterprise (Harris & Jimenez, 2001). As we have seen, this includes not only facts but also subjective influences, emotions and experiences that may form part of the participant's or researcher's personal constructions. Data collected via qualitative participatory processes will form the basis of each participant's interpretation of the peri-urban; based on the application of their own interpretive lens, coloured by their own personal experiences. Combining this with other participant lenses and the analysis of other data sources will allow the research to make meaning for the peri-urban landscape (Merriam, 1998 in Harris & Jimenez, 2001). It is critical then that the research methods selected can work with multiple lenses, the multifunctional and contested nature of space, and the desire to make meaning of this.

The methodology can be depicted diagrammatically and such a depiction follows.

Figure 3.5 Methodology



The use of mixed methods thus builds on the foundations of the research philosophy and approach and aims to allow data collection not only to pick up important clues in the literature for further exploration, but also to become more deeply informed. They seek to create a detailed description of the conscious experience, be it conceived, lived or perceived. An overview of the research methods, and justification for their selection, follows.

Desktop analysis – understanding the conceived space

The desktop analysis aimed to aid the researcher to understand how the peri-urban space is conceived, seeking innovation and new knowledge, as well as some understanding of how the space is most usually framed. It highlighted a limited academic contribution to peri-urban analysis in Australia compared with other jurisdictions such as the UK, America and Europe. The analysis uncovers a lack of acknowledgement of the peri-urban landscape as a specific and unique planning area in this country. It highlights "*...the lingering tendency of planning to align and define itself with the interests that dominate the urban process*" (Gleeson, 2012, p. 243). Recent writings, although small, underline specific challenges to the maintenance and existence of peri-urban landscapes, the dearth of specific policy mechanisms to deal with this and the inevitability of the landscape in transition to residential perspective. The literature reviewed crossed international boundaries and involved a combination of theoretical papers and books as well as practice-based documents such as planning strategies and guides.

This process was challenged by the fact that practice on the ground seems to be moving faster than the theory. The Australian literature notes this (Low Choy, 2008), forcing the researcher to look further afield to the European literature, with a focus on multifunctionality and the importance of productive lands. Of particular interest in this body of work was how it has grappled with connotations of place and the conception of agriculture as a multifunctional activity, where producers carry out positive landscape functions upon which a value is bestowed. Finally, also of interest in the broader international literature were the tools used to plan for and value peri-urban landscapes.

The suggestion that multidisciplinary approaches are most useful when thinking about wicked issues (Rittel & Webber, 1973) highlighted the need to look beyond one discipline for a resolution to this challenge. This was not seen as a problem; rather used as an opportunity to apply fresh eyes to the way this space is considered, blending what we see as useful from other disciplinary approaches. The literature from other jurisdictions may contain lessons from successes that might contribute to a new approach to the peri-urban space. The desktop analysis thus accessed knowledge developed across a range of spaces, including design, ecology, agriculture and transitioning spaces.

The desktop analysis confirms the contested nature of the peri-urban space, but also endorsed it as a dynamic and changing, creative, distinctive and multidimensional landscape. It demonstrates the mediatory function that landscape can play between people and the natural environment in contested spaces (Backhaus, 2008). Whilst identifying that different stakeholders regard landscapes with different

eyes, it notes connecting elements that need to be considered (Backhaus, 2008), similar to the interrelationships between the differing elements of space in the spatial triad. If the analysis can consider and act upon these, it is hoped to achieve a heterogeneous accommodation that may lead into a new space.

Semi-structured interviews – a first attempt at considering lived space

Getting as close as possible to the participants and the peri-urban space being studied (Cresswell, 2007) was critical. Meeting participants where they live and work provides an important context for understanding what they are saying and helps to capture directly the lived experience of people. The data can then represent a text constructed by the researcher for analysis (Miles & Huberman, 1994). But behind the apparent simplicity of qualitative data there is complexity, requiring care and self-awareness from the researcher (Miles & Huberman, 1994 in Harris & Jimenez, 2001) and the use of such measures as triangulation to provide rigour and reliability. It is inevitable that the words used by the researcher to record data from the field will reflect, to some extent, their own concepts. The interpretive approach inherent in qualitative research acknowledges that the perspectives of both researcher and participant will reflect their own subjective views of the social world. *"Both participant and researcher will react to the background, characteristics and positioning of the other and each will contribute to the co-construction of reality during the interview process*" (Finlay & Gouch, 2003, p. 5 in Hennink, Hutter, & Bailey, 2011, p. 19). For this research, this is mediated by the addition of the perspectives located in both conceived and perceived space.

Semi-structured interviews were selected as a way of uncovering and exploring the values and meanings that underpin life in the peri-urban – the lives of individuals in the space, the interactions of those working in the space and the responses these interactions generate (Rubin & Rubin, 1995). Of specific interest were beliefs about the peri-urban and the risks and challenges that participants had experienced in the space. A critical element in the interviews was the focus on the participant understandings and the exploration of spoken and unspoken networks and relations and the interconnections underpinning them. These qualitative interviews examine the context of thought, feeling and action and *"interviewing is a powerful way of helping people to make explicit things that have hitherto been implicit – to articulate their tacit perceptions, feelings and understandings"* (Arksey & Knight, 1999, p. 33).

Drawing out networks and interconnections to unpack the peri-urban's wickedness seemed critical to understanding the possibilities rather than simply the realities. The interviews were selected as a first stage data collection activity (see Appendix 1 for more detail), following on closely from the desktop analysis. Leading participants on an exploration of the peri-urban from their own individual perspective allows an inventory of different perceptions and interests to be created; the objective being to understand these, to identify misconceptions and misunderstandings, as well as elements of worth and value that might contribute to its identity. The enquiries are based on intensive questioning of specific aspects of people's lives and experience rather than on conversations in specific organisational

contexts (Chase in Denzin & Lincoln, 2008, p. 68). These interviews focused on unpacking experiences, values and interpretive lenses, seeking to understand their impact on what people see and experience and what this might mean for a peri-urban identity. This assists in locating barriers, impediments and areas where more clarity might be needed. It facilitates an understanding of the interactions between people in the space, where these may be refined, exploited or reconstituted and highlights aspects that may be built upon, enabling deeper questioning, more immediate follow-up and enriched data as a result. It seeks to get into the minds of those who spend their everyday lives living and working in the peri-urban.

With a view to eliciting how things are done in the space, interconnections and relationships were explored. Decision-making factors that sat beneath the decisions made were interrogated and the impacts of both conceived and perceived space on peri-urban experience were queried. If the research was to argue for an identity for the peri-urban, then those in the space needed to be involved, providing their own unique insight into what happens in their everyday lives. Whilst capturing lived experience in the peri-urban might suggest a focus on farmers and rural lifestyle residents only, some planners were also included in the interviews as many of these people shared the lived space also, with farmers and other residents. These particular interviews sought to develop a strengthened understanding of life experience and practice, rather than organisational context, to provide insight into the personal experience of from decision to its implementation and to understand whether the extent of data and analysis reflected the interactions within the system.

Interview participants were selected using the snowballing technique. Participants were gathered through the initial identification of a small number of subjects with differing involvements in the peri-urban and covering the areas of agriculture, planning and valuation. This sought to cover the range of interests and claims evident from the literature review. From the conduct of these interviews, further names of potential participants were provided, but not all were interviewed. Some, especially those who were noted experts, were used in the course of other data gathering exercises, to explore further the conceived space. This technique enabled the researcher to expand the field of contact and also aligns with the action research strategy that the research employs. The snowball selection technique also allowed the research to take advantage of the networks that the lived space and social relationships of the participants uncovered. Because of the diversity of the lived space of the participants, the interviews were designed to unpack the range of views, values and meanings which might later help to capture a peri-urban identity. Ideas were sought about the intrinsic values of the landscape, the economic values of the space, perceptual values (what was liked and disliked), needs, planning and environment. Questions were intended to draw out this lived space so as to be able to compare and contrast the data with that of the conceived and perceived and were tailored for the to enable a broad discursive approach to the interview. Further insight into the semi-structured questions is contained in Appendix 1.

Targeted conversations – a second exploration of conceived space

As the research developed, targeted conversations were also used to expose the researcher to a broader range of people and ideas beyond the interview process, with a specific focus on a second exploration of the conceived space. The action research approach enabled the inclusion of this method as a result of an initial serendipitous conversation with a Canadian rural planning expert. Using existing networks, and following up leads that emerged from the desktop analysis and interviews, the researcher was able to follow up on ideas and data that emerged as the research progressed. This enabled both a deeper knowledge of the subject and issue, and confirmation of the researcher's own viewpoint. Through these targeted conversations, the researcher conversed with people who openly advocate for the peri-urban, raising ideas of interest or importance, exploring the conceived peri-urban space from a range of different angles. In this process, the researcher sought information not available in the literature or other data, and, critically, they exposed further clues, providing glimpses into the new market that the research proposes.

These targeted conversations occurred in a number of settings, made possible by the researcher's attendance at forums, expert meetings and conferences held in Victoria, Tasmania, the Netherlands and New Zealand (see Appendix 2). Attending these allowed the researcher to understand and experience representations of rural space, which had great relevance for the peri-urban. These representations enabled a more nuanced exploration of the issues in the local, national and international contexts and the settings provided opportunities for the researcher to talk to planning experts, designers, entrepreneurs and practitioners informally, bringing forth new concepts and understandings. This was critical as it enabled deep insight into the alternate ways of constructing the peri-urban space, which was later interwoven with other conceptions of space.

Participant and location observation – immersing in the lived space

The reflexive nature of the research offered a key role for observation, of people, situation and place, enabling the comparison of what is logically expected with what is actually observed (Babbie, 2011). Using observation enabled the research to build on the researcher's own experience as both a planner and resident in the peri-urban, as a participant observer. Observation involves looking at the world – at the way things actually appear (Babbie, 2011) – and the research uses the dual lenses of planner and person to reveal what is observable in the lived peri-urban experience at ground level. Planners are trained to observe, to look at the physical landscape and see what it contains, the land, its assets and values and its uses, enabling a focus on the visual and obvious. Personal observations add a layer to this – travelling around, looking at the surface and its less physical dimensions, scratching beneath it to reveal the other, the spiritual, the unconstructed, to experience the landscape in a longer timescale.

Here the researcher's previous experience of these spaces meant a role for reflexivity. Through interactions with them as both planner and resident, they had been experienced as complex, tense and contested, yet held in high esteem by many. Their inherent value was clear, through both formal and informal exchanges and firsthand experience of their conflicts and the implications. The role that place

and value plays in the conflict had been revealed, and an understanding developed of the reality that personal values will frame what one sees as useful and unique in a place. The different layers of the landscape merge in the researcher's personal experience of the peri-urban place. As a planner, the mix of feelings that place engenders in others are often evident: pain, anguish and worry for agricultural producers and residential dwellers locked in conflict; loyalty, passion and joy for those who marvel at unique environmental, productive and recreational values that the place may express. Feelings of absolute powerlessness had been felt because the conflicts couldn't be resolved. As a resident, lived experience saw urban boundaries eating into the farmland, rubbish dumped in nearby bushland and dogs from nearby urban areas chased away from livestock. Nearby bush and farms were developed into residential places, suburban gardens now full of rich, productive red soil. As researcher, disconnecting these feelings and playing the role of participant observer is difficult, because our views are in essence coloured by personal experience. Accepting and understanding this, and weaving this self-awareness into the observation process, helped the researcher's neutrality but also enabled the location of that which did not appear obvious, that which lies beneath the surface.

Observation has been described as "*the systematic recording of observable phenomena or behaviour in a natural setting.*" (Gorman & Clayton, 2005 in Baker, 2006, p. 173). As a research method, it most often involves human participants and for the purposes of this study, focused on location, being based in place not person, a critical departure from the traditional anthropological view, but compensated for by the recording of lived experience in the interviews. In this sense, the role taken by the researcher was similar to that of complete observer, using listening and observing processes as a way to pin down what is occurring in the particular space. A key aim when undertaking observations is to get "*deeper into the elements of the setting that have emerged as theoretically and/or empirically essential*" (Adler & Adler, 1994), and this is crucial for the research. Observing the changes in the landscape laid them bare – the impacts of land use changes are viewed; possibilities raised by the data visualised on the ground. This was supplemented by the collection of a range of observation tools, including photographs, documents and maps, all elements of an unobtrusive analysis of sites (Given & Leckie, 2003; Hartel, 2003, p. 235, both in Baker, 2006, p. 184). The research combined physical observations from a site with all of the mediums mentioned above to create a nuanced picture of the peri-urban that built on what the desktop analysis and other research methods suggested.

Observations were conducted in two Australian areas (South East Queensland (SEQ) and Tasmania) and were supplemented by an individual one-day field trip that took place in the Netherlands (see Appendix 3 for location maps). In particular, areas of South East Queensland observed included the fringe areas of Noosa, Maroochydore and its surrounds, Eumundi, Maleny, Montville, Yandina and down to Yarrabilba, north west of the Gold Coast. SEQ was selected because it is argued that this is the one of the most mature peri-urban spaces in Australia and these specific areas were observed because they displayed a mix of rapid housing growth, scenic landscapes and open space, agriculture and food production, whilst also displaying remnants of traditional land use and economic activities. SEQ offers many possibilities for the peri-urban researcher – characteristics of rapid growth, profound

change, and contests between land uses and residents. Low Choy (2008) describes it as the most conclusive peri-urban space in Australia, demonstrating the most developed regional planning in the nation, although there are older examples of regional planning. The *SEQ Regional Plan 2005–2026* delivered an integrated response to the challenges facing the peri-urban and the broader region. Reviewed and revised in 2009 (*SEQ Regional Plan, 2009-2031*), the plan has status as a statutory instrument and is argued to have delivered impressive outcomes for growth management in the peri-urban.

The observations in SEQ also aimed to reality-check whether practice is ahead of theory (Low Choy, 2008). As a "*rich mix of bushland and beaches, ranges and paddocks, rivers and lakes*" (Government of Queensland, 2009), determining whether it has suffered or survived was of key interest to the researcher. The same question can be asked of many peri-urban regions across the country, so observations of SEQ were supplemented by others, closer to home in Tasmania including:

- on the fringes of Launceston, looking northwards up the Tamar Valley;
- the edges of Devonport, both inland towards South Spreyton, east (to Port Sorell and Shearwater) and westwards (around Forth);
- the surrounds of Burnie, to the south where there is now a mix of farmland and residential development; and
- South East Tasmania, fifteen minutes south of Hobart starting in areas around Kingston and moving into the south Huon Valley (see location maps at Appendix 3).

These areas were selected using population and housing growth statistics and their proximity to major metropolitan/regional centres. These Tasmanian locations were added because the search for a peri-urban identity required a more defined focus than the regionally planned locations in South East Queensland could. Further, rural agricultural activity is often significantly left out of planning and so a further layer of observations were added to ensure this dimension was not excluded. As these additional observations occurred, an idea began to emerge that something interesting is happening in the peri-urban that offers great promise for its future. In response to this, these Tasmanian areas were observed for clues about this emergent phenomenon and its makeup, and these occurred in meanderings around these places, visits to farmers markets and food-based events in the areas, and again via observation at forums, conferences and similar events.

The final set of observations occurred as a consequence of attending the Agriculture in an Urbanising Society conference at Wageningen in the Netherlands. A one-day conference field trip provided the opportunity to observe what has occurred in several peri-urban areas, on the ground responses and accommodations of competing uses overseas. The areas of Doornenburg (in the region Betuwe), Ressen and Nijmegen were visited. Observations involved visual cues and listening opportunities, as various peri-urban producers provided information about their business and experience. Photographs were also collected as part of this activity to facilitate a visual comparison with what we see in Australia.

Discourse analysis – unpacking the perceived space

Exploring the peri-urban discourse provided another strategy to ensure a deep understanding of the many competing claims for the peri-urban space. Discourses are useful when considering identity, because not only do they reflect or represent social identities and relations, they also construct and constitute them (Fairclough, 1992). Discourse analysis is a method for investigating social and cultural change, which needs to attend "*to the interplay of changes in knowledge (beliefs and common sense), social relations and social identities*" (Fairclough, 1992). The use of discourse analysis in this research sought to consider the changing social relations in the peri-urban space, the differing and contested views on what is important, and to unpack the different voices in the discourse that compete for the space. During the course of the research, print and electronic media articles, interviews, podcasts, video clips and web-based public presentations were considered and analysed (see Appendix 4). Formal documents, such as discussion papers, planning documents and government enquiries were also considered, as a significant source of text, voice and language relevant to peri-urban matters.

The desire to determine how people make meaning of and from the peri-urban underpinned this analysis. It sought to locate and understand both peri-urban language and voice – what are the voices, which ones are being heard, and which ones are not; drawing out how people in the peri-urban get their voice heard and determining whose opinion is listened to and why. It allowed the researcher to highlight the language in use, including text and context. This use of context is important for the research, because it is expected that context will provide clues to values and their interpretations in the space, potentially leading to elements of identity. "*Discourse analysis...has a social dimension, and for many analysts it is a method for studying how language gets recruited 'on site' to enact specific social activities and social identities*" (Gee, 1999, p. 1).

The analysis also sought to understand whether language has been recruited to reflect or support specific activities and if so, how. Expected perceptions in the peri-urban discourse give rise to philosophical thinking about what is real and unreal in space. When is something real? When it is constructed in the minds of actors involved in the situation (Guba & Lincoln, 1988)? In the peri-urban, the competing claims form the realities for the actors involved and are expressed in both the language and discourse, and via competing value lenses placed over it. Looking at the discourse may highlight that there is no secure representation of reality in the peri-urban and thus no firm identity. We know that the prevailing view, whilst contested, is constructed as reality; yet the reality is in fact incessantly perspectival and polyphonic (Apple, 1991 in Punch, 2005), especially in multifunctional situations. Depicting the peri-urban reality as a text potentially requires a rethinking of the space, an acceptance that it is subject to multiple interpretations, multiple readings and multiple uses, which may have consequences for a single peri-urban identity. If the discourse analysis offers a reality different to that which some have constructed, then this might mean that in the peri-urban, there is no secure representation of reality. The research expected that the discourse would expose ambiguity as well as emphasising what is effectively the powerlessness of most peri-urban dwellers, both producers and

residents. Language would not reflect the reality. Voices would not be equal. Interrogating the discourse is driven by the idea that if a secure representation of the peri-urban space and identity is to be achieved, then all the voices must be captured. Following on from this the discourse analysis also looks for confirmation that we are using the wrong words to describe and respond to the peri-urban which also contributes to confusion as to how the peri-urban reality should be expressed.

Validity

Thus the dynamism of the peri-urban space required a methodological approach that was adaptable, responsive and able to act on gaps as they were identified. Adopting a qualitative approach increased flexibility for data collection, as it allowed the modification of research design to account for the unexpected and unforeseen. Data collection methods matured as a result of insights emerging from the initial research, leading the researcher into territory previously unimagined. The central methodological intent thus became to capture information that confirmed the tensions evident in the peri-urban through the three lenses of valuation, land use planning and agriculture overlaid by landscape, and deepen understandings of the place's identity. The action research approach allowed the researcher to follow the early leads to an enriched understanding of what emerged from the data collection process. Broadening the geographical focus to different locations highlighted the universality of the issue whilst simultaneously revealing something new about identity; adding the targeted conversations allowed access to individuals previously unconsidered. Data and knowledge sourced contributes to an emergent conceptual space where peri-urban tensions might be valued for the opportunities they create as well as the insights that they provide.

Each of the mixed methods used revealed complex and nuanced data about the peri-urban, and the data analysis techniques involve the sieving of information gathered not once but twice to ensure a rigorous and triangulated approach. Once the data gathering process is complete, its content can be analysed for themes. This allows the researcher to create a collage of insights from what is uncovered and enables all the different nuances and layers to be brought together through the use of different mediums and materials such as texts, voice, photos and maps. In this way, the collage becomes a metaphor for enabling the diverse fragments (the data) to be organised, understood and reconstructed. To get to this point, two sets of lenses are applied. Firstly, the lens of voice and language is used to interpret what the data was saying and contribute to the construction of meaning. Meinig (1979) points us to the importance of interpretation, the act of accommodating new or different meanings (Harris & Jimenez, 2001). What can inform interpretation is a question fraught with indecision and debate. For this study, interpretation creates the convergent space within the research process, where researcher, theory, participants and data unite (Harris & Jimenez, 2001); a matter that requires great care and self-awareness, but with potential to lead us towards an alternate space. Determining who speaks for the peri-urban and interpreting the language used helps to locate meanings by honing in on the words used by those speaking for and about peri-urban space. Language can provide clues as it is the medium by which we express our interpretation of what is important to us (Goodall in Bonyhady & Griffiths, 2002), what we believe is without contest and what we may be prepared to negotiate on. Interpretation will

address the language used in these spaces, which may help locate the point of convergence we are looking for, where conflict may have some common ground and where contests may actually co-exist.

Language is a prime carrier of a culture (Seddon in Bonyhady & Griffiths, 2002) and the voices in the landscape provide expressions of that culture, the meanings that people make of it and the values that they hold. Looking at peri-urban language may help us to reconcile the different perspectives at work, and to understand how they may contribute to identity. Acknowledging what people value and see as contested in the landscape helps to decode its uniqueness, emptiness or eccentricity (Douglas in Bonyhady & Griffiths, 2002) and importantly, we should not discount what may be empty or eccentric, because these may hold important keys to understanding a peri-urban identity.

We can emphasise the ways we create our worlds using language. Language is centrally implicated in the construction of knowledge in its inevitably political context (Punch, 2005, p. 140). Sometimes, language will fail. In spaces ridden with conflict, the meaning of land can become so contested that people move away from verbalising their feelings and seek to express them in other ways (Goodall in Bonyhady & Griffiths, 2002). Sometimes there is no language to express what has occurred; or people cannot find the right form of expression. Sometimes people disengage or perhaps find other mediums to express what it is they feel. We need to take clues from this. Different voices express "*diverse sensibilities and histories as they speak through the landscape or for it*" (Brown, 2002, p.86 in Bonyhady & Griffiths, 2002). In a study of environmental conflicts on the NSW South Coast, Brown noted that a number of languages specific to different voices involved in the contests over forestry activity. There was a political language, the language of environmentalists and a language carrying the "*...accents of urban mobility, its conscience and sensibility, and of tactics and aesthetics of the social movements with their origins elsewhere*" (Brown, 2002, p. 86 in Bonyhady & Griffiths, 2002). Different languages and words were used to express vastly contested ideas; rural regions became immersed and enmeshed in official and urban languages (Bonyhady & Griffiths, 2002). This could be said for many peri-urban places in Australia. Language thus provides the cultural clues, critical to determining identity, allowing us to express what we value in the landscape, some or all of which may be personal. *"...so much of what they say expresses the different things they see when they look at the same piece of country through different cultures..."* (Goodall in Bonyhady & Griffiths, 2002, p. 34). Truth and meaning emerge from our engagement with the realities in our world – using language we firstly construct and then express our own meaning, which may differ from that of others, using different language and words (Crotty, 1998).

This process of deconstructing the peri-urban through voice and language may provide completely different constructions of the same space, but also clues we can use in unpacking the contests and seeking accommodations of them in identity. This process of "*reading the land...as a structuring device for interpretation*" (Douglas in Bonyhady & Griffiths, 2002, p. 74) helps to compose a narrative that reflects, as closely as possible, the contests and convergences, the history and context of a place. Shifts in language and expression may lead to new forms of language emerging. From the focus on

language and the discourse it is expected that voice may emerge as a uniting theme. The initial aim of data collection, to connect the literature and discourse together with the practice to locate identity, is infused with a desire to locate and hear from the voices on the ground. Listening to them becomes a bridging mechanism for the gap between theory and practice and the deficits of language and response. It can play an important role in determining how peri-urban space and identity might be shaped; how the narrative of the place might be constructed.

Following the analysis of voice and language, a second pass of the data was undertaken to pin down the emergent themes, seeking evidence of the literature's insights in the data. In this way, the first pass sought to see what is revealed in the space and the second makes realities and attempts to hold them steady, undertaking a type of creative reworking and recrafting (Law 2004). Using the theoretical lenses once more provided an organising agent and helped the exploration of the revelations that the research methods exposed, not once but in many cases twice. In this way the multiple realities became the differing perspectives based on lived experience, the conceived and the perceived, located using the mixed methods that the research employs. This enabled the complexity of the space to be unpacked and its totality fully considered as Halfacree (2006; 2007) proposed in his model of rural space. Similar to landscape, the peri-urban problem has many "*impossible things*": the multiplicities of the rhizome, the interdependencies that compete, conflict and overlap, and the interconnections that manifest both positively and negatively. Law (2004, p. 147) suggests that the process of holding steady in the face of these multiple realities will make new signals and manifestations, as well as new concealments, continuously. Accepting this may assist in accommodating the many impossible things that we find into a peri-urban identity.

Chapter 4 Voices, Language and Learnings – Taking the Peri-urban Apart

4.0 Voice as a tool for analysis

In order to understand the lived peri-urban space, voice was used as a tool. By this, the research aimed to identify what residents, users and other interests relevant to the peri-urban think about its use, values, management and appearance. The use of the spoken word as a technique has proven useful in gathering insights into complex phenomena related to human behaviour and the use of land and resources. Interviews and other data methods aimed to draw out what was being said in the space and capture the many meanings present in the language and landscape, in the hope that this would aid the reconstruction of the space. Creating a space for people to talk about both their lived experience and their relationship with the peri-urban space enabled an exploration of place and how it speaks to them, the strength of voices and language used, and what this means for peri-urban identity. Using voice helps to locate values and meanings, and the language used acts as a medium for an expression of not only what is important (Goodall in Bonyhady & Griffiths, 2002), but also what is believed to be without contest and what may be negotiable.

Drawing on the voices in the peri-urban created a challenge for the researcher because it initially acted as a mask, hiding the real issues, sending the researcher in directions that did not necessarily reflect the critical matters in the space, or towards one particular voice at the expense of the others. Avoiding this required a process of deep listening, looking past the voices that present themselves, such as developers, and looking for what else lies beneath the surface. Listening to the voices, then, allowed the problem to be further unpacked, the barriers identified, and started the thinking about the future.

The use of voice as a tool is critical to the process of deconstructing the peri-urban; it allows a disparate range of ideas and activities of relevance to be unveiled. It provides a mechanism to tap directly into the practical intelligence that exists on the ground, important because the desktop analysis highlighted a theoretical gap when it comes to the peri-urban. There is no specific peri-urban planning theory, and the literature around agricultural transformations overlooks its potential as a productive place. We suspect the multiplicity of the peri-urban is in fact a distinguishing feature, and listening to the voices allows the researcher to acknowledge success stories, identify the cutting edge and pinpoint the specific elements of the peri–urban that have allowed success to occur. It affirms the logic of Meinig's 'ten versions of the same scene' and its utility in this deconstruction. The voices evident in the peri-urban spoke different versions of the same scene. Unpacking them uncovers the existence of something quite unexpected in the peri-urban, something that holds great promise for its future.

A cacophony of voices

Entering into the peri-urban, given the traditional rural nature of the space, a dominant, singular productive voice was expected. But instead, the first thing that became apparent was a cacophony, all types of voices speaking at once. It is suspected that this cacophony emerges from the peri-urban's multifunctionality, its many attributes and the many different values of its inhabitants, which are

vocalised in quite diverse ways. The cacophony can be deceptive, because not all voices heard are of the same strength, potentially leading one to listen to the loudest voice at the expense of the others, and maybe suppressing others with important things to say. It appears as a harsh dissonance across the contests in the peri-urban, each offering different messages about peri-urban contests and life.

So instead of one strong voice emerging in the data many voices emerged, articulating a broad range of views. The town and country voice suggested that the urban-rural dichotomy does not exist anymore. The developer voice suggested that the prevailing view should be embedded in decision-making into the future. A further voice, the producer voice, was much quieter than expected, and the media voice gave a platform to a number of different interests and individuals who otherwise may not have been heard.

Town and country voice

The first voice, the town and country voice is one most often expressed in the literature as the urban-rural dichotomy: a concept that divides space into two distinct mutually exclusive, contradictory and separated spaces structured around their location. Interestingly, there are some in the peri-urban who argue that the old urban-rural divide does not exist on the ground anymore. One interview respondent suggested that "...*we should blow this urban rural thing out of the water*" (Participant 5, 2011), a view reiterated by others during data collection. There are several issues embedded in this that were revealed in the analysis. Firstly, what we have in fact in the peri-urban are mature areas in between that we treat as urban or future urban areas. Secondly, if we plan to turn rural land into urban land, how can we then relate this land, and its purpose, back to something rural? Thirdly, many of these spaces that sit between the traditional urban rural divide are now mature spaces whose multifunctionality is not necessarily understood. What all these things tell us is that we can't simply treat this land as urban or rural.

Once, Australians were highly conscious of the importance of rurality – the role that agriculture and rural areas played in the development of the nation. However, today many people no longer tolerate the agricultural uses that were once an accepted part of many backyards. As the role of the country (and the use of the term) diminished in the eyes of urban Australia, the rural (productive) voice faded. This was exacerbated in the 1950s, as the speed at which suburbia encroached into productive rural areas and the boundaries of the city spread increasingly faster into what was once the country. Since then, the hegemonic view has centred on the urban side of the fence, as post-World War II population growth encouraged housing and development into these areas. The status of the country declined along with the contribution of pastoralism to the national economy, and with the city gaining increasing prominence, it has never re-emerged at the same strength. Government attention became focused on the manufacturing economy with the result that the agricultural economy no longer held the spotlight. Thinking about this shift in view requires consideration of the role of the country in relation to the city, but it also challenges the traditional conception of the *urban-rural dichotomy*. Today, a better word might be disconnect rather than dichotomy. We cannot argue that the two places are mutually exclusive

because of the multifunctional benefits that the country provides to the city in terms of food, water supply, recreation and landscape services. The emergence of the peri-urban as a middle ground between the two has, however, resulted in confusion as to its purpose.

Different versions of the town-country disconnect were expressed in the data but a common theme was that it must be overcome. These different expressions conveyed multiple realities, taking a number of forms. Firstly, there is a level of ignorance about where food comes from, what it looks like in its raw form, where we are prepared to go to get it, and *"what needs to happen to transform it into what we want in our home."* (Participant 10, 2011). Secondly, and this extends further, there is concern about the lack of knowledge that many city dwellers, especially children, have in relation to where food comes from (Participant 12, 2011), and the inputs into daily life are derived.

> *I ask children where the water and power comes from...in the city water comes from a tap and power from the wall...in the city the only nature you can see is on the computer. How can I tell them that the brown snake or the koala is important? They haven't been here.* (Participant 8, 2011)

Finally, there is a feeling that this disconnect is founded on a fear that farmers have of urban development creeping ever-closer to their farms. Some in fact argue that this is one of the biggest barriers to closer relationships between existing peri-urban residents, such as farmers, and new ones (Participant 12, 2011).

The idea that the peri-urban has matured to a settlement form in its own right presents a challenge to those who seek to hold onto the traditional separation. It suggests that this is not a town space or a country space and pushes for consideration of a third space, *"...that is neither urban nor rural"* (Participant 5, 2011), in discussions about city and country and how we use these terms, much as the geographers have done (Halfacree, 2006, 2007; Lefebvre, 1991[1947]; Soja, 1996). Yet whilst both town and country voices are evident in the peri-urban, urban imperatives prevail. Whilst there is articulation of a gap between town and country in the data, there is some evidence of progress towards harnessing the potential of the peri-urban as a bridging force (Brown 2012; FAO 2009). As Brown (2012) commented in his presentation to the Agriculture in an Urbanising Society Conference, *"...the action is in the periphery, the area that joins urban and rural space. This is where the resources are, population, economic activity and natural envy."* The notion of connectivity, of the peri-urban's rhizomatous nature, articulated in the literature by Armstrong & Allison (2003), is spoken on the ground, but not yet mainstreamed in thought. It is recognised by some, and the data contained examples of where this was occurring, in South East Queensland, through the activities of Food Connect, and in the blurring of the boundary between area once worked for food production and the green spaces designated by planning. But at present, this is almost a feeling more than a reality; the city continues to hold prominence over the country, and there is little to suggest this will significantly change in the near future.

The idea that the peri-urban is a mature space emerges in the data. Out of different expressions of the city-country relationship comes the idea that the peri-urban holds the potential to bridge the gap, bringing together the multifunctional and diverse elements that hold opportunity for strengthened connection. *"...Peri-urban farmers have a sense of land and the landscape – Food Connect has created an opportunity for them to engage with city folk and they have a better understanding of them."* (Participant 12, 2011). The data reveals emergent change, hints of identity emerging as a new articulation of the peri-urban's connective potential. *"We have removed the barriers that were existing for farmers in relation to the urban-rural divide – we have brought them together, with conversations and farm tours..."* (Participant 12, 2011). Some see peri-urban activities centred on food production, tourism and open space as a compelling force, drawing city people into the space for food and recreation and landscape, creating a renewed bond, taking us back to a former time. Others argue that this connection must happen, that city dwellers must come to understand the role and resources of the peri-urban in urban life, whilst others see it happening, noting that "*individuals and communities around the world are showing a marked increase in connecting more directly with and participating in food production activities*" (Berezan n.d.).

"Amending the peri-urban scene" – the exurban voice

A second voice identified within the data featured an urban mindset, imported into the peri-urban by those that relocate there, and contributing to the enduring nature of the city-country disconnect. Urban migrants come into the peri-urban, aspiring to the five-acre block and the space and separation that they believe goes along with it, but bring with them "*their dense thinking and attitudes. We need them to lose that dense thinking*." (Participant 8, 2011). Denseness in this sense was not a comment about intelligence or intellect, but rather seemed to refer to an impenetrable thinking about ecology and environment, a blinkered approach to the land and a desire for the landscape to be compact and tidy. Adjoining open spaces are often seen as available for their needs. There is a commitment to doing what has always been done – creating the suburban-style garden and exotic landscape, manicuring and mowing the expansive lawns. This voice consists of many individual voices, joining together when contests arise or "quality" of life is threatened. One blog, created to provide information around the impacts of farming on a rural-residential estate established in the 1970s, highlighted another expression of this impenetrability, and demonstrates the extent to which these voices band together against perceived threats.

> *Weary of trying to get the relevant information published in local media, while people who do not live here continually stir the pot with misinformation, accusations of 'farmer bashing', and red herrings designed to muddy the waters (so that the farms can continue to trash our environment and lifestyle with impunity) have led us to attempt to take back control of the debate by providing the relevant information here to anyone who seeks it...What do local residents think? 58+ residents objected to another igloo farm; their reasons are very convincing and sometimes shocking.* (The Greenbank Mozzie Blog, 2013)

This voice is one that often objects to productive activity and exhibits ignorance about its impact. It expressed a version of the peri-urban scene often heard and supported by the data, which shows that, time and time again, when lifestyle settlers move into peri-urban spaces, they immediately start to reorganise them, reinforcing urban norms and standards.

Underneath this exurban voice is a range of motivations. Firstly, it appears as a way of thinking, a desire to escape the density of the city. These people seek space, a different lifestyle, something slow and unsullied. However, in seeking to shake off city life, they paradoxically amend the peri-urban scene, recreating elements of the built (sub)urban environment in the peri-urban – the large house, a big shed, the large garden, mown lawns and cleared spaces (Participant 8, 2011). Amenity is "*a reason for urban growth in some places*", (Participant 9, 2011); it is "*an attractor*" (Buxton, 2013); it is something that must be "*...maintained whilst being balanced against lifestyle, small scale agriculture and the natural environment*" (Online Petition, 2013). Some value the amenity that the landscape may provide, whilst some value it at a distance, so long as it is not on their property (Participant 5, 2011; Participant 10, 2011). Finally there are those that note that what they sought to escape is rapidly creeping toward them, and question whether they wish to remain and whether they got what they paid for (Akerman, 2011; O'Leary, 2011; Participant 8, 2011).

Secondly, the dense thinking described in the interviews is encapsulated as an attitude; and often one which results in the exurban voice working against productive land-use in the peri-urban. The data suggests a clear concern that many exurbanites do not understand how productive activity works, particularly in terms of potential impacts on the new blissful life they expect to lead. In some peri-urban areas, such as on the fringes of greater Melbourne, a mix of urban dwelling types have been developed on land adjoining productive farms. Many settlers to these areas bring a NIMBY attitude of "not in my backyard", a marked ignorance about what the agricultural landscape may turn up and a total disregard for the activity that went before them (Participant 2, 2011; Participant 5, 2011; Participant 10, 2011). Ironically, in many cases, it is the farm that provides amenity to these dwellings.

> *...They have not got a backyard so they put up a fence with a gate in it so they can access it for their cricket pitches, their swings, their bonfires, their camping ground, their veggie gardens and their wood heaps. It is also a nice convenient place for them to discard their rubbish.* (Donald in Outer Suburban/Interface Services and Development Committee, 2010, p.157)

Tensions arise around the activities of the farm, and with this comes a heightened sense of rights, a strong ownership of the land and claim of tenure, a version of the peri-urban far removed from its origins. As one participant describes, dealing with these challenges makes him "*the Nazi neighbour*" in the eyes of these exurban settlers.

The exurban voice suggests that there is something distinctive about the peri-urban that attracts city dwellers there. Despite the stories of contests and conflicts, the transplantation of city people and urban attitudes into the space has continued to receive support. Why this is so is not clear, but it suggests that for those looking from outside the space they see a version of the peri-urban scene somewhat different from the reality; an urban life, just on a larger footprint.

Landscape under construction? The developer voice

The analysis of the data shows that there are those in the landscape promoting this dense exurban voice. These are the land developers and owners that seek to profit from the ongoing settlement of peri-urban fringe areas. Time and time again, the evidence in the study areas suggests that the developer voice is the one that comes through loudest and most clear. In Gatton, large areas of productive land not anticipated to be included were incorporated into the urban planning footprint in the most recent regional planning process for SEQ. These areas were "*too constrained...we can only surmise it was developer driven.*" (Participant 5, 2011). How does this happen and why?

Firstly, these people often hold the ear of governments and are organised and articulate when submitting their views to policy and planning forums, as the interviews continuously suggested. They dominate the urban footprint, seeing the peri-urban as a place for its expansion, lobbying and making submissions to government for this outcome. Related to this, pressure from the development industry has made "*a nonsense*" of the urban growth boundaries, which some now describe as farcical (Buxton, 2013). Responding to processes that weakened or removed growth boundaries in Melbourne and Adelaide, one planning expert described *"...an unholy pro-expansion alliance"* between developers, government officials and planning officers (Buxton in O'Leary, 2012).

Secondly, as the developer potentially profits from decisions to open up increasingly large areas of fringe land, it is this voice that usually argues the loudest for policy change or a political decision. When this change occurs, other sides to this voice emerge. Representatives from Wyndham City Council, responding to the Parliamentary Enquiry into Agribusiness in Outer-Suburban Melbourne, described what they observed when the growth boundary was amended. Speculative developers purchased old farming properties in the dryland farming area of the municipality in response to the release of the Melbourne 2030 planning strategy *"...with the expectation of a shift in the UGB and the release of the state government's Melbourne @ 5 Million substantiates this view."* (Outer Suburban/Interface Services and Development Committee, 2010, p. 149).

