



UNIVERSITY OF
TECHNOLOGY SYDNEY



Australian Government

Department of Sustainability, Environment,
Water, Population and Communities



National Environmental
Research Program



Institute for
Sustainable
Futures

IMPLICATIONS OF POPULATION GROWTH IN AUSTRALIAN CITIES: CASE STUDY – MELTON, VIC

2013

ABOUT THE AUTHORS

The Institute for Sustainable Futures (ISF) was established by the University of Technology, Sydney in 1996 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change toward sustainable futures that protect and enhance the environment, human well-being and social equity. We seek to adopt an inter-disciplinary approach to our work and engage our partner organisations in a collaborative process that emphasises strategic decision-making.

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CITATION

Cite this report as:

Sharpe, S., Ross, K., Moore, D. Partridge, E. and Paddon, M. 2013, Research into the Economic, Social and Environmental Implications of Population Growth in Australian Cities: Case study – Melton, VIC, report prepared by the Institute for Sustainable Futures, University of Technology, Sydney, for the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC).

ACKNOWLEDGEMENT

The authors would like to acknowledge and thank all stakeholder participants for giving up their time to participate in interviews and providing such rich views and perspectives regarding the Melton area.

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Case study summary

Until quite recently Melton was considered a rural town, or a 'satellite' town of Melbourne. With the extension of the current Victorian Government's Melbourne Urban Growth Boundary, Melton is one of the fastest growing local government areas in Victoria and Australia. Over the period from 2001 to 2011, Melton's population grew by 56,883 persons or 7.8% pa, compared to State growth of 1.6%. This growth is projected to continue, with the population of Melton predicted to more than double over the next two decades.

The case study research suggested that the rapid pace of growth has left many in Melton in a state of flux over the identity of the city and their ability to influence the future course of this growth. Stakeholders expressed a sense of inevitability about population growth, and a feeling that the best they could do in the situation was to plan adequately for the coming influx of people. However, many also pointed to a number of positives emerging from population growth, including increased community diversity and dynamism, an improved ability to lobby and receive higher order services (such as hospitals and higher educational institutions) and the provision of some major transport links.

Nevertheless, many stakeholders expressed a frustration that Government at all levels was not appropriately planning for and allocating the resources necessary to cope with population growth. As a result many pointed to negative outcomes such as inadequate service delivery, a lack of community cohesion and a need for residents to travel out of the area for essential activities such as work, education and recreation. This extended travel largely requires private vehicles because public transport options are limited and no significant improvements appear to be on the horizon. These issues were seen to exacerbate one another.

All stakeholders recognize the challenge in balancing growth and the environment, but many commented that the outcome of this 'balancing' always ended up supporting development. One stakeholder voiced the inherent conflict in this situation: 'it is challenging as a growth area, as we say we are pro-environment, but we are continually eating away at it.' Several stakeholders firmly believed that 'the continual expansion of urban areas is not sustainable'. There were three main issues that emerged as particularly important in the environmental domain: perceptions of open space, conservation of wildlife habitat and biodiversity, and the design of buildings and developments. The underlying perception among stakeholders is that the environment appears to always come last to social and economic considerations.

Socially, Melton appears to be relatively disadvantaged in comparison to other urban areas in Victoria. Levels of university education are significantly lower than in Melbourne or Victoria as a whole, although the proportion of residents with these qualifications is growing more rapidly in Melton. Melton has a higher proportion of residents with certificate or diploma qualifications in comparison with Melbourne and Victoria. While there was a slight reduction in the rate of social security take-up in Melton over the past five years, Socio-Economic Indexes for Areas (SEIFA) scores suggest that Melton has a number of areas of high socio-economic disadvantage. Unemployment is consistently higher in Melton than in Melbourne and Victoria.

Vulnerability and social isolation can be challenges for people and families moving to the new development, high growth areas. One of the main causes of vulnerability is the compounded impact of lack of services and lack of mobility. Stakeholders pointed out that these impacts can make the somewhat cheaper housing available in these areas something of a 'false economy'.

Stakeholders shared the sentiment that Melton has relatively low levels of community cohesion. It was suggested that this is a result of a number of factors, including the relationship dynamics between old

and new developments, a lack of a shared identity and the few opportunities for interaction between the different socio-economic groups.

The economic indicators also show variability within the Melton area, with overall household wealth increasing, but average dwelling prices in different areas showing that there is a range of household income and wealth levels within the local government area (LGA). Household debt service ratios and the ratio of debt to income have increased in Melton, and average house and unit prices in Melton are significantly lower than the state and Melbourne average.

Transport data indicates Melton is a highly car dependent area, with a very low level of public transport usage compared to the rest of the state. This high level of dependence on private vehicles likely reflects the relatively poor level of public transport infrastructure in the area, and has a number of negative implications for sustainability, as discussed further in the case study. The main economic issues discussed with stakeholders were related to the lack of economic centres, a need for more diverse businesses and employment opportunities, and insufficient transport options.

The main challenges of population growth in Melton are building the appropriate settlement design, creating a more robust local economy and providing timely social and physical infrastructure. Governments and responsible agencies will have to explore new methods and strategies for funding infrastructure, coordinating priority actions and preventing or mitigating the expected negative impacts in the long-term if infrastructure development does not keep pace with population growth.

Glossary

ABS	Australian Bureau of Statistics
CBD	Central Business District
CD	Collection District
CO	carbon monoxide
cvm	Chain Volume measures
DSE	Victorian Department of Sustainability and Environment
DSEWPaC	Federal Department of Sustainability, Environment, Water, Population and Communities
EPBC Act	Environmental Protection and Biodiversity Conservation Act
GAA	Growth Areas Authority
GRP	gross regional product
HC	hydrocarbons
ISF	Institute for Sustainable Futures
kg	Kilogram
km	Kilometre
km ²	Kilometre square
LGA	Local government area
NGO	Non Government Organisation
NO ₂	nitrogen dioxide
O ₃	ozone
pa	Per annum
ppb	parts per billion
NES	Non-English speaking country
NIEIR	National Institute of Economic and Industry Research
PSP	Precinct Structure Plans
SEIFA	Socio-Economic Indexes for Areas
SLA	statistical local area
SoR	State of the Regions report
UGZ	Urban Growth Zone

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Background and context

Geography and features

The City of Melton is situated on the outer western fringe of Melbourne, approximately 40 kilometres west of the Melbourne central business district (CBD). It covers a total area of 527 square kilometres. The area consists of both urban and rural areas, and includes the localities of Brookfield, Burnside, Caroline Springs, Chartwell, Diggers Rest, Exford, Eynesbury, Hillside, Kurunjang, Melton, Melton South, Mount Cottrell, Parwan, Plumpton, Ravenhall, Rockbank, Toolern Vale, and Truganina. The City of Melton is bounded by Moorabool Shire in the west, Macedon Ranges Shire in the north, Hume and Brimbank Cities in the east and Wyndham City in the south.

The City of Melton is one of the six local government areas that make up the designated 'growth area' in the Victorian Government's Melbourne metropolitan framework. Melton township was declared a 'satellite city'¹ in 1974, leading to major residential development, and has only just recently (September 2012) been re-constituted as a City Council.

Melton is served by the Calder Freeway, the Western Freeway, the Melton Highway and the Western Highway. Melton is also served by the Rockbank and Melton Station which are situated on the Ballarat regional train line. There are ten metropolitan bus routes operating in the area including services to Highpoint Shopping Centre, Woodgrove Shopping Centre and Caroline Springs Square Shopping Centre.

Local industries in Melton include structural metal product manufacturing, motor vehicle services, building completion services, electrical equipment, appliance manufacturing, general manufacturing, distribution, transport and logistics, equine industries and agribusiness.