Thirdly, speculation is a key part of developer activity and was clearly revealed in the field research in South East Queensland. Here the landscape was littered with real estate billboards for new housing estates or communities. In most states of Australia, peri-urban areas present large areas of land under construction – for subdivision or housing infrastructure as part of new communities or estates. In many cases, this is the result of speculative activity. However, as the developer voice has grown in strength, so has articulation of concern about the prevailing development paradigm. Existing development

systems have given rise to stories of housing estates that have not been followed up by the promised infrastructure, describing "*the nightmare of life without proper services*" (Gillard in Franklin, 2010).

> *...all the analysis seems to suggest that huge housing estates end up becoming social wastelands. People living there are often disconnected from mainstream activities and society by distance and tend to plug into the TV (in the best-case scenario) as a substitute for personal interaction.* (Hale, 2011)

Developers' design new housing estates as though the land canvas is blank, ignoring not only the landscape features and traditional productive activity, but also matters relevant to maintaining strong cultural and social ties and relationships. Arising from this is evidence that some are starting to contest the development paradigm that creates these outcomes. Critically, this argument includes the economic dimensions of greenfield peri-urban housing development. Not only are there socio-cultural and environmental concerns about the prevailing model, critically, in many cases, it simply does not stack up economically. *"...The financial model for these things is predicated on taxpayer support...if developers were presenting their product to potential buyers at the full cost of urban production (including infrastructure costs) there would be virtually no market."* (Hale, 2011). Taxpayers are expected by developers to subsidise these developments via infrastructure development and other means. Many developers and councils understand this, but the development is allowed to continue because "*we are open for business.*"

Developers note that *"there is a balance between what will sell and what is sustainable in the long run..."* (Participant 14, 2011) and persist with the same development model. For some, this mindset dominates their view of the peri-urban scene. Spaces are often developed without considering their long-term sustainability, without thinking about how they will be maintained in an ecological, economic and social-cultural sense (Participant 1; Participant 5; Participant 9). Developers say they would like to undertake sustainable development, but the cost of doing so, in their view, is "*prohibitive*" (Participant 14, 2011). Sustainability is vocalised as a short-term vision, applicable only while they remain engaged with the site, yet the environmental consequences of these developments are significant. In SEQ, developments observed included artificial water features such as lakes, which deteriorate into weed infested water holes after developers leave. *"...Accidental introductions happen – these lakes being included in developments are a pit waiting for a weed invasion. Once something dropped in there then it's gone..."* (Participant 9, 2011).

So in the developer's peri-urban scene, the data reveals that sustainability is often articulated but rarely implemented to its full extent because it just doesn't pay to do so. Ideas of sustainability don't extend to food as a critical element of liveability. It is confined to statutory constraints of planning rather than the potential to achieve a broader construction that focuses on sustainable living. This is exacerbated because it is not always made clear in development approval processes as to what is required for sustainable development now and into the future. This leaves us with a middle ground, a scenario that, in the eyes of one developer, recognises the need "*to create an environment that a new community can*

value" (Participant 14, 2011); but is in reality, a scenario that often comes up short socially, environmentally and economically. What we get from the developer voice then is often a one-dimensional version of the peri-urban scene.

Cutting through: the media voice

The analysis of print and digital media highlighted that the discourse in the media plays a key role in shaping attitudes towards the peri-urban. Indeed, the media voice offers up several discourses, advancing quite different versions of the peri-urban scene than the popular, development based discourse suggests. Firstly, headlines such as "Councils left in the dark on Development Plan" and "Mt Barker expansion 'ignores basic planning'" (Adelaide Advertiser, 2010) suggest that the peri-urban remains neglected or misunderstood. Politicians and policymakers are failing the space and those within it. Secondly, the media has emphasised the state of life on the fringe and, in particular, life in the new greenfield communities and a disconnect between versions of life in these places. Its observations of life in the peri-urban are not necessarily found elsewhere, and often contradict the claims of developers and politicians about the legitimacy of development in the space. The media brings to the public's attention studies that question the validity of developer claims. For example, one study reported by the media found that ten outer suburb areas in Adelaide, Melbourne, Sydney and Brisbane risked becoming dormitory communities because they lacked key infrastructure such as public transport (Williams, 2010).

Thirdly, the media voice draws out critical comments rarely referenced in the theory. It notes the lack of connection between those making decisions and the realities of people on the ground. The comments of the Mayor of Mount Barker, Ann Ferguson, shed light on this.

> *The District Council of Mount Barker will not support the current Ministerial DPA because it ignores and overlooks the most basic planning fundamentals of community infrastructure and services," she said..."Such massive and rapid growth will put enormous pressure on health, education, public transport, waste water and road works and will create a host of negative impacts... (Holderhead, 2010)*

The media provides evidence of a trend that has become entrenched and repetitive; it draws for us a picture of new communities, "*...devoid of infrastructure as landowners and developers celebrated*" (Coleman in Gilbert, 2007). This partially reflects that this infrastructure was once funded by local and state governments prepared to go into debt to do so, but now, as urban development continues to grow in pace and scale, this is not possible, thus altering the whole dynamics of infrastructure provision. The media continues to raise concern about the existence of, and potential for, these "*infrastructure deserts*" on the fringe, drawing attention to this pattern.

> *There is nothing in this Ministerial DPA about how those who live in any of these new houses will be able to walk to a local school, play in a local park, swim in a local pool, flush a toilet, tap into mains gas or gain access to transport links.* (Holderhead, 2010)

Without this voice these stories might not emerge; the reality of life in newly developed fringe communities may go unnoticed and most importantly, without this voice there may be no alert to the reality, no questioning of whether planning and development is doing right by these areas.

Further, the value of the media voice is demonstrated in the critical role it plays in exposing the discourse of conflict and power in peri-urban areas and the role of political economy in many decision-making processes affecting the space. It brings this to broader public attention, when little attention might otherwise have been given. It allows contestants to put forward their view when there are few other options. Sometimes, pressure applied through the media results in policy reversals, the outcome of individual voices acting collectively (Gilbert, 2007). When it reports the voices of the rebel tillers at McLaren Vale, or the residents of Mt Barker, or the story of Beveridge in Victoria, the media voice exposes the power relationships in the peri-urban, exposing inequity whilst paradoxically equalising the playing field, opening up avenues for voices to be heard.

In exposing this conflict and contests, the media voice suggests that many lifestyle residents do not get what they pay for when they buy into their peri-urban dream.

> *Where would you go this close to the city and find the same place? I elected to come out to acreage. I elected to have my privacy and my lifestyle and I don't think anyone should have the right to take that away.* (Mearns in Drew, 2012)

The media channels the feelings of loss and anger that these settlers feel when the farmland adjoining their property is carved up and developed to meet both urban and lifestyle demand.

> *"Once this is gone, it's gone forever," he said. People come out here for lifestyle, maybe they have horses, but they're the ones who are saying we don't want subdivision. We want to preserve the rural amenity."* (Merchant in Dank, 2011)

Thus, the media voice acts as a conduit to understanding the peri-urban paradox: the very thing that attracts people there is often a temporary thing, the aesthetic value of the farm or landscape cannot be guaranteed. Across Australia, the media expresses many stories that conflict with the version of the peri-urban as a bucolic scene, including stories of pressure on food producers, as areas such as Adelaide and Sydney surrender their "*food bowls to sprawling McMansions*" (Littley, 2011); stories of a lifestyle lost or compromised. Without the media, these discourses may not be revealed. And without the media, these glimpses of life that speak the peri-urban truth may go unnoticed – not only the pressure on farmers, but also the idealism of the dream, a version of the scene often ignored.

"Doing the best you can with the constraints you have": the productive voice

It is the sense of weariness that marks the voice of those who produce in the peri-urban. This weariness is expressed as a sense of frustration or futility held by producers, based in enduring conflicts, continual production declines, scarce resources or limited opportunities, and emanates from a range of sources.

> *There are significant issues that do exist. Unfortunately, as farmers we get the brunt of it. We get very frustrated...I think living very close to Melbourne, people just do not understand that you are doing the best you possibly can in the constraints you have got.* (Anderson in Outer Suburban/Interface Services and Development Committee 2010, p. 121)

Firstly, farming can be a messy business, at times noisy and smelly, despite the best productive and management practices. Whilst many have somewhat sanitised views of rural life, these are not the reality. Dealing with the issues that development creates in peri-urban areas gives rise to both weariness and frustration.

> *...It is immensely frustrating that when we are harvesting fodder, much of our machinery runs 24 hours a day, 7 days a week. When you have got a contractor turn up to bale hay at 8 o'clock at night, he has a 2 hour job to do. Then you can have police turn up to actually say, 'Well, on your way. You are in an urban community here'. But two hours of losing sleep for a community on one night of the year is a small price to pay...* (Anderson in Outer Suburban/Interface Services and Development Committee 2010, p. 121)

One story in the data shows the lengths to which weary farmers must sometimes go. This story occurred in the Okanagan area of British Columbia (BC), a very significant orchard and vineyard area for both BC and Canada. It is the story of a longstanding orchardist whose farm was in the Agricultural Land Reserve (ALR) area, protected from urban development under Provincial legislation, situated on the edge of the reserve next door to land allowed for development. A subdivision proposed next door to the farm located development right to the farm boundary. The orchardist was concerned that new residents would potentially complain about his operations so tried to work with local planners and politicians to get a buffer separation between the two properties to reduce this potential conflict. However, the developers got what they wanted and the orchardist's concerns were ignored. When the site was developed and the neighbours started moving in, the complaints started about the tractor noise and spraying (Sands, 2011).

This story does not end there. A second urban development was proposed next to the farm. Expecting his pleas to again be ignored, the orchardist took matters into his own hands, got a sign made and placed it on the front of his property.

Plate 1: One farmer's way of getting his productive voice heard

> *The city phoned me about the right to have a pig farm there and I just told them that there are no restrictions on the type of farm operations in the Agricultural Land Reserve. Actually, if he did want to put a pig farm there, he would be required to set back his barns from the urban edge...so this was really an unfair situation for the farm side of the fence. Anyway, the planning for the proposed urban development stopped and sales even dropped off for some of the existing new residences in the previous close development.* (Sands, 2011)

So, the orchardist made his point but as Sands (2011) argues, was it really fair for a farmer to have to go through that when he is trying to stop conflict before it starts, especially when he then has to "*...live with it when the City ignores him.*"

The experience of the Canadian orchardist highlights how these situations are not one-off events for producers in the peri-urban. For some, the contests that closer settlement has engendered are so significant that these producers question why they continue. As the urban edge moves closer to farms, many farmers see their future opportunities diminish. They must reduce their farming hours and advise the neighbourhood when they wish to work late, as if they can always predict the reasons that lead to this. They must sit around a table mediating the interests of their business with those of the new neighbours when complaints inevitably roll in. Their day-to-day life becomes consumed with the issues that this urban creep brings to their operations, rather than the core activity of production. *"...You must understand, it is in the community's best interest for us to be there to look after that land but I do not think the community really realises the service we are actually doing"* (Anderson in Outer Suburban/Interface Services and Development Committee, 2010, p. 121). The edginess that gives rise to this weariness also emerges out of knowledge gaps. The community does not understand what the farmer does, why it is important, and the unmeasured and unacknowledged contribution to the

landscape. The resident does not know how to live in these places, and conversely the farmers are at a loss to know how to respond.

So whilst weariness is a key reason for the decline of the productive voice, this has also been exacerbated by an ageing farming population. The sense of optimism these farmers once radiated has declined. Many ponder why they continue to farm in such contested landscapes (Participant 10, 2011), but also against the context of globalisation. Some have ridden the rise and fall of commodity markets until they can do it no more, or until the market has all but disappeared. Some have seen their business wither and die in the face of prolonged droughts or competition for water resources.

The analysis of the data reveals that when the productive voice is ignored, it can sometimes be shocked into silence, and this also contributes to its decline. In the face of the contests and conflicts, many farmers find themselves unable to respond and so just "*...fade away...get a job and find a new life and live probably not as happily as they would like*" (Participant 12, 2011). Others turn to actions to get their point across. The story of the British Columbian orchardist above portrays how a farmer, initially shocked into silence, decided to consolidate his stand second time around by taking his own action to bring the situation to public attention.

The data analysis also shows that the productive voice has declined because it hasn't been given equal weight. Government policy processes have exacerbated this situation. While participatory planning models promote a consensus-based model of decision-making, the data shows that the reality on the ground is that some voices have been drowned out by the cacophony present. This has led some peri-urban producers to take fairly radical actions in order to strengthen their voice. In the McLaren Vale, farmers created a guerrilla garden on a proposed development site to get their point across about urban sprawl.

Another example comes through the experiences of one peri-urban farmer on the fringe of Canberra, keen to influence and be active in food policy. Speaking of his experience, he noted the difficulties faced in advancing peri-urban input into national food policy considerations because of the cacophony of voices and the dominance of particular interests. This led him and others to create the Australian Food Sovereignty Alliance (ASFA), a platform "*to create equitable, sustainable and resilient food systems for all Australians*" and to join with them to develop a People's Food Plan in response to failings in government policy-making processes and outcomes (ASFA, 2013).

However, it is important to note that the peri–urban productive voice is not completely negative. Within the data, points of optimism emerge. Notwithstanding the weariness and frustration evident in the producer dynamic, there is also evidence of innovation and a sense of excitement about what is possible. *"...That was where I thought and started to consolidate my stand for I am going to do something about this..."* (Participant 12, 2011). This strain of the producer voice represents a new positive stirring, one that refuses to give ground on urban encroachment, instead thinking about how to use it to advantage.

It is this that holds most promise for the peri-urban, as it seeks to combine many of the multifunctional attributes of the space into a new business model, providing hints that there is a specific peri-urban identity, built on the reconfiguration of assets and resources in innovative ways. The observations in the peri-urban were critical to identifying a new way of thinking about production and business in the peri-urban. On many occasions during the field research, in Maleny (SEQ) and the Tamar Valley (Tasmania) amongst others, there was evidence of food production being placed at the centre of a new form of peri-urban enterprise. These tell the stories of people who, in seeking a renewed connection with the land, build businesses based around food, landscape and location. This highlights that some have adopted a multifunctional conception of the space, knowingly or not, and articulates a sense of promise that the researcher must follow. We will return to this again later.

Using voice as a tool, the data shows that there are many voices in the peri-urban, but that one voice has tended to dominate. Characterised by a cacophony of voices, the peri-urban presents multiple and competing perspectives and little by way of structures or frameworks to accommodate this. In the light of this, the question becomes how do we deal with this reality? The producer voice in particular reveals an interesting point of convergence that may assist. Returning to our starting point, if we accept that the traditional urban-rural dichotomy is no longer relevant and the peri-urban is in fact a mature space with connective potential, then using the hints in the producer voice we can start to think about it differently.

> *There are positives however from the location of the land in New Norfolk. At Westerway, we offer shop sales and make the product available to people to buy from the farmgate. This site would provide an opportunity to connect more people in the town to this land. Here we can offer more diversity, other berries, cider apples, fresh market potatoes and we are gearing this up at present.* (Participant 11, 2011)

Peri-urban activities can be reframed as a compelling force, drawing city people into the space for food, recreation and landscape, creating a renewed bond, taking us back to a former time, reminding city dwellers of the role and resources of the peri-urban in urban life. The popularity of farmers markets, evidenced during the study, provides an example of how this occurs. Food production plays a central role in the emergence of the peri-urban as a third space, where the old producer voice takes on a different form, and highest and best use of the land shifts from a residential view to a productive one. In the past, the old producers would have given up in the face of the contests and sold up their farm for superannuation. But in the peri-urban, the data suggests that the producer voice is becoming reinvigorated, and those who didn't want to leave the land, or who once left but have returned, are now starting to be heard. Critically, grounded in this new articulation of peri-urban connective potential are the hints of identity that the research seeks.

4.1 Language and words

Locating and listening to the range of voices is one thing, finding a way to express what they are saying and linking it back to a distinct peri-urban identity is another. Whilst landscape often brings to mind the natural world, language hints at the human dimension and we can use both language and words to shape and manage the environment (Bonyhady & Griffiths, 2002). With this in mind, the data was also scrutinised for the clues that words and language provide about the question of peri-urban identity. The challenge of language and words is multifaceted in the peri-urban. Firstly, there is a language gap – the reality is that the peri-urban has no language of its own, starkly demonstrated by the limited use of the term in Australia. During the course of data gathering, it was necessary to continually describe to people what the term peri-urban refers to. It is not embedded in planning's language and policymakers don't commonly use it either (Participant 2, 2011, Participant 5, 2011, Participant 10, 2011), although one metropolitan strategy (Perth, Western Australia) adopts it. In SEQ, the term peri-urban is used only by "*...the more impassioned people from state and local government... the people living and working in the areas see themselves as rural and regional*" rather than peri-urban (Participant 13, 2011). So in describing it, one inevitably resorts to words like fringe. *"Ask the question – in all the peri-urban planning in Australia – is there such a thing as a zoning called peri-urban agriculture?"* (Participant 10, 2011).

In the language of planning and valuation, it is an urban dialect of growth and development that dominates. When scrutinising the data and the landscape for evidence of peri-urban zonings, there is no evidence of any formal designation of a "peri-urban" zone in use in planning schemes, and no common terminology for the space in between the urban and rural. Valuers, according to one research participant, allow *"market driven, speculative language and thinking to guide them*", (Participant 3, 2011) embedded in the traditional language and practice of valuation.

The second aspect of the language challenge in the peri-urban highlights the confusion around the language and words used to describe and work with the space. A range of terms are commonly used, but do those using them really know what they mean? A scan of the data would suggest that the answer may be no. Firstly, the notion of *liveability* features prominently, evidenced in headlines such as "*Melbourne's liveability under threat as population grows*" (Herald Sun, 2010) and references of liveability in planning documents (Government of Queensland 2009) and marketing brochures (Lendlease, n.d.). There is agreement that the peri-urban possesses liveability features, but what exactly were these words saying? On the one hand, liveability appears in policy documents influencing the development and management of peri-urban land. *"The regional vision for SEQ is a future that is sustainable, affordable, prosperous, liveable and resilient to climate change..."* (Government of Queensland, 2009, p. 10). In Melbourne, liveability has been closely linked to green wedges and advanced as an argument to preserve and protect productive and agricultural land on the peri-urban fringe. But on the other hand, the data shows that the relationship of liveability to the peri-urban is ill-defined. It is often used as a marketing slogan or aspirational term. *"Investa Land creates sustainable,*

liveable communities for the Australian climate and lifestyle and currently manages over 9,000 active and pipeline lots in key growth corridors throughout Australia" (Investa n.d.).

Whilst articulated as a priority, how liveability is achieved is rarely spelt out practically. It appears the term is narrowly interpreted, perhaps almost visionary rather than something tangible. This suggests that more consideration should be given to the language around liveability.

A similar descriptor used frequently in the data was amenity.

> *...amenity means a lot to different people...it's hard to put a meaning on...my push is about biodiversity – amenity can erode that. A fallen log with a vine crawling over it is an amenity thing – it's a habitat, a home – to someone else it's not.* (Participant 8, 2011)

Amenity is a vexed term, often used in the peri-urban, difficult to define. The data uncovered a range of interpretations, including any feature that is useful or desirable, whilst others saw it simply as the attractiveness or positive aesthetics of place. Some viewed it as an intrinsic benefit derived from property, whilst others noted its subjectivity. In SEQ, the regional planning process "*defined amenity only in terms of scenery*", despite the use of the term in the peri-urban implying much more than this (Participant 5, 2011; Participant 9, 2011). As one participant noted: "*three thousand people photographed scenes they felt were of scenic value, and this data was added to technical expert opinion to build an approach to scenic amenity*" (Participant 9, 2011). However, the final plan did not define amenity in a more general sense, despite this being a driving reason for urban growth in these areas and advanced as a key rationale for settlement decisions. Rather, it is often left to the decision makers to interpret or the courts to define.

It appears that amenity, despite it being a frequently utilised term in the peri-urban, is an esoteric concept, a term not easily understood or defined in practical terms. We value it, but we struggle to capture it in a uniform way. *"...What we mean by amenity is rarely encapsulated in any statutory document*" (Participant 13, 2011), despite the value placed on it as something that touches us personally.

> *...amenity isn't captured in legislation enough – only recently brought into SEQ planning policies, in the 2009 version of the regional plan. People were very reluctant to put amenity considerations into the new planning scheme this time around as well.* (Participant 5, 2011)

Perhaps this reluctance relates to capturing what might be described as an intrinsic value Planning struggles with it, and so apparently do policymakers. Legal interpretations abound, but whilst some planning schemes refer to amenity, its characteristics or attributes are rarely satisfactorily explained. Moves towards performance-based planning away from more prescriptive approaches has meant that "*...trying to quantify amenity in the development assessment realm is incredibly difficult...the translation*

of performance outcomes is ...poorly done...doesn't give a level of certainty." (Participant 5, 2011). What the data tells us is that whilst amenity is a frequently used word, and a frequent reason advanced for peri-urban settlement choices, few can pin it down.

Like amenity, the language of landscape features prominently in the peri-urban debate. Landscape can have a range of different interpretations and this is no different in the peri-urban, where it is talked about in many ways. Firstly, landscape features as an aesthetic consideration in the data. The term is used "*as though all landscape is beautiful*" (Participant 8, 2011) and all peri-urban landscape is the same; as though the landscape cannot possibly be affected or altered by the development mooted to occur, and as though we all glean identical things from the landscape, blithely ignorant of the unique scenes that we perceive.

Ironically, the promotion of landscape by the developer voice throughout the peri-urban argues that landscape is also something to be protected.

> *Right throughout the community, a wealth of existing and new native trees, bush, flowers and shrubs have been carefully protected; not just for today, but for always. They attract the birds that provide a subtle soundtrack to your day-to-day life and give Yarrabilba its meaning – 'the place of song'. The environment plays a key role in the development of this sustainable new address.* (Lend Lease n.d.)

Ironic, because the urban development being promoted often signals the commencement of the ultimate destruction of this proclaimed landscape, something unaccounted for by many who buy the landscape and lifestyle dream.

In the data, landscapes are also described in cultural and ecological terms and goals, their significance linked to a sustainable future. For example, the SEQ Regional Plan 2009-2031 provides one statement of this: *"The regional vision for SEQ is a future...where...ecological and culturally significant landscapes are valued, celebrated, protected and enhanced."* (Government of Queensland 2009, p. 10). Landscape in this context again conjures up an ideal of beauty and heritage, of something pristine and unspoiled, despite the fact that this may simply be a temporal thing. The data also shows that there are other interpretations of landscape at play in the peri-urban, beyond that which sees landscape as an object of beauty and integrity. *"This idea of beautiful landscape important to people's decisions – not all landscape is beautiful. I write about this a lot..."* (Participant 8, 2011).

This confirms Meinig's (1979) notion of ten versions of the same scene, that when people stand in the same place, looking at the same landscape, they will inevitably see different things. Other views expressed in the data suggest that the conception of a beautiful orderly landscape may be a pretence:

> *...the Australian landscape is not neat - it's a preconceived thing that it has an English sense of order – straight lines, mown grass – look at the strata, the succession and say that's a healthy piece of bush – some others see huge trees and grass, these people think it looks great, to me it looks sick – when they die what will replace them – it is perception and it's not real.* (Participant 8, 2011)

Whilst the same participant (above) was quick to identify this as an issue in the interpretation of the peri-urban landscape, it is not necessarily reflected in the way we plan and manage the space. Other data sources also suggested that we overlay our own sense of order on the landscape, creating our own aesthetic that may or may not fit with what is naturally there.

> *There is a patchwork of different uses...rural residential estate...some see it as a luxury environment and include pools, tennis courts etc., but others take a more practical view, is it centrally located for transport opportunities, can they have their own businesses, expand...* (Participant 5, 2011)

In this way, we create our own peri-urban reality and perhaps our own version of its identity.

> *SEQ's rural and natural landscape areas support environmental, rural production, recreational, cultural and scenic functions. They underpin the region's liveability and viability, and will be protected from urban development and rural residential subdivision.* (Government of Queensland, 2009, p. 11)

Further, as the data shows in the peri-urban, we link landscape to amenity and aesthetic, whilst simultaneously attaching it to liveability for example, without ever really expressing or understanding the relationship between these concepts. Landscape stands alone in some parts of the data, but in the discourse texts is also used in functional ways such as *rural landscape, productive landscape, healthy landscape, biodiverse landscape*. Reviewing the discourse provides little by way of a definitive version of landscape – rather the word is used with the expectation that landscape can be all things to all people.

Like liveability, landscape is also used as a marketing tool to conjure up images of idyll, particularly in the development discourse. For one major developer in SEQ, landscape is equated with an idyllic lifestyle. *"...you'll be able to relax and soak up the spectacular landscape with its wide open spaces, lush bushland and landscaped parks and gardens as far as the eye can see"* (Lend Lease n.d.).

In this location, landscape is also seen as an enduring asset. "*Maleny's premier residential address*" in South East Queensland, a place described as a "*positive example*" of peri-urban settlement (Participant 10, 2011), advertises subdivided residential blocks on what looks like former farmland, providing a view of paddocks and bush that leaves one wondering whether this vista will remain when the subdivision is completely sold.

Plate 2: Maleny Real Estate

So in our use of language around landscape, the data suggests we have confused ideas of what landscape really is. In the peri-urban, the landscape has traditionally displayed a mix of rural production activity and bush. As urban development has occurred, what is now observed has changed significantly, yet we have no way of describing this transition. The language of the peri-urban resonates with the landscape discourse because a key version of the peri-urban scene holds onto the landscape aesthetic. The data suggests we hold onto these ideas of landscape as something "*beautiful*", "*untouched*" and "*enduring*" (Participant 5, 2011, Participant 8, 2011, Participant 9, 2011, Participant 10, 2011) when we know this is potentially not the case in the peri-urban. We value different things when we view it, and perhaps if we name all of these we can then give it more space than we currently do.

"It's hard to be green when you're in the red": mixed messages and contradictions

Thus, emanating out of the data is a sense of concern about the way language is used in the peri-urban. The current context sees mixed messages and contradictions abound: the wrong words being used, the meanings of the language used not always understood, the delivery of messages not reflecting the needs of recipients. Some in the peri-urban understand the language challenge and are cognisant of it as they go about their work. They know that the language of urban planning and bureaucracy "*does not sit well*" in the space, and they see that the language of other realms is dominant in the peri-urban (Participant 13, 2011). The data confirms much of what can be heard derives from a more urban-growth

discourse, with comments about "*urban sprawl and transit-served sustainable development*" (Hale, 2011). All of which suggests the use of the term "planning" to describe processes of land allocation, use and development that occur in the peri-urban is also something of a misnomer (Participant 13, 2011). But this doesn't just stop with planning as one participant comments: *"Farmers...there's a way to talk to them...it's hard to be green when you're in the red..." (*Participant 8, 2011).

These mixed messages are also evident in the nuances of agriculture and production, where *"...the discussion with landholders is more about what the urbanising influences are going to be rather than what the rural ones will be* (Participant 7, 2011). Firstly, the words and language emanating from the bureaucracy are not tailored to speak to the situation that many peri–urban producers have found themselves in, where their ability to make a livelihood is gradually disappearing in the face of urban and market constraints. The discourse included many references in documents to "*sustainable agriculture*", "*increasing food sustainability*" and in Tasmania's case, "*clean, green food*". *"Bureaucracy has been a major frustration... we all want the clean green food..."* (Participant 6, 2011). The analysis suggests that it can be hard to be green, to adapt your enterprise to more sustainable methods and practices, if it sinks you (further) into debt, yet the data suggested that some farming practices, especially in the peri-urban, may be unsustainable.

Secondly, do we really know what the term agriculture encompasses, particularly in the peri-urban? The data points to confusion in the way people use the term, whether they are referring to a model is big or small. Many talk about agriculture but do not specify whether they envision more traditional broadscale production model or a more intensive and one. There is a lack of clarity on whether the two have to compete, or whether they can exist side by side. One interview participant noted the attachment of "*the population people*" to "*big agriculture*" and the lack of insight into the potential of land around the city (Participant 12, 2011). This attachment to big seems to fly in the face of what the data shows as an emerging discourse around new enterprises that can maximise peri-urban productive potential. The data analysis identified a business model of agriculture in the peri-urban that is less premised on size and scale and more on connections, networks and relationships. It suggests that peri-urban agriculture has been viewed as itinerant by policymakers who have in the past made decisions with a mindset that it can be simply pushed further out. As the research reveals, key assets are inevitably lost when planners and others encouraged urban development into the peri-urban field. The story told by Schreurs of the family's experience in Victoria depicts the experience of many:

> *...it was there that I learnt that the first market gardens in the early 1800's were in Richmond. The urban sprawl at that time made them move to Caulfield and Brighton. From there, they moved to Bentleigh and Moorabbin, then to Dingley and to Keysborough and from there to Cranbourne and Clyde and now from Cranbourne to Devon Meadows — and that is part of my history.* (Schreurs in Outer Suburban/Interface Services and Development Committee, 2011, p. 59)

The data analysis suggests that language used in relation to these spaces often reflects terminology that isn't fully pinned down. Another example identified in the data is in the use of sustainable development as a term. Speaking at the Agriculture in an Urbanising Society Conference, Collier noted that: *"...the (English) national planning policy framework includes a presumption in favour of sustainable development. What does this mean, in practice, for the system? What does it mean for economic growth?"* (Collier, 2012). Insights gathered from targeted conversations in New Zealand (2012) suggested that sustainable development may in fact result in a weak form of sustainability, which pits economic growth against environmental protection and results in only incremental change (Duell pers comm. 2012). This contest has not been considered when we talk of sustainability and sustainable development in the peri-urban.

Other contradictions also arise in the language of sustainability in the peri-urban. Again the data opened up these questions and contradictions. As one participant queried, *"...how can peri-urban development be sustainable if it comes at the cost of inputs to sustainability (food, environment and landscape, amongst others)?"* (Participant 12, 2011). Others queried whether residential development can be described as "sustainable" if it reduces food production opportunities, creating issues for food security and ignoring how environment and biodiversity will be maintained after the developers move out. Asked about sustainable development in terms of the new community being created in SEQ, one interview participant commented that *"...the big developers don't really know what it is, who does it or how to ensure it"* (Participant 8, 2011). Sustainability is a "*slippery word and...means different things to different people...*" (Participant 8, 2011). Queried on opportunities for food production in new estates, one developer interviewed had given little thought to this as a marker of sustainability (Participant 14, 2011). Developers focus on what will sell (Participant 13, 2011).

Finally, the language of protest in the peri-urban provides evidence of the tensions and contests. In the data, stories of farmers nearing the end of their careers and making decisions about the family farm highlighted the struggle, heartache and in some cases, a sense of desperation. Speaking of this, one interview participant commented that it is a "*very challenging problem... I was engaging with a sector that was dying – it was in serious decline"* (Participant 12, 2011). Another participant also painted a bleak picture for these farmers, commenting that many simply just leave behind vacant land with no immediate future use.

Critically, the words and language used to describe this process highlight that, too often, the retirement trajectory is simply to *"...leave my farm and sell it to the developers* (Participant 7 2011). But planning doesn't always allow this, so these farmers decide not to farm anymore: "*...the land then becomes unfarmed but (they) don't have a neighbour who wants to buy it..."* (Participant 7, 2011). Here the constraints of planning are evident – it is regimented, using a one-size-fits-all strategy. Planning does not usually allow these farmers to sell their land in smaller lots for those who might want to undertake more intensive small-scale farming. In these cases it is not only the lifestyle of the farmer that is affected, but also the maintenance of the landscape. *"...they can't subdivide it because it's zoned for agriculture*

– patchwork quilt in which sub-lots of land unfarmed, a struggling family living there, maybe on benefits, running down their reserves" (Participant 7, 2011).

Some of these farmers use the protest as a response to the loss of rural and peri-urban land and the impacts of urban growth on their operations. The guerrilla gardening activities in McLaren Vale (South Australia) mentioned earlier were described as "*rebel tillers*" in the local press (Holderhead 2010). What is particularly interesting about this is that no matter how strongly farmers feel, often land is lost in the need for superannuation and retirement income, meaning that farmers often do sell to developers. Some of the participants argue that because government puts too much effort into resolving urban problems at the expense of the areas outside it (Participant 7, 2011; Participant 9, 2011), this leaves farmers with fewer options. *"Rural strategies have been slow to emerge...many drafts and iterations...it doesn't sound like it has gone anywhere. Rural futures at the regional level...never very strongly pursued...It was a bit of a motherhood attempt..."* (Participant 7, 2011).

These mixed messages extend to the language and words of those who hold power in and over the peri-urban. Power resides outside of the space in the urban realm, held by those with the ear of governments and those who enact the policies and plans. It is not held by those who rely on the land to live and work there.

> *The 2013 strategy now proposes a fraudulent limit on outer urban sprawl, a fake policy since the Liberal-National parties in 2010 helped destroy the former growth boundary by expanding it by 43,000 hectares, making irrelevant any contrived limits to growth.* (Buxton, 2013).

The data suggests that those who hold power have manipulated the language and words to suit their own ends – "*this is not a plan, it's a hoax driven by money*" (Buxton, 2013). This results in messages that are mixed, full of contradiction and conundrum. Despite the State Government in SEQ proclaiming that the regional-planning process promotes compact settlement, its actions in creating the Urban Land Development Authority (ULDA) to fast track urban development in growth areas seems to directly contradict itself.

> *...What's the story with the Urban Land Development Authority and the Yarrabilba and Flagstone exercises? ...Are they not up to date? Or do they believe their own spin that they are producing "good new sprawl" rather than the bad, old variety?* (Hale, 2011)

Speaking of the regional planning process in SEQ, one participant commented that the creation of the ULDA, in providing a fast-tracking mechanism for urban development purposes, allows "*outcomes influenced by developer lobbying of government*" (Participant 9, 2011). Interestingly the use of the term fast tracking, frequently aligned with the ULDA, arises from the discourse of developers and politicians. Throughout SEQ, there were suggestions that the ULDA as a mechanism for development approval

was purely focused on urban imperatives, responded to the power of developers and resulted in a loss of local control over growth and land management decisions (Participant 5, 2011; Participant 9, 2011). One participant commented that these outcomes were not successful ones, "*similar to the urban growth boundary in Melbourne, which has experienced similar issues in relation to the role of the developer influence...pushing for incursions into it*" (Participant 9, 2011).

4.2 Talking until the talking really starts

Looking at language and words allows us to glean insights that will help resolve this question of a peri-urban identity. In the peri-urban the data highlights there is a hegemonic voice and language, grounded in the reality that only the loudest voices have traditionally been heard. There is evidence this has affected planning processes, people and the manner in which the peri-urban challenges have evolved. The data also shows we know that, at times, the discourse has been artificially narrow, restricted by a traditional dialect of urban language and words. This has led to outcomes that drown some voices into silence, reflecting a one-dimensional mindset of what the space is capable of and a deficit in terms of power relationships. Our responses to the peri-urban have to date been couched in poorly defined terms, confused and ad hoc. We have used the language we know best, not that which best reflects what can be seen. And there is evidence of a problem of comprehension – the data suggests that the language used is not being understood by those who need to understand it.

> *...governments are still trying to get their head around this new space...this is something we didn't see coming and we don't know how to deal with it. They are struggling to get their head around it...* (Participant 12, 2011).

So, when talked about in terms of voice and language, we can say with growing certainty that the urban influences on the peri-urban are embedded in the way we speak and act. But what is also revealed from an analysis of voices, is that part of the contradiction and conundrum that the space presents lies in hints that the data provides of clues to an alternative identity for the peri-urban. While sometimes quiet and sometimes strident (in protest), this is evident in the new positive, productive voice emerging that brings with it different words and language. How then to use this knowledge to attempt to detach the space from urban-influenced voices and language and create a new approach to reflect this, with its own unique language.

Letting go – the language of transition

The data indicates the opportunity for a broader view, one that reflects the multifunctionality of the space and disconnects from the status quo. It first suggests that we need to learn to let go *"...of old paradigms, see the world with the beginner's mind, note the new possibilities arising out of what we know from the past, deeply respect the balance of life on earth..."* (Hann, 2011). When talked about like this, it is possible that the peri-urban can play a critical role as connective tissue in a renewed conception of the urban-rural relationship. The data provides clues of new ways of thinking and acting in the space,

evidenced in the way that some people are conducting business, and in the emerging activity around new forms of product and production. Using these, we may be able to reconstruct the peri-urban as a place of possibility and balance, retaining its key assets and resources, but retreating from the entrenched paradigms of planning that at present stifle the opportunities they present.

Responding in this way will require a number of actions. *"Look at what we've done in 200 years – if we don't do something to address the urban sprawl, there will be nothing left. It doesn't matter who is doing it, we cannot continue this trajectory*" (Participant 8, 2011). Attempts to curtail the growth of cities have occurred internationally over a significantly long period of time. It has long been recognised that the expansion of urban areas is problematic, but few alternatives exist and most are very expensive. As the quote reveals there is evidence of an ecological and productive deficit in the peri-urban as a result of human incursions into the landscape, but as yet there has been no substantial shift in the prevailing development paradigm in response to this. The recognition by some in the data that the current trajectory of development is not able to be sustained may increase the search for alternatives.

Secondly, we must look in new directions. Governments have routinely created taskforces and undertaken enquiries and investigations, producing numerous reports in response to many of the challenges that impact upon the peri-urban. Despite these processes, the problems they seek to resolve are still occurring. In some jurisdictions such as Victoria, this, and the concern that these investigations and reports are looking in the wrong direction, has been acknowledged.

> *...an appreciation of the significance of peri-urban regions and peri-urban agriculture is routinely absent from public policy deliberations and data collection. The conventional wisdom is that peri-urban agriculture is economically insignificant.* (Outer Suburban/Interface Services and Development Committee, 2010, p. 42)

A review of literature by a Victorian Parliamentary Committee noted that agriculture in peri-urban Melbourne has not been a major topic of government or academic inquiry and found few comprehensive studies to draw on (Outer Suburban/Interface Services and Development Committee, 2010).

Thirdly, we must overcome the fact that at present, everything in the system is geared toward assisting and facilitating development in the fringe (Martin, 2011). When the planning system thinks about land use in these areas, it is with a development mindset and the language supports this. *"You can't blame developers for wanting to develop in the fringe ...it is the old business-as-usual model"* (Bilsborough in Martin, 2011). Associated with this is the systemic nature of responses to peri-urban challenges. Developers are encouraged to use these spaces via supportive zoning or local economic development policies. The data has demonstrated their power in planning processes – they lobby for the right to push further into the fringe, presenting a version of what is necessary in the name of growth and sustainable development.

> *There hasn't been enough urban development in Sydney generally, including on our urban fringe...we've got the balance wrong...we should be striving to get to the Government's target, which is 30-40 percent of new housing supply on the edge of Sydney.* (Gadiel, CEO of the Urban Taskforce, in Cameron, 2010)

The prevailing view conceives farmland as transitional land, partly based on the discourse of the globalisation of agriculture and its need to scale up, and partly on the convenience factor on the edge of developed urban areas. The idea that emerged from the data that the peri-urban is undervalued comes into play here, forming a comfort zone in relation to the growth response. The simple solution, the old "business-as-usual" model, a regimented framework that allows us to create more urban development, "*including on our urban fringe*", reflects the development lobby's power in this process, especially when valid alternatives are still contested.

> *Current planning legislation...limits how the planning scheme can look, what type of elements you can have… this will preclude the ability to plan in a way that captures the multiple attributes of an area, blending contested perspectives and understanding the values that attribute them.* (Participant 5, 2011)

Further, whilst developers lobby for what should happen on the fringe, they also play a key role in changes to the planning system. Whilst planning does need some consistency of framework, the regimented nature of planning schemes with their one-size-fits-all approach, constrains responses to locally specific circumstances. The need to have a centrally controlled and legislated planning system results in reality being constructed via the language of development, articulating goals of certainty and consistency, amongst others. It is this that some planners describe as their experience on the ground and the discourse around the planning system reflects this. For example, in a national report card, the Australian Property Council recommended seven practical reforms to deliver greater certainty and ensure a targeted approach to planning reform. *"...All are essentially about fast-tracking development and ensuring consistency in planning decisions – none about improving urban design processes and policies to enhance the liveability of future fringe suburbs"* (O'Leary, 2012). This kind of evidence implies that planning has become a narrow panacea to resolving many things over which it has only minimal influence. The language of statutory planning often dominates and allows only a limited interpretation of what needs to be included in its deliberations. Planning itself has not picked up on the clues in other languages spoken in the peri-urban.

In the discourse, Hale (2011) noted the current model of peri-urban residential development is broken in terms of space, infrastructure provision, and the social dimensions and economic ramifications of the model. Others support this, yet the urban transition continues (Centre for International Economics, 2010). There is also concern about the influence of the land market on the peri-urban and indisputable evidence of a peri-urban productive conundrum centred on land prices.

> *When I came to Brisbane, there were farmers seeking to retire on the proceeds of the farm, by selling to developers. In other cases, the husband died and the wife was being asked by developers before the funeral to sell them the land...many farmers...sitting on highly productive land in the suburbs.* (Participant 12, 2011)

Those within the urban footprint express their desire to capitalise on high land prices for retirement or relocation purposes; those outside sought an expanded boundary. Others speak of their concern as to how they will continue to operate their farm efficiently as their neighbours left and development came closer. Some will continue to farm because they love it, but mostly the pattern is one of decline. *"Once a farm is not a farm anymore, for reasons of retiring farmers or lack of viability, they often sit in a holding pattern of degradation... I'm not sure there is any other picture present"* (Participant 7, 2011). This troubling language of loss and decline is quite evident, yet the evidence shows that planning has not adapted to cope with this. Perhaps this is because in the peri-urban, planning sees the designation of land for agricultural purposes as an end state. Whilst a range of policy and zoning mechanisms have been established to protect agricultural land, the data highlights that these have failed to halt the urban transition. It confirmed that every state of Australia has legislation or planning policy to protect agricultural land, but emphasised a feeling that once something is given the planning status of production area, it means "*...you can then leave it up to the enterprise of the rural landholders who will then come up with viable industry. This is very simplistic and it doesn't happen like that*" (Participant 7, 2011).

So whilst there is a Regional Landscape and Rural Production Area in SEQ, participants were highly critical that few resources were made available for this area to reach its potential (Participant 5, 2011, Participant 7, 2011), resulting in "*motherhood attempts*", and "*actions of little value"* (Participant 7, 2011). And further, despite this type of "protection", planning processes have pushed urban development deeper into these protected spaces. Drawing a line in the sand in the form of an urban development edge has simply not guaranteed the continuity of productive uses or aided the interaction between land that is locked up "under protection" and the developed land at its edge. The data revealed that many involved in planning talk as though the dilemma is resolved. But even though the plan is done, the issues aren't really tackled. Talking about the SEQ Rural Futures Strategy – a key part of the regional planning implementation process – one government representative confirmed this, noting that whilst an action list with a wide variety of actions had been developed, *"...at the end of the day...there haven't been any mechanisms or political input to drive and prioritise that and give it some teeth"* (Participant 1, 2011).

And so we are left with the situation where we make the plan using language of the urban realm, and then leave it to the enterprise of those in the peri-urban to make something of it. This suggests that the dominance of the urban realm not only impacts on peri-urban agricultural land in production, but also on the economic futures of peri-urban areas. It highlights that whilst there has been talking, perhaps there has been no listening. It also suggests that the language that has been used is one alien to the

unique characteristics of the peri-urban. And most interestingly, perhaps it also highlights an inherent belief that those within the space will pull through, but this at present remains unspoken.

4.3 A new language, a new approach

The data also hints at an evolving willingness to change the way we think about and act in the peri-urban.

> *...we need to redefine and find a new name for it (the peri-urban)...this will allow us to claim a space for it which is not tainted by traditional planning approaches...to capture that space because it needs to be captured, the multiple faceted benefits to people approach, not embedded in traditional planning approaches...* (Participant 12, 2011)

We are caught in the same "*stuck patterns of interaction*" (Hann, 2011). Planning processes need to understand and measure fully the complexity of the system, meaning they must act on consideration of all the voices and what they are saying; taking the language and messages being spoken and using them with understanding.

A multilingual space

So what is emerging? How is the language in and of the peri-urban taking other forms? Two streams of language are identified: the language of those involved in (regional) planning who believe the problem is well underway to being addressed (usually policymakers and decision-makers), or who are getting what they want (those involved in the land market); and the language of those seeking to understand and do more, to drive a new form of response that recognises the importance of these areas and the groundswell of activity emerging from them. The data shows many who are actors in the peri-urban remain stuck in the language of the first stream, despite the potential of the second. In the latter stream, the language (albeit embryonic) reflects cooperation and collaboration, speaking of connections and relationships with organisations and individuals who potentially have a real understanding of peri-urban life and challenges. Underpinning the data is a feeling that in the peri-urban, planning is asking the wrong questions. We know that today's challenges are dynamic and unpredictable, yet we still seek certainty in the language and the approach of planning. In the peri-urban there has been no shift to reflect this.

In the interviews, some participants articulated clearly their view that the world is being seen with new eyes, applying what Meroni (2011) called '*the beginner's mind*'. There is awareness that these issues require rethinking – "*we have to find ways to re-examine the rural landscape*"; *"we have to get messages to these people – they don't read the land*" (Participant 13, 2011). There is cognisance that the questions must be reframed to enable past experience to become the building block of the future and that this applies to the language of the peri-urban. It suggests a reinvigoration is necessary, to reflect the multiple contests and attributes of peri-urban spaces and build on the positives that may emerge

from them. Polarised debates often frame the wrong questions (Steel, 2012). In her presentation in the Netherlands in 2012, Steel argued that a key question to be solved is how do we as a society want to live? *"How do we extend the conversation about food and agriculture beyond the science into the public domain – the pursuit of food beyond the context of agriculture as a specific study?"* (Steel, 2012). Others would suggest that the question should be narrowed even further to how we need to live. Extending the conversation would broaden the argument from growth in the peri-urban to reflect questions about the quality of life created in peri-urban settlements and the place of food in broader society, changing not only the thinking but also the language used to describe it.

Multilingual to multifunctional: the peri-urban as rhizome

Capitalising on the tensions across language and opportunities in a new, invigorated language allows us to recognise the peri-urban as a multilingual space. The data invokes the concept of multifunctionality. Multifunctionality offers potential to foster language of broader relevance, reflecting what both urban and peri-urban dwellers need from the peri-urban space and recognising that urban communities also derive benefits from it. Most critically, it allow us to utilise the idea of the peri-urban providing the connective tissue for urban and rural populations. Earlier in the chapter, the idea in the data that the peri-urban may form the connective tissue between urban and rural areas was introduced. We can draw on descriptions of the new (contemporary) city to help us here – a "*spreading rhizome, dispersed and diffuse, but at the same time infinitely enabling*" (Wall, 1999, p. 234). Thinking about the peri-urban in these terms helps here: the rhizome shoots representing the multifunctional attributes, the multiplicity of uses in the landscape, connecting under the ground. Discussing the rhizome as a philosophical construct, Deleuze and Guattari (1987) noted it is not comprised of units, having neither beginning nor end, *"...but always a middle (milieu) from which it grows and which it overspills...It constitutes linear multiplicities...which can be laid out on a plane of consistency..."* (Deleuze & Guattari, 1987, p. 21). The rhizome connects any point to any other, and its traits are not necessarily linked to traits of the same nature. When multiplicities change dimension, they change in nature as well. The rhizome is a map and not a tracing. It is *"...open and connectable in all of its dimensions. It is detachable, reversible, susceptible to constant modification"* (Deleuze & Guattari, 1987, p. 12).

Like the rhizome whose multiplicity undergoes a metamorphosis, so does the peri-urban. Its dynamic nature is always modifiable, with multiple entranceways and exits, a place "*where we must capture multiple attributes"* (Participant 5, 2011). It is from the peri-urban rhizome that the potential to connect multiple possibilities of food production and food security, population growth and sustainable landscapes emerge. The challenge that this rhizomatous nature creates for policymakers and planners was highlighted in the data, as was a lack of engagement with the issues and activities in the space, and the people connected by its tissue, *"...so many things that I knew needed to happen in parallel with opening up the distribution space – young farmers, access to land, engagement in policy and research...not happening" (*Participant 12, 2011).

When talked about like this, the peri-urban rhizome resists the traditional structures and norms usually aligned to urban and rural spaces, configuring different elements and conflating systems. This language is organic and dynamic in nature. It necessitates a reprogramming of the surface that we currently see as urban, and planning to be used inventively to create new space (Lootsma, 1999). This language allows us to place all the uses of the peri-urban onto the surface, scrutinising the peri-urban rhizome for its multiple rootstocks. Listening to the small voices is an important part of this process, so that all values and experiences are taken into account. *"Systems change can't be accomplished by leaving out the needs, information and influence of all stakeholders"* (Hann, 2011). These voices revealed hints about the peri-urban dynamic that were critical when pondering the question of identity. Hints about linking *"people back to the earth", "connecting people with produce",* utilising *"communal space and sharing around food", "promoting the local produce".* There is *"a new economy",* which we must give notice to, based partly on the *"importance of being involved in all parts of the supply chain"* (Participant 6, 2011). But before we can determine what this means for identity, a second pass of the data was undertaken and it is this that the discussion now turns to.

Chapter 5 Holding Multiple Realities Steady

5.0 Emergent multifunctionality

Law (2004) writes that social science is about following the lead of Lewis Carroll's Queen of Hearts, "*...and cultivating and playing with the capacity to think about six impossible things before breakfast*" (Law, 2004, p. 6). Method, says Law, requires reincarnation and is "*...a risky and troubling process...(that) will take time and effort to make realities and hold them steady for a moment against a background of flux and indeterminacy*" (Law, 2004, p. 6). The methods used thus help to produce realities in an uncertain world. In this way, the challenge becomes to embrace multiple realities, undertaking a creative reworking of the lived, the conceived and the perceived, and rebundling to recraft them into a new version of the space (Law, 2004, p. 14), which will continuously reinterpret them. The wickedness of the peri-urban requires us to enter this difficult space, embracing these multiple realities and cultivating the impossible things that make it contested.

Investigating the contextual forces of population, landscape sustainability and agrifood production (chapter 1) by applying the literature of planning, valuation and agriculture (chapter 2) resulted in this conceptualisation of the space as wicked, yet multifunctional and collaborative. Using the literature, the exploration of the literature revealed multiple realities clearly highlighting the multifunctionality of the peri-urban space, contributing to its deconstruction. From this analysis, a series of themes emerged that revealed an alternative space, one that looks like the peri-urban but does not align with prevailing expectations about how the space should be. Whilst there was evidence of a range of competing uses, there were also possibilities of an accommodation of activities in ways not previously recognised. In this second pass of the data, the planning, valuation and agriculture lenses are placed over the data to firm up these initial themes and see what can be revealed.

In the productive space, ideas of local food systems, provenance, new business models, short chains, rural lifestyle and amenity are revealed. When the planning lens covers the space, lifestyle and amenity rise again in the desire for the country life, but a key tension point lies in their need to overlay it with urban standards and facilities. The environmental issues created by peri-urban development also become apparent, land management, the introduction of weeds and loss of biodiversity. Open and greenspace concepts also emerge from this lens, highlighting in particular their critical role. Following on from this, the valuation lens reveals the redundancy of the highest and best use concept, different versions of what is valuable, problematic nature of the space, the difficulties in valuing intangible assets and the potential for a market to be developed around ecosystems services.

Two things stand out from consideration of the literature in chapter 2. Firstly, that peri-urban multifunctionality can provide clues about its identity. It is a complex place where a range of resources and assets are present and sometimes compete, but where they might be combined in new and unique ways. Secondly, there is little by way of tools to work with this multifunctionality, and many of the concepts that arise. Planning has no peri-urban specific mechanisms, neither has valuation. In the

productive space, there is little interest in peri-urban agriculture and how it has evolved or needs to be managed. Thus, using the lenses as filters did not necessarily reveal all we need to know about the peri-urban and how we can work with its complexity. What this means then, is that the data must be scrutinised closely once more, first for the presence of the emergent concepts described previously described, and secondly for further clues about the peri-urban identity.

5.1 Valuation

Talking to those engaged with the valuation profession highlighted key points about the interaction and influence of valuation processes with and on the peri-urban, revealing that the process and impacts of land valuation in the peri-urban facilitate the opportunity for residential land use to take hold in the space. This activity can occur at the expense of a range of land uses traditionally situated in the space, particularly centred on productive, open space, amenity and recreation. The guiding principle of highest and best use has decreased in use, and the interview participants suggested that the land market continues to play a significantly influential role in the ongoing loss of peri-urban lands to speculative residential development (Participant 5, 2011; Participant 9, 2011; Participant 12, 2011).

> *Just because something is zoned in a particular way, doesn't mean it will ever be used for that use...it could be zoned for residential, but if you are in an area where growth is slow or stopped, or not favoured by the market...then it's in a market where its most probable use is rural.* (Participant 3, 2011)

There is little understanding of how the land market is privileging residential use in these spaces (Participant 3, 2011) and whether valuation processes are producing appropriate valuations of these multifunctional places. Valuation is an artificial construct based on a perceived value of the land. What is appropriate to the seller can be very different to the buyer. Yet despite the challenges of the profession, valuation, and in particular the land market, "*...is frequently omitted from many studies looking at land...*", yet, *"the market will determine at the end of the day which value is the highest..."* (Participant 3, 2011). Further participants argued that there is a gap in theory relating to peri-urban valuation, however there are some papers in the literature that would suggest this is not the case (Cavailhes, Hilal & Wavresky, 2011).

So a range of issues emerged from the conversations, interviews and observations, all of which suggest a difficulty for valuation in the peri-urban. Firstly, valuers lack tools that are peri-urban specific. When valuers undertake the act of valuing land, they use long-established principles, formulas and methods (Participant 3, 2011). *"Highest and best use in 90% of valuation work is not an issue in the zoned area where there are potential alternatives – the 10% is in the peri-urban area"* (Participant 3. 2011). Many of these methods and processes predate the existence of the peri-urban and have not been adapted to deal with its particular challenges. In particular, the concept of highest and best use which remained static in its interpretation and application for a long period of time (Participant 3, 2011). It is "*a subjective*

judgment that doesn't always match the minds of the planning authority" or the expectations of the landowner (Participant 5, 2011). One valuer, commenting on the valuation system in NSW, suggested

> *...the whole valuation industry needs a massive overhaul. They don't get paid enough, they rarely go to the property. They do desktop valuations. Some of them do inspect the property, see it's brand new and still compare it to 10-year-old properties.* (Elbanna in Duke, 2013)

The data confirms there is a gap in valuation theory regarding the modern practice of ascribing value to land on the fringe and, in particular, responding to its multifunctionality. Processes have been long established for rural property valuations (see Baxter & Cohen, 2009; Participant 3, 2011) and if a valuer is doing their job correctly, then the property would be valued on the basis of how the market buys and sells. If the current market for the property is based on productivity, then the valuer would focus on the land's productive performance, its management and the dollar value per hectare.

> *...In this case you would expect that the higher return per hectare, the higher the value ascribed to the land; if the return was low, whether it reflects the location, topography or past poor management, then this would also be reflected in the valuation.* (Participant 3, 2011)

This sounds fairly straightforward, but it doesn't necessarily work for the peri-urban. The value of peri-urban productive land per hectare can become so high that it is prohibitive for farmers to purchase, a fact complicated by the reality that sometimes it is farmers themselves seeking to maximise their returns by selling the land for a non-productive future.

The value that arises out of the valuation exercise is expressed in economic terms, a dollar value ascribed to the land and its assets, in response to an analysis of the land and the circumstances of the market (Participant 3, 2011). However, in some circumstances, for example, when the land is close to the urban growth boundary, the value ascribed to peri-urban productive land may not just be based on productive and land management factors, but also intrinsic, cultural and ecological factors which can be difficult to quantify. Sometimes additional value may simply relate to its proximity to existing urban development. As one participant related, there is a reluctance to pay a price for land which is focused more on the intrinsic than the productive factors, because "*the sheep don't necessarily enjoy the view*" (Participant 3).

Thus, the principles of valuation theory come through in the data as disconnected from the reality of what is occurring in the peri-urban. The interviews (Participant 3, 2011; Participant 5, 2011; Participant 13, 2011) and conversations (Sands 2011) suggested that the higher-than-average sale prices of many productive properties on the fringe reflect a market view that is in conflict with what the theory suggests should exist. As one participant remarked: *"Land values in urban SEQ have significant influence on land value for rural and regional areas."* (Participant 1, 2011). The discourse supported the role the

market view plays, suggesting that "*powerful interests are using facilitative, market based land use systems to further their own short-term interests*" (Buxton, 2014). The closer the fringe goes to rural properties, factors other than its primary production capability influence the price people will pay for the land (Hendy, 1998). "*You can't invest at the market level and derive a productive income*" (Participant 13, 2011). This conundrum is exacerbated by the significant growth pressures that have occurred in recent years.

Planning also emerges in the data as creating difficulties for traditional valuation processes in the peri-urban. The research shows how the introduction of performance-based planning schemes has removed a key clue for valuation professionals in determining the appropriate value of the land. Valuers once started with the zoning of the land, which provided them with an automatic level of value based on use (Participant 3). However, many of these new schemes prescribe intents for the land rather than uses, meaning that an application can be lodged for anything rather than the planning scheme prescribing land use.

> ... (The performance based schemes) *give intents or preferred and dominant land uses in zones which provide an indication of the value to develop the site because of the zoning. But the reality is a value isn't a value until the site has been approved for a particular purpose, so this is problematic.* (Participant 5, 2011)

This participant, a planner in a South East Queensland Council, noted that in some areas "*there may be no clear and dominant highest and best use*", but rather, a number of uses that may receive that status subject to the vagaries of the planning process and the desires of individual landowners (Participant 5, 2011). Here the synergies between the valuation and planning professions become evident, in that they share a failure to grapple successfully with areas that are neither urban nor rural, those with no one clear use. When a valuer asks the planner what the highest and best use in these peri-urban areas is, "*the answer will almost inevitably involve several 'permitted uses' rather than one*", leaving the valuation process open to a subjective judgement (Participant 2, 2011; Participant 5, 2011).

Intangible values

A second influence on the valuation process in the peri-urban, and one playing a very obvious role, emerges in the form of intangible assets and intrinsic values. Consistently, the observations of peri-urban Australia, in South East Queensland and in Tasmania, underlined the high quality assets and resources of many of these spaces. These can take the form of amenity, views, lifestyle, biodiversity or the opportunity to undertake a non-primary production business on the site. Often, many of these broader assets are linked into the concept of amenity, "*what people can see and what they like to see*", described by one interview participant as human amenity (Participant 13, 2011). *"Where scenic amenity value is high – people perceive that to be the most important landscape, higher than biodiversity"* (Participant 13, 2011). In the peri-urban, some of these assets are real, or being sought in the understanding that they can be found (amenity and lifestyle). Others are visual or personal (the

landscape and our attachment to it), or emotional and economic (both linked to sense of place and how we use it).

Small villages like Eumundi (in the peri-urban area of SEQ) demonstrate a number of these inherent values, or intangible assets, which take many forms. In the case of Eumundi, but equally across a number of places observed in SEQ, such as Maleny and Montville, there are examples of people eliciting economic value from the landscape, based on particular inherent or explicit qualities evident in the space, most often loosely arranged around the idea of amenity. Other examples are seen across the country, including in tourism enterprises that rely on scenery and pristine nature in these areas, or combine this with a product-based experience. Tasmania's Tamar and Huon Valleys, also both in the peri-urban, are two places where amenity values combine with productive enterprise to create an "experience" going beyond product.

The data analysis exposes evidence of two interpretations of amenity in the peri-urban. The first, based on *rurality*, describes an ongoing desire to see the rural idyll maintained – the tractor chugging across the paddock; the comforting familiarity that all is as it always has been; the link back to simpler days that peri-urban settlers are now trying to recreate.

> *When they come to the Hunter Valley their view of what they are going to see is the bucolic charms of the Hunter, grapevines and rolling hills. Not seven and a half thousand new homes scarring the landscape.* (Kreiger in ABC Newcastle, 2011)

This idyll is seen as economically valuable in terms of its maintenance, and in some countries, such as France and the Netherlands, its value is recognised in a level of subsidisation. Paradoxically, it can also manifest in negative impacts, because of the potential of farm operations to change the landscape or create a detrimental impact.

The second interpretation, based on the *aesthetic*, appeals to those who value the peri-urban landscape for the picturesque beauty of its landscape – the unique connection it engenders between and within individuals that inhabit the space.

> *"The aesthetic here is very different," he said. "It still has a country feeling. We have trees and small creeks. I know my neighbours, who's at the bottom of the street, who's over the hill. 'Intimacy' is probably the right word."* (Simpson in West, 2011)

Here the landscape of amenity speaks in an inherently personal way, creating a sense of belonging emanating out of nature. Again, this form of value is seen as adding economic value to the property or area, even though we don't really understand the actual amount. *"We had 40sq m of verandas built so we could enjoy views...We put all our money into the house; it's our retirement, where we want to live and enjoy...We're growing fruit trees and we have chooks and land"* (Schwerdtfeger in Donaghey, 2011).

Related to this is the revelation in the discourse that many residents settle in the peri-urban because of its lifestyle promise, founded on one or the other interpretation of amenity. In this case, the desire to seek a rural lifestyle and the rural aesthetic led to settlement decisions based on this promise.

> *Many get bucolic bliss on the weekends but still got the traffic jam to work every day. I'm not sure I want to live that far from where I work.*
>
> *I am one of them – a rural lifestyler. I have bucolic bliss – but I work in the area.* (Participant 10, 2011).

However, accompanying many of these types of expressions in the data was evidence that as quickly as that promise is delivered, it can just as easily be taken away, the victim of the factors driving peri-urban settlement. The story of the town of Beveridge in Victoria (Brown, 2011) provides a good example of what can happen to the peri-urban lifestyle, which some had enjoyed for many years. Described as a hamlet, the town is located 38km north of Melbourne, "*...only as far flung to the north as Dandenong is to the south.*" Currently home to a small population of 1,192 people, it is suggested that mooted development will see this rise to a level of 110,000 in the next few years.

> *Colin Daisley, 43, and wife Maki are raising three kids on a big block that could fit four townhouses, but instead has a dog, cubby, trampoline and views that are about to get busier.*
>
> *The lifestyle will unfortunately change. It will be just another suburb. All this you see, it's going to be houses, he says.* (Brown, 2011).

Whilst the settlement juggernaut continues, the data reveals that some are troubled by what is occurring, by the ongoing development that potentially will change not only their lifestyle but also the amenity that they enjoy. One interview participant stated the paradox clearly: "*Sometimes you get what you expect, others get a real life experience that is totally different"* (Participant 10, 2011).

But the case of Beveridge also highlights a further paradox around value. In some cases as the lifestyle opportunities reduce, the land market value grows, under the guise of creating new opportunities. Analysis of a 2009 media report on the Victorian Government's proposal to rezone green wedge land to residential noted just that in response to concerns about the loss of lifestyle, agricultural and environmental benefits. The government's response was to argue that the rezoning proposal would give the land created a higher value as residential land. While lifestyle opportunities would appear to be abundant in the green wedge before the development began, as the rezoning occurred, they would significantly reduce, whilst the land value increased (Bennett, 2009). One farmer clearly refuted this idea: *"...we don't look at it like that at the moment. We don't look at it like that. Because it's very hard to replace this, you know. You can't get ground like this - nowhere"* (Lamattina in Bennett, 2009).

In Beveridge, the locals also noted significant increases in land prices occurring as a result of the development plans for the town – "*2.4 ha blocks have quadrupled in price in two years*" (publican Mike Cirelli in Brown, 2011), despite the potential loss of their particular lifestyle. This suggests that many will pay a premium for a lifestyle promise that may not, as the discourse reveals in stories like Mearns above, be delivered. The data highlights that this promise that drives a significant part of peri-urban settlement (Participant 5, 2011; Participant 8, 2011; Participant 14, 2011) is just that, something intangible, easily taken away.

A sense of place...with city services

The "exurban" voice, identified in the first pass of data analysis, is also evident in the second consideration of the data, as a third force influencing valuation processes in the peri-urban. In the data, there were many examples of people describing their connection to the environment and the landscape in terms of sense of place; a link to the aesthetic character they derive. This appears in the data as almost a "personal valuation framework" that people apply to describe what the peri-urban means to them, a personal coding of the landscape and the activities that take place within it.

The literature refers to place as consisting of many influences, which combine to bestow upon a location something unique and portrayable, something we refer to as a sense of place (Brady, 2003 in Firth, 2008). But the data shows that this sense of place is not only difficult to measure and value, but also often only temporal.

> *If the 500 acre farm that borders our land becomes tract mansions (which it is likely to do), our home, even if it remains exactly the same, will never feel the same again. We'd hear lawnmowers and cars and weedwhacking equipment. And even if they were the quietest of neighbours, we'd know that on the other side of our own tract of woods, the suburbs had begun. Similarly if the winding narrow roads that bring you to our place are paved and widened, or the horse farms disappear, or foxhunting goes away,* ***the sense of place*** *we now feel would be vastly diminished.* (Finnemore, 2010)

The many intangible assets and influences in the peri-urban together create a distinctive sense of place. However, as the peri-urban settlement continues, there are fears for this sense of place and what might become of it.

> *I've met many folks who move out to the country and immediately want trash pickup, street lights, and paved roads. There seems to be little consciousness that once those niceties are provided, the feeling that brought them to the country in the first place would be gone. They talk of security and convenience, not realizing that a place in the country doesn't have anything to do with those things and to make it so, will make it the suburbs, which they fled in the first place.* (Finnemore, 2010)

This confirms a key dilemma in the peri-urban, also identified in the analysis of voices. Many want to feel that sense of place, that unique environment, a real connection to the location. However, simultaneously, they also seek the trappings associated with city life, the access to rubbish collection, walking tracks and four-lane highways. Because of this, sense of place is often only a temporary reality. The observations in the peri-urban provided visual evidence of the continued urban incursion into the peri-urban that the data confirmed (Participant 2, 2011; Participant 5, 2011; Participant 8, 2011). It suggests that decision-makers are yet to understand how to identify and measure the inherent characteristics of these spaces and build this into a valuation framework (or indeed find responsive planning measures).

The data confirms key messages about valuation practices and processes in the peri-urban as identified in the literature review. When we seek convergence between the literature and the data, concepts related to highest and best use, amenity, lifestyle and sense of place all emerge as problematic. It is clear valuation methods struggle with intangible values, particularly the amenity and lifestyle values that often create peri-urban identity and a sense of place. The interviews highlighted this conundrum and the lack of value convergence in the valuation process. Equally presentations at the "On the Edge Conference" in Melbourne (2011) noted this challenge and the need to value land for its critical environmental and social importance, over and above its ability to create profit.

Examining the data to see what it reveals about valuation processes in the peri-urban re-emphasises the ineffectiveness of applying a single valuation method to multifunctional places like the peri-urban. The findings in the research reinforce the growing consensus that we need a system of valuation that can account for other drivers of value, and their complexity. But at present, the only approaches that might offer a way forward are ecosystems services (for which measurement systems are being developed) and multifunctionality. The valuation profession has not addressed these concerns, and does not seem ready to engage with more complex ways of looking at them, through lenses such as ecosystem services and multifunctionality. That said, it seems appropriate to consider these new emerging concepts, also raised in the literature as potentially ideal for complexity, as concepts that might enable us to pull this together.

5.2 Land use planning

So what does the data reveal about the challenge of land use planning in the peri-urban? In the contemporary context, as urban development continues to make incursions into these once-protected areas, again and again practitioners and others alike argued that planning must once more respond to crises of living conditions and rural population decline. This was especially so in the interviews with planners and government representatives in SEQ. *"People believe that statutory planning frameworks are the solution – if that was the case we would zone land weed free...The actual impact on regional outcomes is ordinary. The lever is just not going to work"* (Participant 13, 2011).

Critically, some questioned whether the current planning and governance arrangements could succeed. The data clearly demonstrates that the problems are getting worse, faster than the statutory planning frameworks can address them. For example, in SEQ, the loss of the sugar cane industry creates enormous problems for the future of these lands, which planning has yet to find a way to respond to. Participants spoke of extensive studies occurring in the early 1990s and again later as background to the 2001 regional plan. The mills were not viable nor were other crops. In some parts, the land is heavily flood prone and soil quality questionable. Some of the sugar cane lands are made up of four or five lots, all individual titles with a right to build a dwelling on them. These individual lots can be sold off, so long as they are not constrained by access or flooding issues, but if they are, *"...then it is in no man's land. This is a constraint upon their future sale... Those parcels of land could potentially run into nothing – this is now occurring, they are growing weeds and grass..."* (Participant 7, 2011). Unfortunately, the whole question of the future of these lands has been left in the too hard basket.

For planners in these areas, this poses a significant challenge and there is no easy answer as to how these parcels of land can be used in the future. But this is not the only challenge facing planning in the peri-urban. There are a host of others: food and emerging productivity; loss of bushland and backyards; the reliance of farmers on subdivision and land speculation to fund their retirements; the development of rural slums; and, most importantly, the evolution of the peri-urban as a mature space, a disruptive space presenting great challenges. As single issues, they are difficult – brought together they imply a disconnect between the objectives of planning and the reality of what is occurring on the ground.

"Blowing the urban-rural thing out of the water"

A further challenge for planning lies in the contemporary context, which suggests that, in many cases, you no longer need to live in the city to experience its "advantages." This may have driven the development of peri-urban settlements to the extent that we can now observe. Brown, in his presentation to the Agriculture in an Urbanising Society conference in 2012, argued that modern social and economic mobility makes the rural-urban periphery a much more important space than we traditionally acknowledge. He contended that this requires an inductive approach that recognises interdependencies between urban and rural spaces and where they come together, rather than their separation, providing further evidence that some are now questioning the relevance of the urban-rural dichotomy. It is this point of intersection that is most relevant to this research, as it may well be the point that helps us to decipher the peri-urban identity.

This challenge to the way planning has traditionally viewed these *spaces in between* brings the notion of the urban-rural dichotomy to the fore once more. The idea that urban-rural distinction may no longer be as relevant as it once was emerges clearly from the data, firstly from the voices and then from the other data collection methods, especially the participant interviews. As one participant clearly articulated: *"...We need to blow the urban rural thing out of the water and start to get an understanding that this can't be treated as simply urban or rural"* (Participant 5, 2011).

The traditional concept of an urban-rural dichotomy has a real dynamic and tension around it, and honing in on this uncovers further points of importance. These reflect planning's tenuous relationship with the peri-urban and the evidence that it represents a middle ground; it suggests that the peri-urban may be acting as a disruptive force for planning. The data reveals that flux and fluidity lie at its centre, forming an enormous challenge for planning, and within this are a range of motivations or push-pull factors that drive people to the space. These points are reflected in the forces that drove modern attempts to plan.

As the previous section referred to, there are few traces of the urban-rural dichotomy observable on the ground, yet we continue to plan as though it still exists. One planner noted in his interview that planning had not yet recognised the contemporary reality that makes the urban-rural separation somewhat redundant (Participant 5, 2011). Another interview participant agreed that this space cannot be treated as transitional, reflecting Brown's observations on the outcomes of mobility. Whilst Howard's early ideas of bringing town and country more closely together are somewhat lost in contemporary Australian planning, there is evidence that the peri-urban represents a modified version of the middle ground he argued for in his Garden City model (Howard, 1896 in Le Gates & Stout, 1996). Piecing this together in the context of the peri-urban spaces considered in this research confirms what the initial analysis suggested – that it is time for planning to let go of the urban-rural dichotomy and recognise the existence of a third space, one that holds the potential to bring town and country together.

Bushland and backyard

There were other messages evident in the data that pose challenges for planning. The concepts of "bushland" and "backyard" have played a key role in the manner in which planning has traditionally structured settlements in Australia (Fiske, Hodge, & Turner, 1987). The data suggests that bushland and backyards have been given a vital task contributing to liveability, cultural and amenity over a long period of time, supporting claims in the literature of the need for greenbelts and bushland, and for people to have backyards for recreation and food production purposes, amongst other things. Steel (2012) noted that thinking about the layout of settlements goes right back to early times, to the Fertile Crescent, when the evolution of cities and farming intertwined. From the early settlement of Ur, in 2000BC, the importance of food production activity surrounding settlements and the central position of the marketplace were recognised as important and from this, a number of principles have remained constant including market gardens, green spaces, the notion of bushland and countryside, and gardens and backyards.

So the idea that cities should be surrounded by countryside and garden, and include key spaces for productive activity, has long been a precept of planning, and is something that the data highlighted.

> *...in the city you would like to grow as close to any house as you can, the herbs, the greens, the crops highly susceptible to losing nutrients as soon as they are picked small shelf life and fruit. There is a great opportunity for cities to grow fruit in many places...once in the ground requires little maintenance and 20-30 year opportunity.* (Participant 12, 2011)

But unlike the literature, the data suggests that whilst many still recognise this, the practice of planning and the interventions that occur in planning processes have resulted in a downgrading of the role of bushland and backyards in decision-making processes, with impacts for the peri-urban. In some cases, it has resulted in planners and decision-makers increasing their reliance on the peri-urban for the amenity, open space and recreation requirements of cities that bushland and backyard once provided. In Sydney, for example, public consultation on the draft Metropolitan Strategy recognised this, suggesting that consideration should be given to once more promoting productive urban spaces that provide potential for alternative food production (NSW Department of Primary Industries, 2009). However, the argument advanced is more often one focused on density, rather than any recognition of the key role that bushlands and backyards play in providing conditions of liveability.

There are several tensions arising out of the idea that cities should include key spaces for bushland and backyard, rather than continuing its incursions into the peri-urban. The first tension arises in the counteractive response to urban sprawl on the edge of cities and towns, that of increasing the density of city settlements. In this model, suburban bushlands, and particularly backyards, become housing sites, developed to meet the demand. However, the data emphasises the highly contested nature of this strategy as an appropriate response, in particular some inherent flaws of the approach: *"...if the idea of higher densities in the suburbs are to be accepted by the public, then the design processes and criteria that are applied to individual developments (even minor ones) have to be vastly improved"* (O'Leary, 2012). There are concerns with the overall design quality of new higher-density developments, which many see as inadequate, and with the living conditions that these create.

Secondly, there has not been an appropriate response to this tension. Whilst some governments have moved to maintain the idea of the backyard and concepts of lower suburban density, others have taken a different route, using more dense development as the cure. Whilst advocated as a response to urban sprawl, this too is contested. As a result, decisions and responses to growth imperatives continue to generate conflicts and tensions within communities, from SEQ all the way down the eastern seaboard to Tasmania, with opinion divided on what is the right response to the problem.

> *The president of the West End Community Association has labelled a State Government decision to reinstate building heights of 12 storeys in the suburb as "anti-democratic".*
>
> *The controversial move will affect sites in a section of West End between the Brisbane River and Forbes St, Montague Rd and Vulture St, allowing construction of high-density developments.* (Eastwick, 2012)

At the crux of this tension is the unresolved issue of whether higher density is the panacea for urban sprawl. Professionals cannot agree on the appropriate way to address this issue and believe that the

loss of bushland and backyard must be balanced with the impacts of containment on sustainable living. This excerpt from a media article (Masanauskas, 2012) highlights the dilemma.

> *Melbourne planners should stop bulldozing the suburbs and encourage people to turn their backyards into vegie patches, says an urban expert. Melbourne University professor of urban policy studies Brendan Gleeson blasted the trend towards high-density living as wasteful, saying we should be making more use of spare land for food, to collect water and recycle waste...*
>
> *Architect Craig Yelland, whose firm, Plus Architecture, specialises in apartment projects, said it was ridiculous to believe that a city like Melbourne could shun high density development.*
>
> *"If you don't increase density then you have expanding urban sprawl," he said. (*Masanauskas, 2012*)*

So the debate over the best way to deal with urban sprawl sits at the centre of considerations about the future of bushland and backyards – with significant implications for the peri-urban. And the tension around the efficacy of this response remains unresolved. In 2012, Victorian Planning Minister, Matthew Guy, announced that:

> *Neighbourhoods will be preserved under sweeping changes ..."We're going to keep the backyards."*
>
> *Families will continue to play backyard cricket, invite their friends for barbecues and retain the lifestyle that was one of their reasons for moving to the suburbs.* (Editorial, 2012)

Yet, despite these comments, the original Melbourne 2030 strategy (Victorian Government, 2002) has now had several iterations and still not resolved the competition between protecting bushland and backyards and proposals to reduce urban sprawl.

Commenting on proposals in the 2013 iteration of the metropolitan strategy, Buxton (2013) noted that any discussion on "*...how to intensify established areas while not destroying amenity, or whether it is even possible to achieve both objectives...*", was generally avoided. The discussion paper released to promote debate around future strategies argued that "*there are different ways of increasing housing density without undermining the valued characteristics of local areas*"; but as Buxton also noted, it did not provide any discussion of how this might occur and how amenity would be protected. Some would argue that this protection is only facilitated via a massive expansion of the Melbourne UGB into the peri-urban (Buxton, 2013). There may well be the need to answer a fundamental question about the conception of backyard as potentially an Anglo-Saxon hangover which is used to support arguments

against increasing urban density and incursions into the peri-urban. There remains a lack of clarity as to how backyards can be used without compromising the amenity or liveability of other areas and the peri-urban. If housing density is not going to increase, one can only guess that the development must instead flow outwards. In Melbourne's case, where the UGB was expanded to a scale of 43,000 hectares, this seems highly likely.

In spite of planning: food and productivity

Planning once played a critical role in defending the need for food and food-production spaces in close proximity to society and community. These spaces have been a vital function in building social and cultural capital over a long period of time. Today the situation is very different. Planning has established rules and regulations that support the ongoing protection of prime agricultural land, but in many cases, these do not achieve the greater goal of ensuring productive land has the opportunity to remain in this condition.