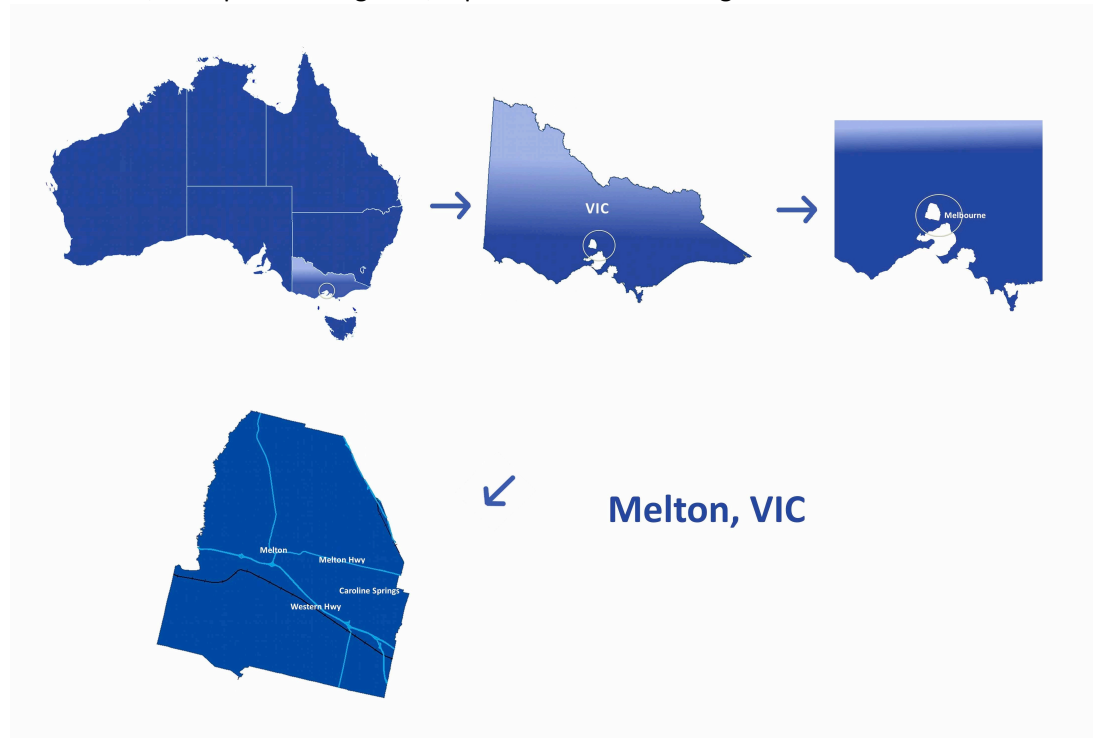


Figure 1: Geographical context map of Melton

¹ Satellite cities are generally taken to mean cities which mirror a central city in density, but are separated spatially from this centre and where both satellite city and the central city are surrounded by open land (Frey, 1999: 100) – that is, the satellite city lies beyond the outer reach of the central cities 'urban sprawl' but is still close enough to allow connection for residents.

Population summary

The population of Melton according to the 2011 Census is estimated to be 109,258 persons, which represents 2% of Victoria’s total population. Melton LGA is one of Australia’s fastest growing LGAs, and the fastest of the 80 LGAs in Victoria. Over the period from 2001 to 2011, Melton’s population grew by 56,883 persons or 7.8% pa, compared to State growth of 1.6%.

It is anticipated that the LGA will continue to experience strong population growth with forecasts suggesting the Melton population will rise to 197,524 by 2026 and 225,774 by 2031 (DPCD, 2012).

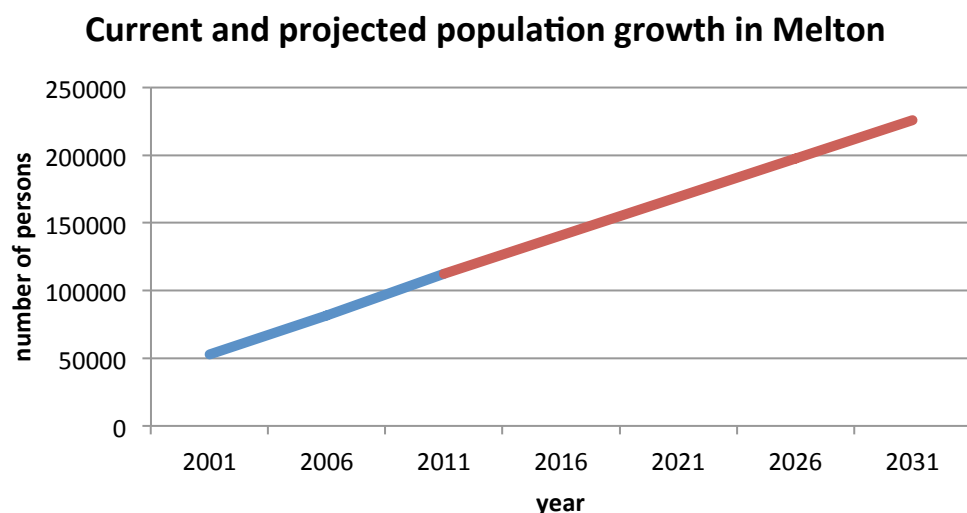


Figure 2: Current and projected population growth in Melton (Source: ABS, 2012; Department of Planning and Community Development, 2012) (Note: Population projections are shown in red.)

Table 1: Context indicator – population (Source: ABS, 2012)

	Melton 2001	Melton 2011	Greater Melbourne 2011	Victoria 2011
Population (persons)	52,830	109,258	3,940,226	5,354,042
Rate of growth 2011-2001 pa		7.8%	1.7%	1.6%
Population density (people/km ²)	100.1	212.6	417.3	24.7

Table 2: Context indicator – culture and migration (Source: ABS, 2007 & 2012)

	Melton 2006	Melton 2011	Greater Melbourne 2011	Victoria 2011
Population (persons)	78,272	109,258	3,940,226	5,354,042
Indigenous	0.6%	0.7%	0.5%	0.7%
Overseas born predominately English speaking countries	5.6%	5.6%	7.2%	6.7%
Overseas born in Non- English Speaking (NES) countries	18.7%	22.3%	24.6%	19.6%
Total overseas born	24.5%	28.0%	31.6%	26.3%

It is clear from the above data on birthplace that Melton 6 years ago had a smaller proportion of residents who were born overseas than it does today. In 2011 the proportion of Melton residents born overseas is greater than the Victorian average but still less than the proportion of Greater Melbourne residents. The percentage of residents from English speaking countries has remained unchanged, so the increase in cultural diversity experienced in Melton over these past 6 years has been in residents born in Non-English Speaking countries.

Characteristics of population growth in Melton

Residential development in the City of Melton dates from the late 1960s and early 1970s when Melton township expanded from a relatively small rural service centre. The area has been a source of affordable housing for many years. After a number of decades of incremental growth, the importance of the City of Melton within the western suburban housing market of Melbourne increased dramatically during the late 1990s. This growth was based predominantly on two factors. Firstly, easily developable 'greenfield' land to the east of Melbourne, where most greenfield development had been occurring, was largely exhausted by the early 1990s. Secondly, there was significant demand for new housing from new young families and couples from within Brimbank and to a lesser degree areas to the east, such as East Keilor, Avondale Heights and parts of Maribyrnong City. Many of these areas developed in the 1970s and 1980s, and many people who grew up in these areas were now forming their own households and seeking affordable housing nearby. In addition, Maribyrnong and Brimbank are major areas of first settlement for overseas migrants, many of whom were expected to settle within Melton over the coming decades.

Social characteristics

Population profile

Melton LGA has a relatively young population, with a median age of 32, which is much lower than the State average of 37 years. As shown in Figure 3, the age profile of Melton is starkly different to that of Victoria as a whole. In line with increased life expectancies, the proportion of people in Melton aged 65 years and above rose from 7.2% in 2001 to 10.6% in 2011, although it remains lower than the 2011 state average of 13.9%. The age group that proportionally grew the most in Melton was residents aged 60-64 years.

One contribution to the relatively low median age is the number of working age people (and their children) who are moving to the area. While the proportions of both residents aged 15-64 years and residents aged 0-14 years decreased by 0.8% in the decade between 2001 and 2011, these remain greater than in Victoria as a whole. In 2011 the proportion of working age people (15 to 64 years) in Melton was 68.7%, compared to the state average of 67.3%.

Of particular note is that the proportion and number of young children (years 0-4) in Melton has increased in the past decade, and the area currently has a much higher proportion of children than the state average, with 24.8% of the population aged 0 to 14 years in 2011 (compared to 18.8% in Victoria).