Analysis of Tasmanian planning schemes highlights the reality for many agricultural enterprises in the peri-urban, hampered by their location on prime agricultural land. In the case of one enterprise at East Devonport in Tasmania, highly technical and detailed information about irrigation calculations and planting techniques was required by the local Council so berries could be grown under tunnels. The *State Policy for the Protection of Agricultural Land* is embedded into local planning schemes and requires producers on prime land to not only seek planning approval, but also endure a process where nearby residents can object to agriculture, often on non-agricultural grounds. In SEQ, whilst the Regional Landscape and Rural Production Zone in Council planning schemes recognises the important values that the peri-urban contains, in many cases, constraints outside of this zone can make productive land use unviable (Participant 7, 2011; Participant 10, 2011). One participant suggested another issue for producers within the zone was the lack of support provided to producers once the new zone boundaries were established (Participant 7, 2011). In Victoria, as in South Australia and NSW, whilst there are regulations to protect agricultural land, there is an ongoing frustration that planning does not give enough notice to the pivotal relationship between food production and community survival, and that this can assist in creating renewed community connections (Larsen, 2011; Participant 12, 2011).

This idea that planning can have a close and nurturing relationship with food production is grounded in history. Critically, not only a sense of the aesthetic, beauty and harmony were present in early attempts to plan, but also a sense of survival. In her presentation to the inaugural Agriculture in an Urbanising Society conference in the Netherlands, Steel reflected that as early as the ancient Mesopotamian city of Ur, the market was placed at the centre of the city and the farmland situated around it. This was based on the notion "*that planning should not isolate agriculture from food, urban culture and culture in general*" (Steel, 2012). In Steel's view, this formed the basis of the first urban paradigm, the solution in those days being to live next door to your food. However, in peri-urban Australia, the observations confirmed that modern planning has moved a long way away from early designs of functional open spaces within urban areas, which brought the country into the city. Instead planning now creates

communities far distant from their food sources, turning their backs away from key issues of food, liveability and culture.

Despite these concerns, other data suggested that there is an emerging productivity occurring in the space. This emerged quite strongly in the analysis of the voices and was clearly present in the observations. All the peri-urban landscapes included in this study (from SEQ to the Huon) displayed evidence of food trails and agri-tourism, interesting collaborations that bring food and place-based qualities together. Underpinning these are new, alternative business models that focus on short distribution chains. In Maleny (SEQ), high quality landscape combines with food and art to create a visitor experience, which the locals can also enjoy. In the Tamar Valley (Tasmania), vineyards and cellar door trails combine the place assets of landscapes, river views and proximity to offer an experience grounded in many of the same qualities, but with its own unique spin.

Inherent in this data is an awareness and criticism that planning has failed to articulate the connection of food production as a critical element, not only of survival, but to liveability. Critically, the targeted conversations highlighted that attempts to overcome this began by asking the question of the broader community – do we want food production or not? In British Columbia, the first question asked was how will we feed the people? As a result of change, agricultural land value has increased substantially (Sands 2011). In Barcelona, the first question asked was do we want agriculture and food production or not? (Callau, 2011, 2012)

So, whilst there is evidence in this study of the peri-urban in Australia of a renewed interest in food production, planning has a long way to go in terms of the support it offers for this. In other places, it seems that only when people came together around the hard question of do we want food production, that action, including consideration of planning's role in this, occurred. In Milan, doing this resulted in *"...a human platform...being built – a network of people working around food utilising a common vision"* (Meroni, 2011).

In Australia, the observations and conversations suggest that this emerging productivity is occurring in spite of planning. The On the Edge Conference, organised around concerns about peri-urban food production, confirmed that whilst some planners are aware and supportive of this emergent food production in the space, at this stage it remains to be mainstreamed. A key message was the opportunity to learn from positive models that exist in other places, which take a long-term view of the importance of productive peri-urban land, and include actions to retain this status.

Rural slums – who would want them?

In seeking to bring town and country more closely together, there is a further disruptive force that the data suggests planning must overcome, that being the propensity for peri-urban development to result in the creation of rural slums. In an interview with a peri-urban settler, this was captured in the idea that early attempts to plan peri-urban settlement have not only been unsuccessful, but created a standard

of living akin to slums, only in rural-residential or peri-urban areas. "*Who would want to live there? There were high expectations but through ignorance or whatever they have run them down with livestock numbers or weeds*" (Participant 10, 2011).

The image of slums implies a dynamic far removed from the pages of the developer's marketing brochure, for example for the new Yarrabilba community east of the Gold Coast in South East Queensland, which advertises that you can "*lose yourself in the great outdoors, then find yourself in the village cafe*" (Lend Lease, n.d.). In the peri-urban, according to the advertising, you can enjoy images of beautiful landscapes and engage with nature. Residents are promised rural lifestyles in brochures dotted with images of pristine environments and picturesque ranges. In one case, prospective buyers of a particular development are told that *"...no matter how you spend your days, in the evening you can relax on your veranda surrounded by nature and the peaceful environment of this quiet valley"* (Danks, 2011).

In the peri-urban, not only can some development result in a lower standard than what is expected, but land may also be used for other purposes, such as infrastructure or water supply. In one case the developer failed to divulge a wind farm planned for the third stage of the development.

> *A North Queensland development company sold residents a quiet rural lifestyle "surrounded by nature" – and then announced its plan to build a wind farm next door...Residents who bought into stages one and two were promised a "quality rural lifestyle", with brochure images of the picturesque range.* (Donaghey, 2011)

Whilst this promise may be delivered in some places, the data repeatedly suggests that this is not always the outcome. Sometimes the developer is responsible, failing to deliver promised infrastructure or further develop the land in later stages. Other times, it is because peri-urban settlers have limited income, limited work skills and little by way of land-management expertise. One interview participant noted this, commenting that some will settle in the peri-urban because in some places, it offers cheap land: *"...some peri-urban settlers ...struggle to pay for a block – they often can't pay their rates so more trouble than they are worth...lower service levels than they're used to..."* (Participant 2, 2011). Critically, this rural-slum dynamic and the issues that drive down living standards against what is promised, whilst clearly evident in the peri-urban observations, are missing in the current planning and development narrative, even though the discourse is clear on the reality of this situation.

Mature space

A final, and probably most significant, challenge emerges from the data for planning. Planning has encouraged a uniform pattern of values over the peri-urban, predominantly driven by urban imperatives of managing increasing populations. The research suggests that those responsible for planning overlook the age and maturity of the peri-urban space, the fact that there are well established land-uses in the space. Some, such as Collier (2012), support this view. In his presentation to the Agriculture in an

Urbanising Society conference, Collier argued that the peri-urban is "*the dominant space of the twentieth century*", and even if this seems a little extravagant, as the location of significant growth and issues implicated with that growth, it has received only limited recognition as a space in its own right. This suggests an ongoing disconnect between planning and the peri-urban.

The interviews in Queensland suggested that the focus on planning as the solution for the peri-urban is problematic. All down the eastern seaboard, governments are struggling to find the right solution for the peri-urban and its associated population growth using planning mechanisms and frameworks. In Victoria, numerous metropolitan planning strategies have created further issues for the peri-urban from Melbourne 2030 to the recently released *Plan Mel-bourne* (Victorian Government, 2013). The data revealed entrenched attitudes, pressures and contests around differing uses and values in the peri-urban and suggests a lack of understanding about how to treat the space. As one participant stated: *"...these are mature areas in between. We are treating them like urban areas or future urban areas..."* (Participant 5, 2011).

Further, it seems that in Australia, planners didn't see the impacts of the peri-urban phenomenon coming until they were upon them. Certainly, Rose (1967) and Pryor (1968) identified the emergence of a peri-urban style space in Australia and other places many years ago, but they were largely ignored. The first attempt at regional planning in SEQ examined the issue of "lifestyle living" but since then, the regional planning effort has focused more on the urban side of the equation than the rural/peri-urban. Consequently, responses to the problem appear to be rapid and reactive:

> *There wasn't a lot of thinking in the urban footprint...Done very quickly and drawn a line around – very limited thought because of the speed of the first process. The second iteration – tidied up a few things...* (Participant 2, 2011).

In SEQ, for example, responses to peri-urban issues have been mostly reactive and in SEQ, "*...freezes were put on urban development*" (Participant 9, 2011). When the scale of the growth problems demanded a response in the early 2000s, in SEQ the first regional plan simply "*drew a line around existing allotments which was then approved to create an urban footprint boundary*." (Participant 9, 2011). In this process, the pressing need to react to change meant that at times decisions were made in relation to the final plan that did not serve the best interests of the space, despite their popularity or at times the results or outcomes of consultation. *"...A good example is in relation to interurban breaks, where there was significant farmer backlash, especially in relation to canelands."* (Participant 9, 2011). In this case, the state government announced these areas to provide green buffers between urban areas, but one problem identified by participants was that they then overlaid them on existing uses such as food production and in particular, the cane fields.

The data confirms that whilst clues as to the early signs of the development of the peri-urban are highlighted in the literature, they were not reflected in action. In some places, there remains little

recognition about how available land around cities and towns could be better utilised, and one interview summed up how planners have failed to see how these productive spaces can be fully utilised:

> *...they haven't seen how we can grow on all these small blocks that surround every capital that have high production potential – and then marrying it with ecological potential that farms and farm landscapes can provide both to the farm and to the city.* (Participant 12, 2011)

So in SEQ, whilst there is a plan to curb urban incursions into peri-urban and rural areas, the data revealed evidence of a clear concern that the horse has already bolted. There are already large numbers of vacant blocks in the rural area that can be developed for residential use because Queenslanders have the right to build a house on a developable lot. This is in spite of the regional planning process attempting to limit the opportunity for residential development in the areas designated for regional landscape protection and rural production.

Perceiving the peri-urban as a transitional, rather than a mature, space means interventions to the challenges facing this land are limited. One government representative in Queensland argued that the approach adopted in SEQ was limited, not the least because it relied on urban development frameworks, overlaid across a zone that is anything but. He challenged the manner in which planning goes about its business in these spaces, suggesting that

> *...planning...in many ways is a misnomer – the so called statutory planning frameworks we use are urban development ones and not really planning ones – they are much broader and should be defined that way...* (Participant 13, 2011)

The problem is that the use of these urban development frameworks means that urban development receives higher importance than the rural activity or landscape, and often breaks the nexus between that which is desired in these landscapes, and that which is delivered. It also uncouples rural lands from peri-urban lands, and once disconnected, this is difficult to overcome. *"...you can't disconnect it – otherwise you totally destroy the liveability and lifestyle – yet we think we can do it"* (Participant 13, 2011). This participant clearly noted the tension of a transitional interpretation – evident in continued urban development that did not consider its relationship with the rural landscape and production areas and most frequently resulted in a more urban dynamic. Interestingly he noted the role of language and terminology in narrowing the discourse and the response to the challenges, something identified earlier.

The data confirmed that planning and urban development frameworks are interchanged as though they are the same, which suggests that the finer detail is not being heeded. As a result, the approach used to resolve issues in the peri-urban is often not nuanced or tailored to the unique and complex nature of the space. For as long as these views of the peri-urban as transitional persist, planning is not equipped to deal with the challenges of the peri-urban. One planning expert in Queensland commented on the

lack of tools that exist, noting that whilst the broad frameworks and principles now exist, the tools do not. *"...We need a new planning paradigm that doesn't use urban tools etc. to deliver non-urban outcomes"* (Participant 9, 2011). There is also a lack of nomenclature. Despite its maturity, the peri-urban cannot be called a zone, nor be a zonation based on its activity. There is no zone that links with the peri-urban as a concept. As one interview challenged: *"...you need to ask the question – in all the peri-urban planning in Australia – is there such a thing as a zoning called peri-urban agriculture?"* (Participant 10, 2011).

The research confirmed that plans for these peri-urban spaces have largely imposed a set of urban values, bringing urbanisation further into the fringe. The language connotes rural in zoning and land-use nomenclature, but the data shows otherwise: plans for the peri-urban are made using urban values and methods (Participant 9, 2011, Participant 10, 2011). Quite simply there is no attributed zone for the peri-urban, rather it is called things like Rural Living Zone (Tasmania) or Regional Landscape and Rural Production Zone (SEQ). This contributes to the idea that not only have the values and landscape been urbanised, but the tools and language of planning also. It also suggests that the peri-urban space has matured and consolidated as an entity but the planning tools and language specific to the space have lagged and failed to materialise.

Conceiving the space between the urban and rural zones as mature and distinct not only encompasses the signals that the landscape provides now, but also accommodates actions that need to occur for the future (Thom & McKenzie, 2011). The data suggested that planners must frame responses differently in the future, on the basis that "*there are no clear boundaries, no well-defined essences, no sharp separation(s),* accepting peri-urban messiness which features *"tangled beings...rhizomes and networks*" (Latour, 2004: 24 in Murdoch, 2006:155). This takes us back to one planner's interview comments about the peri-urban being not only a mature space but one that transcends traditional boundaries.

The lack of a specific peri-urban zone, combined with evidence of multifunctionality and integration in the space, suggests that a focus on zoning and compartmentalisation when planning these spaces may not actually deliver what is needed. Traditional statutory frameworks and approaches, and a reliance on government to fix things, may not be the right response tools. Other interview comments support this, implying that the situation is often more complicated than these traditional approaches allow and whilst the SEQ plan, for example, delineates urban uses to urban footprints and rural uses to rural ones, this too is problematic because much of the land has already been subdivided: "*...A whole range of vacant blocks of peri-urban size in the rural area – there is huge potential that hasn't been realised by some – which may contribute to greater dispersion of settlement."* (Participant 2, 2011).

The evidence of a mature space also reveals that some policymakers are starting to understand the limitations of the urban-rural dichotomy conceptualisation, a recurring theme of the research. Implicit in this is the understanding that the dichotomy does not serve the interests of urban liveability, or the values of landscape and rural production that are so critical to peri-urban integrity. The traditional narrow and

fixed interpretation of the dichotomy has resulted in a diminution of natural and social capital, something not appropriately considered in the frameworks used, perhaps because traditionally, rural places have nurtured strength in this area.

This same government representative argued compellingly that, in the case of the SEQ Regional Plan (2005-2026), the elements were "*probably right*", but the manner in which the plan has been applied remains the issue. He suggested that the failure to invest adequately in infrastructure, for example, has contributed to the problems that many peri-urban areas now present.

> *...the investments in the infrastructure plan compared with other parts, a huge amount compared with miniscule...we are running down our natural capital...our social infrastructure is plateauing...the natural environment trending down....Why? The nature of our economic model and its investment mindset.* (Participant 13, 2011)

Critically, this participant pinpointed the shortcomings of the current development paradigm, where natural capital is not an investment priority, and return on investment drives decisions around the location and type of development. Again, he pointed the finger at the statutory planning frameworks applied to the peri-urban and the failure to see the peri-urban as something more than transitional.

This message was also supported by practising planners. An outcome of the regional planning process in SEQ was a Rural Futures Strategy, which was released in 2009. The strategy included an action plan with the fundamental aim of supporting sustainable economic and social development of the region's rural areas. Five major themes were identified: economic development, healthy and productive rural landscapes, water resources, community development, and leadership and collaboration (Department of Infrastructure and Planning, 2009, p. 4). In response to a question about what the regional plan has achieved for the non-urban areas of SEQ, one planner commented that "*the SEQ Rural Futures Committee has been going around in circles for about 7-8 years",* and suggested both reliance on state and federal governments for funding and a lack of commitment by players involved (Participant 2, 2011). Interestingly, there was never a financial or risk analysis undertaken for the SEQ plans and the reality is that many of the proposals on paper could never be funded from government or private sources. This lack of commitment was in spite of the strategy being two years old at this stage. In another interview it was also suggested that whilst the Rural Futures process had stalled, the regional plan also had its problems, and that in fact, "*the impact of the bureaucracy and changes in the way planning occurred in region have been responsible for the mixed success of the SEQ Regional Plan"* (Participant 9, 2011).

Planning's failures – a failure of governance?

The challenges of a mature peri-urban space for planning were clearly highlighted in the data. Whilst traditional planning models described in the theory have enabled the peri-urban as a kind of unforeseen consequence, they have failed the space in the long term. Governance, in particular, highlights this,

suggesting that planning has been driven by politics and economics rather than by the desire for betterment that it would be expected. *"...it's often politically motivated how the policies are put in place. Quite a number of different attributes dealt with through overlay provisions, but often economic and political influences are at play..."* (Participant 5, 2011). Governance in the peri-urban is often impacted by governments; power matters, and the media discourse and the analysis of voices confirm the influence of those who hold power over both planning and governance. The political economy is far more powerful than planning ideology and practice. As a result, planning struggles to marry the competing interests in the space, relying on more rigid and inflexible conceptions of the public interest firmly rooted in political externalities, rather than any consideration of the types of motivations that drove Howard and his contemporaries in the early days of planning.

This lack of governance that works in the best interests of the peri-urban, combined with a dearth of political commitment to the space, means that the talk is not often followed up by action, and this requires a paradigmatic shift to change. In SEQ, the regional plan has been accompanied by an action plan (the Rural Futures Strategy) focused on building a future for rural areas, but despite there being *"...lots of projects, many are existing actions, there is not much new funding for them and only limited prioritisation"* (Participant 13, 2011). Interview participants were highly critical of the plan's lack of outcomes outside of dealing with urban growth matters. In the rural and peri-urban areas, one participant noted *"Since that strategy was released, there hasn't been a focus on the governance arrangements..."* (Participant 13, 2011).

Governance models have been altered in some jurisdictions to fast track urban development in peri-urban spaces, but the same considerations have not been given to actions that complement the peri-urban space. For the first iteration of the SEQ regional plan, the creation of governance mechanisms that would empower the planning process was seen as critical to its adoption, but the impact of bureaucracy and changes in the way planning occurs in the region resulted in "*...the mixed success of the regional plan. The Office of Urban Management was established to develop and oversee the plan, but was eventually swallowed back into the bureaucracy*" (Participant 9, 2011). The appointment of a regional planning government minister with specific and strong powers to oversee the process was also critical. When a freeze on urban development was implemented during this process, "*the Minister had enough power and strength to resist change resulting from the development lobby*" (Participant 9, 2011).

The eventual creation of the ULDA in Queensland saw a further shift in governance, but one that actually privileged urban development once more, supporting earlier observations about the existence and role of the developer voice in the space. Originally intended to fast track the urban development of Crown Land, the outcomes have been "*...influenced by developer lobbying of government and not successful*" (Participant 9, 2011). One interview participant noted that the urban growth boundary in Melbourne *"...has experienced similar issues in relation to the role of developer influence...pushing for incursions into it" (*Participant 9, 2011). It is notable that the plan done under the Bracks' government in Victoria

was not underpinned by any economic analysis, and was sent back for reconsideration. Reflections of the South Australian experience are present here also.

Thus, planning has been overly pressured by influences external to the peri-urban when making decisions about land in this space and this is well demonstrated in the governance arrangements presiding over the planning exercises in the space. But the problem goes further than this, and whilst we plan urban areas to the lowest common denominator, we don't do the same outside the urban footprint, as one participant observed: "[We are] *good at quantifying and adding value...*" to what we plan for urban areas, and now need to "*take what we have learnt from that...*" and start planning the rural and peri-urban area in exactly the same way (Participant 5, 2011). At present, there is a feeling that whilst the process (motions) have been gone through, it has not served the outcomes we were trying to achieve. Questions arise about the value of the process if its implementation is not adequately resourced or committed to. Comments on the SEQ Rural Futures Strategy by one participant close to the process provided evidence of this feeling:

> *...the DLGP (the department) has developed an action list with a wide variety of actions on it, but at the end of the day they are all existing programs and there hasn't been any mechanism or political input to drive and prioritise that and give it some teeth.* (Participant 1, 2011)

Heterogeneous collectives

One last point of interest emerged from the data, which demonstrates the complexity of the peri-urban and poses a significant challenge for planning. The data unveils the emergence of heterogeneous collectives in the space, posing a problem for planning and creating further complexity in its processes. Evidence of this heterogeneity was initially noted in the analysis of voices, which unveiled a range of different interests and individuals. But this second pass of the data identified something further about these interests: that sometimes they combine in unexpected or unpredictable ways, sometimes like that expressed in related variety.

The planning literature reinforced modern planning's enthusiasm for processes grounded in participation and consensus, with the objective of allowing many different voices to be heard. But often these processes have resulted in unforeseen outcomes or unpredicted actions, the result of different sets of interests noting their commonalities. The earlier example of the guerrilla gardeners in the McLaren Vale region of South Australia is a case in point. These individuals, a group of farmers, joined together to express their concern and displeasure about the inadequate consideration given to the impact of urban sprawl on food security and productive land in local and regional planning processes. These farmers saw valuable agricultural land disappear under building developments and found their own way to respond.

> *A new action group plans to tackle urban sprawl and food security using a guerrilla-style stunt tomorrow. As many as 200 "guerrilla gardeners" will build and plant a garden on an undisclosed plot in the area earmarked for housing development.*
>
> *We are not anti-development, but we are looking for sustainable development, and trying to protect our farming land," Mr Hook said.* (Littley, 2011)

Protest did not come easily to these farmers who, in response to their frustration, did what was most familiar to them, growing plants in the soil, to highlight the problem. In this case, farmers, and others with an interest in the issue, made a symbolic intervention in the landscape to express their concerns, creating a renewed cultural space that pushed the boundaries of what had been deemed legitimate; simultaneously they were highlighting an alternative future possibility, an amended technical and political potentiality, for a threatened place.

The case of Mt Barker, also in South Australia, provides further evidence of these heterogeneous collectives, this time one of residents, farmers and local politicians, often seen to have different interests, coming together to fight proposed urban expansion in the peri-urban. Here, the right to determine the rezoning of productive land was taken away from the Council by the State Government at the urging of the developers involved. In South Australia, like most other jurisdictions, the State Government can bypass council approval processes for significant or large developments and in this case, did so, allowing five landholding companies the opportunity to develop *"...a $2.3 billion project that sought rezoning of rural land for 7700 new homes in the area on land totalling five times the area of the Adelaide city centre"* (Kemp, 2012). As a result, quite heterogeneous interests were bound together as a loose collective via their shared concerns.

This concept of heterogeneous collectives holds promise as one way that planning may be able to reconnect urban and rural spaces. In Vancouver, it has been recognised that bringing farming more closely into urban spaces may create similar examples of these collectives with potential for positive results, stimulating a longer-term interest in productive opportunities.

> *"We may have the opportunity to start people down this path in the urban areas where they can still have their urban lives," says Michael Ableman, who farms on an island off Vancouver.*
>
> *"Then maybe that will stimulate their longer term interest in moving to rural areas and getting involved with that as well."* (Duxfield, 2012)

An important part of this heterogeneity lies in cultural considerations, which often form the basis of the collectives evident in the peri-urban. The *Contested Landscapes of Western Sydney* project in 2010 explored the issue of the loss of agricultural land in peri-urban Sydney and was grounded in a

heterogeneous collective of artists and scientists, working with those who inhabit the space. The project focussed on contests across western Sydney that demonstrated the heterogeneity of interests in the space – "*...housing, agriculture, roads and industry, and their collective implications for the health of people and planet*" (Reid, 2010).

The emergence of heterogeneous collectives confirms that the different values and interests in the peri-urban do jostle and rub together, sometimes creating a positive peri-urban force. This suggests that it is the sum of the collective values that is important. This means that when we look at the landscape, whilst different visions may be evident, it is possible to combine them. The data reveals that the drivers of peri-urban land use differ between individuals and for some, their use will be most important to them, such as for low income earners with few choices of living location (Participant 2, 2011; Participant 5, 2011; Participant 10, 2011). We may not subscribe to this use of peri-urban land, but the concept recognises its validity as one part of the collective.

Thus the range of values held in the peri-urban is significant, and cultural values, often overlooked, are an important part of this. The data suggests this may be at the core of understanding the peri-urban, and indeed, the capacity to hold both the dirty and the messy is "mature". We must take the heterogeneous collectives seriously. The singular manner in which planning has overseen the fragmentation of land in the peri-urban means that there is significant potential created to alter the cultural attributes that many value in these places. But if planning can recognise these as the sum of the whole, it may open up opportunities to reconfigure and rearrange them with unexpected results.

Fearing the difficult spaces

So, with recognition of the need to rethink governance arrangements and the manner of the peri-urban planning response, there is also a need for a renewed planning effort that creates new collectives and relationships. This effort must harness technical and political resources: *"...the technical to visualise and demarcate the heterogeneous features of the spaces to be planned – the political to ensure these heterogeneous features are brought into some kind of regulatory environment*" (Murdoch, 2006, p.155). The research illustrates that there is a need for a framework to support the organisation of peri-urban space and delineate what occurs there; one which recognises the heterogeneity of the space and uses it to its advantage. However, at present it is argued that planning lacks at least the technical resources necessary. One planner provided evidence of this dilemma when he cited the example of the key resource areas (KRAs) identified as part of Queensland's planning process. Whilst seeking to protect extractive mineral areas, the process of identifying KRAs creates conflict in places where biodiversity is highly valued because they contradict the values of the mineral industry:

> *...We are working through this with the state at the moment – the problem is that the KRA's are limited and not being explored at the moment. We are trying to bring in other extractive operations that are in existence or outside of the KRA likely to be approved.* (Participant 5, 2011)

So whilst there are technical deficits, these are exacerbated by an unwillingness to enter the difficult spaces. Describing this further, the planner commented on the challenge that values created for these planning processes, noting that the peri-urban holds many values, some protected by law and some not. Those that are not are often part of this dark space. There is uncertainty in these processes about which values should be given preference, and which are most important. "*...at best we are muddling through... It is a complicated process*" (Participant 5, 2011).

The fact that shortcomings in technical and political resources often lead to critical peri-urban values being threatened or omitted from planning outcomes altogether was highlighted as a concern. Planners interviewed expressed their frustration with this and the subsequent outcomes that occurred when dealing with these difficult things. Scenic amenity, as mentioned earlier, was an often-cited example of something given immense value in the peri-urban, yet little protection. Despite the value it holds for many people, and the tourism value that it generates, *"...it isn't captured in legislation enough – it was only recently brought into SEQ planning policies in the 2009 version of regional plan"* (Participant 5, 2011). In Queensland planning schemes, scenic amenity was a dark and difficult space. There was a historical reluctance to express scenic amenity in regulatory terms, and when new planning schemes were required, this situation continued. "*Officers want it but local politicians reluctant – trying to quantify amenity in the development assessment realm incredibly difficult*" (Participant 5, 2011).

Exploring this with a key architect of the first SEQ Regional Plan, a reticence for going deep into the difficult spaces was revealed, partly because of the pressure from government to have some outcome in terms of a plan, partly because of the complex and contested nature of the issues. Using the amenity example again, in the first SEQ regional plan, amenity was narrowly defined, something seen as a major shortcoming. The plan did not seek to answer the question of what is amenity in a more general sense, despite this being a reason for urban growth in the first place (Participant 9, 2011). A key driver of peri-urban settlement was thus consciously omitted from full consideration in the planning process; this was symptomatic of a reluctance to remain in the contested spaces and perhaps of a fear of complexity. The failure to unpack the peri-urban pressure points has resulted in a lack of coherence for those working in the system, which translates into a growing need for a peri-urban specific planning model. It also means that whilst the difficult spaces are ignored, there is still no planning for heterogeneity.

5.3 Transforming agricultural landscapes in the peri-urban

The observations down the eastern seaboard of Australia highlighted how different and heterogeneous agriculture can be from place to place and how the motivations of those involved in production emanate from many different drivers. For some, agriculture is a conscious choice, something entered into as part of a lifestyle, commitment to the land or as one part of a larger business, but for others, it is a story of family duty, difficult circumstances or struggle. The SEQ story, where there has been a long history of voluntary regional planning and several statutory regional plans seeking in some way to protect

agricultural land, illustrates the situation of struggle in which agriculture is involved in the peri-urban. These plans have aimed to protect heterogeneity and biodiversity, but in the years intervening between each regional plan, encroachment into the peri-urban/rural area and loss has continued. Nevertheless, pockets of production have remained, albeit at various scales and levels of contestations, and it is these pockets that have become the support system for local food production. Here, there are examples of how the peri-urban's multiple assets and resources can be combined in different ways to create heterogeneous collectives with renewed value, leveraging off the multifunctionality of the space.

The field work (in particular visits and observations) helped determine the nature of the peri-urban transformation, providing the opportunity to see the way in which producers are shifting from traditional agriculture towards a more multifunctional model. These data confirmed a high degree of heterogeneity, continual change and conflicting values noted previously in this study. Strong population growth has resulted in highly dynamic social and environmental change (Participant 9, 2011), but also cultural change. Residential or productive land is interspersed with commercial or open space lands of varying quality, again suggesting a heterogeneous landscape and land use. Across Australia, landscapes are dotted with signage promoting future land development, or house and land packages, on land that was clearly once used for productive purposes, as has been the case in the peri-urban in the past.

Plate 3: Farmland in South East Queensland

Note the residential land for sale sign in the background.

But, productive land use consisting of fruit and vegetable growing, grazing and poultry is evident along with flowers, vineyards, cheesemaking and agritourism (farm gate sales and farmers markets). Houston

(2005) demonstrated this and the qualitative data gathered for the research confirms that productive activity has survived, despite the contestation evident in the peri-urban.

In SEQ, the evidence of this contestation and its impact on agriculture is notable. A declining agricultural industry is laid out bare. The colours and variety of the agricultural landscape are completely different to that which participants suggest existed thirty or more years ago. Pineapples and citrus industries have declined or relocated further north, there are different tree crops, and the macadamia industry is involved in a period of change. The interviews revealed the extent of the landscape change:

> *If you look at what is happening now, there is a declining pineapple industry...there used to be a big citrus industry here. There are some sub-tropical tree crops (avocado, macadamias, custard apples, lychees etc.) – but these are very market based and demonstrate economies of scale.* (Participant 7, 2011)

The macadamia industry, once a performer for the region, is also declining. Picking macadamias requires mechanical harvester machinery, and as the urban edge has crept closer, it has become more difficult to operate that machinery. The industry is seeking economies of scale, which means small land footprints are not seen as viable for the industry – "*...there is big growth where there is flatter land and you can grow 50 hectares and mechanise it completely*" (Participant 7, 2011).

On top of this, vegetable production has become more intensive in the region. The emergence of controlled environment agriculture has seen some producers move into greenhouse hydroponic culture and, with this, some continued development of flower and ornamental-type industries. This not only represents a massive change in product, but also in the landscape itself, from twenty to thirty years ago when the area was a hugely diverse vegetable production area, "*...growing winter beans, a whole lot of cucurbits, citrus, pineapples, strawberries, papaya – this has just about gone because it's now dominated by North Queensland*" (Participant 7 2011). One of the historic mainstays of the region, banana production, has declined since 1980, relocating north "*...where yield is better, and the economies of scale are better....without strawberries and intensive export would be gone...*" (Participant 7, 2011). Larger land footprints are sought, something the SEQ area struggles to offer, as these offer potential for economies of scale. Sugar cane production, an intensive use of the land over a long period, also appears to be in its death throes, partly for market-based reasons, but some moving further north where there are better yields, and again, similar economies of scale. Interview participants involved in agriculture in the region cite the impacts of urban development as a major reason for this. "*We can sit back and think, why is all that happening? There are economic reasons but there are also other factors involved, such as urban development*" (Participant 7, 2011).

The data demonstrates that life on the land has irrevocably changed, supporting the claims in the literature about the transformation of agricultural landscapes (Barr, 2003, 2005). Consideration of the values present in these peri-urban spaces, the way business is undertaken, and the tensions about what

the term "agriculture" actually means, reflects the specific elements of the transformation and change. One participant, interviewed at Maroochydore in 2011, insisted that we should be questioning the reasons for this change, suggesting that the usual factors advanced in response are but part of the real picture (Participant 7, 2011).

> *In these constantly changing times, rural communities and industries are facing financial, economic, social, environmental and climatic challenges... rural issues must be considered in the context of national and international economic and social forces.* (Government of Queensland, 2009, p. 72)

The literature confirmed that change in agriculture has occurred, but did not provide a clear indication that the ramifications of these changes for peri-urban producers, or what they might mean for governance and planning mechanisms, were clearly understood. The history of change in production scale and outputs in the Sunshine Coast area of SEQ demonstrate this.

Observing changes to agriculture in the peri-urban

Examining the changes to rural landscapes provides insight into the role of a third space in the highly influential and irrevocable processes of change and the values of those interacting with them. The data suggests that the emergence of this space in the peri-urban challenges the traditional "bush culture" upon which our rural areas were built and brings the redundancy of the urban-rural dichotomy into sharp focus. This reflects commentary that Australia has experienced a "big shift" towards the coast, conceptualised as a new "third culture", something distinctive from that associated with "the city" or "the bush" (Salt, 2004) and evident in the peri-urban. From the agricultural perspective, the peri-urban, once the domain of the traditional broadacre farmer, now features an eclectic mix of individuals choosing to create a place for themselves in the space for reasons that go beyond productivity. These third culture inhabitants have yet to come to terms with the opportunity to make continued productive use of the space, but there are exceptions in the areas of water products, ecosystem services and the production of niche gourmet products (Armstrong & Allison, 2003) as well as biodiversity.

Detailed analysis of changes in the SEQ region highlights the role of this third space as a national '*biodiversity hotspot*', renowned for its natural environmental quality and diversity (Government of Queensland, 2009). Threats to these qualities were recognised in the original statutory regional planning process (*SEQ Regional Plan 2005-2026*), which stated its aim to protect more than 80% of the region from future urban development. This was to be achieved by protecting areas valued for their regional landscape, open space, conservation, water catchment, scenic amenity or agricultural quality. The resulting regional vision reflects this, recognising *"...the combination of diverse and culturally significant landscapes that shape the region's economy, culture, liveability and lifestyles"* (Government of Queensland 2009, p. 55) and the value placed on this by third culture migrants, producers and visitors. This third space, with noted productive values, also becomes important for its environmental ones.

Yet despite emerging opportunity and the intent of the SEQ plan, these key assets have been subjected to increasing pressure. The SEQ experience provides a useful picture for this research. On the ground, this picture is quite different to what the regional plan suggests. There is evidence of significant conflict between urban and productive uses, and ongoing pressure on agriculture, which the regional plan has been unable to resolve and the photo below demonstrates.

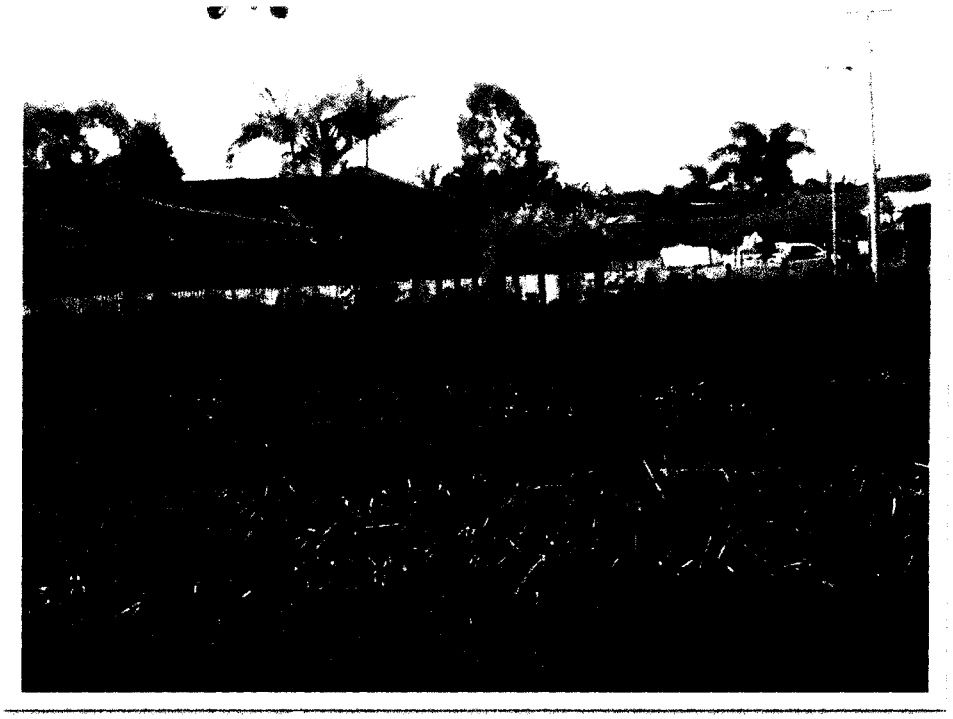


Plate 4: Redlands (SEQ) remnant land

The observations suggest that whilst on paper the plan provides a structured framework for future growth, the "growth markers" are permanently ingrained on the landscape. For example, in many places, such as at Redlands, you can observe remnants of production continuing, or note a pattern of rows and furrows, consistent with agricultural activity, ingrained in the land, despite the fact it has been abandoned as an agricultural enterprise. Here, the observations showed that often brand new houses sit alongside or in between these patches of land.

In some places, instead of the houses or furrows, the land is now simply populated with weeds, poor fencing and car wrecks. Interview participants noted that this has long been a concern of the government, producers and Landcare organisations – one outcome of the use of the peri-urban as "rural residential" land. There are

> *...biosecurity issues – people are uninformed – no land use background – large welfare belt through the region into the Lockyer and scenic rim – majority of settlers come for affordability under the guise of enjoying rural lifestyle – cheap lot then comes costs for*

water tanks, sewer etc. – don't have reliable vehicles – half retired...NRM officer about to be appointed and will play an educational role for these people. (Participant 2, 2011)

These blighted spaces are often owned by absentee landowners and as long as land prices rise above inflation, there is little need to make any productive use of these lands.

The SEQ Plan recognises that the regional landscape, to remain "*...attractive and functional, must continue to support values such as biodiversity, rural production, scenic amenity, landscape heritage and outdoor recreation* (Government of Queensland, 2009, p. 55). But despite this, a significant and ongoing loss of productive land, biodiversity and habitat over the life of the plan is evident on the ground. Land degradation continues to occur, as a result of changes in agricultural use and viability, as well as settlement by those with no understanding or experience of managing the land and its resources. A lasting memory of this degradation and contestation within the peri-urban was evident near Yandina. Here, an old burnt-out bus sat on a weedy, degraded piece of land, surrounded by rural residential development and farmland.