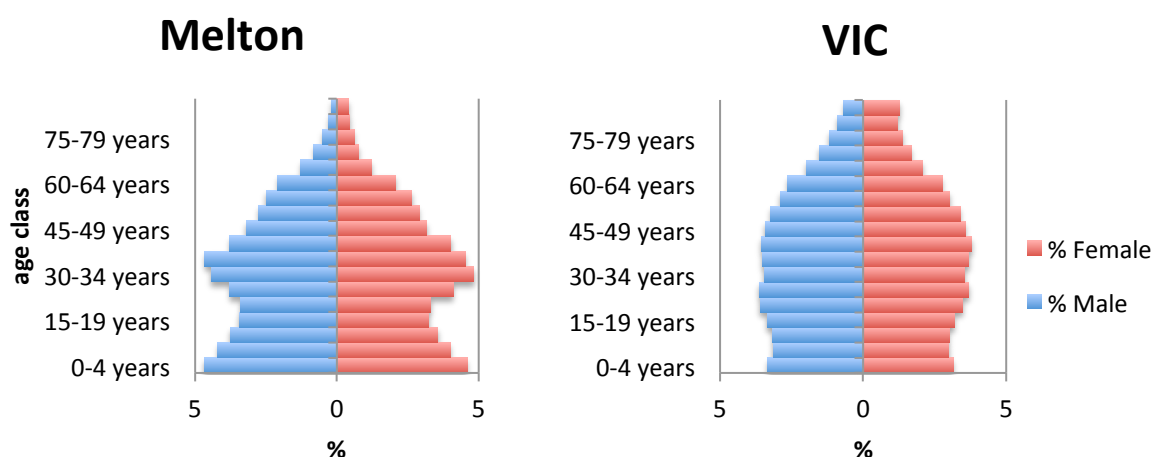


Figure 3: Age profile of Melton and Victoria (2011) (Source: ABS, 2012)

According to the 2011 Census, 0.7% of Melton’s population identifies as Indigenous (see Table 3). This proportion has increased slightly since 2001, and is slightly higher than Greater Melbourne and the same as the rest of Victoria. The proportion born overseas has also increased, to 28.0% in 2011, up from 21.1% in 2001, which is lower than the average for Greater Melbourne, but higher than the rest of Victoria. The majority of the Melton population was born in Australia (67.1%) or another English speaking country (5.6%), while 22.3% of Melton residents were born in a non-English speaking country.

Table 3: Context indicator - culture and migration (Source: ABS, 2012a)

	Melton 2001	Melton 2011	Greater Melbourne 2011	Victoria 2011
% Born overseas	21.1%	28.0%	31.6%	26.3%
% Do not speak English well	1.9%	3.5%	5.1%	4.0%
Indigenous	0.6%	0.7%	0.5%	0.7%

Economic characteristics

The dominant industries in Melton include structural metal product manufacturing, motor vehicle services, building completion services, electrical equipment, appliance manufacturing, general manufacturing, distribution, transport and logistics, equine industries and agribusiness. Melton's Gross Regional Product is estimated at \$2.323 billion.² The Western Melbourne region (of which Melton is a part) accounts for 11% of the Greater Melbourne region's gross regional product (GRP).

Manufacturing is the single industry sector which provides the greatest economic output within Melton – totalling \$681,395 million compared with (for example) Construction (\$665,498 M) and Mining at \$18,637million.³

Melton residents experience higher levels of mortgage and rental stress than both Greater Melbourne and Victoria as a whole (PHIDU, 2010; ABS, 2007).

Planning and governance

Victoria's planning and development systems are managed by the Department of Planning and Community Development, which administers the *Planning and Environmental Act of 1987*, the *Victorian Planning Provisions*, and local government planning schemes (Western Melbourne RDA, 2012).

Melton sits within the Melbourne Urban Growth Boundary, a boundary set by the Victorian state government, and is therefore included in the Melbourne metropolitan area strategic plans and planning policies.

Influence of the Victorian State Government

The *Planning and Environmental Act 1987* is the legal framework for Victoria's planning system. This legislation requires each municipality in Victorian to have a planning scheme, which is the predominant regulator of land use and development, and is overseen by the Victorian Department of Planning and Community Development.

In accordance with the *Planning and Environmental Act 1987*, each council prepares a planning scheme, which is required to contain:

- the state planning policy framework and policies;
- a local planning policy framework and policies;
- a community vision in the form of a municipal strategic statement;
- zone and overlay provisions that control the use and development of land.

To support councils in preparing a scheme and ensure consistency, the 1987 Act provides for the Minister to prepare a set of standard provisions for planning schemes, called the Victorian Planning Provisions. The council will provide the local content in the planning scheme, but councils must select zones and overlays only from the Victorian Planning Provisions.

² Source: Latest [REMPPLAN](http://www.economicprofile.com.au/melton/economy/gross-regional-product) data incorporating Australian Bureau of Statistics' (ABS) June 2012 Gross State Product, 2008 / 2009 National Input Output Tables and 2011 Census Place of Work Employment Data, cited in Melton Economic Profile: <http://www.economicprofile.com.au/melton/economy/gross-regional-product>

³ Source: Latest REMPLAN data incorporating Australian Bureau of Statistics' (ABS) June 2012 Gross State Product, 2008 / 2009 National Input Output Tables and 2011 Census Place of Work Employment Data, cited in Melton Economic Profile: <http://www.economicprofile.com.au/melton/economy/output>

Victoria is currently undergoing zone modifications to streamline development to meet the needs of growing populations (described below in the section on Melbourne strategic planning). Some critics have suggested these zone modifications are out of sequence and have not been tested properly in a strategic planning sense.

The 1987 Act describes how Councils can amend their planning scheme. In addition, the Department's Planning Practice Note *Strategic Assessment Guidelines for Planning Scheme Amendments* instructs councils on the matters for consideration before amending its planning scheme. Anyone can ask a planning authority to prepare an amendment but the amendment must be prepared by a planning authority, namely the local government, the Minister for Planning or another Minister. The amendment becomes part of the planning scheme once the Minister approves it.

The 1987 planning law is currently being reviewed by the Victorian Parliament via the *Planning and Environment Amendment (General Bill)*, which, according to the Municipal Association of Victoria, will improve the planning process by removing Development Assessment Committees and the deemed authorisation of planning scheme amendments if a decision is not made in 10 days.

Melbourne strategic planning

The metropolitan plan for Melbourne, *Melbourne 2030 - Planning for sustainable growth* was released in October 2002 as a 30 year plan to manage urban growth and development across metropolitan Melbourne. The main elements of the approach in the Plan were to '*continue to protect the liveability of the established areas and to increasingly concentrate major change in strategic redevelopment sites such as activity centres and underdeveloped land*' (Victorian Government, 2002). Melton was again designated as one of five satellite growth areas for Melbourne (Victorian Government, 2002).

The Urban Development Program, a major initiative to support the implementation of the State Government's *Melbourne 2030* strategy, aims to ensure there is sufficient residential and industrial land to meet expected population growth, ensure a competitive land market, and reduce pressure on housing affordability. This is achieved through analysis and regular reporting of the supply and demand for residential and industrial land. For example, in the latest 2009 report, Melton-Caroline Springs is assessed as having 12 years of 'adequacy' for total supply of broad hectares land needed for residential development, 4 years of which was available for development, as it is Precinct Structure Plan approved (Victorian Government, 2009).

In fact, the Melton-Caroline Springs growth area constituted 45% of the broad hectare land stocks in the West Region (Victorian Government, 2009: 10).

Melton's designation as a growth area was reiterated in the 2005 Plan for Melbourne's Growth Areas (Victorian Government, 2005). The Department of Planning and Community Development established the Growth Area Authority in 2006, an independent statutory body that facilitates relationships between industry, councils and state government in the development of Melbourne's growth areas.

The *Melbourne 2030* plan was refined in 2008, and released as *Melbourne @ 5 million* (Victorian Government, 2008), to adjust for the higher than predicted rates of population increase. In *Melbourne @ 5 million*, the Victorian Government confirmed that Melton will be one of three 'employment corridors' (Melton to Sunshine and North Melbourne) given priority attention, in order to help 'reduce congestion, particularly in the west, and achieve social objectives by providing more equitable access to employment' (Victorian Government, 2008). Importantly, the Government also announced its intention to review the Urban Growth Boundary.

The Melton-Caroline Springs Growth Area was one of four designated Investigation Areas, for which 'decisions about key transport infrastructure for this region in the future will have a strong influence on the structure of new communities as well as the location of land for new employment' (Victorian Government, 2008).

Planning reform to meet population growth

To build on the *Melbourne @ 5 Million* and the *Victorian Transport Plan* (also released in 2008), the Victorian Government developed an integrated land use and transport plan in 2010, titled *Delivering Melbourne's newest sustainable communities*. The plan states that around 284,000 of the new homes required over the next 20 years will need to be built in the growth areas of Casey-Cardinia, Melton-Caroline Springs, Hume-Mitchell-Whittlesea and Wyndham. It explains the initiatives that the State Government has designed to help deliver these 'sustainable new communities', including:

- 'Shifting the Urban Growth Boundary to ensure we have access to the necessary land to accommodate projected population growth and maintain housing affordability;
- Introducing a Growth Areas Infrastructure Contribution to help fund substantial State infrastructure to ensure these communities have access to the facilities and services they want and need;
- Improved transport services including an alignment for the Regional Rail Link and the future Outer Metropolitan Ring / E6 Transport Corridor' (Victorian Government, 2010).

The planning elements required for all of these projects are contained in Amendment VC68, which implements this new planning scheme (DPCD, 2012).

This review of the Urban Growth Boundary included an additional 590 hectares of land in Melton and zoning changes for locations in Melton West, Brookfield and Kurunjang.

Delivering Melbourne's newest sustainable communities states 'Growth Area Framework Plans will define the urban structure for the expanded growth areas and identify areas for housing, employment, community facilities, public transport, road and rail infrastructure, drainage and open space. The Growth Area Framework Plans will also provide direction on the sequencing of development. The sequencing of development will be informed by the delivery of key Government infrastructure such as the Regional Rail Link in Melbourne's west. It will also be informed by other important strategic objectives at the State and local Government level' (Victorian Government, 2010: 8).

To help inform decisions about the development of land inside the Urban Growth Area, the Planning Minister announced that Precinct Structure Plans should be developed as primary plans. In recent planning reform, the Precinct Structure Planning process and the rezoning of land to residential will be merged into one process, to save time in rezoning land (Growth Areas Authority, nd).

The Government’s Growth Area Authority created a new ‘Urban Growth Zone’ (UGZ) to expedite the approval of new communities on greenfield sites. All broadacre areas identified for future urban development inside the Urban Growth Boundary have recently been rezoned as Urban Growth Zones. This new zone intends to help bring forward the development of more than 90,000 new homes in the five growth areas: Casey-Cardinia, Hume, Whittlesea, Wyndham and Melton. By rezoning undeveloped land from primarily farm land to the UGZ, the 2-step process of developing this land (rezoning to residential and developing a Precinct Structure Plan) has been reduced to one process required for Councils. The Growth Area Authority intends to play a significant leadership role to ensure efficient development of the Precinct Structure Plans.⁴

The Growth Corridor Plan states that Melbourne’s western region is one of the fastest growing in Australia and that the West Corridor Growth Plan will eventually accommodate a population of 377,000 or more people (Victoria Government, 2010: 42). The future development of Melbourne’s west will be shaped substantially by significant transport projects, including the Melton rail line corridor (allowing for transit oriented development⁵). A new regional park is also being developed along Toolern Creek, to the south of Melton (2010: 47).

Figure 4 shows Melton’s community concept plan. Connections between districts will be provided by a grid of arterial roads and extended public transport networks. Melton will have a new major town centre on the Melton rail line at Rockbank. The Growth Corridor Plan also includes concept plans for employment, public transport, and freight. Melton’s Investigation areas, potential areas for future growth and proposed buffer areas are also shown in Figure 4.

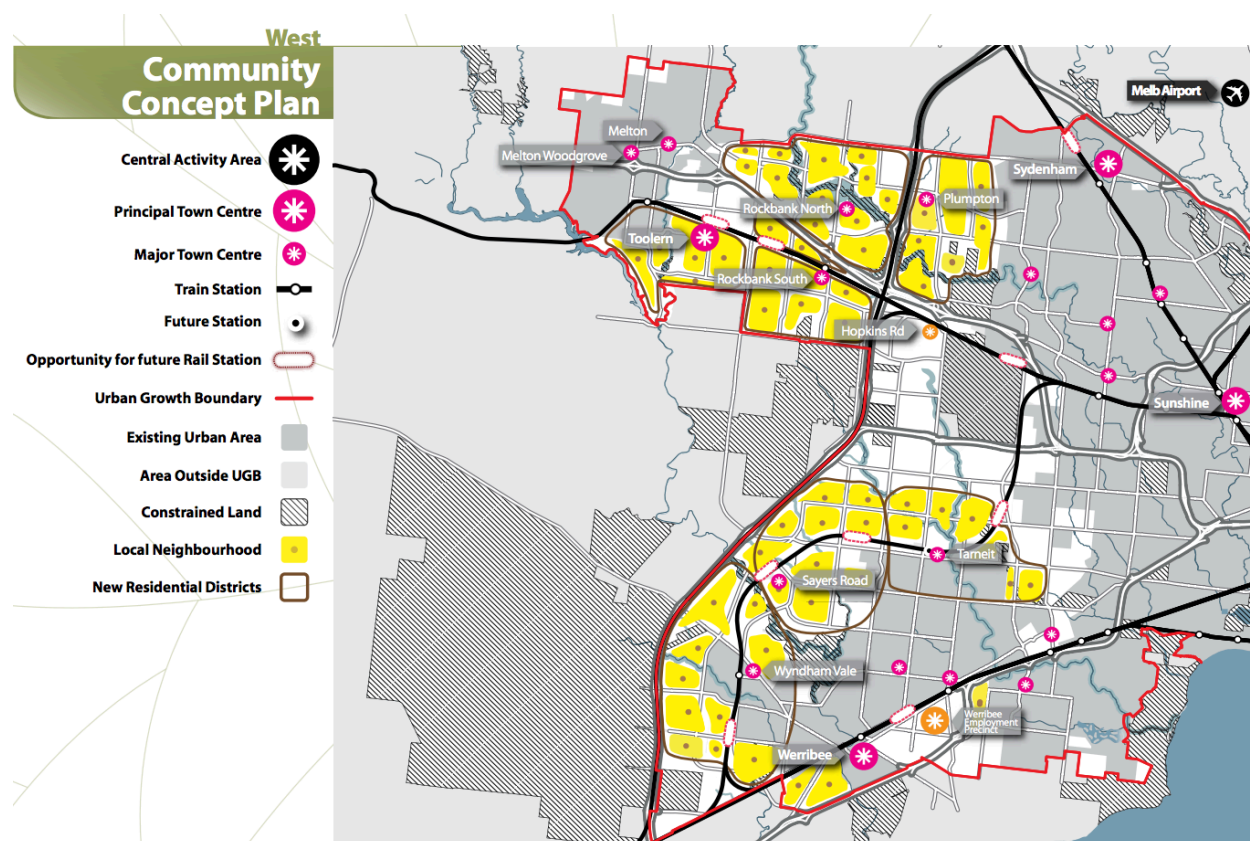


Figure 4: Community Concept Plan (Source: Growth Areas Authority, 2012: 46)

⁴ For more information see: www.gaa.vic.gov.au/planning_reform

⁵ Transit-oriented development is a mixed-used residential and commercial area designed to maximize access to public transport.

After its election in 2010, the new Baillieu State Government announced a new Melbourne metropolitan planning strategy (Victorian Government, 2011). At this point in the preparation of the new Strategy, a number of issues and challenges have been identified and a discussion paper will be released shortly⁶. The Growth Corridor Plan will be the basis of the new Strategy's plan for Growth Corridors.