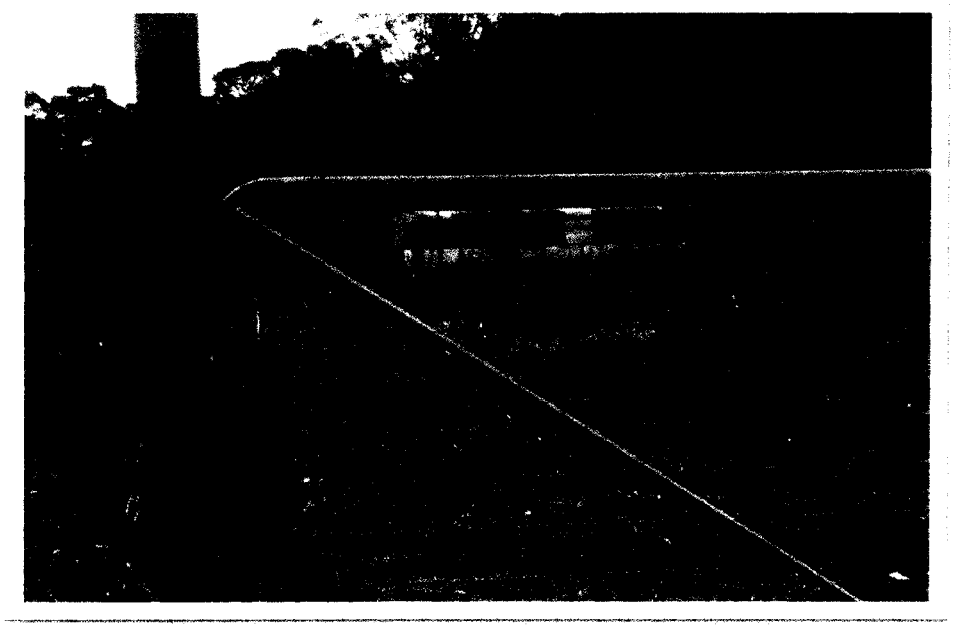


Plate 5: Yandina, South East Queensland

Other stories compounded these observations. At Eumundi, a market stallholder told of the loss of a local kangaroo-leather producer, a value-added activity being driven out by urban development and complaints from new neighbours. In Redlands, south-east of Brisbane, agricultural use continues to diminish in the face of ongoing urban development. Houses now abut remnants of productive land; food production is severely constrained compared with what once occurred. Around Maroochydore, houses are surrounded by remnant cane fields, a reflection of both the closure of the sugar mill (and the influences of world trade) and the ongoing surge of urban development. Some cane fields are still

productive, but many present evidence of regrowth and weeds, as ageing owners struggle to determine what to do with the land.

Plate 6: Remnant Canelands, Maroochydore, SEQ

But despite the negatives, there were many examples where multifunctional activities based in production, protection and consumption have been joined up into new business frameworks in the peri-urban. Here, amenity and food are used as collaborators to provide an encounter with the peri-urban that differs from expectation, one that is as much experiential as it is sensory. How has this emerged when government and planners have not shown much interest in peri-urban production? *"The government has set the boundaries and there is an expectation that the area will take care of itself, except for some recognition that enterprise zones might require some determination of how that might work"* (Participant 7, 2011).

A particularly important finding is that these enterprises seem to have emerged from within, from peri-urban producers themselves, without any structural or institutional support or incentives. Despite the SEQ Plan (2009-2031) creating the opportunity for specific rural precincts to be developed, the implementation and the lack of support from government gives no real hint there is something worth nurturing, yet it emerges in and of itself.

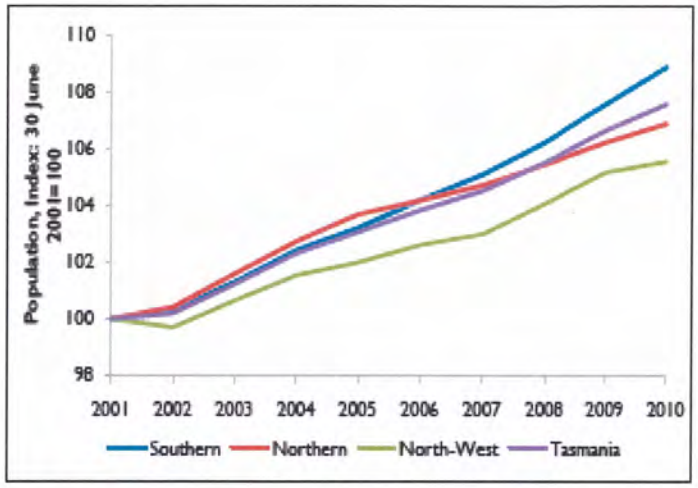
Evidence from the micro-scale: value-adding in the peri-urban

This was not exclusive to SEQ and other evidence was located in the Hawkesbury region (NSW), the Yarra Valley (Victoria), South Australia and all three regions of Tasmania, not all of which were visited however. Given the reference to the agricultural resources and potential in Tasmania, it is useful to look more closely as to the value and impact of these trends on the peri-urban in that state. Further, looking locally provided a micro-scale opportunity to examine in detail the types of changes that are occurring in peri-urban places and understand the responses made to those changes. Some of these potentially

hold promise for peri-urban production on a broader scale in the future and some, for Tasmania, are particularly important.

The peri-urban fringe areas of Tasmania display similar pressures to those that other states are experiencing. The data shows that despite the state's relatively small size, many areas exhibit the known characteristics of peri-urban spaces, including growth reflecting the sea and tree change phenomenon, pressures on agricultural land, environmental degradation and land use conflict. The figure below highlights regional population growth as at 30 June 2012.

Figure 5.1 Regional Population Growth Tasmania



Source: ABS, Regional Population Growth, Australia, 2009-10, Cat No 3218.0, 2010.

Areas on the fringe of major urban centres have experienced significant population growth in recent years, when viewed in terms of the overall scale, including Brighton, Latrobe, Sorell and Kingborough, as the following table shows.

Table 5.1 Population Growth and Change

	Estimated Regional Population at 30 June 2011	Population change 2010-2011	%
Largest Growth			
Kingborough	34 800	680	2.0
Brighton	16 700	310	1.9
Sorell	13 600	250	1.9
Fastest Growth			
Latrobe	10 200	230	2.3
Kingborough	34 800	680	2.0
Brighton	16 700	310	1.9
Sorell	13 600	250	1.9

ABS (2012a).

In Tasmania, agriculture in the peri-urban and on the rural fringes faces similar pressures as other places in the country. Over time, the state's agricultural sector has developed into a highly diversified sector, making a significant economic contribution to gross state product. In Tasmania, broadly, a range of products were observed, including dairy, aquaculture, meat, vegetables, fruit and wine, accompanied by significant attempts to value-add to primary product, evidenced in farmgate sales or more sophisticated tourism enterprises that centre on combining product with an experience. Many other examples, including the Moorilla Vineyard (combined into the Museum of Old and New Art cultural enterprise on the outskirts of Hobart), Ghost Rock Vineyard at Port Sorell and the Turners Beach Berry Patch, all situated in suburban and peri-urban areas of the state. The aerial photographs that follow (Plates 7, 8 and 9) highlight their location in amongst different land uses.

Plate 7: Moorilla Vineyard Aerial Location Map

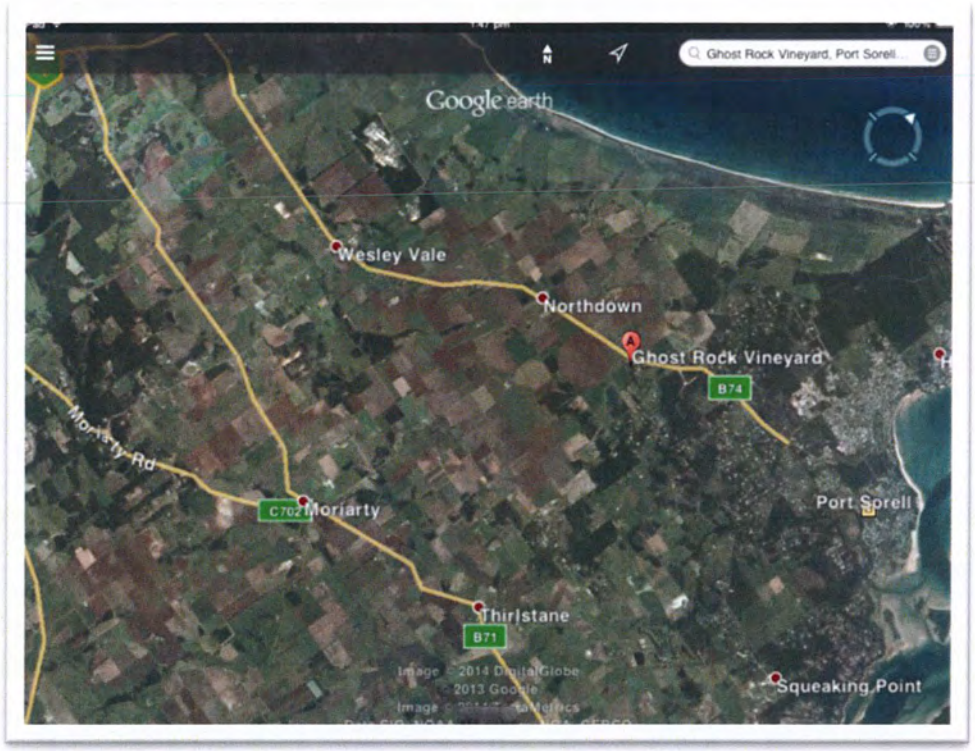


Plate 8: Ghost Rock Aerial Location Map

Plate 9: Turners Beach Berry Patch

Many peri-urban areas, such as Kingston and the Huon Valley in the south, the outskirts of the major regional towns of Burnie and Devonport in the north-west, and the Tamar Valley in the north, exhibit this high diversity of product. Food production activity occurs on various scales, sometimes stand alone,

other times mixed with lifestyle, amenity, creative activities and leisure opportunities. Today, the traditional product offer is also vastly expanded, with farmers markets and other retail outlets offering a wider variety of local fruit and vegetables. Significant areas of niche production of nuts, olives, berries, truffles, seeds, honey, herbs, heritage meat varieties, cut flowers and bulbs, as well as ciders and boutique beers using local inputs were observed. Some of these peri-urban enterprises have joined with urban and rural producers to market themselves together, highlighting how collaboration can occur around this diversity. The observations in Tasmania suggest a re-emergence of the smaller scale, with a number of micro and intensive enterprises undertaking production and value-adding activities. This also reflects comments in the interviews about the different responses farmers made to the challenges facing the industry. The observations suggest that it is still possible to operate at the small scale and be viable. They highlight a growing trend toward a type of enterprise that mixes new product with leisure opportunities for visitors and residents alike.

The fieldwork in Tasmania confirmed the emergence of a new productive peri-urban agri-space where entrepreneurs have consciously located to create smaller, value-added operations. Interestingly, many of these entrepreneurs were in a younger age bracket than what might traditionally be expected of producers. Their activities include the introduction of niche product operations and microenterprises, echoed in other areas of the country. *"Understanding the enterprise potential was the key....Competitive advantage was identified"* (Participant 11, 2011). In Tasmania, for example, one region clearly demonstrates how producers can build a transformed future for themselves. The Coal River Valley in South-East Tasmania has been described as a stark and robust example of a region capable of regenerating itself via a transfer from lower to higher value agriculture (Stolortz, 2010). Plate 10 provides an aerial photo of the area, showing urban development clearly interspersed with farmland. An interview with an agribusiness expert (Participant 11, 2011), who was also a producer himself, recalled the critical decision-point (and success factor) in the broader planning process as understanding what might be possible if conditions were altered, rather than simply working with the status quo as many planning exercises had done previously. In this region where rural-residential development competes with rural use, the traditional lenses were removed. When government agreed to fund an expanded water supply, the lens adopted was one of high value. Rather than viewing the land through the "constraining prisms" of drought or tradition, potential land uses were analysed (Participant 11, 2011; Stolortz 2010). Doing this allowed agricultural futures to be altered by firstly embracing change, through a re-evaluation of the land and its potential, which identified opportunities to pursue niche or diversified product.

Plate 10: Cambridge and Richmond area of the Coal River Valley

Two key insights come from this process. First, this process saw a shift in the traditional role of government and governance. Government acted as a facilitator, becoming the enabler for change by providing funding that was then applied to the further development of irrigation, rather than acting for the producers or providing top down policy "solutions" (Participant 11, 2011; Stolortz, 2010). Secondly, the solutions came from within – the producers themselves identified the need to reconfigure the assets and resources of the area to create new forms of value from the land. In accepting the offer of irrigation, some producers also made a decision to disconnect from the traditional product mix and production methods. One family farming operation moved from poultry farming to bagged lettuce leaf production, and are now selling nationally; others introduced cherries, a product with high-value export potential, and stonefruits to their operation (Henning pers comm. 2012, Participant 11, 2011). Once you would drive through this area and see sheep grazing, erosion on the hills, rural residential development, but very little else. Now it is a completely different landscape – multifunctional activities such as agritourism, vineyards, stonefruit orchards and vegetables. Less than thirty minutes from the city of Hobart, visitors can get out in the peri-urban, travel a wine route, see real-time farming activity and experience not only scenic amenity but also high quality food and wines.

Localised food systems and the peri-urban

So, despite the constraints, peri-urban agriculture has reinvented itself in some places, and this was evident in the observations in SEQ and Tasmania. Whilst micro-farms and diversification to new

products were both trends influencing the space, another important change was the emergence of local food systems. These food systems are seen as increasing the resilience of agriculture and communities, and in Australia's case, are critical to the achievement of food security. The fieldwork confirmed the development of local food systems in the peri-urban, something which the literature references as a legitimate response to agricultural transformation (Barr, 2003, 2005; Holmes, 2006). These local food systems form as producers seek to break away from what is contemporarily termed industrial or corporate agriculture, and are based on shortening the value chain, increasing the amount of added value at the local level, and turning the producer into price-maker, not price-taker, amongst other things. Flora, in her paper presentation at the Agriculture in an Urbanising Society conference in the Netherlands in 2012, commented that the discourse around the advantages of local food systems highlights a focus on quality, suggesting "*...conventions embedded in trust, tradition, relationships and sense of place*." (Flora & Flora, 2012).

The growing trend towards local food identified by Flora was also confirmed by other presenters at the conference in the Netherlands. Wiskerke, a Dutch academic, noted that localised modes of food provisioning have emerged from within the peri-urban. *"...Localised, traditional and artisan modes dominant in most developing countries are gaining ground in many industrialised economies."* (Wiskerke, 2012). Steel (2012) also recognised local food when she argued for the emergence of a new productive paradigm, one that couples food with society and community in a broader conception. These various data sources confirm the literature findings, that changes in rural landscapes and the activities occurring in them reflect a complex reordering of space. This reordering also confirms Holmes' (2006) view that it revolves around the three basic purposes underlying human use of that space: production, consumption and protection. Once these landscapes were purely productive, now production competes with other purposes to create a new type of enterprise or product mix. Whilst this reordering occurs, local food couples with social and cultural influences in a rethinking of the modern agrifood system (Ostrom, 2006). It must be noted that this is slightly easier to achieve in economies such as the European ones where no single supermarket chain controls the majority of the market, so there is always room for competition. The Australian situation, where two chains control more than 70% of the market, makes this a more difficult task.

The interviews provided clear evidence that food remains a centrepiece of the peri-urban albeit at the centre of a new socio-cultural partnership. One participant suggested that peri-urban productive areas have a critical role to play in the reordering of the food system in Australia, highlighting that production can occur on the small, high potential sites surrounding the cities (Participant 12, 2011). Others saw the potential for food to act as a lever to broader social and community connection (Participant 5, 2011). Indeed some interviewed for this research sought to extend the significance of localised food systems, arguing the case for new business models in the peri-urban, which seek to commercialise the principles underpinning local food systems. *"My business philosophy is connecting people to the source of their food...Engagement and relationships are the key and market access is often through farmers markets and now also through the shop"* (Participant 6, 2011).

This focus on food as a centrepiece to a multifunctional third space featured strongly in the interview with commentator, restaurateur and businessman Matthew Evans. Matthew is "the Gourmet Farmer", food critic turned farmer, and the star of his own reality-television show now into its third series on SBS television. The show focuses on his attempt to create a small-scale diversified farming enterprise in the Huon Valley of Tasmania, an area highly developed as peri-urban rural residential living interspersed with historic and long-lasting productive activity. Interviewed in 2011, Evans recounted the key element of his business model as being a renewed partnership between people and their food. Interestingly, Evans was one of many participants in the research that used the word "relationship" when describing not only the way they do business, but also the outcomes they sought to achieve. Clearly, as he noted, "*...this is a different way of doing business.*" This point of view was not an isolated one, with other participants also reaffirming the role of the peri-urban location in the changing food system. Another interview participant, an agribusiness expert, also saw this when he noted that one response that farming made to "the cost price squeeze" is particularly relevant to the peri-urban area, that being to get smaller and more specialised, "*...get focused and become a niche producer...*" (Participant 10, 2011), again a different way of doing business.

All of this highlights that agriculture in the peri-urban is no longer what it might traditionally have been. In most cases, it is locally owned and operated. Localised food systems are becoming apparent, and new business models are being developed around their existence, recognising a growing urban awareness centred on food and providing a joined up response to the challenges facing production in these contested spaces. Reflecting the hints in the producer voice uncovered in chapter four, a new peri-urban agri-space is emerging, underpinned by a renewed interest in food and how it is produced, and closer connections and relationships.

New forms of agriculture

These initial conclusions from the data suggest an emergent interest in a new form of agriculture that is depicted by the presence of:

- producers who may have had other life experience in different professions;
- younger farmers who are committed to staying in agriculture but doing different things;
- cultivation of diversified or niche product;
- utilisation of often smaller land footprints;
- new technologies for farming;
- adoption of collaborative or multifunctional business strategies;
- a focus on relationships and the value chain;
- a desire to utilise shorter marketing chains.

In each place observed, some or all of these qualities were present. In SEQ, Food Connect demonstrated how food and food production can be placed at the centre of new collaborations, based on creating closer relationships between consumer (city) and producer (country). In Tasmania, the Cradle to Coast Trail is but one example of producers collaborating around food, using new technologies

and systems to create experiences for visitors and residents alike. Hawkesbury Harvest, in NSW, whilst not experienced by the researcher, is another example where, using systems such as short marketing chains and value-adding, food is placed at the centre of a new future for a peri-urban area.

What is particularly interesting about these developments is that they shed a new light on the promise of the peri-urban and a business model that is optimised when adopted in the space. They suggest that the perception of the peri-urban as worthy only for residential or urban development can be shifted and highlight the potential of productive activity rather than its futility. At this stage, as we heard from the analysis of voices previously, many of those engaging in it can only be heard faintly in processes of planning. Some suggest this is because they are focused on doing the activity rather than talking about it. But others, such as Evans, have made the decision to make talking part of their business model, and this is having positive consequences for a renewed interest in food and the places where it is produced. Speaking of his documentary, Evans outlined his concern that in promoting the place he loved, he may also be promoting the lifestyle attractions for which these places are sought:

> *I was concerned that the documentary would introduce or entice a new urban type of weekender into the area. I questioned myself about this – I was concerned that the town would become full of Audis driving up and down the street at weekends. Am I doing the right thing in promoting this place I have become so passionate about?* (Evans pers comm. 2011)

Regardless of which parts of the business model these producers adopt, they are contributing to a re-emergence of the productive consciousness. Interestingly, it is coming from a different location than expected, but no matter its origins, it is awakening a productive voice that appears to have been missing for some time. Evans summarised this in his interview, when he noted that the model sought to connect people with produce, in the area it came from. *"...Communal space and sharing are the two qualities that are a big part of this"* (Evans 2011).

Other producers also note these qualities. Presenting at the Central Coast Producers Forum in 2013, Wood, a meat producer from North West Tasmania specialising in rare breed pork, also noted the element of connection and shared experience and what it seeks to achieve. She argued that story-telling is a key part of the business model and that close proximity to urban communities facilitates this. *"You have to get out and tell people the story...part of this is selling the story, using social media and your local community...demonstrating to people what the business and the people are about...creating deeper connections"* (Wood, 2013).

So, once more, the data reveals that language is important, although in this context the words form the stories that create the connection back to food. These stories and connections, and the way these are articulated, become important to the dissemination of this new form of agriculture as an alternative way of thinking about and "doing" food. Within this, proximity is critical, because this facilitates a

consciousness about the activity that is taking place in the peri-urban, bringing the producer into the city regularly, but also motivating urban dwellers to journey into the space. Producers understand that this is necessary and their commitment to "the greater good", that is, the concern that society needs to re-engage with food for social, cultural, environmental and economic reasons, means that some encourage this in order to build the bridges necessary to achieve it.

5.4 A new peri-urban space

Whilst the data corroborates the gaps that exist in relation to planning and valuation in the peri-urban, it paints a different, and more positive, picture of agriculture than that which one might expect to find. If we accept at face value what the literature tells us, and what appear as first impressions in the observations, we potentially consent to a limited and constrained future for the space as a place destined for concrete and banality. Digging deeper beneath the surface, via the observations and targeted conversations, also rebutted this view because when you immerse yourself into the lived space, all is not what it seemed. Yes, it is contested, but it is also a rich space of experience, innovation and culture, one where producers combine artisan techniques with scenic landscapes. It is multifunctional and, in many places, has high amenity that planning and valuation professions struggle with. There are lifestyle spaces, and it is sought after as a lifestyle destination, yet it is also a place where food production can continue and flourish. There are interesting collaborations using concepts such as related variety to reorganise and reconfigure assets and resources that are valued in the space. There is a range of different voices saying different things about what is important in the space, and this second stage of data analysis bears out much of what the voices articulate.

The two phases of data analysis show how the peri-urban has been ignored, used and degraded in the face of ongoing urban development. Valuers struggle to know how to interact with the space, and planners share this difficulty. In some cases, the legal profession has shaped planning and valuation through the courts. Multifunctionality and ecosystems services are concepts that may assist them to grapple with these difficult spaces, but there has been no wholesale adoption of these ideas. Planning, choosing to retain the status quo, has overlooked the heterogeneous collectives, and as a result has restricted itself to a limited and narrow response to broader problems of population and urban growth that impact in the peri-urban. Despite this, peri-urban production has survived. The pockets that remain are where localised food systems are emerging. This has occurred as a result of producers using joined-up responses, collaborating with one another, or using assets such as amenity and food as collaborators. The result has been that remnant pockets of land have been given a greater value by some, with producers claiming a space for their activities as a valid peri-urban land use activity. The emergence of microfarms and value-added activities in these remnant areas, as well as innovation centred on local food systems, has seen business models develop that are starting to underpin its commercialisation.

Building on the data gathered, it can be argued that the future conceived for the space could be exceptionally different to that which is currently foreseen. The data confirms that these areas we see

as messy and contested agri-scapes may actually be creative, industrious and innovative, reflected in the new productive activities and the range of passionate people doing business in them. Contested spaces have been found to incorporate a multiplicity of social relations and a number of heterogeneous spaces (Fernandez, 2009), or in the case of the peri-urban, heterogeneous collectives. Some contested spaces will undergo an ongoing process of negotiation and change, which may facilitate the emergence of new spaces, reflecting a plurality of interests and the simultaneous coexistence of these with their own trajectories and stories (Fernandez, 2009). Others will not. The data suggests that the peri-urban, while a significantly contested space, can emerge as a new space where these contests can come together. In this case, the process of negotiation towards this unification is using food as the medium for change. The seeds of a heterogeneous accommodation which allows coexistence and embraces plurality appear to have been planted as the basis of peri-urban identity. We will explore the elements of this identity further in the next chapter.

Chapter 6 A Place for the Peri-urban? Identity, New Markets and New Land Uses

6.0 Introduction

Throughout this study, a number of core concepts such as multifunctionality, landscape and soft systems were used to examine the peri-urban more closely. These concepts were employed through several techniques and approaches – by looking at the discourse and language and the landscape through different lenses to see what might be revealed. And this was so much more than merely a place/space in transition. This chapter now seeks to draw these findings and evidence together to articulate that not only does the peri-urban have an identity, but also that this identity is constructed because of and through the level of contestation and complexity and the multifunctional uses evident in the space. As a consequence, this affords opportunities for related variety and heterogeneous collectives, which yield concrete prospects and possibilities for the peri-urban future. It is argued that the peri-urban identity is not just about complexity but, in fact, points the way to new land uses and new markets.

At the very least, the data reveals that the peri-urban has "personality", as its mix of competing uses and challenges suggests. But the study has also revealed much greater insight into identity and that the peri-urban offers much more than this personality. The activities in the space, determined from evidence and data in this thesis, point to the peri-urban offering opportunities for new markets in food production, in quite different business models and in employing relationships, short chains and language in ways not previously employed. Some of these structures are so new as to suggest blue ocean thinking. Thus the findings afford a real opportunity to rethink the activities and role of the peri-urban space as a platform for social, economic, cultural and environmental activities – many of which are important for local and regional economies. In other words, the peri-urban, it seems, is a platform for new thinking and new configurations of assets. All of this argues for new forms of land uses and, by implication, land use planning and management and governance models.

This research suggests exciting new prospects for the peri-urban, which are now considered in this chapter. The chapter begins with a consideration of the peri-urban identity, which initially draws its form from contestation, complexity and ambiguity. The characteristics of this contestation are like the different often unrelated mediums used to create a collage, an assemblage of diverse fragments in unlikely juxtaposition, rubbing together and yielding an interesting and challenging place and identity for the peri-urban. As this complexity has been explored, other possibilities and activities have emerged. Using ideas situated in concepts of white space and blue oceans, new markets and business models for the peri-urban are developed which not only stretch what was deemed possible, but also then lever off existing resources to create greater productivity and outcomes (Hamel & Prahalad, 1993). All this evidence points to the possibility of the peri-urban as a platform, and when the peri-urban is re-imagined as a useful platform its future and value shift well beyond a role as a future urban/greenfield site. This in turn has significant implications for land use planning.

6.1 Peri-urban identity

Drawing all these findings and evidence together, what can we make of peri-urban identity? It seems that the identity of the peri-urban takes its shape from the complexity underpinning it. The data analysis employed two approaches to examine this complexity and contestation. The first approach re-examined the data building on and supporting the construction of a peri-urban identity by pinning down the many layers of its distinctiveness; the second evaluated emergent possibilities against relevant concepts identified in the literature of valuation, planning and agriculture and the data collected on the ground in the space. From this emerged key characteristics of identity in the peri-urban which, when brought together, created a new picture of the space.

Conflict as insight into identity

The disconnect between expectations and the reality of the peri-urban entrenches conflict in the space and, importantly for the research, suggests a sense of confusion on the part of some about what the identity of the space actually is. However, analysing this suggests that conflict in the peri-urban is part of its character and that it is in fact a critical part of its identity. In the peri-urban, conflict has become an inherent and fundamental premise of life (Participant 2, 2011; Participant 5, 2011; Participant 9, 2011). While it takes different forms and is driven by different issues, in many ways it is part of the peri-urban settlement pattern. Speaking of this conflict, one planner commented that *"...the Lockyer Valley does not have a peri-urban area without it. I can almost always think of a conflict that comes up in the areas"* (Participant 5, 2011). To shape the peri-urban identity, this conflict, and the contests that underpin it, must be acknowledged, as it offers insight into the different values and assets that contribute to identity. Importantly, the peri-urban, unlike some other land use forms, accommodates conflict and land use contestation – making it a pretty useful land use type.

Conflict in these spaces is expected and regular, and it takes several forms. Firstly, it is often driven by physical change. It emerges only when someone realises something different is occurring in the space, even though it may have been for quite some time. This type of conflict often seeks to relocate the "offending" activity. *"...planning solutions that seek to resolve it are probably not the way forward because it usually just shifts the problem"* (Participant 5, 2011). The most usual planning response is to resolve the conflict using statutory powers or a negotiated solution. However, the deep-seated nature of this conflict means that this has proven difficult in many cases. Secondly, for those involved in the conflict, it is real. It is time-consuming and draining. There are many stories that can be told about its impacts on the lives of those seeking to make a living off the land. One interview participant told the story of a farmer in Beerwah, SEQ and the impacts of conflict on his life and livelihood.

> *...the line of the urban footprint is along the road – on the left hand side there are pineapples, on the right hand side a farm growing avocados and macadamias. On their border is a small lot subdivision with 500–700m² blocks. That landholder has gone to a lot of trouble*

> *to keep the peace with those owners…at his own expense. He admits that eventually it will become too difficult. The road could be sold to a developer as part of a subdivision. It is a narrow road and these are productive farms. The boundary can't be held because it will be alienated and along with it so will the productive farms. The boundary keeps getting moved – it becomes unviable for farms…* (Participant 7, 2011)

Interview data suggests that conflict affects not only the economic survival, but also the mental health of many individuals in the peri-urban in a negative way (Participant 2, 2011; Participant 5, 2011). There are many stories of its impacts, which are not constricted only to producers. One case in North West Tasmania provides a good example of how conflict affects the lives of those involved and the matters that the conflicts can involve. This situation involved a farm that scaled up its growing operations into carrot processing and associated infrastructure development. The farm and its processing facility were located in the Rural Zone, less than fifteen minutes from the nearby regional city. The closest neighbours, situated at least 200 metres away, had moved into the area when the farm's original owners had subdivided a block of land to finance the farm's expansion. The dispute between the farm owners and the neighbours had several aspects, including noise generated by the processing operation and transport movements to and from the site. The Council involved took significant steps to assist the parties to come to a resolution. This included bringing the parties together to get the issues on the table, assigning a resource to the farmers to help them work through their growth issues, and the employment of an independent mediator to find some common ground. Despite these actions, the matter ended up in the Tasmanian Resource Management and Planning Appeals Tribunal (RMPAT) and only finally resolved when the neighbours sold up and moved away.

Resource conflicts

The data analysis also uncovered other forms of conflict that arise in the peri-urban. Sometimes it arises out of the competition for various resource inputs that different land uses need to prevail, and the interviews uncovered the story of a Bourkedale (Queensland) farmer who continued to farm a smallholding despite being surrounded by urban development:

> *...He is backed by a koala corridor at the back but all his water has been cut off because of the surrounding development – where his water came from has now been developed. In this case, the 12 acres cannot be served with the water required for the highly productive farming operation that it could be over time.* (Participant 12, 2011)

Conflicts in the peri-urban are not just personal, not just between people. Other forms of conflict present can be cultural, institutional, involving different parts of the bureaucracy, political or across policy sectors. They can impact on the supply of liveability factors for those in cities. One interview told the story of the Traveston Dam project in SEQ, where a new dam was proposed to alleviate Brisbane's water supply problems. Brisbane had suffered a prolonged drought and water supply capacity for this part of the south-east had decreased to around 17%. In the words of the participant,

> *Alarm bells were ringing – state government decided they would build a mega-dam, flooding key agricultural dairy land, beautiful alluvial soil. There was a huge fight, the community didn't want it. The Commonwealth EPBC legislation resulted in it being knocked on the head due to the presence of lung fish and the Mary River Turtle...All this beautiful farmland was to be flooded for urban water use – an average depth of 4-5 metres, slow moving, high nutrient, meant that it would become weed ridden. The biggest concern was that beautiful alluvial plain was going to be flooded and not be available for small crops and dairy farming.* (Participant 8, 2011)

In this case, the conflict led community members, with their different goals and purposes, to unite together despite their own challenges and the impacts of the water scarcity on them, providing an example of how heterogeneous collectives form.

Conflict also takes other forms and is sometimes created by governments themselves. One respondent detailed a long history of bureaucratic wrangling over where the responsibilities for growth management, and regional planning, were actually vested (Participant 9, 2011). Others outlined the concerns of some in the peri-urban about the creation of the ULDA as a fast-tracking mechanism for new greenfield developments in SEQ. Large areas of greenfield land are earmarked for the development of new communities in SEQ, something driven by government and mandated through the SEQ regional planning process. A common view from those involved in local government was that *"...the government is using them (the ULDA) for things that weren't intended. I doubt they have the resources to quickly plan for a place like South Caloundra"* (Participant 2, 2011). Governance arrangements established to oversight the planning of these areas have been imposed by government in a top down approach, which, in the eyes of many, have overridden more pressing local imperatives.

The data suggests that conflict extends geographically, between uses occurring in localised areas of the fringe, as a result of poorly thought out policy or a failure to adequately consider the peri-urban's multiple attributes. The interviews in SEQ suggested that the regional plan, with its urban component and its regional landscape and rural production component, actually created conflict at times.

> *There are provisions which prevent urban or higher density type uses in the latter area – and there is some friction around open space uses. Things are getting caught up in this – tourism and recreational uses – there are tensions between what some of the regional councils would see as imperative for their interests versus the whole regional picture.* (Participant 1, 2011)

More recently, it is not only urban uses that provide tensions for productive agriculture in the peri-urban and many interview participants cited the "*incredible tensions*" occurring between coal seam gas

> *...as a very valuable industry for state government, and the areas, e.g. Lockyer Valley fruit and salad bowl, that are important for the state and country in terms of food production. Industry is hurting because of issues surrounding this use. These wells are on rural holdings and rights of access are provided to miners – there are pretty big issues in terms of conflicts.* (Participant 1, 2011)

Despite concerns around the coal seam gas issue, permits continue to be issued for exploration. Farmers with no legal right of objection have locked out companies seeking access to their land, and have joined with environmentalists to create the Lock the Gate Alliance in New South Wales and Queensland. This highlights how conflicts can act as a binding force for interests that otherwise would be in contest, and how alliances can arise out of a common purpose.

Rights and expectations – a case of mistaken identity?

The research finds that peri-urban settlers often have unrealistic expectations of what life will be like there, based on a confused sense of its identity. The expectation of residential amenity is "*...a false expectation...these are rural areas*" (Participant 5, 2011). In the experience of planners in the peri-urban, this expectation, and mistaken sense of identity, forms one of the biggest tensions in these areas. *"...perhaps there should be an entrance policy...what do you propose to do with the land?"* (Participant 10, 2011). Some planners ponder whether people understand what they are buying into in the fringe and suggest, somewhat facetiously, that people's expectations and future intentions should be determined prior to buy-in. Some jurisdictions have sought to deal with this issue through education programs and information mediums provided to potential purchasers in fringe areas, providing a clear statement of the identity of the space. Other jurisdictions, however, continue to struggle with this, and the ensuing conflict, and remain just as baffled by this problem as we are.

In the peri-urban, there is a strong feeling of ownership over the land and demonstration of a robust relationship to it. The interviews suggest that this strength of feeling also extends to rights and tenure in the peri-urban, and that it may be stronger than what is seen in urbanised areas.

> *"This goes way beyond peaceful enjoyment; people have a very strong belief in a right over the development potential of what can be done...rights based conversations often happen in those areas, ironically, of greatest degradation."* (Participant 5, 2011)

Reports from those working in the peri-urban suggest that these "rights" and expectations are often unrealistic and more powerful. This derives from the overlay of singular, often urban, values onto the peri-urban, and ignores the multifunctional values inherent in these fringe spaces.

Whilst the issue of peri-urban rights and expectations was repeatedly observed in the data, they are relatively unnoticed in the theory. In the data, the issue takes two forms. In one form, the upholding of rights and expectations appears as the imposition of urban ways of life and thinking upon the fringe,

grounded in ideals of urban primacy (and potentially privacy). In the second form, it deviates from this appearing as something more radical. Here, many lifestyle settlers bring with them the same set of expectations they held in their urban residency, which tinges their expectations when they relocate to the peri-urban. The data analysis could not locate any understanding of the costs of this mindset to farmers trying to make a living in the area. This suggests that further consideration of the costs of residential development on productive operations in the peri-urban, in terms of both constraints and opportunities lost, should be further considered.

The research has found that the developability of the land is regularly at the centre of this urban mindset, and that often it is a case of mistaken identity. Rural property is viewed as a land bank by many. One interview participant commented on his observations of this practice.

> *In the peri-urban – when a council changes a zoning or regional plan and someone has purchased on the basis that the spread would come to them – the first answer they will usually give is that they have bought for rural lifestyle. But deep down, it's probably for commercial purposes – they view it as superannuation. They stay there, wait for the zoning to change and then make their big profit, and when they don't change become quite vocal.* (Participant 3, 2011)

People buy into the peri-urban with ideas of future prosperity and wealth from land sales, even though this may not be explicit. It is only when this future vision is not realised, or hints appear that it won't be, or overt evidence of productive activity emerges, that conflict arises. *"No one wants them to have impacts on their health, but to have an expectation of no animal noises or cows, from paddocks next door, is unrealistic and occurs regularly"* (Participant 1, 2011). Some individuals, frustrated by the ongoing issues that urban development creates for their operations, take matters into their own hands. The earlier story of the orchardist in BC, who resorted to promoting "hogs coming soon", highlights that the identity of the peri-urban to date has been imposed by the judgements of those most often outside of it.

A zone under constant scrutiny

From this exploration of conflict emerged evidence of an element of consciousness around peri-urban activity, suggesting that this is a zone under constant scrutiny.

> *Where farms are well screened from the road or neighbours, there is less complaint. Where they are more exposed, closer to the highway…there's a huge increase in the amount of complaints about those operations. This raises questions about how you perceive your environment around you.* (Participant 5, 2011)

When the farming operation occurs unseen, there is little complaint or conflict. Sometimes, conflicts between producers and residents emerge only when farming operations become visible or grow in scale.

Other times it is the lodgement of development applications, and their associated notification processes, that drive its emergence.

This highlights how conflict in the peri-urban arises out of confusion around identity, but also that the peri-urban is now under constant scrutiny from those who dwell there. In the days when the peri-urban was a rural space, productive uses that now engender conflict had survived for many years unimpeded. However, the interviews noted a significant shift from that time, and now these uses are often driven out by the new settlers.

> *...innocent old chook farmers have to go away because their chooks make a noise in the morning and make dust. Pig farmers – pigs smell and people don't like pigs in their backyard. There's no room for pigs in the peri-urban zone – not even a consequence of whether they're successful or not – it's something deemed to be undesirable or noxious. They were there 100 years before. (*Participant 10, 2011)

These conflicts are often responsible for moving enterprises out of the peri-urban as they grow, despite the fact that they may have a rural zoning. Public concern about some aspect of their business, such as spray, smell, noise or dust, acts as the catalyst for conflict that planning then struggles to deal with.

The result is a level of scrutiny on the producer and their operations that is unreasonable for productive activity and actually results in a suppression of its identity. One berry farmer, speaking about his operation on the edge of a large southern Tasmanian town, provided critical insight into the reality of this situation and what it means for his business.

> *This parcel of land is subject to continued scrutiny. Harvesting must occur during the day instead of during the night. Neighbours have no regard for the farming activity, no connection to the land, no connection to the activity. There is a fair bit of intolerance. The new spraying regulations will make it even more difficult to farm this land. Residential turnover also affects things.* (Participant 11, 2011)

This interview participant clearly understood the value of relationships, both within the value chain and with his neighbours, and expressed interest in how he might use the close urban proximity of this farm as a form of connective tissue. But despite this commitment, his experience to date suggests a marginalisation of the peri-urban's rightful identity, something strongly confirmed in the data.

The research demonstrates that the peri-urban identity is often suppressed as a result of these conflicts. The producer seeks to go about business in a quiet and unnoticed way as much as possible, minimising any impacts or conflict from outside. This contributes not only to the diminution of the producer voice, as discussed in chapter four, but also means that expressions of peri-urban identity misrepresent the space, something that must be overcome. Critically, this misrepresentation extends to the responses

that planning makes to peri-urban conflict: *"The planning industry will always feel the need to try and solve the conflict...using urban models about lifestyle, peace and quiet, bucolic countryside and amenity"* (Participant 10, 2011).

As the examples show, attempts to respond to conflicts and contests in the peri-urban often flounder or fail. Great effort is put into resolution processes, but they rarely succeed or satisfy those involved. Attempts often come at a high cost, financially, temporally and personally. Often the planning responses simply relocate the perceived problem to another area. There are suggestions that conflicts have been "muddled through" without the necessary science that Lindblom (1959) recommends. Each conflict is an individual ramification of the multiplicity of uses in these spaces (Participant 5, 2011), and thus each is a signpost marking distinct parts of the peri-urban identity. Unfortunately at present, these markers lead to the wrong conclusion.

Reshaping the peri-urban identity towards production

The outcomes of conflict have sought to fundamentally reshape the peri-urban identity but have, more often than not, pushed productive uses out of the peri-urban or into a holding pattern further away from the urban fringe. So this reshaping is resulting in a misshapen identity, one that demonstrates ignorance about the consequences of this to food production and the supply chain. There is a strong link between what is being experienced in planning practice when attempts are made to resolve these problems and the theoretical descriptions of wicked problems and highly complex challenges. For these problems, attempted solutions have often led to the emergence of new problems.

So, in an attempt to pin down the peri-urban identity, the research finds that there is a need to determine what we really seek from the space. Is it to reconnect town and country? Is it to obliterate conflict in favour of a singular dominant use? Is it greater recognition and acceptance of the importance of these spaces as productive ones, or not, given the emergence of more recent production methods such as vertical farming as one solution to more sustainable approaches? Should the reality be accepted that there are two disparate spaces, with their historical identities, and alongside these now sits a new space, with its own identity, which forms the connective tissue between the others? Other places have sought to answer these questions, wrestling with this dilemma and tackling it in different ways, and we have briefly referenced some of these earlier. At the core of their efforts are attempts to recognise the peri-urban; to ignite a consciousness of what these areas have to offer both urban and rural spaces; to connect the three critical challenges of population, landscape and food production together in their interventions.

In British Columbia, *"...the question was asked – how will we feed our population if we continue to lose productive land at the rate we are?"* (Sands, 2011). The data was produced, and the argument was compelling. The prevailing view challenged what had previously gone on at ground level. The numbers were crunched and citizens were alerted to the reality that there was a deficit in food needs versus land supply. Efforts to promote this resulted in broad community acceptance that productive activity

underpinning food supply is a shared responsibility; that those on both sides of the fence must acknowledge and work with the interests of the other. In some cases, this represented a significant cultural shift and a modification to the prevailing thinking. Raising and maintaining awareness of the importance of productive land on the fringe and its contribution to city life is a constant activity (Sands, 2011). Actions included significant regulatory change to protect agricultural land and producers who met the requirements of a new regulatory and planning regime. Regular visits and tours are now organised into the fringe productive areas to ensure the profile of production is sustained. All of this was underpinned by consideration of how to, in a planning sense, use the peri-urban as a conduit to renewed and shared understandings about the importance of food to community and society (Sands, 2011).

Barcelona too needed to respond to a widening city-country gap and a diminishing peri-urban productive base (Callau, 2011, 2012). Calculations highlighted that Barcelona was losing 500ha of agricultural land each year to urban development, and would run out of productive land in only 47 years. Food self-sufficiency calculations suggested that approximately three million people were unable to be locally fed in the Barcelona metropolitan region. This necessitated some serious thought and a reconsideration of how production might occur:

> *"There is a need for a new and innovative models of food self-sufficiency that can answer the realities. This means local systems of production and consumption, taking into account consumers, producers and territory (i.e. land)."* (Callau, 2011)

Critical to a reshaping of the peri-urban identity was the recognition by the city of Barcelona that they must move back towards producing food locally near the city, suggesting a key role for short production-distribution cycles. In this case, action included the development of a dedicated agri-park and planning instruments that reflected the desire to preserve, develop and manage a peri-urban agricultural area (Callau, 2012). The creation of a brand agreed to by farmers and promotion to metropolitan markets were key activities in advancing a productive peri-urban space. Emerging from these activities has been a discourse created around the brand and the establishment of a food-belt using short supply chains. These actions occurred because of conflict over the impact of land uses on productive land and because some saw the potential to create renewed connections out of it. Cultural and environmental values were seen as being secured for the long term using this model, which situated productive activity into the peri-urban and centred on a specific peri-urban identity (Callau, 2011).

Milan, whilst taking a somewhat different approach to Barcelona and British Columbia, also pinpointed food as a key part of the peri-urban's identity, and particularly the short supply chain as critical in establishing this. Creating a link between culture and food enabled action on the city-country gap (Meroni, 2011), using the cultural principle of conviviality to underpin a design-based approach to growing the local food system. This allowed an emotional yet rational commitment, creating a new space, convincing people that there are other ways to approach the peri-urban that focused on food

production. Planning by projects was the philosophy adopted, making small interventions to create stronger city country links and including the community in this; using conviviality to challenge the market system and strengthen peri-urban production through collaboration, sympathy and trust, all around food (Meroni, 2011). So here the focus was on using the emergence of this new space, the peri-urban, as the local arena for change, to consumption patterns and the prevailing food paradigm, all based on recognising the importance of a local food supply chain emanating from the peri-urban.

So a key reshaping of the peri-urban has taken place in these places, and common to them all is that identity is related to food production and the creation of short supply chains. Underpinning the different actions is an acknowledgement that the peri-urban identity has been misrepresented, and that change would not be achieved by unilateral action. Specifically, it seems that linking changes in culture back to elements of food and food production, and then creating an environment around this that supports design, education and regulation initiatives in and around the peri-urban, has been the preferred approach in these jurisdictions. This suggests that a key part of the peri-urban identity relates to food and short cycles, and that the process of embedding this in other jurisdictions has provided opportunities for new collaborations.

6.2 The new market as a platform for change

The transitory view that sees the peri-urban space as urban-futured does not allow an identity to emerge – perhaps because if it does, this might impact on what its future will become and perhaps, because it is not seen as useful land beyond a use that is residential. However, the data provides evidence that what is occurring in the peri-urban is not just an iteration of the urban development phenomenon, or something that will go away. Rather, it suggests that something unique and different is emerging. Change evident in the peri-urban is raising questions for traditional development models and planning tools, challenging what most see as the identity of the space and heralding something different in the form of a new market in the space. The data provided clues to how the space might look, highlighting attributes that must be considered. It supported the research question that the space in between has an identity and integrity in its own right; that it is unique. It is not simply left over land to be consumed for non-productive use in the future. Ironically, it is the very "in-betweenness" of the peri-urban space that gives it its own identity and integrity.

The contestations suggest that the identity of the peri-urban consists of multiple attributes over which the planning system seeks to impose a rigid use. Often, where the land has no clear purpose, or when growth imperatives are given precedence, these attributes become but minor hurdles to overcome on the way to development. This is supported by a valuation system that reflects the view of the land market when it allocates value to these spaces and is exacerbated by a lack of understanding about the value of peri-urban agriculture. Recognising the different uses in the space and accepting its multifunctionality may help to overcome this.

The on-the-ground understanding of the peri-urban sees its identity as more than a collection of eclectic uses and provides clues to the "something" going on in the space. There are new and different things occurring in the peri-urban, emerging despite a lag in governance, a frustration about the limited response of government to this change and a planning failure to recognise and accommodate the range of valid activities that have positioned there. First, there is a different kind of farmer to that which we might expect to find, better educated, more technologically savvy, well networked and often in possession of capital. Then, there is a renewed interest in the plight of the land and the soil, a desire to reconnect with food and the provenance of that food, a return to a simpler way of doing things. There are also differences around product, which is diverse, reflecting seasonality and locality. This engenders a fourth aspect, which sees consumers re-reconnect with the soil and the food that comes from it – they want to get their hands and feet dirty when engaging with it. A different sense of value also prevails, and value is seen as the outcome of long-term investment in the land, rather than as a short-term return such as gained from the land market. And finally, there is a range of disconnects and contests in the space, advanced in their nature and development, yet unresolved. The practice of agriculture is more artisan, linking landscape sustainability with food production. All of these things point to something emergent and promising, early signs of enterprise materialising into a new market, a place where new initiatives and responses have developed at least in part as a response to frustrations about the enduring food-economy paradigm that underpins the traditional commodities market.

The data highlighted a sense of change, a small but growing aspect of the producer voice, which saw things quite differently from what traditionally was seen. The observations, interviews and conversations all confirmed that there is a change occurring in agriculture, especially evident in the peri-urban, which is responsible for the emergence of a new market space. In an abstract sense, this new market is best encapsulated as an alternative market-based way of thinking about food and food production, which sees agriculture and farming as the construction of relationships and engagement centred on product. When we bring all of its attributes together in the peri-urban, the new market appears not only as a functioning and important contributor, but also offers the opportunity to think about the space as a white space where technology, lifestyle, demography and geopolitics intersect, creating a blue ocean centred on the processes used, the focus on product and provenance, and the people.

New market process in the peri-urban

Unpacking new market process in the peri-urban provides critical clues to the business model that underpins it and the divergences between the traditional commodities market and this one. In the data, evidence was presented of enterprises and organisations doing business in new ways in the space. Small intensive operations are engaging in it as well as larger enterprises that enter the new market space in search of a blue ocean, adapting their processes to respond to the challenges of the broadscale. Some of this process in the new market goes beyond production, to include the cultural and social domain.

For food production, new market processes in the peri-urban have a number of distinctive characteristics. Firstly, small micro-farms are an important segment, and they differ in terms of their characteristics, values, attitudes and the drivers of land use compared to mainstream commercial farmers, particularly grounded in commodities (Armstrong & Allison 2003; Hollier & Reid, 2007). Secondly, highly productive processes focus on value-adding opportunities for products, providing benefit for broader rural and regional development objectives. The complex mix of agricultural production that occurs within small peri-urban parcels of land has been found to strengthen communities and enterprises, facilitating the creation of more diversified local economies and providing opportunities for environmental conservation (ABARES 2013; Hollier & Reid 2007).

Thirdly, the approach to business is also different and has spawned new models and collaborations. There is a paradox within the space, in that processes can be both autonomous, yet connected. New market operators will achieve outcomes as small individual business units, but also bring them together in collaborative processes that create new opportunities. This was evident in the data, and one berry farmer, in particular, told of how he had collaborated with other farmers to ensure he could meet the requirements of the market.

Those operating within the system see themselves as open to collaboration and cooperation, but they are not aligned in the traditional sense of the commodities market, where producers are often members of negotiating groups or contracted suppliers, with operating environments often dictated to by organisations external to the farm. This was also described by interview participants engaged with agriculture, who in the main expressed a need to do, rather than talk about doing. Following on from this, the process of doing business often features much shorter value chains using peri-urban proximity as an asset. The producer makes their own modifications to shorten or add value to it. Development, and the thinking around it, takes place at enterprise rather than industry level, often because of the small scale, sometimes because the producers a more nuanced understanding of their own future.

A fourth feature of new market process is its engagement with technology. Producers have embraced it, but not in the form that we would expect of agriculture traditionally. In the movement away from bigger agriculture, proximity and constraints on operating conditions mean new forms of operating technology are adopted. Some have engaged with industrial technology as a point of difference, an enabling factor to ensure efficiency of harvest for example, but these producers are in the minority, and the stories in the data told of the difficulties that accompany this in places with residential settlement nearby. Some are thinking about how they might adapt broader scale technology to work at smaller scales. Communications technology plays a key role as Brown and others pointed out, and this renewed relationship most often hinges on the advantages available in using information technology as a business strategy and in particular, the degree of mobility and nimbleness it enables (Brown, 2012; Participant 6, 2011; Participant 12, 2011).

A further feature is in the nature of the relationships that new market producers seek with the broader community. Increasingly mobile, the new market operator has participated in a rethinking of the traditional agrifood value chain. The traditional focus on production shifts into distribution also. Closer relationships between producer and consumer create the shortened chain mentioned above, the opportunity for the producer to be involved in the process every step of the chain, and critically, also enable a higher level of communication with the consumer. Participation in farmers markets is one strategy for this heightened communication, but it does not always happen at the face-to-face level. Again, social media technologies enable product marketing and distribution processes to occur quite differently than traditionally has been the case. Mobility becomes an underpinning business strategy, which enables the producer to be involved across the whole process from production to market and to respond rapidly to consumer desires.

Thus, innovation in the new market builds collaborative relationships between businesses and individuals, which in turn create opportunities for scaling up operations and utilising new types of technology for business and product promotion. In North West Tasmania, a number of agribusinesses, situated in both rural and peri-urban areas, developed the Cradle to Coast Tasting Trail with the aim of providing and promoting a more experience-focused approach to attracting visitors and tourism spend to the region (Cradle Coast Authority (CCA), 2012). The producers involved understood that collaborative marketing of their businesses, in the form of a trail, offers the visitor a broad range of complementary and appealing products and experiences (CCA, 2012). Whilst this began as a small collaboration between three businesses, two of which are situated on the fringe, it has now grown organically to include a number of food related value-adding businesses, reflecting the increasing density of these operations, the potential of the region's produce for value-adding, and Tasmania's growing reputation as a food tourism destination (CCA, 2012).

A key activity in the trail's development has been the creation of a virtual tourism platform using information technology, something also seen in other peri-urban places such as the Yarra Valley and Hawkesbury regions. The group has used expert knowledge to explore how new generation technology could be applied to trail marketing. The initial step was the creation of an easily accessible, mobile and interactive website for people to click on and create their own itinerary when visiting the area (Dornauf, 2012). Information on the website includes when the businesses are open, maps, linkages to transport and recreational trails, and an online shop where all products can be purchased: "*a one stop shop bringing businesses together and promoting our farmers*" (Dornauf, 2012). The collaboration has also embraced Facebook with the creation of a page to promote and further develop the tasting trail network, and other social media platforms such as Twitter and Instagram. Now, Smartphone scanning technology is being developed to provide easy access to information and ideas when using the trail. Thus, a particularly interesting feature of this form of collaboration is that it transcends planning. The trail's development creates a brand, a one-stop shop and potentially expands business operations, without the need to expand their business footprint or even engage with planning.

This new market thus demonstrates an altered relationship to food underpinned by a philosophy that links food to liveability and lifestyle. The participants in this research not only spoke this but lived it also. The new space is a way of life for some who have relocated in search of it; it is explicitly about land on the edge, the closeness of the chain and the relationships between producer and consumer. It comes out in the language. Those interviewed talked constantly about the importance of relationships across the food-production process, a call now taken up by many in agriculture and food, old and new. Attendance at conferences and forums heard continued talk of relationships, engagement and new proximity.

The new market adopts a process based on a philosophy of people to people. It structures the land and customer relationship differently. It separates the land from the market, recognising that people derive a different form of value from the land than simply economic value, and also the land from the landscape, recognising that it is not just the aesthetics that create value. It alters the traditional conceptions where the market is seen as an entity quite distant from the producer, bringing social relationships into the value chain, drawing buyer and seller much closer together than more recent times have seen. It returns to an older way of doing business whereby much of the business occurs in the space in between, via markets and direct engagement between producer and consumer.

Situated in a multifunctional context, the new market operators place a high importance on environment and sustainability. A purposeful disconnection from the commodities market has seen the new market space turn its back on the processes related to commodification that are traditionally associated with agriculture, sometimes because of scale, towards a more multifunctional interpretation of its value. Production is married with environmental care, and efforts to improve biodiversity go hand in hand with attempts to produce food more sustainably and to create not only business opportunities from this but also broader socio-cultural benefits. These efforts go mainly unrewarded, as ecosystem services do not play as high a role in valuation processes as the potential to put a dwelling on the land in these spaces. Food quality and environmental integrity are also part of this marriage, and if population incursions potentially damage these aspects, then those in the new market would argue that this is unsustainable and inappropriate. Thus in the new market space, environmental improvement activities are important elements in the food production process, earning producers rewards as an income stream in their businesses and as a positive input into the valuation of the land.

The earlier example of Food Connect is one such new market enterprise, demonstrating the incorporation of many of these process features, and particularly the broader socio-environmental ethic that is a feature of the space. Working in collaboration with SEQ local and peri-urban farmers, often microenterprises in scale, it aims "*to deliver the best food in the world, efficiently, affordably and equitably*" (Participant 12, 2011). Developing a local and regional food system, and changing the way food is grown and distributed, are key aims for the enterprise. Ensuring a fair share for farmers and high quality produce for customers drives its strong belief in the peri-urban, as a place where this can be achieved and the role of peri-urban producers in driving this change.

Product and provenance in the peri-urban

A second area of change evident in the new market space relates to product and provenance. In this space, product is diverse and local. Alternative ways of processing product and adding value are evident. A new concept of value is being formulated with implications for valuation processes. Product is more focused on a high end, high value product, often with lower yield. This differs significantly from the existing commodities-based market paradigm, which is premised on a model of high yield and economies of scale and quality. The product mix is broader and includes berries, rare breed pork, seed products, wasabi, beef and cheese. These products are presented in different forms including at markets and specialist shops, via cooking schools and as critical elements of tourism enterprises.

Product and its story lie at the centre of the new market way, and both elements combine to position the product as something of value, rather than simply as any product. Instinctively, those in the new market have tapped into the concept of related variety. Here, "*creativity turns into a source of innovation because it finds this sort of unusual relatedness among places, sectors, products and professions*" (Lazzeretti et al, 2009). Producers tell you of the close relationships that drive product choices, whether perceived or real, many new or different, some building on what already exists. The approach to market is different, and transactions take place across a number of locations. Product is sold using a short chain grounded in engagement; the producer engages directly with the consumer, telling the story of the product, making suggestions about its use. The product, and its production process, is honoured rather than ignored. It is a more nuanced relationship than hitherto. Sometimes it has an urban edge and often takes place in an urban setting. Other times, it will happen at the farmgate, bringing with it a rural nostalgia on the part of the consumer, a recollection of the days when food was grown in town or country, when the origins of food were well known and understood. There is a recognition factor inherent in this food – whilst it may not be regionally branded, it suggests that there is something of the place where it is produced that is worth having. This recognition factor creates potential for the enterprise collaborations around tourism and business development strategies based on co-production.

Product, and both the production and producer story, acts as key creator of value in the new market business model, linking lifestyle, amenity, food and economic development values. There is demand for these stories and they act as an expression of the multifunctionality of the space, bringing together these different values so that the stories themselves become an integral and valued part of the product itself. Once more, the producer voice comes to the fore. Product provenance, and the producer themselves, emerge as experiential, going hand in hand with purchasing the product. Larger supermarkets have also recognised this, incorporating the stories and photos of the producers into their promotional activities. In some jurisdictions, major retailers are starting to pick up on the potential of this, such as Waitrose in the UK (because of farmer pressure, more direct selling and the successful introduction of niche food supermarkets) and the two major Australian supermarkets. LEAF Marque (www.leafuk.org) is another example where producers can weave care for their product into the story, through certification that it has been produced by farmers whilst caring for the environment. This

suggests a shift towards the recognition of multifunctionality, and an acknowledgement that this is a key part of the new business model.

A local example in the peri-urban of NW Tasmania illustrates this point well. Four generations of an orchard business situated five minutes from the urban centre of Devonport in North West Tasmania have grown apples in the valley area since the mid-1880s. Settlement has meant that their once rural landscape is now peri-urban. Over the years, they have seen export markets fluctuate, a growing urban area develop around their operations and, most importantly, adapted and changed their business to suit the prevailing conditions. In 1998, they diversified their operations to create an apple juice brand and collaborated with a nearby grower to establish a small juice factory. Capital investment in infrastructure was a critical factor in growing the business, with fresh juice sales increasing to almost two million litres per year since the first juice was sold at local markets. More recently, the company has expanded into cider and created a cider company. A cellar door has been established, where locals and visitors can test and buy the product, something seen critical to telling the story of the product, from the apple tree right through to the bottle. Supporting this, a heritage orchard has been planted and, when completed, will include a walking trail and historic interpretation for visitors.

Enterprises such as this mean that in the new market you can engage with the producer on the site of production. Products are often selected on the basis of their marketability to, and following feedback from, the local consumer. As a result, there has been a reinvention of the type of product that can be purchased from peri-urban locations and a move towards processes of co-production and co-creation. What is striking about this new market is that it starts to create value around the very attributes in the peri-urban that have in the past been viewed as a problem – size, proximity, production and a lack of scale, for example. These factors form a critical part of peri-urban value. Product is used as the centre of a renewed relationship with the consumer and creator of new value. Value emerges from the fact that proximity results in a potentially more responsive reaction to the urban voice than has historically been the case. All the small voices that were once present in the peri-urban space become linked together, with the potential to create a new big voice. Provenance, becoming increasingly lost in the commodity market, comes to the forefront once more, overcoming the fact that the traditional distribution methods have removed regional identity and food became food no matter where it was produced. Indeed, increasingly provenance is needed to enter a market – it seems that the "rural" can learn from the peri-urban.

In the peri-urban, provenance and product distinctiveness become part of the producer's price-making ability. The knowledge of where the food originates from is important as it can add value to the purchasing experience that is returned via price to the producer. The new market space responds to consumer demand about the product by placing it in front of urban dwellers, capturing their needs and demands simultaneously. This ensures that the emergent engagement and conversation around food originating in the peri-urban continues to build, some would say until such time as the new market space is embedded as a food system, one that embraces both urban and rural production. This hints at new

possibilities for participatory planning. In many cases, the consumer determines what the product will be, as farmers use these renewed relationships to conduct their own market analysis of demand and supply. The product-centred relationship highlights an opportunity to capitalise on its goodwill to highlight the plight of the peri-urban and potentially ensure its preservation, an opportunity that at present has not really been captured or exploited.

But in the new market, this process of co-creation, and the use of scale, emerge in different ways, and are not simply limited to the creation of new or niche product at an intensive scale. In another illustrative example in NW Tasmania's peri-urban, one enterprise, Sassafras Farms, shows how it is possible for "old agriculture" to engage with the space using an existing product line. The farm is family owned, a traditional broadacre farming operation, ten minutes from the major regional city of Devonport. For a number of years the farm has supplied parsnips and onions to both major supermarket players in Tasmania as well as growing poppies for the international market. It is one of only two parsnip growers in the state, but fairly representative of the scale and type of operation located in the peri-urban parts of the region. The operators of Sassafras Farms realise that to remain viable and relevant in the broader sense, they need to consistently engage with alternative ways of doing business.

Meeting supermarkets' requirements for produce that is uniform in terms of size means a significant level of waste product in the business. Smaller, younger parsnips were deemed unsuitable by the supermarkets, so the farm operators set about finding alternative markets for this produce. As a result of their tenacity, unique partnerships have been formed via collaboration with a range of specialist vegetable sellers and a community-supported agriculture scheme. Produce that was previously not providing any return to this broadacre business is now being sold as premium product, as a result of collaboration and relationship development, through grocery outlets in and around Hobart, fresh fruit and vegetable box schemes and via local vegetable shops across the North West Coast.

A key activity has been creating a relationship between the growing location and the product, with the product now branded as Sassy Snips. Packaging has been developed that provides not only the Sassy Snip story (of producer, place and provenance), but also suggests uses and recipes for a somewhat underrated product. Building on this has been the adoption of a co-creative focus, which is now playing a role in the further development of the parsnip business. The demand created for a smaller parsnip has resulted in research by the farm operator into international developments, the availability of smaller parsnip varieties and a trial crop to determine their suitability to local growing conditions. Discussions are occurring with an independent grocer who has been involved at the purchasing end of the new marketing chain created. These discussions are based on co-creative action around marketing, packaging and value-adding for the smaller parsnip.

People, passion and the peri-urban

The data suggested that the urban-rural dichotomy is becoming increasingly redundant and that the peri-urban has emerged as a third space where some form of re-connection to the land can occur. The

third area of change in the new market space, the people, is critical to this idea of urban and rural reconnection. New farmers are entering the space – with other life experiences that they are prepared to share, strengthening social capital. In some cases these people are new to the land, in others individuals have journeyed back to the land, into the peri-urban to promote a new way of thinking about food linked integrally back to the sustainability of the land (and landscapes) and less closely aligned to the demands of the market in its traditional economic sense. They feel a deep connection to the earth as an object that must be looked after. It must be noted this is not exclusive to the new farmers alone, but it is highly evident in spaces where these new markets are emerging.

These farmers engaging in this new activity often *"...understand how the world works, they are already more intellectually and culturally activated..."* (Participant 12, 2011). Often these involve a different type of farmer to those traditionally involved in agriculture: younger, more culturally connected, with a background other than farming. Whilst some farmers make the transition from old to new agriculture, others are the children of farmers returning to the land at a later stage of their life; or they are individuals with a passion for food and a concern about the mainstreaming of food, which they argue has caused a decline in knowledge about what we are currently eating. These peri-urban producers often don't simply produce food, they promote, market and distribute it also, reflecting comments in the data on the farmer being involved along all the steps of the value chain. They challenge the prevailing view and seek to reconfigure resources to create new opportunity.

Some producers have consciously shifted towards operating in this new market as a survival mechanism, seeking to reinvent their operation and production paradigm within the context of a dynamic, changing environment. This highlights the role of the peri-urban as a platform where assets and resources can be reconfigured and potentially used as connecting pathways to renewed relationships. Once the land that many of these people farmed was rural, now it has close settlement, environmental challenges and nearby neighbours. Other producers have, ironically, disconnected; they have decoupled from the mainstream, from the dominant economic paradigm that is large, market-based and all about growth as the mechanism for economic success. Many in the space have a passion and argue for a new paradigm around food and the role and appearance of the new market space. They argue for closer connections with urban dwellers. They see food production as the central element in a new type of multifunctional relationship – one grounded as much in social innovation and regional development as it has traditionally been in the market. Much of this passion arises out of concern some hold that Australians undervalue food (Participant 11; Participant 12; Keogh 2011), both in an experiential and financial manner, and the land upon which it is produced. They advocate that the way farming, and farmers, are treated today in Australia is not good enough, given the role that sustainable food production should play for human survival and reconnecting communities. They challenge the planning and governance paradigms that in their view, constrain the peri-urban from meeting its potential. They argue that there is a better way that will result in higher values for everyone: *"...higher social returns for the community, higher resilience, the farmer gets higher values for crops, urban people get a better aesthetic value – kids can wander through the farm"* (Participant 12, 2011). Critically, they

believe that all of these things can be integrated, into the kind of multifunctional model that this research argues for, so everyone wins.

The new market producers practise a form of social innovation with a strong socio-environmental ethic, evident in the way business is done. The peri-urban offers a space where they are able to align their own beliefs about the food system with the activity occurring around them. They don't need a large land footprint to do this and see the more intensive nature of the space as a feature rather than a disadvantage. Some articulate a strong desire to change the existing food paradigm and see small incremental actions as the way to achieve this. Like larger-scale farmers, they understand that land is a finite resource and seek to do all they can to preserve and maintain its good health. There is a strong concern for the plight of the soil, the biodiversity of the land coupled with a desire to relocalise food production as part of a broader sustainability consciousness.

In Northern Tasmania, the creation of one local food enterprise in 2009 provides a local example of the people and passion in the new market, and also the type of systems thinking underpinning the emergence of a different business model in the peri-urban. Based in a regional area, high quality and seasonal produce is sourced directly from 300-400 growers and farmers throughout the state. Produce is sourced from both smaller growers, many of whom are situated in the peri-urban, as well as larger farmers who are looking to diversify their markets, and engage with a shortened value chain. The business aims to keep the chain not only short in terms of involvement and handling, but also in terms of the timeframe from producer to consumer.

At the centre of the story is a Tasmanian who spent many years living overseas, and who professes that she never thought she would return to Tasmania to live. Realising that in Tasmania she could find "*real food, real people and be in tune with the seasons*", she returned to a small town in the north east fringe of Launceston (pers comm. 2013). Here she rediscovered what she describes as the freshness and taste of the local produce and the sheer abundance and range of product that was emerging, and set about creating initially a "hobby" nursery. Believing strongly that this bounty should be shared, they attended the local market with plants and produce, but after it was rained out they were left with baskets of produce and no-one to sell it to. Challenged by what to do with this, they boxed it all up and emailed friends to see if they were interested in buying it, and in half a day all boxes were sold and so their new business was born.

A key part of the business model is the people and the passion – a commitment to freshness and seasonality and the owners' desire to share what they have learnt about the link between food and life. Produce is at times value-added, and ideas for using the produce, by way of recipes and pictures, are often included in the boxes. Business growth has been somewhat organic, as they see themselves on a journey, following the growth to see where it leads, embracing the idea of provenance and sharing the origins of the food they provide. Around this, with clever use of social media and communication, the operators have created a virtual community, connected by a shared love of food and a sense of

understanding. Bringing these resources together creates an enterprise with a new market business model – alternative processes, product and provenance, people and passion built into a system underpinned by relationships and collaboration, education and engagement, reflection and rethinking.

The people, interactions and close connections of the peri-urban mean that planners must change the way they think about managing the space. In the peri-urban, many producers are engaged in overtly transforming the food system through integrated economic, social and environmental action, expressions of the space's multifunctionality, which may also have ramifications for its management. Thinking about transformational leadership, Hann (2011) noted the personal journeys that often accompany the learnings that underpin this. The discourse highlighted the personal nature of the journey of those who relocate to the peri-urban. Key to this, in Hann's view, is the concept of generative learning, where a different sense of life and balance on earth is sought, one that increases biodiversity rather than destroying it.

Ideas of passion and transformation align with a central tenet of this new market space – many participants are seeking a new balance, engaging themselves in experiences and conversations with groups of people seeking to understand the world around them, to interpret it culturally. It flows from the involvement of a cultural domain; engagement is key as one participant explained (Participant 6, 2011). The status quo doesn't facilitate this learning or talking, as Boully et al. (2005) identified when suggesting we have to "*talk until the talking really starts*". In the new market space, this learning and talking is underway; participants are aware of an enormous opportunity to fundamentally rethink how we do things around change, leadership and learning (Hann, 2011). Sharing past experiences, creating opportunities to share around food, and reconnecting rural pursuits with urban dwellers are critical to advancing this rethinking; the proximity of the peri-urban to large populations is seen as an advantage in this process. Collaboration and cooperation are key elements in ensuring that the communication required for this happens.

The peri-urban supporting new systems thinking

Finally, bringing the processes, product and provenance together with the people and passion hints at the new market space as a system, and helps us to understand and connect convergent elements that congregate and touch in the middle. A range of social and environmental issues has contributed to the development of this new multifunctional market space. Many of the producers in this new space have located into the peri-urban consciously, in response to their desire to use its assets to change the existing food paradigm. The new market space takes an ecological approach, considering the land, landscape and sustainability as critical points in decision-making about production; it brings them together in a systemic approach to action to create a competitive advantage. Social aspects come into play – food becomes about more than survival; sharing of food becomes a cultural precept. The new market space thus includes not only the environmental and economic, but also the cultural domain. Food becomes something that is embraced in many ways, not just as a survival mechanism, but also

as something that underpins all that those in this space do on the earth. Through this example and leadership, they seek to transform the way we think about, and value, food.

The peri-urban new market and its multifunctionality help make sense of plurality. When we talk about a system, we talk as though it is monophonic, providing little or no change in structure, having parts that exist in only one form. When we think of the peri-urban system, we must contemplate a more holistic system, completely new and an important component of the peri-urban's distinctiveness and identity. In Europe, this new market space is recognised in the "*call of the street*"– that is, a cry for sustainable solutions – that is slowly making its way up to enter the mainstream decision-making processes of governments, business and individuals (Meroni, 2007, p. 5). Those promoting it realise that "*sustainable consumption is about the power of individuals*" (Annan in Meroni, 2007) and that to achieve this, a re-ignition of interest in all things food is necessary. The explicit adoption of a sustainability ethic is pivotal to the new market space. It is reflected in choices made about consumption and production, natural resources, pollution and social progress. A European Commission project to investigate the emerging demand for sustainable solutions (EMUDE) (Meroni, 2007) found that some individuals are exploring new systems for living and working together, and organising their lives differently to reflect this. "*They act. They show by doing that there are other ways to live a good life without at the same time threatening nature, other people or their own inner peace.*" (Meroni, 2007, p. 5).

This creates a challenge for planning, as one discipline given responsibility for the creation of sustainable solutions. The EMUDE project shed light on the existence of "*an important driver for sustainable innovation – groups of individual citizens thinking out of the box.*" Meroni (2007, p. 9) argues that subjective wellbeing is related to a belief in interpersonal relationships – that is, the capacity to bring people together around an idea, to get people moving, resolving a problem – and that all of these are characteristics clearly expressed by creative communities. Again, the role of relationships is critical. Central to this is a shift in mindset where people stop seeing themselves as consumers and discover that they possess the ability to self-determine some parts of their life. The new peri-urban market space is one such creative community, infused with these characteristics – those engaged in it have thought out of the box – they have self-determined, reorganised and invited others to join. They understand that there is an opportunity to move away from the existing food paradigm and that there are other ways to live a good life.

The actions of bringing people together, getting them moving around an idea and working in a creative and meaningful way, are key to planning's purpose. But, perhaps planning's focus on process sometimes comes at the expense of this, stifling the ability of planning to formulate a creative response. This leads to the question, what if relationships and passion drove the planning response, if planning could create the space for this to emerge? For this to occur, relational strategies must be implemented "*that contrast with current development logic*" (Latouche, 2004 p.10, in Meroni, 2007), necessitating a move away from the prevailing development paradigm in these places. *"...these networking relational strategies presuppose an active way of interpreting the services, where the roles of client and producer,*

of user and provider merge in the co-creation of value and benefit." (Latouche 2004, p. 10 in Meroni, 2007).

Planning is yet to see that it is the process of co-creating with others that makes the solutions of these creative communities valuable. It is a process demonstrated in the new market where producers work with the consumer and other intermediaries to co-create – both around product and process, but more broadly, around a new way. This makes a critical contribution to the peri-urban's identity. Whilst value is derived from the economic advantage this co-creation can enable, greater value can be derived from the fact that individual contributions to the achievement result in emotional involvement and a profound long-lasting sharing of aims and means (Meroni, 2007, p. 10). In the new market space, this relational, co-creative aspect enables existing enterprise to be deepened as a method of growth. So, what is evident in the peri-urban speaks to new possibilities being explored in the social-cultural realm, an idea recently confirmed by McKay in his argument that, to live a good life, we must connect with those around us in a meaningful and useful way (McKay, 2013). The ethics and ethos of those engaged in this new business model in the peri-urban speak to a much more mediated and moderated good life, a collaborative and sensible use of resources. These people are settling in this useful space, because it enables them to connect with others and have a scale where they can implement some of these things. In the face of the Global Financial Crisis, this has emerged as a stronger force – we are actually thinking about scaling down, what it is to be a good citizen, what makes a good leader and a good life. What is occurring in the peri-urban thus speaks to other contemporary discourses rather than any discourse of planning.

The new business model – convergence of land, value and production

Hann (2011) describes a journey involving the whole food system from one end to the other. Personal experiences are unpacked and the different elements of the food system thought about in terms of how they play out both individually and together. Key to the learning journey is the development of a shared purpose, deeply connected to those on the journey, linking food with environment, moving into an innovation space, building on the shared connections and purpose. This journey leads to an exploration of what's possible: new policies, engagement processes, business practices and a vision of a future food system that those connected can build together. Exploration may lead to action, which if successful, can be scaled up; new paradigms can emerge and new relationships are established. The result: large-scale systemic change that sees transformation across the sectors involved in food. This is the type of accommodation that those engaged with the new market space are aiming for in the peri-urban.

The peri-urban space is immeasurably attached to land, it can't be separated from location and the advantages and assets related to that. This is intrinsic. Deeply entrenched in this attachment is a systemic approach to land, a desire to protect the asset and the many attributes and roles that emanate from it: human survival, biodiversity, food production, and recreational value amongst others. Whilst a triple-bottom-line approach is implied in the status quo, the development and use of land does not

always achieve this. The inherent challenge becomes one of making a more meaningful response in relation to the environmental and socio-cultural aspects; considering the many attributes of the space; re-weighting the uses that can occur to consider broader issues of human survival, such as food supply.

For example, as a response to shared concerns about the shrinking nature of the Sydney basin, and the rapid incursion of urban development into the space, Hawkesbury Harvest was formed in March 2000, supplemented by a farm gate trail and growers directory initiative (Knowd, Mason & Docking, 2005). The geographic context for Hawkesbury Harvest is the North West area of the Sydney basin. The Hawkesbury Harvest business model features a concentration on relationships and interdependency and highlights how natural and agricultural resources can be reconfigured into a platform that creates change. Regional amenity and assets have been used in a process of co-creation with agribusiness, to strengthen the regional economy and highlight an alternative approach to landscape and food production. The core business of Hawkesbury Harvest is articulated as providing visitors to the region with a food, flora, fibre and wine experience whilst bringing viability back to the small farms (Mason, 2011). This is embraced in a range of ways, including encouraging open farm experiences, facilitating the creation of purchasing opportunities for those who seek to access locally grown, fresh produce and via the use of technology and communications media to market the region and its bounty. However, underpinning this is a broader ethic, which seeks to ensure that the contribution of the productive lands in the area to the quality of life of urban dwellers is recognised.

Like those involved in Hawkesbury Harvest, new market producers and conflations have much to offer. Often focused on premium product, they understand that they need to think differently about how they offer it. They combine place attributes with an experience that moves across enterprises and locations. They invite people into the peri-urban, to see for themselves the place and landscape, to understand the production process and the product itself. They offer a unique experience – targeting initially those who have some level of awareness about the benefits of eating (or drinking) locally and growing this to reach those who may not.

The distinctive aspects of the peri-urban new market thus highlight the development of a business model founded on collaboration and relationships, on a connection to the earth and a "good life" ethic that places food at the centre and is embedded in every action. By embedding this emerging consciousness of local food within their own culture, other places have seen new ideas spin off out of this focus on the peri-urban and the new market emerging there. The Milanese experience centred on conviviality, introduced previously, is one manifestation of this. Conviviality is a word used to describe a festive atmosphere, a fondness for eating and feasting, drinking and merry company. The word has its origins in the 17th century, in the Latin word *convivium*, meaning "a living together, a banquet", from *vivere* which is "to live". Food, in Latin cultures, means

> *...conviviality, pleasure, taking care of others and being loved. Slow food is not so much about cooking and eating slower, than about connecting people, so as to regain meaning for the rituals related to food in everyday life*. (Meroni, 2011).

In Milan, as was outlined earlier, the relationship between conviviality and food was used to underpin the development of a local food system and a renewed passion for local food. The questions asked focused on how this principle, as a pleasurable and collaborative relationship, can change the way a city feeds itself. The interest was in determining what impact this might have on the way producers and consumers engage with one another and exchange not only produce but knowledge (Meroni, 2011). Milan's response was to seek the creation of *"...a human platform supported by information technology that is designing and prototyping a number of services to shorten the food chain and feed the city"* (Meroni, 2011). Again this idea of the platform emerges, in this case envisaged as a "*design supported community that experiments with a brand new system of possibilities to create a sustainable foodshed"* (Meroni, 2011). Underpinning the creation of this platform were the human and social (relationships), the technological, the experiential, combining with those that design the system to build a network of shared trust and empathy. This has particular impacts, encouraging *"...the last mile to be a human mile and relationships to happen, which implies also for designers being there and creating human links as a way to operate"* (Meroni ,2011).

The concepts of prototyping and design that are evident in the Milan example raise possibilities for the exploitation of related variety. When this way of thinking is implemented in the peri-urban, new businesses form and new industry and markets emerge. One enterprise in southern Tasmania demonstrates how this happens and the way in which collaboration grounds it. The initiative of three food lovers and former chefs, it collaborates with artisan growers, farmers and fishermen, winemakers, brewers and producers of Tasmania, many of whom are situated in the fringe of larger metropolitan areas. The initiative seeks to reconnect people "*who love eating great food with the great people who produce it. We feel that both producers and consumers are equals and we aim to honour both*" (Evans, 2011).