Review of the Victorian planning system

The Minister for Planning recently established an Advisory Committee to review the planning system in Victoria. The initial report, released in December 2011, contains several submissions from the Melton Shire Council (now Melton City Council). Specifically, Melton Shire Council's submission highlighted the burden created by significant changes in state planning policies for local government, without timely communication from State Government. In particular, the submission noted that:

- There had been a lack of prior communication from State Government regarding what was 'a critical change of state policy affecting a local area';
- Council had spent significant time and resources in reviewing its Municipal Strategic Statement (MSS), only to be informed after completion of the review that changes to the Urban Growth Boundary would render the new MSS redundant;
- Previous state and local policy was to maintain a 'Green Wedge' to physically separate Melton Township from Melton's Eastern Corridor (Caroline Springs / Burnside), whereas the change to the UGB now envisages a continuous growth corridor out to Melton Township;
- Reviewing the scheme had placed a significant administrative burden on Council;
- While Council is now initiating a new review of the MSS, it is 'wary of this' because 'the impending review of the Green Wedge and Urban Growth Boundary, Metropolitan Development Strategy, and Developer Contributions, [...] will have substantial impacts on the MSS and its application'. (Victorian Government, 2011: 77).

The Interface Councils, of which Melton is one, are the group of councils for the areas in which a significant amount of Melbourne's future growth is planned. The Interface Councils' submission to the Advisory Council highlighted a number of issues associated with growth pressures, including:

- The level of developer contributions is well short of what is required to deliver the infrastructure and services these communities will require;
- A lack of policy direction, especially in relation to employment and investment opportunities within the interface areas;
- The challenge of creating sustainable development within the green wedge (Victorian Government, 2011: 117).

The Advisory Committee's review found that the planning system in Victoria was complex and identified a lack of ownership and responsiveness to issues (Victorian Government, 2011: 29). Some of the main recommendations of the review were in relation to planning and population growth for Growth Area Planning and Interface Councils, specifically (Victorian Government, 2011: 34):

- Growth area councils should be allowed to prepare a precinct structure plan in the first instance. The Growth Areas Authority (GAA) should be the planning authority only where a growth area council requests it to play this role, or where the council does not have the necessary expertise or resources;
- An evaluation of the precinct structure planning processes that have been finalised be undertaken to determine how effectively the Precinct Structure Plans (PSP) and planning permit process is operating in the Urban Growth Zone;

⁶ Metropolitan Planning Strategy: A Vision for Victoria - www.planmelbourne.vic.gov.au/

- There is a need for a mechanism to improve the delivery of infrastructure to match planning aspirations in growth areas;
- There is a need for funding and co-ordination mechanisms to improve the delivery of infrastructure to match planning aspirations in interface areas;
- The scope of green wedge management plans should include a review of permitted land uses to ensure the achievement of strategic objectives.

Environmental, social and economic indicators

The first component of the case study research was investigating themes and indicators presented in the indicator framework. Each theme and group of indicators are explored here using the indicators as headings and across the three sustainability domains (environmental, social and economic). Each of the domains draws on different data sources at the local level, the availability of which varies across the indicators.

The analysis presented shows that population growth is impacting on all three sustainability domains in a range of ways.

Environmental indicators

Climate and atmosphere

There is one air monitoring station in the Melton LGA area, which measures ozone (O₃) but does not measure carbon monoxide (CO), hydrocarbons (HC), nitrogen dioxide (NO₂) or particles. The next closest monitoring station is located in Deer Park (approximately 21km east of Melton town centre), and is just outside of the Melton LGA boundary area. The data available from the Deer Park air quality monitoring station is limited to quantitative data on air quality in only the easternmost part of Melton and therefore does not give an overall picture of air quality issues in the case study area.

Historical data from the Melton air quality monitoring station indicates that since 2003 Melton has only had two years with a yearly maxima for ozone in exceedance of the current standard of 100 parts per billion (ppb). Most other years since 2003 have been well below the standard. See Table 4.

Table 4: Natural capital - climate and atmosphere (Source: EPA Victoria, 2012)

Melton	2003	2004	2005	2006	2007	2008	2009	2010	2011
Yearly maxima – ozone (O ₃) ppb ⁷	112	76	79	126	85	71	92	62	71

In 2009, the Victorian Department of Sustainability and Environment (DSE) compiled data from Victoria electricity and gas distributors to provide a state-wide picture of Victoria's household energy use. Energy use is directly related to climatic factors and household features such as household size, whether the household is connected to gas, number of residents and income level (DSE, 2009).

For the average household in Melton, combined electricity and gas energy use has generally increased. As can be seen in Table 5, electricity consumption per dwelling in the Statistical Local Area (SLA) Melton (S) – East⁸ decreased consistently from 2004 to 2006, but then increased significantly between 2006 and 2007. In comparison, the SLA Melton (S) Balance steadily increased electricity consumption per dwelling for all years. However, for both SLAs, total residential electricity consumption increased from 2004 to 2007. This indicates that without drastic reductions in electricity consumption per dwelling, an increase in population will result in a continued increase in total residential electricity usage.

⁷ The current standard for ozone is 100 parts per billion (ppb) measured over one hour.

⁸ Melton LGA has two SLAs within its boundaries – Melton (S) – East which covers the urban areas of eastern most section of the LGA, and Melton (S) Balance which covers the rest of the LGA including the Melton town centre.

Gas consumption per customer for the Melton area during the same time period followed a slightly different pattern from electricity consumption per dwelling, with both SLAs experiencing ebbs and flows between years. For the Melton (S) – East SLA total residential gas consumption increased from year to year, even though there were decreases in gas consumption per customer for some years. The total residential gas consumption for Melton (S) Balance, however, followed the same pattern of decreases and increases as the relative gas consumption per customer data. The consumption data for gas per customer for Melton (S) Balance mirrors fairly closely the pattern seen for the state average. This suggests that perhaps climatic factors affected the pattern of gas usage.

Table 5: Natural capital - climate and atmosphere (DSE, 2009)

Statistical Local Area	2004	2005	2006	2007
Electricity consumption per dwelling (MWH/HH)				
Melton (S) - East	5.2	5	4.6	5.4
Melton (S) Balance	5.2	5.3	5.6	5.7
Gas consumption per customer (GJ/GC)				
Melton (S) - East	58	52.4	57.4	58.9
Melton (S) Balance	54.9	51.3	57.6	53
Total residential electricity consumption (GWH)				
Melton (S) - East	51,196.10	54,363.40	56,472.70	72,560.20
Melton (S) Balance	67,519.40	70,655.30	77,087.90	80,571.50
Total residential gas consumption (GJ)				
Melton (S) - East	569,960.20	575,089.30	710,235.20	792,391.40
Melton (S) Balance	710,611.40	677,714.00	794,472.90	750,859.70

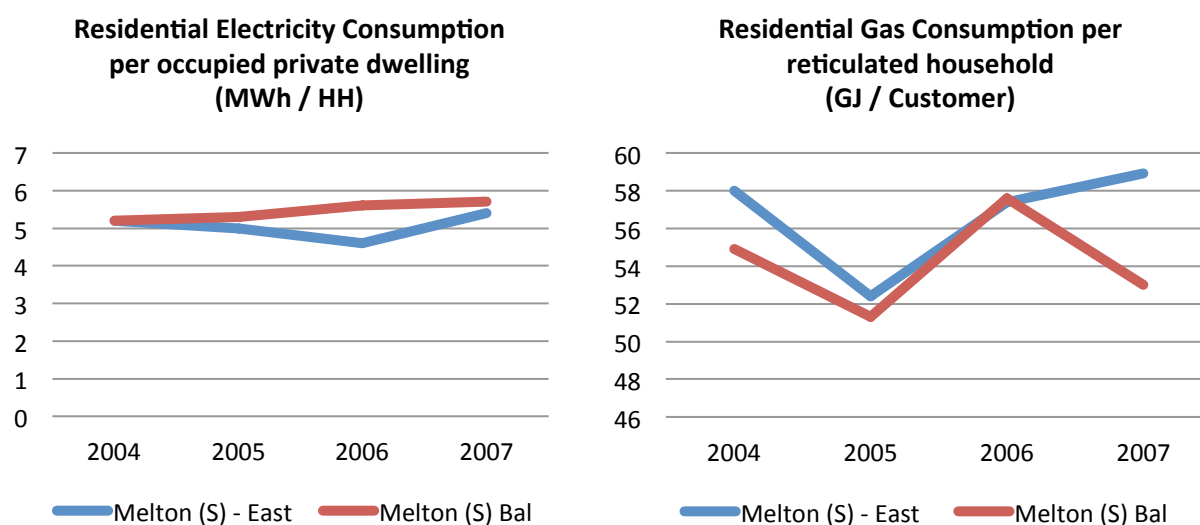


Figure 5: Natural capital - climate and atmosphere (DSE, 2009)

Ecosystems and biodiversity

According to Council documentation very little native vegetation remains in the Melton area. There are some remnants of the Victorian Volcanic Plains, of which only 20% remains since European settlement across all of Victoria (Melton City Council, 2012). The extent of land clearing has resulted in a number of the flora and fauna species and vegetation types in Melton being protected by Victoria and Commonwealth law because they are very rare and endangered. Recent mapping provides details of native vegetation and fauna habitat and their distribution within the municipality of both Wyndham and the Shire of Melton (Growth Areas Authority 2010a and 2010b).

Listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) are seven plant species and four animal species in the Melton LGA area. Under the *Victorian Flora and Fauna Guarantee Act 1998*, significantly more species have been identified as rare and threatened, including 29 plant species and 46 animal species found in the Melton area.

Table 6: Natural capital - ecosystems and biodiversity (Source: Viridans, 2012)

	Number of plant species listed in Act	Number of animal species listed in Act
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	7	4
<i>Victorian Flora and Fauna Guarantee Act 1998</i>	29	46

Water

The Melton LGA is situated within the Western Water catchment area. Figures from Western Water's 2011/12 Water Quality report shows water quality within the Melton South testing area was within national acceptable standards on all tested variables (Western Water, 2012).

Land

The Melton-Caroline Springs Growth Area Framework Plan identifies the various land uses within the Melton urban growth boundaries (see Figure 6). The map indicates that most of the urban settlement is confined to the Melton town centre and eastern side of the LGA.

Some regional open space is identified in the plan, but much of it lies outside of the LGA area. Within the urban growth boundary, there appears to be limited amounts of open space currently, but some significant open space areas are designated for investigation. Also shown in Figure 6 are areas of potential environmental sensitivity.

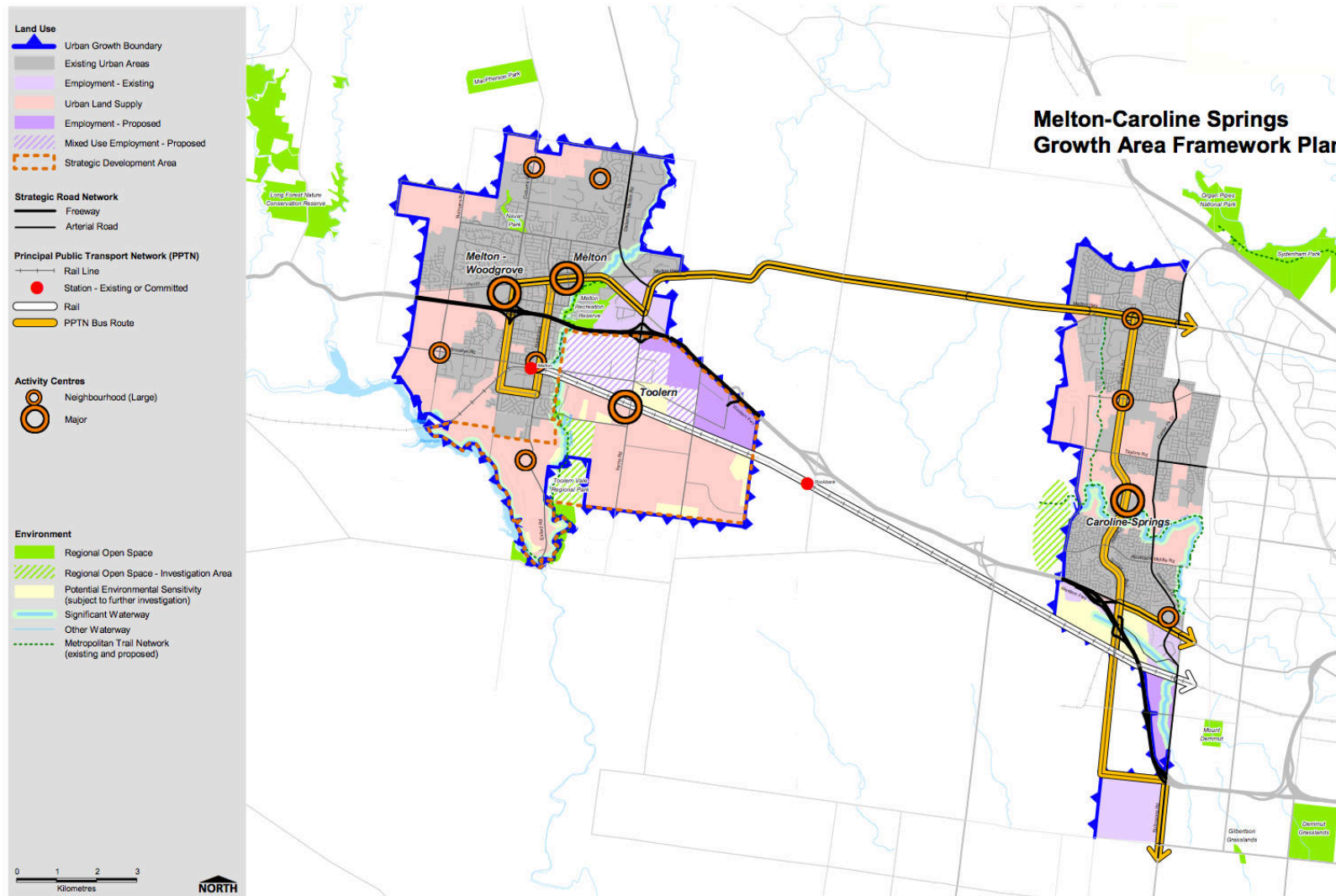


Figure 6: Melton-Caroline Springs Growth Area Framework Plan (Source: DSE, 2006)

Waste

Melton Council has recently revised its waste management strategy applicable until 2016, but notes that the change of State government has created a degree of uncertainty about waste management policy and that Council will therefore need to incorporate any new or revised State waste management policy into a new strategy to be developed in the 2014/2015 financial year.

In comparison to the Victorian 2006/2007 financial year average, the volume of household waste generated per person per annum is significantly higher in Melton. Local residents generated 632 kilograms of household waste in 2006/2007, as opposed to 540 kilograms for Victorian residents as a whole (Table 7). However, according to the Melton Waste Management Strategy, Melton residents have reduced the amount of waste generated per person to 570 kilograms per person per annum for the 2009/2010 financial year, though this number is still higher than the 2006/2007 Victorian average.

Table 7: Natural capital – waste (Source: Melton Shire Council, 2011)

	Melton (2006/2007)	Victoria (2006/2007)
Household waste per person (kg)	632 kg	540 kg
Material recycled (%)	54%	62%

Total waste generation in Melton has steadily been on the increase since at least 2004, with a slight decrease in 2008. However, since 2008 waste diversion rates (recycling and green organics) have increased to 46.7%, which is attributed to an increase in green organics disposal associated with increased rainfall over the period (Melton Shire Council, 2011: 23).