The geographic region is the scene-setter for the business, a kind of restaurant, but without walls. It roves Tasmanian regions and areas, "*hunting and gathering, meeting the growers and makers, learning from them about their produce and passing this onto the diners.*" (Evans, 2011). It features a series of long-table lunches, held in different geographical locations, setting the table "*right in the places where the food comes from – a field of potatoes, an olive grove, a jetty, a greenhouse, a paddock."* This allows the provision of an experience based on "real food", food that is fresh, local and able to be enjoyed at a slow place. Alongside this enterprise sat a stall at the renowned Salamanca Market each Saturday, featuring the artisan products produced by these three collaborators. But this was not enough for these passionate entrepreneurs, and with the success of the stall, a new venture was embarked upon. The business metamorphosed once more, and now includes a local food shop in central Hobart, featuring

artisan and gourmet products from around Tasmania and value-added produce from their own operations.

The manner in which new market enterprises live and breathe their philosophy of the land and the food, and the connections that can be made around this, are important factors when we think about the criticism that for some, the emergent food consciousness and premium product is an ideal but not a reality. Whilst all this offers promise, there is an inherent dilemma in the shift that the new market represents, which lies in engagement with the space and the affordability and accessibility of product. At present, it has not been mainstreamed and while it suggests simplicity, it is marketed as premium or gourmet. As a result, many argue that whilst it is nice, it is not necessarily affordable for the masses. A counter argument to this is the fact that those engaging as producers in this market see an enormous opportunity to spread their message and skills. New market producers are keen to be involved in the community and seek to share their skills and expertise as one way of spreading their message. For many involved in these emerging enterprises, their effort is not just about the production process, but also in educating and informing those who may not engage with it. The peri-urban's close proximity to large population bases, the opportunities it provides to engage with young and old people alike, and the small scale of its land footprint means that perhaps here is a place where these issues of access and equity can be addressed. It suggests that perhaps we should be concerned less with mainstreaming the product and more with mainstreaming the production process.

So, like many others practising in the new peri-urban market, these people and their actions are contributing to a rethinking of the peri-urban. They demonstrate an understanding of what's wrong with the way we currently think about these areas and how this fails food production. They are contributing to the development of a food system that embraces food in an integrated manner, as cultural precept and critical input to human survival. They have found ways to reconnect people to where food is grown, taking people back to the source to address not only issues of access and equity, proposing a renewed commitment to the land. In doing so, they have found the white space, making a clear decision to follow a new trajectory. This, they put forward, has been most challenging, and it is a frustration that this trajectory it is not reflected in the manner in which we plan for our food. Situated in different locations, they all argue for a systemic approach to achieve the reconnection necessary. They have built enterprises on foundational platforms that go beyond their business, configured on alternative processes, committed people, new or diversified product and a commitment to building a new system. They lament the failures of planning and governance to embrace this. They note a paradox that land use planning, with its focus on holistic and sustainable development, has not yet fulfilled the role it could play in this.

The peri-urban is undergoing what some might call disruptive change, as much based in social and cultural factors as in economic ones. There are some exciting trends emerging, which were observed in some of these spaces. Its proximity is an asset, not a problem, as is often depicted. The existence of the new market space creates a vision of the peri-urban in the 21st century that is built around the

altered processes, product and provenance, people and passion, all contributing to a new multifunctional system. This is not absolutely exclusive to the peri-urban, because there is evidence of some parts of it in some rural areas also, but it is in the peri-urban where it is most clearly playing out at present and where we can see the complexity of the whole system. It is here that we have the best hard evidence of the new market space, which, critically, leads to the creation of a plausible and worthwhile identity for the space. And whilst this new market is not unique to a particular land use in the space, thinking of it systemically reveals both its identity and raison d'être.

The research reveals clear evidence that the peri-urban is the location where a blue ocean has been created around food, a new space that this is becoming a central part of its identity. The stories of those engaged in this reveal that the peri-urban identity includes its locus as a new market space, one that functions extraordinarily well. Simultaneously, it hints that the new market in the peri-urban is leading where at least some agriculture must go in the 21st century, away from an industrial form, towards something that is more nuanced and local, more consumer-responsive and, critically, more sustainable. Here both production and selling processes are being rethought; product is being dealt with in new ways, using value-added and direct supply options. The consumer no longer singularly plays that role, but is invited to co-create, contributing to decisions about production and product, selling locations and marketing forms. In the new market, technology is worked with to facilitate closer connections around these things, which ultimately may start the process of paradigmatic change. This might be social media; it might be adaptive technology that helps with the production process. Whatever it is, it is at this point that the people-to-people relationships, embedded in food and product, will start to emerge and co-create.

6.3 Beyond future urban – reframing the peri-urban as a platform for the possible

The emergence of this new market in the peri-urban, as highlighted in the previous section, suggests something that resonates in the discourse of regional development, with what Haarmakorpi and Pekkarinen (2003) and others talk about in terms of reconfiguring resources to be the platform for change to create new markets. This drives a new conceptualisation of what the peri-urban is and suggests a blue ocean of possibility for the space. It is constitutive of a new identity, which speaks to usefulness and considerations of product and provenance, alerting us to new types of business models and case studies, all of which require an alternative planning response.

Returning to the metaphor of the rhizome, we can start to scrutinise the peri-urban surface in terms of these multiple shoots that emanate from it and use these shoots to build a picture of the identity of the space. Critically, the rhizome suggests that the peri-urban is a *useful space*, one with many resources that are contributing to its own rethinking. By interrogating these different resources, we can construct an alternative picture of the peri-urban that suggests an entirely different future than currently envisioned by the prevailing view. Thus, a key part of the peri-urban's identity is its ability to act as a

platform for a whole range of other activities beyond residential development, and its very dynamism, capacity to encompass contestation, and related variety works to foster this.

The analysis of the data confirms a peri-urban identity and allows us to understand the peri-urban as a space whose usefulness has been badly misinterpreted. The acknowledgement of its multiple voices, the language and messages emanating from them, and their contribution to the multifunctional identity of the space, all herald the reality of the peri-urban as useful land, but not in the way suggested by the prevailing view. Exploring the relationship of value and valuation to the peri-urban, and the emergent agricultural activities and land uses, has also helped to demonstrate that the peri-urban is useful. The data also confirms the utility of the space as a platform for a range of purposes that planning struggles to accommodate into a holistic framework.

The research has spent some time on the deconstruction of the peri-urban, and with all this in mind can move towards a renewed construction. The rhizome can be imagined as a platform, and its shoots as the resources that move and merge into the landscape via a range of different processes, taking many different and changing forms. From this a new platform for the peri-urban can be constructed around its usefulness, which offers renewed hope for the space. Whilst it appeared on the surface that the peri-urban faced a fairly negative and one-dimensional picture, this research suggests the situation is not that bad. It is in fact "the new useful" when contextualised with the challenges that urban society in particular faces in terms of food, sustainability and growth.

As the data and analysis in the research has revealed, this new peri-urban usefulness is characterised by a range of possibilities that also help to pin down the identity of the space. Critically, these possibilities emerge from the processes, product, provenance and people that come together to create a system that this research calls the new market space. This new market pushes for an acceptance of peri-urban identity, for a reconception of the space as a system based on a set of assets and resources that can be configured in interesting and unexpected ways. Looking at these possibilities highlights a range of useful contributions that the peri-urban makes.

The new useful: a novel value chain

The data highlighted that the peri-urban is useful as productive land and that producers have something worthwhile to say. The stories in the data reflect what is, and might be, possible in the space. One story particularly resonates. This farmer lost his dairy farming business and after travelling for a while, settled in south east Tasmania working on a community supported agriculture scheme. During this time he recognised that many fringe producers had lost their voice and struggled to articulate successfully the issues and experiences that were affecting their business. This inspired him to create a new form of agribusiness using the principles of community-supported agriculture to create a new form of social enterprise. This enterprise now works in collaboration with local farmers around SEQ "*to deliver the best food in the world, efficiently, affordably and equitably*" (Participant 12, 2011). It is driven by a passion to change the way food is grown and distributed to ensure farmers receive a fair share for their

product and customers receive high quality produce. In other words, to create a new and efficient value chain for local food product that rewards all who participate, be they producer or consumer.

This enterprise represents one of the new forms of business models evident in the peri-urban. It sources seasonal produce from local farmers living within a five hour radius of Brisbane, who are paid a fair price and encouraged to farm using the most sustainable methods. From its humble beginnings in 2004, the organisation has grown to the point where over one thousand fresh fruit and vegetable boxes are distributed to urban customers each week, employing over thirty-five staff members from a range of backgrounds. Food collection points are identified for centralised delivery of food boxes, and at last count, the business had at least 70 "city cousins", who act as salespeople and pick-up locations for food boxes (Participant 12, 2011). The peri-urban enables a marriage of city and country through food, a kind of related variety where new ways of doing business, and new relationships, are created. It highlights that in these spaces the local food systems, that some argue are the future of food production, are emerging. One outcome of bringing urban residents and farmers together is a developing understanding between the two. In the eyes of many farmers, these "city folk" see the peri-urban only as a place for them to live or recreate; this business, and enterprises like it, are changing this and creating renewed understandings of peri-urban worth.

The new useful: an opportunity space to reconfigure resources

A second characteristic of this peri-urban usefulness is linked to its potential as a place of opportunity, a multifunctional environment, where a range of assets and resources are present and able to be harnessed. It is useful as a place where the profile of the food producer can be raised. Armed with the understanding that the voice of the fringe producer was lost in the rapid urban-development milieu, some have set about creating new opportunities for the peri-urban voice to engage with urban dwellers, to remove the barriers that were blocking the voice of the producers.

This idea of the peri-urban as an opportunity space turns on its head the prevailing way of thinking about production in the space. One interview with an agribusiness expert explained that over the last fifty years, agriculture faced declining terms of trade, which meant that enterprises had few choices. In its response, Australian agriculture chose to become more efficient, and did this well, by producing more output for a given amount of inputs. Using new technologies and processes, producers produced more with less and got more out of every dollar spent (Participant 10, 2011). Other producers chose to respond differently, some left the land, whilst others got bigger. But regardless, this drive for efficiency and economies meant that there was little time for anything other than a disciplined and singular focus on the business.

These difficult times contributed to the diminution of the peri-urban voice by the agricultural industry itself, and this was reflected in one Participant's own farming experience where he experienced "*a divide and conquer approach that saw those managing the distribution chain and those making the policy decisions use their power to silence the voices*" (Participant 12, 2011). Others also made this type of

observation, noting that a reticence to work collaboratively resulted in a loss of market opportunities: "*…A few years ago, Driscolls, the US strawberry giant, offered a program with an Australian counterpart where growers could be part of a growing and marketing team but a lot of growers were very shy of getting involved*" (Participant 7, 2011). So some have attempted to give voice to the peri-urban as a place of opportunity, but as yet, the response has been slow and measured. However, the observations and interviews suggest a growing awareness of this potential, and today, there is change on the ground that suggests others are catching on.

This idea of the peri-urban being useful as a place of opportunity, one where resources can be reconfigured, has both personal and systemic connotations. For producers, there are opportunities to enter into collaborative business arrangements, to overcome issues relating to a lack of scale, offering access to alternative markets and scope. For the system, a new value chain emerges. Arising out of these is the significant potential for new relationships based on trust, which will be pivotal in renewing and strengthening the producer voice and building a profile for the producers once more.

The new useful: emerging collaboration

A further characteristic of peri-urban usefulness is located in its potential as a participatory space. The data suggested that, in many cases, there has been traditionally little by way of cooperative productive activity in both rural and peri-urban areas: "*Whether it's horticultural farmers in the Queensland coast or not, it has generally been difficult to get them to work together*" (Participant 7, 2011). This is understandable, given the pressures producers have experienced in trying to keep their heads above water. Collaboration between producers has been the exception rather than the rule, often driven by tourism rather than productive imperatives. However, the data highlighted examples of collaboration in the peri-urban and the fact that this has occurred, despite the prevailing environment, provides hope for the future and demonstrates once more the peri-urban's usefulness.

A critical outcome of the prevailing food system, which contributed to this producer mindset, is that it impeded collaborative effort. The interviews noted that there was "*…a general feeling that people in the middle of the chain have used their power to extract more than their fair share of the value created back on the farm*" (Participant 10, 2011). The data reinforced this growing belief that, in the chain from producer to retailer/consumer, the wholesaler or middle man received more than their fair share of the return. In other words, it was not the farmer who profited from the production process, but rather the person who negotiated the product into stores and the retailers themselves. This created increasing pressure back on the farm, with the result that the farmer disengaged from collaborative activities and initiatives, especially those related to advocacy. Moves to find ways around or through this have seen initiatives that seek to shorten the chain by dealing more directly or finding middlemen who are prepared to adapt to new circumstances and provide a fair return to producers. This has resulted in the emergence of this shortened value chain in the peri-urban, which creates opportunities for collaborative engagement. An emerging way to do business "*…is to talk to each other more, work together more,*

try and understand the far end of the chain more, so what you are doing bears some relationship to what people want to spend their money on" (Participant 10, 2011).

More and more, these collaborative initiatives are driven in the peri-urban, by producers, initially because this is the space with close proximity to markets. This proximity promotes some nimbleness in terms of being able to respond to consumers and the demands of the market. Also, because the peri-urban productive footprint is usually smaller and more intensive, producers are closer in distance and can potentially communicate more closely. As a result, cooperatives, marketing collaborations and initiatives such as farmers markets are emerging. Cooperative contract price negotiations, increased acknowledgement of product provenance in supermarkets and the engagement with specialist food retailers are also emerging. These activities provide a key part of the platform by which peri-urban producers can re-engage along the distribution chain and, arising from that, find their voice to express the issues that matter to them.

The new useful: the role of relationships

A renewed determination and direction towards collaboration suggests that an important resource will be relationships, and the data confirms that they are playing a significant role in the rethinking and transformation of the peri-urban. Whilst agriculture has many disconnects, driven largely by its changing form, increasing weight is being given to personal connections. Historically, agriculture in Australia has been perceived as something fairly large, mechanised and export focused. Farmers were price-takers rather than price-makers, accepting what they were offered for their product, rather than setting or negotiating their own price. As one participant commented, producers were forced to produce more for less, adopting new technologies and methods or take other actions to respond to changes in modern, globalised agriculture (Participant 10, 2011). But despite these changes, a substantial number of producers have remained in the peri-urban.

> *This is happening in broadacre agriculture...and more intensively farmed lands. Just as obvious in the Lockyer Valley – a smaller number of larger farms who have become very large – bigger than they ever imagined – 80kms from Brisbane, in the peri-urban.* (Participant 10, 2011)

During data collection, stories were told of some farmers leaving the land, whilst others got bigger. Some who couldn't bear the thought of having to grow or adapt their enterprises, or had succession plans, left the industry; others gave up farming but remained on the land. However, not every producer took one of these courses of action. Some made a decision to become more specialised in terms of their product or began producing entirely different product (Participant 7, 2011; Participant 10, 2011). Others who sold out began new enterprises on smaller land footprints (Participant 12, 2011). What was critical to these producers was the creation of new relationships, new partnerships with other growers and a new way of doing business.

So whilst the prevailing view of Australian agriculture still reflects a focus on big production and the domination of farmers by the market, there is clear on-the-ground evidence that shows this is not the only viable or chosen path. A new way of doing business on the land involves close relationships across the value chain. One farmer told the story of Peter Gilham, a North West Tasmanian farmer who was a major player in the vegetable production and processing industry for many years.

> *Peter Gilham operated a company called Vecon. He was a man before his time, a visionary. He had a range of onion seed growers' contracted, and sold the product to German buyers. A price would be negotiated and Peter would increase it because he understood the importance of relationships. When Vecon was eventually bought out by Webster, they took over the process. Webster management thought the growers were getting paid too much and the relationship began to deteriorate. They lost the trust of the growers, and excluded them from parts of the process, such as seed cleaning, which they had traditionally been involved in. Within three years, the relationship deteriorated to such an extent that the growers walked away.* (Participant 11, 2011)

When we scrutinise this, we find this relationship-focused business can be found in the peri-urban. The story of Vecon, a business situated in the peri-urban fringe of Devonport in Tasmania, highlights the importance of trust and connections. Relationships were put on an equal footing with profit. This also emphasises the gap between agriculture as it has traditionally played out (old agriculture) and agriculture as it is more likely to take place in the peri-urban (new agriculture).

Conflating old with new – connections, communication and co-creation

Whilst this new way focuses heavily on relationships, it also displays an understanding that collaboration between both producers and the other parts of the value chain will provide better results for all involved. Producer involvement is in all parts of the value chain, providing an understanding of the consumer and their needs. One interview participant, an agribusiness expert, described the change in agriculture that has seen this shift occur.

> *Over the last ten or twenty years a major trend has been the sorting out of the power of the middle man in the chain by finding other ways of doing business. Central markets, wholesale agents between the farmer and point of retail are the middle man... there has been a move to find ways around or through that which have...settled into either shortening the chain and dealing more directly or finding new or existing players who want to do business a different way.* (Participant 10, 2011)

Effectively what this means is that the role of the middle man, if they exist at all, has changed, to become one of market informant and partner. This aids an understanding of not only what the consumer wants, but also what they don't want. One interview participant described how this works, honing in on the fact that this type of relationship moves from an arrangement to a system.

> *I'm in the middle here; if I can give you good signals about what the market wants and you can respond to those signals and I can help you get what the market wants or says it wants, then we can all do a better job here, because consumers are not happy about something. Those sorts of business arrangements begin to behave like systems as opposed to parts of systems which are all fighting their way along the chain."* (Participant 10, 2011)

This new agriculture thus facilitates a more open process of communication, where farmers not only seek to work more closely with one another, for reasons of scale, but also more closely with the consumer, to understand more directly what it is that they actually want. There is greater understanding of all parts of the value chain and consumer imperatives drive the production process, rather than producer ones. This type of agriculture most frequently occurs in the peri-urban. Its proximity drives the ability to create close connections that facilitate the shortened value chains, more direct distribution of product and increased communication within the chain.

Production modes represent a major change in the current food-supply system. At times the relationships drive the product selection. Products grown are often more seasonal in terms of their availability and sometimes niche in terms of their nature. They are supplied to consumers via a range of distribution outlets, rather than through just the supermarket marketing chain. Value-adding activity in the form of processing, tourism and creating value out of the landscape are also evident, and underpin the new agriculture's multifunctionality.

Problems of governance

But there are obstacles in the path to this new peri-urban agriculture. *"...regulation is a big issue with small farmers... particularly if they want to have chooks. The regulations are written for the 30,000 egg farmer and not the small farmer"* (Participant 12, 2011). Based on a different set and form of relationships, it raises challenges for the institutional and governance response, which must also be considered in this process of conflation. Whilst there is divergence from the traditional manner and processes of the agricultural value chain itself, it is also evident in the regulatory environment that the peri-urban needs. Producers complain that planning and health regulations constrain what they can do in terms of creating relationships centred on product (Participant 6, 2011), but this needs to be mediated against public risk.

> *Bureaucracy has been a major frustration. In France, infrastructure is laid out for farmers markets. In Tasmania, at the Farm Gate market, you are given a tiny space and people are charged to sell food at the market. Infrastructure planning is lagging behind our desire to promote and reconnect food with people.* (Participant 6, 2011)

This has a significant effect on both the relationships that producers maintain in the peri-urban with one another and their neighbours, but also the relationships they seek to create with consumers. Intensive,

small-scale peri-urban production must respond to rules and regulations that pertain to an industrial scale activity.

In many cases, regulations apply a uniform standard, related to product and health and safety and not necessarily considering scale. Recalling his experiences in running an intensive diversified food production business, one participant detailed his experiences and frustration with regulation and bureaucracy, suggesting that his experience of selling local food direct was anything but straightforward.

> *The idea of selling food direct is impacted severely by the range of regulations that stallholders are required to meet. There are the labelling police – who insist that products are priced and volume displayed on the front of products. The reason I don't like to price products is that I want to engage with the customer – I don't price the goods – this is all about relationships.* (Participant 6, 2011)

The message from this participant and others was clear – the existing systems of governance are not working, and the requirements are onerous for the small producer.

> *...the labelling requirements alone. They are designed for the big companies, who put shit in food. The rules are all about the large corporations. The market stalls are all about the little things.*
>
> *There are cross Council issues – what one council requires can be different to another. If you produce in one area and sell in another, this can be problematic. It is very frustrating.* (Participant 6, 2011)

So whilst the platform upon which the peri-urban seeks to build its future is pinned on its multiple resources and its usefulness, its development is severely constrained. In the case of agriculture, it is constrained by the prevailing food system and associated governance, institutional processes and regulations, but this reconfiguration potential is not limited only to food. This dilemma contains universal challenges: how can we bring the best of the old together with the new, to ensure that this alternative way can be governed by mechanisms more responsive to, and reflective of, its nature and mission.

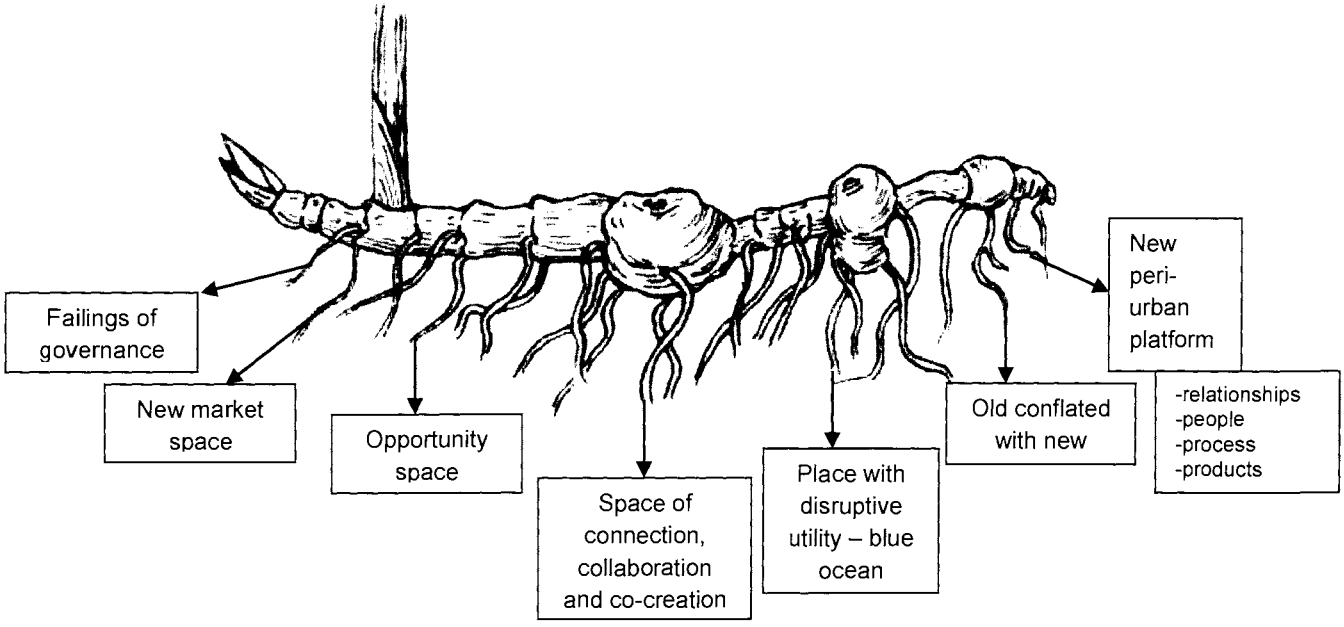
Surprisingly then, despite evidence of the emergence of new prospects, the status quo still prevails in many places, even though this alternative peri-urban platform is emerging. This uncouples economic value from the land and reconnects it to a new place, enabling an elicitation of value based on the land's critical social and environmental importance as well as its economic worth. When we think about food production, the prevailing view suggests something large, machinery-based and requiring huge land footprints, something with global rather than local ramifications. This reinforces the status quo and discourages us from thinking more laterally about what agriculture might actually be; from reframing the peri-urban as useful when we think about what might be possible. The increasing contestation in the

peri-urban suggests that perhaps this usefulness can act as a force field for change, driving a shift to an alternative way of doing things, derived from the potential for an enhancement of value, the re-emergence of the small voices, promises of collaboration and the conception of the peri-urban as an opportunity space.

Thus the research proposes a model for the peri-urban that seeks to reconfigure assets, resources and capabilities into a platform. Accepting a definition of the peri-urban as useful in a set of new ways, it is possible to argue for the existence of that platform as a new market, underpinned by a new form of agriculture and growing acknowledgement of its utility. This helps firm up a solid identity for the peri-urban, one based on multiplicity and multifunctionality, and one that is based on the sum of the whole rather than its individual parts. From this reconfiguration, new markets emerge that bring together opportunities for planning, land valuation and agriculture and allow a reframing of the power imbalance and relationships in the space. We will now explore this new market and what it means for the peri-urban further.

Thus, the process of data gathering and analysis has led to new knowledge about the peri-urban which can be depicted as follows.

Figure 6.1 The rhizomous peri-urban as disruptive, useful platform



6.4 Building spaces for the peri-urban new market

The experiences outlined suggest that there is a need to match movement towards the development of local food systems (as both a social and agricultural innovation) as new market spaces with an appropriate planning and regulatory framework. With its current tools, planning will continue to struggle with this, given the difficulties it has experienced in achieving development that is integrated and sustainable and because of its inability to manage contests and tensions in these spaces. Designing the peri-urban with food and landscape as its major imperatives, rather than urban ones, may help us to better understand how we might achieve some marriage of uses that currently occur there and capture the potential of the new market.

We have seen examples where this has been done. The literature highlighted British Columbia as one place where an integrated approach led to the emergence of a new platform for productivity activity and a targeted conversation with a key player shed great light on this. The realisation in British Columbia that the amount of land available for agricultural production would not meet population demand for food helped drive a complete redesign of the manner in which planning for fringe peri-urban areas occurred. A combination of regulation and non-statutory initiatives were blended together to support the right to farm and ensure linkages across the different areas that affect agriculture. Agriculture is a significant industry in British Columbia with almost 300,000 people employed on farms, ranches and orchards, and in greenhouses, nurseries, veterinary offices, hatcheries, grooming and other related services (Ipsos Reid, 2008). Total agricultural sales in BC reached $2.3 billion in 2006 and provided employment for approximately 34,700 people. The food and beverage processing industry generates $6.6 billion in sales and provided an estimated 26,900 jobs (Ipsos Reid, 2008). BC has climatic conditions that allow a diverse range of crops to be grown and this is reflected in the agriculture and processing sectors with more than 240 commodities being produced (Ipsos Reid, 2008).

Up until the 1970s, this area was losing almost 6,000 hectares of prime agricultural land to other, predominantly, urban uses each year (Sands, 2011). The government responded to this by enacting the *Agricultural Land Commission Act* in 1973. This legislation established the Provincial Agricultural Land Commission (ALC) and a special land use zone (the Agricultural Land Reserve) to protect the diminishing agricultural land resource. It took two years to establish the Agricultural Land Reserve, which initially included 4.7m hectares (approximately 5% of the province). Whilst the boundaries have been changed over time, the amount of land protected remains stable (Agricultural Land Commission undated (a)).

The ALC is an independent agency with the purpose of preserving agricultural land, encouraging farming in collaboration with other communities of interest, encouraging governments of all levels to enable and accommodate productive use of agricultural land and use compatible with agriculture in

their plans and policies. (ALC, n.d. (b), p. 3). Its expressed vision aims at achieving an agricultural land-reserve system that fosters economic, environmental and social sustainability. It has four complementary goals that support the achievement of its mission, relating to the preservation of agricultural land, the encouragement and enabling of farm businesses, a provincial land reserve system that considers community interests, and sound governance and organisational excellence (ALC, n.d. (b)). The ALC has responsibility for measuring and commenting upon the impact of agriculture when applications for the development of land, including subdivision and excision, are made for land in the ALR. Agriculture is defined by the ALC as "*...the systematic and controlled use of living organisms and the environment to improve the human condition*" (ALC, n.d. (a)).

The system for determining land capability used in BC centred on agricultural capability ratings and limitations through the Land Capability Classification for Agriculture in British Columbia. The system uses seven land capability classes, from Class 1 (minimal limitations) to Class 7 (limitations that preclude all arable and natural grazing agricultural systems, regardless of climate). Important to note is the BC advice that increasingly, "*new innovations in drainage and irrigation, tillage, nutrient replenishment (whether organic or inorganic), pest management, as well as closed environmental systems, allow for agricultural production on land once deemed too limited or unsuited for production*" (ALC, n.d. (a); Sands 2011). This challenges the prevailing view that land of minimal suitability can be developed because it won't impact upon agricultural potential. This is important because in places like Tasmania, land of minimal suitability is often allowed to be developed for residential purposes.
The ALC also notes that the potential to put land into agricultural production may have little to do with the agricultural capability or suitability of the land base.

> *External factors such as business costs associated with implementation and sustainability of an agricultural system, the closeness of the farm to transportation links, as well as the vagaries of the marketplace to which one sells and earns a profit, also influence agricultural potential and production.* (ALC, n.d. (b))

Infrastructure is used to improve agricultural potential, such as piping drains to reduce flooding, or adding water resources to improve agricultural capability. In these situations land capability classification is improved (Sands, 2011). Again, this challenges the view often articulated in Australia by developers in relation to the manner in which land capability is considered, challenging the prevailing view that land of lower productive capability is not worth preserving and thus developable.

The BC model is not simply premised on the preservation of agricultural land through land reservation. Legislation has been used as the mechanism to create the ALC and the ALR, and provide the ALC with powers pertaining to matters affecting agricultural land. This enables them to make orders and regulation around soil, waste management, subdivision and development, gas and oil exploration. Further supporting this is a range of policies made by the ARC designating farm uses (agri-tourism, farm product processing, farm product retail, wineries and cideries, amongst others). Regulations and

orders are supported by guidelines, which assist those responsible for planning and management to understand what needs to be done.

One of the pillars of success for British Columbia was the Strengthening Farming Program (Ministry for Agriculture, Food and Fisheries) that saw the enactment of the *Farm Practices Protection (Right to Farm) Act 1996*, established to preserve the right to farm and provide protection to farmers who met their statutory and good practice requirements (Sands, 2011). The Act is complementary to the ALR farm preservation program, and gives farmers the right to farm in the reserve and on land zoned for farm use. It protects farmers using normal farm practices from nuisance lawsuits and bylaws of local government and establishes a process to resolve concerns and complaints. It is underpinned by the philosophy of letting farmers farm, dealing fairly with concerns and complaints, dealing with poor farm practices and keeping people out of litigation (ARC, n.d. (a)).

Along with the Right to Farm legislation, amendments were also made to the *Local Government* and *Land Titles Acts* to support planning for agriculture and "*to encourage local governments to support farming in their official community plans and bylaws*" (Ministry of Agriculture, Food and Fisheries (MAFF), 2005). No by-laws can be made that restrict agricultural growth. Consideration of development adjacent to farms has particular requirements and local governments are required to incorporate buffer areas into development design to protect farms. This regulatory change has been accompanied by information and materials to assist local governments with their roles and responsibilities. The integrated approach has ensured the regulatory framework will achieve the outcomes desired and reflects the need to consider all the numerous constraints that can impact upon land.

The system of agricultural land preservation in British Columbia does not stop at the regulatory level. MAFF has released a publication aimed at explaining farm practices for people living on or near farms, recognising the need to teach people what is "normal" in relation to their expectations around farm activity (Sands, 2011). Agri-teams have been established, which include representatives from local government, MAFF and the ALC. Their role includes the development of agricultural area plans, to plan for agricultural needs, promotion of land capability and the formation of agricultural advisory committees.

A guide to "edge" planning has also been produced. It highlights a range of tools that can be used such as buffers, development permit areas and mechanisms on the urban side to encourage a harmonious relationship between the farm and residential development. Controls on siting residences in the ALR have been adopted, which ensures houses can only be built on identified footprints and protects farmland in the process. Key to these initiatives is the recognition that these mechanisms must be incorporated into design and development stages, rather than retrofitted when a problem arises, at the expense of farmland. This recognition is underpinned by a desire to get people reconnected to productive activity.

An Agricultural Land Use Inventory has been created, which was considered to be a critical piece of support material for advancing the cause of agriculture in BC. Raising awareness of urban dwellers about the importance of agricultural land has also been a priority, and initiatives such as farm tours for the public and local government councillors, conferences and annual meetings have all been used as a key focus of the promotion of agriculture and a way of highlighting to young people the benefits of becoming involved. BC also introduced an income assurance program to assist in supporting farmers and lower rates for productive land in the ALR.

The early days of the ALC were often overshadowed by the approval of controversial development proposals that became the subject of heated debate across BC. The ALC now believes these debates actually reaffirmed, rather than weakened, the public commitment to protecting agricultural land and its support for the ALC's work (Sands pers comm. 2011). This is evident in the growth of support for the ALR and the policy of preserving farmland: from the initial 80% in 1997 to a figure of 95% (Ipsos Reid, 2008). Focusing on the contests and understanding the factors that create them, developing a program of actions and initiatives aimed at increasing the profile and importance of productive activity, especially in fringe areas, and ensuring a range of resources is available to those living or seeking to live in the fringe, have been critical success factors in growing awareness of the importance of ensuring continued productive use of agricultural fringe lands.

Reflecting on the success of the BC model, Sands (2011) noted that a well-researched approach, which built on lessons from other jurisdictions, was essential, and that the protection of farmland required an integrated and connected approach based on making agriculture the first priority; ensuring appropriate tools exist for growth management; ensuring farmers were given precedence in terms of their right to farm and supporting producers with a range of supportive government policies and incentives. The outcomes of this blended, multidimensional approach for BC have been a significant contribution to the long-term viability of agricultural land and greater food self-sufficiency and security. Agricultural communities are now more stable. New market spaces have emerged and strengthened. Here is a jurisdiction that stopped thinking of the peri-urban as a space-in-waiting, applying integrated thinking to the issue that resulted in an innovative, whole-of-government approach to preserving productive land. It provided hard data about the benefits to be secured from such an approach, through its surveys around public attitudes and the numbers that can be demonstrated around changes to land values and land preserved. It demonstrates that without an integrated approach, that thinks about processes, people, product and system, progress will be limited, ad hoc or non-existent. The model contains important lessons for government and planners who must play a significant role in creating the building blocks needed for the new market space to flourish.

The new peri-urban platform and planning

So, while this market in the peri-urban is becoming culturally embedded, it now needs to be married with planning and viability. This research tells some of its stories, but there is much more to be done in relation to putting data around it. Whilst some data sources, such as the Australian Agricultural Census,

help us in this regard, those in the new market express concern that we don't really understand how much production occurs in these areas; that we don't know what the food land deficit is and what the food needs of our projected population are. They see a role for planning in achieving a more mainstream alignment of food with our cultural drivers to push production beyond something that occurs in the grassroots areas of the spaces in between. They argue for a renewed importance to be given to food in both planning and policy, and suggest that governance and policy continue to lag behind. Whilst we are not across this challenge, there are ideas on the ground that may guide how this might happen.

> *...a developer could be requested to do an eco-development of 4-5 acres then the farm could grow food on the rest, and have enough water to do it. You'd still have a development which would return a high value – it would enable good outcomes for both production and development.* (Participant 12, 2011)

The research notes opportunities to redefine development models to incorporate an ecological and productive viewpoint using existing approaches. It is possible to manage peri-urban land in such a way that allows its different, and at times competing, attributes to continue, creating opportunities for living, situated around the farm, placing a central focus on food. There are clues that some are starting to recognise this: the emergence of "development-supported agriculture", an *"...intimate version of community-supported agriculture...a developer includes some form of food production...that is meant to draw in new buyers, increase values and stitch neighbours together"* (Runyon, 2013). One participant also suggested an alternative approach that would provide opportunity for development, but still preserve the land for other uses; however, for this to occur, planning needs to respond.

> *Another example – 100 acre parcel which a developer wants to develop – the council will look at it and say, we'll allow 8 blocks but you have to give us x amount. You have to get rid of every weed, replant it with appropriate species and then hand it over to council. So when you give it you are giving the community someone of worth and without issues. It then gets ticked off by council and then he does the development. Not stopping the development but the environment gets a win also.* (Participant 8, 2011)

The new market precepts of connection and collaboration can help us rethink conflict in these areas to highlight the better way alluded to earlier. How can we use this to create a framework that might centre the peri-urban as the connective force? Firstly, we must capture the multiple attributes of the peri-urban as part of the planning process.

> *It's about capturing the multiple attributes – on your half an acre block, what do you see as an outcome – what do you want to protect? Then turning to the opposite user of the environment, the farmer, who is focused on making a dollar and asking them what they see as the outcomes of the area. Once you understand that, you can then drill down to identify the values demonstrated in those attributes.* (Participant 5, 2011)

This suggests that these attributes and values can be captured by differentiating diverse land uses and adopting a values-led approach that uses techniques including landscape planning. If this is achievable, then by aggregating them into some form of intent, we can start to create a productive precinct that reflects this.

Secondly, we must consider not only the values and attributes, as key aspects of the assets in the platform to be reconfigured, but also

> *...what do you need in the peri-urban in terms of the fundamental resources for food production? You won't need them in all areas, you can't assume that just because it's peri-urban it's a good place to make food. It's a biological process – it's climate, biology and if you don't have that combination with natural resources then don't grow food there. There is an element of understanding the natural resource capacity first.* (Participant 10, 2011)

We must start by identifying the resources available in an area and then plan from this basis to identify productive peri-urban areas that required protection. Once we have done this, it would be possible to frame this into a peri-urban zone, to respond to concerns that there is nothing in Australian planning that hints at the peri-urban as anything more than a transient space.

Creating a land use and regulatory environment that responds to peri-urban food production could underpin attempts to ensure a productive future for these areas. We could map areas of potential productivity to facilitate the creation of a peri-urban zone. We could look to potential opportunities for production as opposed to simply looking at potential areas, and determine how productivity in these areas will be retained or preserved, to ensure the conditions for this to occur are created.

The research finds that to date, planning responses to Australian peri-urban challenges have focused mainly on dealing with growth management issues with limited exceptions, with little awareness that these responses are in fact urban ones. Despite comments in the data that the mechanisms have not succeeded, or that they incorporate loopholes or require further thinking, there seems to be a rigidity of thinking, a desire to stick with the adopted formula. As a result of this, a range of alternatives has yet to be considered – there is a distinct lack of innovation in terms of the response. A clear example of this failure is that mature responses to peri-urban challenges evident in overseas jurisdictions have just not been considered, despite obvious successes over significant periods of time.

The emergent themes highlight the research findings that so much needs to happen to resolve the three critical challenges and that the peri-urban has the capacity to accommodate most, if not all of the response.

> *...so many things need to happen in parallel – opening up the distribution space, young farmers, access to land, engagement in policy and research – there is no research being done that asks the big questions like what the food growing needs of Brisbane, what is the carrying capacity of Australia from a good growing perspective, how much water do we need, how much land?* (Participant 12, 2011)

A new approach will centre upon the attributes of peri-urban spaces and reprioritise the agenda from a different perspective, allowing evidence of peri-urban potential to emerge, offering a space for the quiet voices to be heard and exerting greater influence over planning. A shift from the current paradigm of growth at all costs is thus required and a move from the lifestyle ideals that dominate. In Australia, we have not yet made this necessary response and so the complexity of peri-urban issues remains a persistent and nagging challenge. The emerging themes highlight that what is now required is a broad multidimensional response, which incorporates inputs from a range of disciplines, reflecting the multifunctionality of the peri-urban; embracing alternative ways of thinking; and encouraging a much wider discourse about the future of these spaces and their relationship to the city.