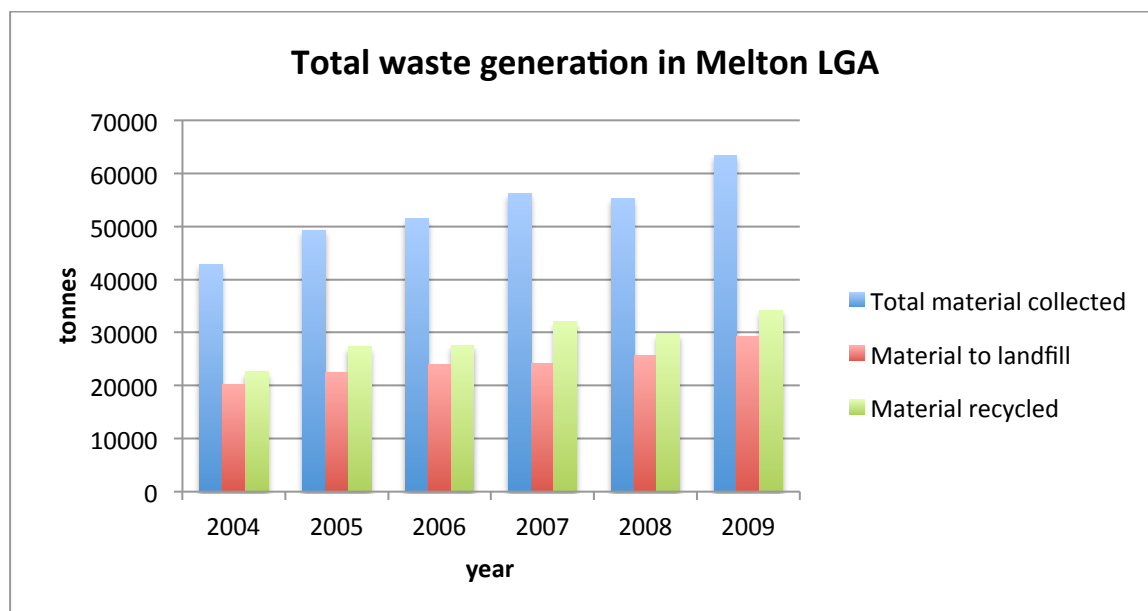


Figure 7: Total waste material generation (tonnes) (Source: Melton Shire Council, 2011)

Social indicators

Skills and education

There are a number of ways to assess educational attainment in populations. Common measures are the proportion of the adult population that has a bachelors degree or higher, and the proportion that has a certificate or diploma qualification. Compared to Greater Melbourne and Victoria, Melton has a lower proportion of people with a bachelors degree or higher, but a higher proportion with certificate and diploma qualifications. These results are shown in Figure 8 and Figure 9.

The number of adults with university qualifications in Melton increased by 3.4 percentage points, from 7.0% of the population in 2001 to 10.4% in 2006 (2011 Census figures are yet to be released). In comparison, the number of people with university qualifications across Greater Melbourne increased by 3.5 percentage points, from 15.9% of the population in 2001 to 19.3% in 2006, and across Victoria by 3.1 percentage points, from 14.2% of the population in 2001 to 17.3% in 2006. As these figures show, the proportion of people with university qualifications is not only lower in Melton than in Greater Melbourne and Victoria, but is also growing at a slightly slower rate than in Greater Melbourne.

For certificate and diploma qualifications, attainment levels in Melton increased slightly over the 5 years between 2001 and 2006, from 22.1% of the adult population to 25.0%, which was a faster increase in the rate of attainment for these qualifications than at either the Greater Melbourne or Victoria level. In both cases the proportion of the population holding these qualifications remains several percentage points lower than in Melton.

The higher levels of certificate and diploma qualifications compared to university qualifications is likely to be related to the employment profile of the region. Manufacturing and construction employment are major employing industries in the area; and many jobs in these industries favour trade certificate qualifications rather than university qualifications. However, a recent National Growth Areas Alliance publication examining the skills deficits and mismatch in outer metropolitan growth areas reported that the trend towards lower skills intensity in manufacturing employment industries is diminishing. The report showed growth in manufacturing employment was occurring but only in higher-skilled occupations (Essential Economics and Geografica, 2012).

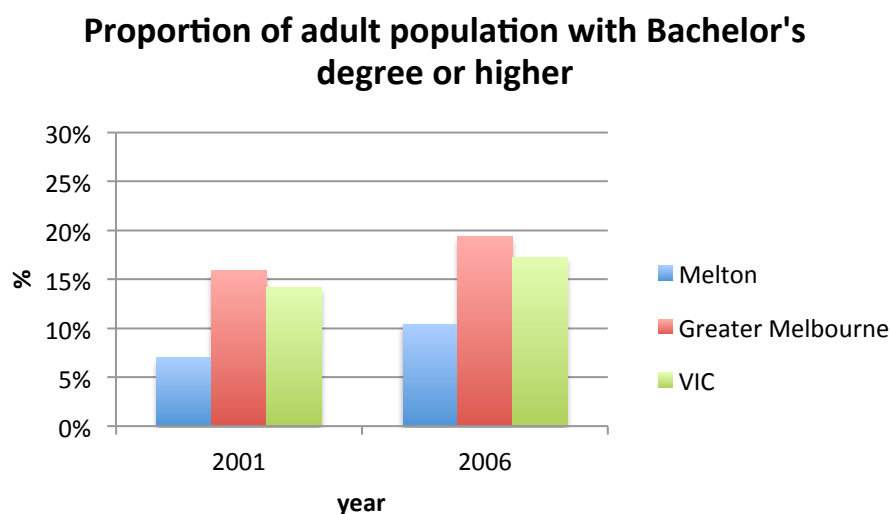


Figure 8: Comparison of adult population with Bachelor degree or higher (Source: ABS, 2012)

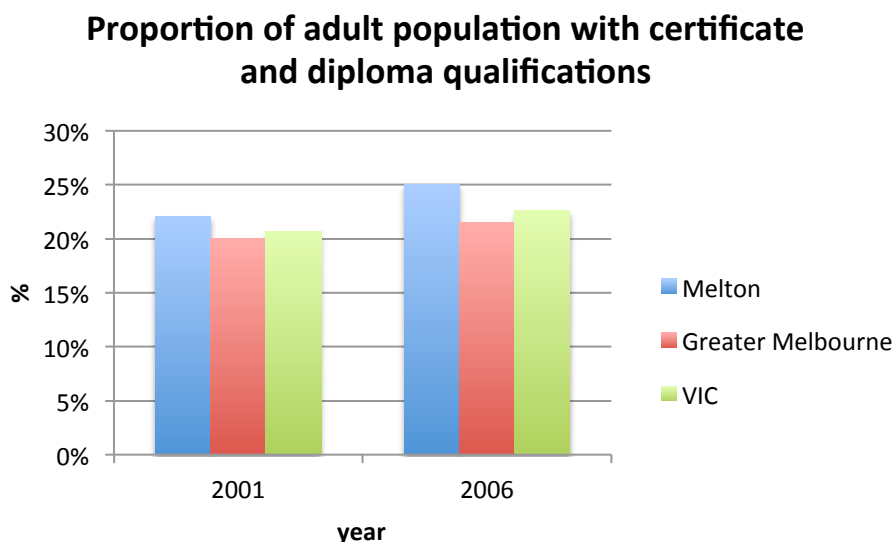


Figure 9: Proportion of adult population with certificate and diploma qualifications (Source: ABS, 2012)

Health and socio-economic disadvantage

As research on the social determinants of health has shown, health outcomes are closely related to socio-economic status (World Health Organisation, 2012). Socio-Economic Indexes for Areas (SEIFA) scores suggest that Melton has some areas of socio-economic disadvantage. They also show relatively little variability within the LGA, with a minimum census collection district (CD) score of 809 and a maximum of 1102. Figure 10 visualises the variability in SEIFA scores, suggesting that the eastern part of Melton LGA is relatively more advantaged than the areas around Melton town centre. Melton was ranked 51 of 80 Victorian LGAs in the Index of Relative Socio-economic Disadvantage in 2006.