Chapter 7 The Research Findings and Contribution

> *...Everything...comes together... subjectivity and objectivity, the abstract and the concrete, the real and the imagined, the knowable and the unimaginable, the repetitive and the differential, structure and agency, mind and body, consciousness and the unconscious, the disciplined and the transdisciplinary, everyday life and unending history.* (Soja, 1996, p. 57)

The American political geographer and planner, Ed Soja, wrote of taking Los Angeles apart, a method he used to understand the emergent patterns in urban landscapes (Soja, 1986, 1996). Reading the geography of contemporary Los Angeles by taking it apart, he was then able to reconstruct it, enabling a view of a "*...comprehensive whole, a limitless space of simultaneity and contradiction, impossible to describe in ordinary language*" (Soja, 1986, p. 255). Soja described Los Angeles as a *"...place where everything seems to 'come together' in evocative fragments"*. Abstractions and concreteness were "*combined in verbal tours of the peripheral and central landscapes of Los Angeles, critical travelogs aimed at restructuring how we look at, interpret, and theorize the spatiality and historicity of contemporary urban society, how we read the urban con-text*" (Soja, 1986, p. 255). In a later piece of work, Soja also went on to propose the concept of "thirdspace", a space enabling both contestation and a rethinking and renegotiation of both cultural identity and boundaries (Soja, 1996).

Drawing together the findings of this research into a coherent whole is not unlike Soja's process of first, pulling a place apart, to secondly, see what it reveals about the whole. In this case, the act of pulling the peri-urban space apart has revealed new markets, new forms of business models and new relationships, all implying a new space, requiring alternate forms of governance, and all acting as provocations for land use planning. It has also revealed the peri-urban as a type of third space, an alternative to any dichotomous or binary view, a place where urban and rural matters can actually come together, and one much more mature, and with more substance, than many would have us believe. This suggests that it does indeed all come together coherently in the peri-urban, and when it does, the outcomes both surprise and challenge.

7.1 The Research Question Answered

Recalling the research question, it sought to answer the key question of whether the peri-urban has an identity, and if so, what this identity might look at. It began with the idea that despite the prevailing view, the peri-urban space is not a transitional or temporary space, but rather one of multifunctionality and dynamism which bestows an identity and integrity. This was framed in the context of a belief that poor planning and management Australia's peri-urban areas had resulted in a space whose identity was not at all evident or clear. The determination of identity (or not) necessarily provokes other (subsidiary) questions on the matter of land use planning: questions as to whether and how land use planning shapes the current identity (or lack thereof) of the peri-urban; and of what the implications for a better and more appropriate planning response are, if the peri-urban does exhibit identity in its own right.

The research presents a strong case for a unique peri-urban identity in the Australian landscape. First, it can be variable in spatial scale, yet exhibit similar characteristics across space. It can contain differing activities across a spectrum of land-uses, such as farming and niche food production, tourism and recreation, housing, open space and bushland (made possible by the provision of ecosystem services and including aesthetic landscapes). And when these uses are in contest and tension the research shows these land uses can be held in tandem and be accommodated Thus, an important feature of the peri-urban identity is that it is ***not*** one-dimensional or monofunctional; rather it is the sum of many parts, which may take the forms of land-uses, activities, functions and services. Multifunctionality is a strong feature of the peri-urban identity.

Second, inherent in this identity is a sense of renewed opportunity, borne out in the establishment of new land uses in the space, ones which aim to co-create rather than compete. Key elements of this sense of renewed opportunity (which ironically harks back to earlier times) include its production potential and its environmental and aesthetic assets. The peri-urban space is agile and flexible with an ability to respond to the growing needs of urban dwellers in new and different and the very challenge of planning for these mix of uses in and of itself becomes part of the identity. It is not straightforward. It can hold a range of competing realities steady, in a way that other pieces of land have not been able to do. The research reveals different voices can be heard, reflecting the different versions of the peri-urban space that we see.

Third, the research finds that there is a new agrifood market in the peri-urban which currently contributes to its identity. This market pulls multiple uses and values together by processes of collaboration and discovery, using its proximity to consumers and other collaborators as an asset. These findings challenge planning's current interaction with the peri-urban space. By adopting Soja's approach the subjective and objective, the real and imagined, the voices and contests, and the way in which they push and pull, bump and rub together were uncovered. A cacophony of voices often ignored by planning was heard and when this was unpacked, the peri-urban's ability to contain and hold what looked like a messy and confused agriscape, revealed itself to be something much more. This "messiness", or the co-existence of different types of uses in the space, co-created and constructed a new market space whose very layering only intensified the dilemma for planners but created a platform for regional development.

The idea of the peri-urban as opportunity space also lies in its potential to leverage the growing interest in food to create renewed community connections. Some in the space are combining its amenity values with productive enterprise to create new experiences and products. The research confirmed a new productive peri-urban agri-space, where entrepreneurs have consciously located to create smaller, value-added operations, which has emerged despite the diminution of the producer voice. Local food systems are developing in the peri-urban as a response to agricultural transformations of more recent times. Underpinning the emergence of these systems in the space is the creation of new markets and

business models founded on a renewed partnership between people and their food. Using a shortened value chain where the producer remains constantly involved, food provides the catalyst for renewed relationships between not only those in the urban and rural space, but sometimes those with competing interests in the peri-urban space, leading to a critical and deliberate reshaping of the peri-urban identity and the re-invigoration of important cultural precepts. Once these landscapes were purely productive, now production competes with other purposes driving not only a new type of enterprise or product mix but a reordering of priorities away from prevailing economic, agricultural and even cultural modes. As part of this reordering, local food is combining with social and cultural influences, driving a rethink of the agrifood system, and critically, the place where this is most obvious at present is in the peri-urban. Internationally, there is growing evidence of this occurring, but in Australia, the data suggested that where this refocusing is evident, it has happened in spite of planning.

Fourth, the research revealed a peri-urban identity of substance and strength. The constant transition that the peri-urban has experienced in recent years has an essence to it that can be planned for. Examining the changes to rural landscapes provided insight into the role of the peri-urban as the space-in-between, in highly influential and irrevocable processes of change. The peri-urban is a legitimate third space. Wedged between urban and rural spaces, it challenges the urban-rural dichotomy and suggests the redundancy of this division. The peri-urban holds the potential to bring urban (town) and rural (country) spaces together, and an approach that recognises interdependencies may deliver more positive outcomes for the space.

Finally, the research found examples where people had understood the importance of the peri-urban to the ongoing survival of communities and cities. Here the peri-urban was the conduit, aiding renewed and shared understandings about land use. Much of the success in these places was achieved by incremental interventions, pulling apart contests, starting small, and asking simple questions. This allowed a new understanding of peri-urban attributes, many of which have been traditionally viewed as problematic, such as its size, proximity to urban areas, production and scale. Forming a key part of the peri-urban identity, this process of co-creation between planners and communities extends into the new market, where producers work with consumers to co-create its ingredients, not only product and process but also particularly a new way.

7.2 The research approach – formulating a comprehensive whole

The early stages of the research suggested that the prevailing view of the peri-urban was one that saw only a residential future for the space and the land's use lying in its ability to act as a land bank for future urban purposes. This transitional view situated the peri-urban in a holding pattern that has contributed to its degradation. This has occurred despite the reliance of planners and decision-makers on the peri-urban to fulfil a range of purposes, including the amenity, open space and recreation requirements of cities. It has also occurred against the reality that individuals value the peri-urban for a wide range of very different reasons.

In the face of these prevailing views the research departed somewhat radically from the more "traditional approach adopted by planners to land use typology and planning. The act of pulling apart all the voices, uses, challenges and contests in the space to reveal the lived, the conceived and perceived, allowed this identity emerge. Similarly the research worked to understand the peri-urban through the lives of those in the peri-urban; representations of the peri-urban interpreted, and the locality itself explored to create a form of peri-urban coherence, such as Halfacree (2007) did for rural space. This was enabled through a series of primary and secondary data sources, adopting interpretive lenses based on multiple values and experiences, allowing participants in the process to create their own vision of the space. Giving voice to the peri-urban and all its elements and attributes allowed an investigation of the convergent contextual forces of population, landscape sustainability and food production, key pressures in the space. These pressures took the research to spaces way beyond planning, enabling not only a "*verbal journey*" of the type Soja refers to, but also a framing of the space as wicked, messy and confused. Whilst this allowed the researcher to acknowledge the range of values and assets evident in the space, it produced challenges for the creation of a conceptual framework. It meant that many forms of knowledge and concepts needed to be drawn on, firstly to understand what this meant for identity, but also to see if in the peri-urban, we could find their accommodation.

A deep concern of the research was to better position the peri-urban in the context of the ongoing loss of productive land to urban development in Australia, and the manner in which Australia's peri-urban landscapes were irrevocably changing, also helped frame the research approach. The role of land- use planning and valuation mechanisms in this change process was explored, underpinned by a desire to challenge and shift the mindset that this point of rural-urban interface was nothing more than a temporary space. Whether this shift could keep peri-urban land productive was also considered and aided by a conception of these spaces as multifunctional and dynamic, rather than transitional and temporary. While planning approaches to the peri-urban were considered as part of the challenge, the research focus was first and foremost on the peri-urban identity. Having established identity, the key characteristics and processes determined within this identity will provide the basis for further research into appropriate and better planning mechanisms and policy for the peri-urban. However this research did not consider this. The focus was rather to build a comprehensive picture of the peri-urban as a mature space, and one maturing into some very interesting new types of markets that have enormous implications for how we think about what happens in terms of land-uses in the space. All of this comes together to have significant implications for peri-urban policy and management frameworks, and particularly land-use planning, into the future.

7.3 The research contribution

Establishing the concept of identity in the peri-urban literature

The research makes a unique contribution to knowledge in the field of peri-urban studies in defining an identity for the peri-urban area in Australia based on the concept of multifunctionality. Unlike most

research in this field, it adopts an interpretative and qualitative approach setting it apart from many Australian studies of the peri-urban space. Using the valuation and land-use planning literature, as well as the theory centred on agricultural transformation, the research applies a multifunctional perspective to the agrifood futures of the peri-urban space and in doing so develops the earlier work of Australian authors such as Holmes (2006; 2008) and Barr (2003; 2005). Using evidence gathered from participant perceptions, the discourse and observations, the research applies a series of lenses over the data to develop a framework that enables the identity of the peri-urban to be refined, providing perspectives and insights into the peri-urban not previously examined. This critical dissection also enables the research to highlight the complicit role of those involved in the planning and valuation professions in facilitating urbanisation in the fringe, making a further important contribution to the literature.

The manner in which the peri-urban identity is extracted and revealed leads the way as a test bed for a new approach, which facilitates and indeed fosters the capacity to bring conflicts and contests together. Having found the white space, it uses it to create a blue ocean, a hybrid both in terms of ways of thinking and in the nature of the land-use typology itself. In this blue ocean, the consumer becomes co-creator rather than competitor. And planning has created blue oceans before. If we scrutinise the transition and growth of the city, as many planners and geographers have, it is possible to see where planning recognised and acted on the potential for innovation in land uses, rather than consign them to a future based on what has always been, and the transition of former industrial sites to open spaces and parkland is one example which suggests a capacity to shift from the status quo and engage in blue ocean thinking. In the peri-urban to date planning has not been nimble enough to do this, and so has not been able to recognise the emergence of a new space centred on a distinct identity.

7.4 Changing dynamics - the peri-urban's disruptive utility for planning

Having established that the peri-urban has an identity created largely because it can accommodate multifunctionality, it is appropriate in the final sections of the research to consider the what next in terms of the subsidiary questions which arose from this thesis research question. The research found that despite the contestations evident in the peri-urban, planning has bestowed a hegemonic identity on the space. Observing the diverse activities in the peri-urban, and listening to the voices in the space, challenged thinking about what can be done. It suggested that the space is misinterpreted, that the peri-urban's distinct identity is overlooked, most particularly because planners and others with an influence over it adopt this narrow hegemonic view of its capability. Yet against this backdrop, the explicit peri-urban identity located has strong implications for the way we plan, manage and value these spaces. There is utility in the contestation that occurs in the peri-urban as it challenges the prevailing view. It also opens the space to collaboration and alternate possibilities, but the act of seeking resolution to the tension and conflict, such that there are winners and losers, means that opportunities arising out of these processes, and potentials that lie within the space, are neglected.

The peri-urban is acting as a disruptive force and a significant challenge for planning. Within the space, there is a variety of push-pull factors at play, which appear as pressures, preserving the conflict and contests that continue to challenge. These factors impose a variety of pressures on the peri-urban, and in some cases are not dissimilar to the forces that drove modern attempts to plan, such as the development of rural slums. Some of these push-pull factors are founded in the multifunctionality of the space, where sought-after assets of amenity, bucolic lifestyle, recreation and bushland are provided as an outcome of agriculture's services. Many in the peri-urban apply their own valuation framework to describe what the peri-urban means to them and what they value in terms of these assets. There is a personal coding of the landscape and the activities that take place within it, a strong sense of rights and place. Paradoxically, there is an understanding that this sense of place is often only temporary because it is so easily subverted by changes in policy and planning regulations, and also by the machinations of the land market. Often when these assets are threatened by planning or development, heterogeneous and potentially disruptive collectives form around them, but this does not necessarily have negative consequences for the space.

Planning for the peri-urban identity

So, how can planning better support the peri-urban, now that evidence of its identity, and indeed its maturity, has emerged? Whilst some might argue that the contestation in the space makes it impossible to plan for, it is clear from this research that this is not the case, and that planners can and do plan for possible reconfigurations in challenging spaces. In regional development processes, assets are brought together and reconfigured and sometimes out of this innovation occurs. Planning too is a dynamic process that often focuses on assets, resources and processes of change, but in the peri-urban, planning has never approached it in a similar way. Instead, planning has been stuck in the dichotomous view that not only influences the credence given to peri-urban identity and activity, but has also reduced its ability to act in a nimble and responsive way to what is going on in the space.

This means that in the peri-urban, planners and policymakers in general are going to have to rethink the way they conceive of, and act within and for, these spaces. One of the problems of the wickedness in the peri-urban is that there is a dominant planning voice, supported by a developer voice. These foster the hegemonic transitional residential view and valuation approaches to the space, with which some are uncomfortable. Even more importantly, there is extraordinary discomfort around the producer voice and a disconnect that has meant that this voice has not been allowed to demonstrate an alternative way of thinking about the peri-urban.

In light of the peri-urban identity exposed, a rethinking the space is necessary, one that takes the elements of this identity into account. Based on this, planning must determine what it really seeks from the space. There are many outcomes to choose from, befitting of a multifunctional space, including the reconnection of city and country, and the obliteration of conflict, the creation of a viable and vibrant space where mixed use flourishes, or the continued confusion associated with a space that often presents as a mosaic jumble. Planners and policymakers may decide that recognising the importance

of food production being in close proximity to the city rates more highly on the decision-making scale than the perpetuity of an exclusively residential development paradigm. Whatever is given precedence, it remains that whilst a singular, dominant use is upheld, the contests and conflicts will continue to thrive, thus confirming the need for an alternative planning approach. This suggests planning must come to terms with the reality of a multifunctional space, which sits alongside the two disparate spaces, city and country, and the reality that this multifunctional thirdspace, with its own identity, forms the connective tissue between the other two.

The planning profession has a responsibility to guide the rethinking and reframing of the roadmap for the peri-urban. Other places have wrestled with the problems of the space, tackling them in different ways. At the core of the research has been an effort to understand the peri-urban as a useful space, creating a consciousness of what these areas offer for both urban and rural areas, and critically connecting the three challenges of population, landscape and food production which come together in this space. To do this, planning must first recognise the peri-urban as useful for more than residential development, and then second it should lead the thinking process around how to embed other futures for the space. When contextualised with the challenges that urban society faces, in terms of food, sustainability and growth, the peri-urban offers a way to help define the many possibilities that give this space a stronger identity, and through this, a sustainable future.

7.5 Final reflections

The use of reflexivity in this research has been a constant and important consideration throughout its progress, so it would be remiss of the researcher not to make some final reflections on the future of this research and the learnings about the research approach that were uncovered as the research progressed. The next body of work arising out of this research will undertake to review land-use planning in the light of this finding of a peri-urban identity. It is expected that this would include consideration of how the current tools advance the opportunities inherent in the peri-urban identity and potentially seek to develop new specific peri-urban planning mechanism.

Whilst a dissertation, this by no means suggests that a finite view of peri-urban identity has been achieved, and further research could focus more closely on whether the identity that has now emerged meets the expectations of those who relocate into the space. Further, the use of Lefebvre and Halfacree's concepts of space as being part of a triad drawing on the lived, the conceived and perceived (or the lives, locality and representations) offers opportunities to develop a more detailed model of peri-urban space along these lines. A further exploration of Soja's thirdspace concept, using the lens of a strong peri-urban identity, might also be built into such a research process to determine whether a next adaptation of the spatial triad may be necessary. Finally, other endeavours potentially arise out of this research and focus on the more technical, seeking to resolve the lack of quantitative data around the peri-urban and create a more detailed understanding of the scale of new market spaces in peri-urban Australia and their contribution to gross domestic product and regional economies.

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Appendix 1 Semi-structured Interviews (Participants and Questions)

Thirteen semi-structured interviews were conducted in South East Queensland and Tasmania. The interview participants included producers, land-use practitioners, planners, government representatives and valuers. Note the interview participants have not been named due to the need to retain their confidentiality, but they can be described as follows:

Participant 1 – government representative (local government)
Participant 2 – council planner (and resident)
Participant 3 – valuer (and resident)
Participant 4 – government representative (agriculture)
Participant 5 – council planner (and resident)
Participant 6 – producer (and resident)
Participant 7 – government representative (agriculture)
Participant 8 – land-use practitioner (and resident)
Participant 9 – planning expert
Participant 10 – agribusiness expert (and resident)
Participant 11 – producer (and resident)
Participant 12 – former producer (and resident)
Participant 13 – government representative (planning and valuation)

Interview Questions

Farmers /Residents (note these questions were adapted to suit the participant, e.g. farmer was changed to resident)

What is the nature of your life here - enterprise/business/lifestyler/other?

How long have you been a farmer/resident?

Have you always farmed/lived on this location?

Are you a full time farmer/resident (or commuter)?

Impact of urban development on rural enterprise

What is your location in relation to the urban fringe?

Does your proximity to the city convey any positive or negative influences on your enterprise/activity? If a producer, what about proximity to residents?

If so, what are they? How have they played out?

Does this (if any) proximity influence the choices and decisions you make around your business/activity? Does it influence your lifestyle?

What other influences are there? How do you think about them? How do they affect your lifestyle, business decisions or future directions?

Life in the peri-urban

What is life like living in the peri-urban? How long have you lived here? If not always, why did you move here?

Do you have close neighbours? If so, what do they do – farm, resident, etc.? What does this mean for you? Do you have a positive relationship with them?

What about the people in your area?

What are things about the peri-urban that you think are positive (what do you like)? Negative (what don't you like)?

Do you think it is a distinct space? Does it have an identity that is unique to it? If so, what makes you say that?

What keeps your business/life here?

What would make you leave?

Do you think your decisions to remain here pay off in the long run (economically or other)?

Do you like the way the area is changing/developing? What you like about it? What don't you like about it?

What do you see as its future?

Interaction with land use planning mechanisms

Have you had any experience with the planning system in the last ten years? If so, can you describe your experience, e.g. what you were seeking to do, whether you received appropriate feedback, whether you were able to achieve your goal.

What is your land zoned? Are you aware of any restrictions on it (e.g. no development, agricultural land protection; flora or fauna protection)? Do you see this as a positive or negative influence?

Have you ever dealt with developers?

The land market

Do you see the land market as playing a positive or negative role in your future plans?

What is your view of what has occurred in relation to peri-urban lands in recent times, in particular the considerable loss of these lands? Has this opened up new opportunities for your enterprise?

Do you see yourself as impacted upon by the peri-urban land market?

Ecosystem services

Have you undertaken environmental improvements on your land in recent years?

How have these improvements been funded?

Have you ever been paid for environmental maintenance/improvements that you have carried out on your land?

Changes in rural spaces and agriculture (farmer specific questions)

How has agriculture changed (across the board)?

What changes have you noted in your region in relation to agriculture?

How would you describe the scale of enterprises?

What is the nature of other productive enterprises? Does product change? How? Why?

What, in general terms, is the size of the production footprint? Has this changed over time? Why?

In your experience what is considered to be agriculture in these landscapes?

Is it traditional broadscale agriculture?

Is there a role for land-use planning in facilitating collaborations and innovation?

New forms of production and distribution

How is business done on the land today?

How are production and distribution systems organised?

What is different about this - have they changed? Why do you think so?

What is driving the changes? How is this playing out?

How do you market your product?

How do you gain market access? How do you maintain it?

Is land accessibility/availability a major factor in your decision-making?

People

What has changed about people in production? (Is there a new breed of farmer involved?)

Are there many in your area? Where do they come from?

How would you describe them?

What do you see for your enterprise's future?

Valuers

Valuation practice

Do you conduct many valuations of rural land? What about peri-urban (fringe) land?

For what purposes are these valuations conducted?

How is peri-urban land valued?

What factors are incorporated into these valuations?

How are externalities dealt with? How about intangible assets?

Given the purposes for which you value land, does one stand out?

Highest and best use

How is the concept of highest and best use determined by the valuer? Do you use this concept? Is this useful?

Does practice meet theory?

Are there any implications evident if the land in question consists of more than one lot – in these cases, are lots valued separately or is the total landholding valued as one entity?

Impact of land use on valuations

Does the land use at time of valuation have an impact upon the framing of the valuation?

In the case of rural lands utilised for agricultural purposes, is the scale/value of the business conducted on that land incorporated into the valuation of that land? Does this generally result in a positive or negative influence on value?

Is there any relationship between agricultural use and residential potential in valuation considerations?

Does proximity to urban centres play any role in valuation in practice?

Do some factors of land use influence valuation more than others?

Land speculation and influence on value

Does potential play any role in valuing lands that are potentially suitable for residential development yet zoned and perhaps utilised for rural purposes?

Is this residential potential reflected in any potential yield value for rural land?

Alternative practice

In your view, does the Australian land valuation system work effectively in relation to rural lands, and in particular the maintenance of rural lands in agricultural use? What about for peri-urban lands?

Or, do you think this is outside of the influence of the valuation system?

Are there changes you would like to see to the manner in which rural land is valued?

Do you think the peri-urban has distinct identity?

Planners

Do you live in the area? As a resident, what do you see?

Do you live on the land? Have you always lived here?

What do you value about the land? What don't you value?

What values do you think underpin why people live in this area?

What is the situation re population growth in your area?

What drives people's settlement decisions?

What is this area valuable for? What forms of economic activity take place? What do these need to thrive?

Is the term peri-urban used much?

As a planner, how do you conceive of the value of peri-urban land? Do you use planning tools to do this?

In your practice, what do you see in relation to other people's values?

How are planning decisions made in your council?

Is amenity a strong consideration? How is it defined in your view? How do you quantify it? Do you need to?

How is your urban footprint designated?

What do you think leads planning when thinking about peri-urban spaces?

Has the regional plan been successful in its objectives?

As an area with a strong production focus, does the plan help or hinder your activities?

Does it include tools of assistance?

Do you have to deal with many land use conflicts?

What drives these?

Have you been successful?

What has contributed to that, or made it difficult?

Does your consideration of planning matters extend to the role of activities of intangible value or externalities?

What would you like to change about the planning system in peri-urban/rural areas?

Does the peri-urban present you with a wicked problem?

Do you think it has an identity of its own? What contributes to this (if yes)?

Do you have much by way of data on productive land/activity etc.?

Can you think of a peri-urban area that has made the land use mix work?

Government and expert representatives

History and success of regional planning?

Is this a contested space? Do you see conflicts?

What level of support for regional plans?

What is the role of values in the space?

Have other planning (or other) tools been explored?

Were they adopted?

Why? Why not?

Do you think there is adequate data on the capacity of peri-urban productive lands, around economic value and contribution, as well as land supply and loss?

Is the link made between planning and food?

Do you think the peri-urban space has an identity? How would you describe this? Does one interest dominate in the space? What is it? What are the others?

Appendix 2 Conferences and Workshops

A number of conferences and workshops enabled the researcher to engage in a range of targeted conversations that had bearing on the research.

Food for All, Making a Difference Forum
VicHealth, 22 June 2010, Flemington, Victoria.

Food for All aimed to encourage local government authorities to improve integrated planning of key factors that influence access to food, such as land use, transport, housing and economic development. The Forum disseminated research from the project bringing together local government elected members, researchers, practitioners, planners, policymakers and food producers.

On the Edge: a forum on food and sustainability around Australian cities
25 October 2011, Melbourne, Victoria.

This forum focused on "*the centrality of food production to our physical, environmental, economic, social and cultural health.*" It considered the importance of the preservation, management and development of agricultural resources close to the city to the future health, sustainability and conviviality of our communities. Peri-urban agriculture was seen as a key component of what makes Melbourne the most liveable city in the world, and the forum advocated for its protection.

Foodscapes, A Tasmanian Food Security Council Symposium
21 November 2011, Hobart, Tasmania.

A one-day collaborative symposium where researchers, planners, food producers, practitioners, local government representatives and others came together to share knowledge and understandings, collaborate and have input into the Tasmanian Food Security Strategy.

Agriculture in an Urbanising Society, International Conference on Multifunctional Agriculture and Urban-Rural Relations
1-4 April 2012, Wageningen, the Netherlands.

> "*A major demographic milestone occurred in May 2007 when for the first time in the history of mankind, the earth's population became more urban than rural.*"

This conference focused on key questions for the next decades centred on the production and provision of urban necessities of food, fibre, clean water, nature, biodiversity and recreational space and whether this could be done in manner that is considered to be socially, economically and ecologically sustainable and ethically sound. It focused on the idea of multifunctional agriculture as

an important reference point in debates on the future of agriculture and the countryside and its relations with the wider and predominantly urban society.

The conference sought to bring together scholars of different disciplines from all parts of the world.

Cradle Coast Local Food Community Networking Forum
15 November 2012, Ulverstone, Tasmania.

Hosted by the Local Food Strategy Group, this forum included local food producers, processors, and hospitality and tourism businesses.

Agrifood XIX: Conference of the Australian and New Zealand Agrifood Research Network
10-13 December 2012, Massey University, Palmerston North, New Zealand.

An annual gathering of agrifood researchers from across Australia and New Zealand.

Beyond the Edge: Australia's First Peri-Urban Conference
1-2 October 2013, La Trobe University Melbourne.

Australia's first peri-urban conference was co-hosted by the Community Planning and Development Program, La Trobe University, and the School of Global, Urban and Social Studies, RMIT University.

Appendix 3 Discourse Documents

Policy documents, plans and reports

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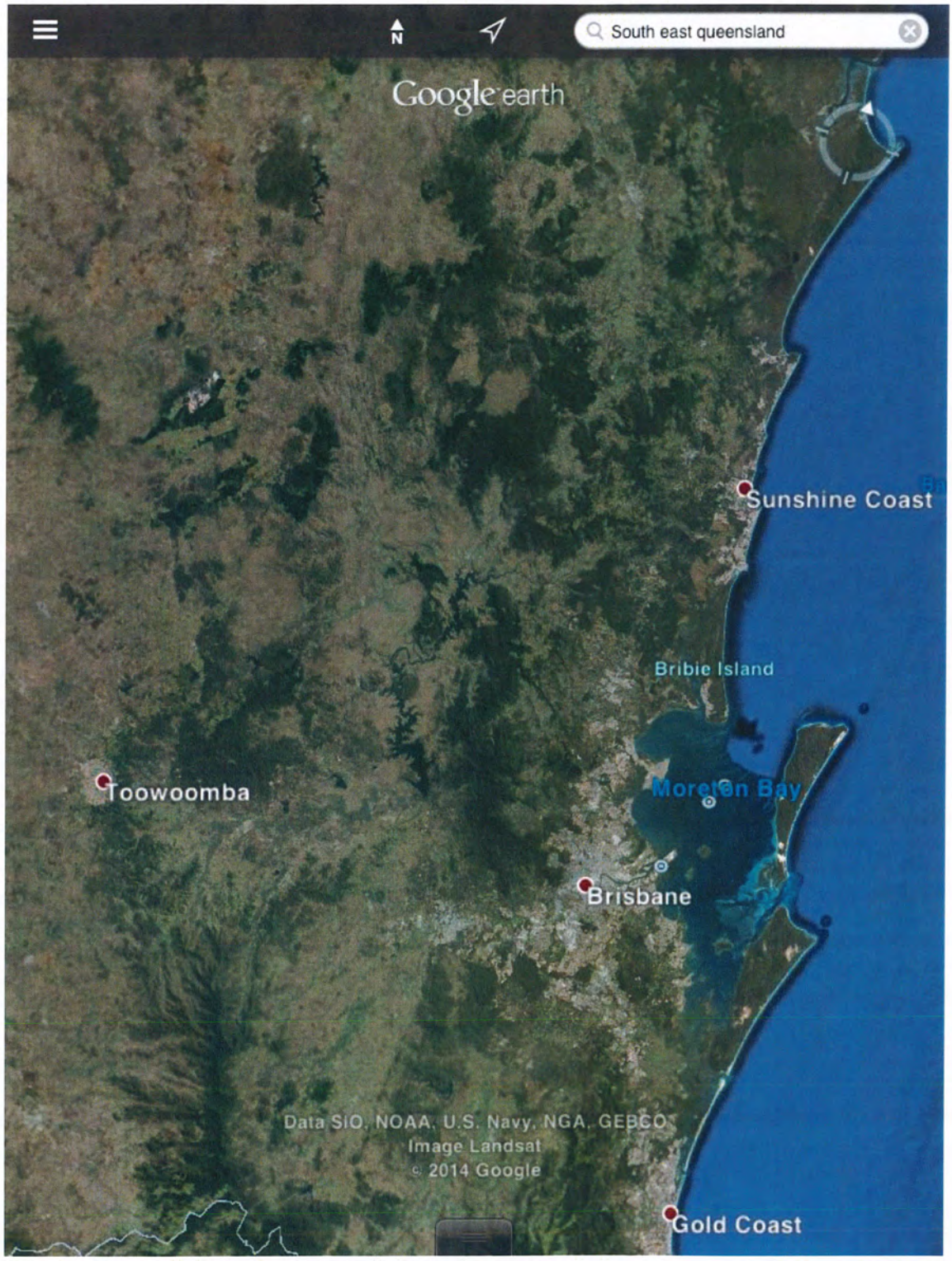
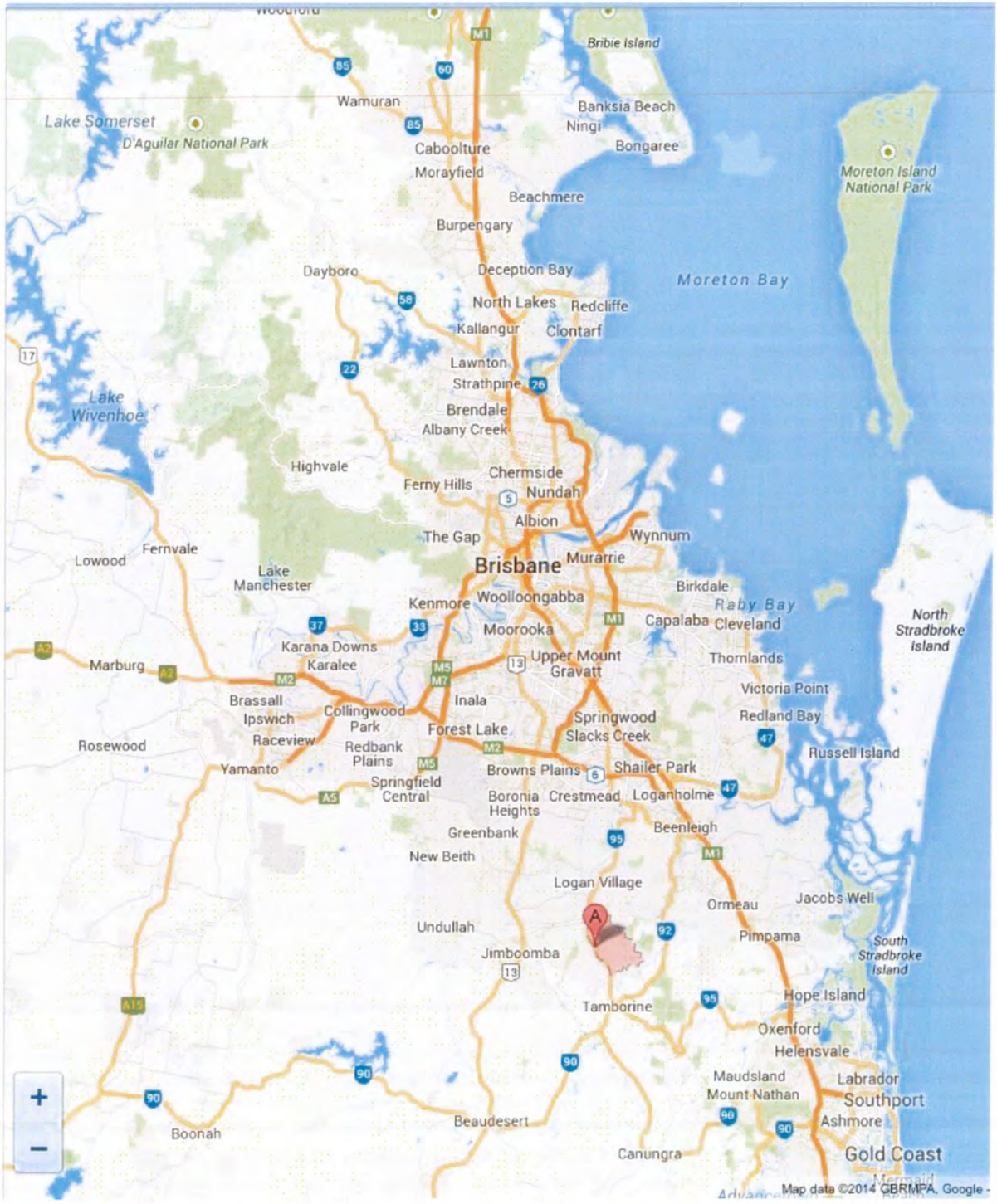
Appendix 4 Location Maps

A4.1 South East Queensland location map

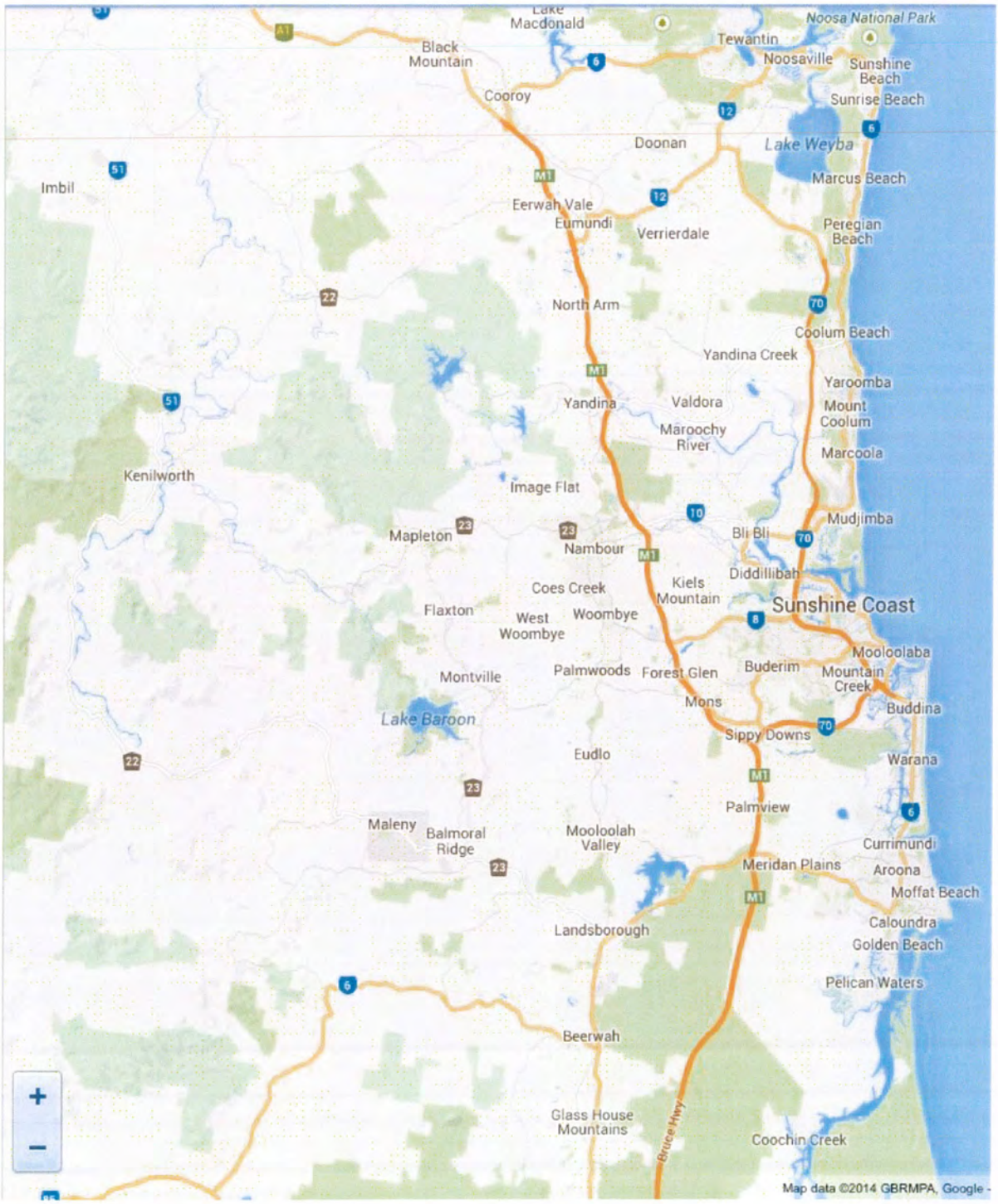
Particular areas observed were in the Noosa, Maroochy and Redlands areas, including the Noosa fringe, Maroochydore, Maleny, Montville, Eumundi, Redlands and the Yarrabilba area north west of the Gold Coast.



A4.1(a) **Detailed location map 1 – South East Queensland (southern end – the location marked A shows Yarrabilba)**



A4.1(b) Detailed location map South East Queensland (showing northern area of the region)



A4.2 Launceston and the Tamar Valley

A4.3 Kingston and surrounds (SE Tasmania)

A.4.4 Devonport and surrounds (NW Tasmania) location map

A4.5 Burnie and surrounds (NW Tasmania)

A4.6 The Netherlands - field trip locations

(Doornenburg to the east of the screen, with Ressen to the north east)