Table 8: Social and human capital – disadvantage (Source: ABS, 2008)

	Melton	Greater Melbourne	Victoria
SEIFA Index (IRSD) score	1010	1022	1010
Minimum IRSD score of CDs	809	430	430
Maximum IRSD score of CDs	1102	1176	1194
Rank in Victoria	51 (of 80 LGAs)		
Rank in Australia	507 (of 667 LGAs)		

**City of Melton,
SEIFA Index of Relative Socio-economic
Disadvantage, 2006**

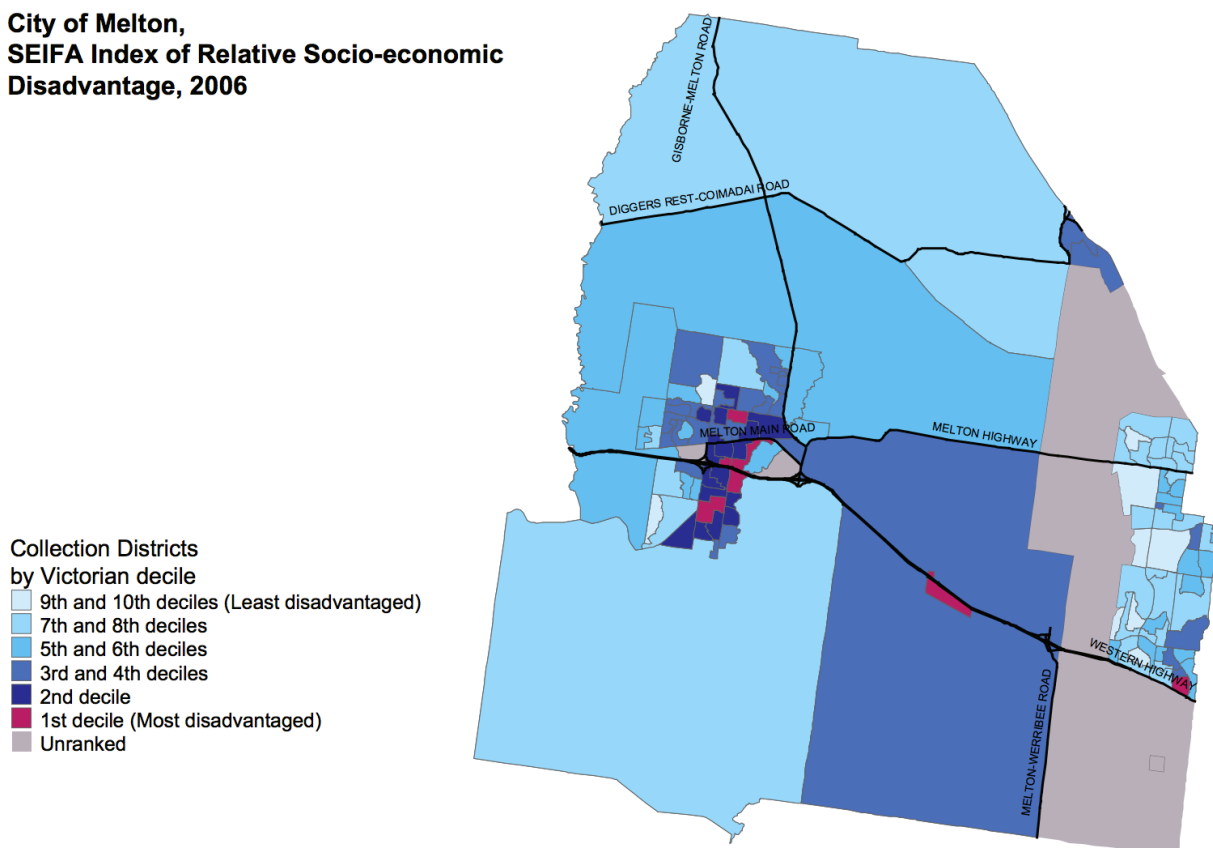


Figure 10: Social and human capital – disadvantage (Source: DPCD, 2006)

Health data suggests that compared with Victoria as a whole, Melton has a higher proportion of the population who are daily smokers (18.2% in Melton compared with 11.1% of the Victorian population), and a higher percentage of people experiencing psychological distress (10.0% compared to 9.3% for Victoria). On other key health measures, such as self-reported health status and proportion of overweight or obese persons, Melton rates are below those of Greater Melbourne and Victoria (see Figure 11). However it should be noted that aggregation to the LGA level may be hiding higher concentrations in specific areas.

Table 9: Social and human capital – health (Source: PHIDU, 2010)

	Melton 2007	Greater Melbourne 2007	Victoria 2007
Proportion reporting fair to poor health	10.3%	10.7%	11.1%
Proportion of population that are daily smokers	18.2%	14.8%	15.4%
Proportion of population that are overweight or obese	34.3%	34.5%	35.7%
Proportion of population experiencing psychological distress ⁹	10.0%	9.4%	9.3%

⁹ percentages are of people experiencing high or very high levels of psychological distress on the Kessler 10 scale

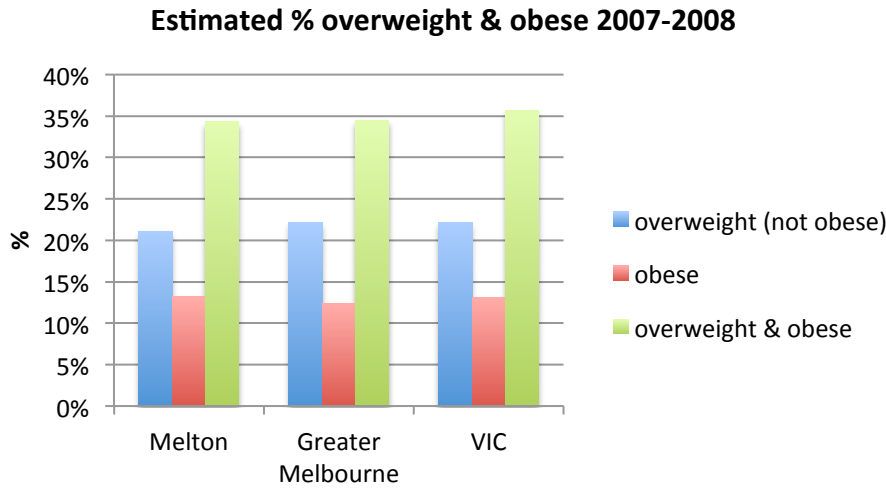


Figure 11: Comparison of estimated % overweight & obese (Source: PHIDU, 2010)

Employment and unemployment

Unemployment in Melton has been consistently higher than in Melbourne or Victoria as a whole. While Figure 12 shows that the unemployment rate decreased between 2001 and 2006, it was still higher in Melton than Greater Melbourne and Victoria for all census years. The latest figures from the *Small Area Labour Markets Survey (SALMS)* (shown in **Table 10** below) confirms this pattern, with Melton’s average unemployment rate in June 2012 9.0% (average of the SLAs Melton (S) – East and Melton (S) Balance), compared to 5.5% for Victoria.

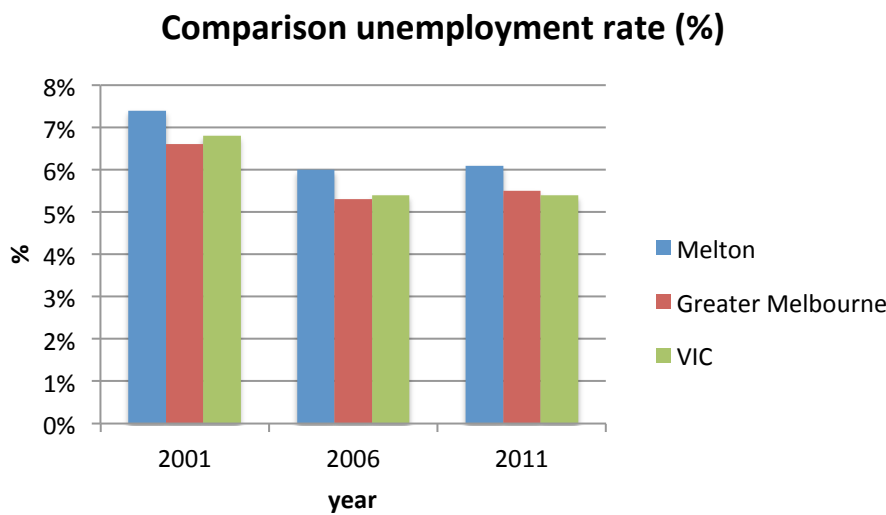


Figure 12: Comparison of unemployment rates (Source: ABS, 2012)

Table 10: Social and human capital – employment (Source: NIEIR, 2012; DEEWR, 2012) (Note: * data items marked with an asterisk use NIEIR data regions. Melbourne Western comprises the major centres of Footscray, Werribee and Melton. Melbourne Southern Outer has been used as a comparison due to its similarities as a growing urban fringe region and includes the major centres of Frankston and Pakenham on the south east side of the Melbourne CBD.)

	Melton (S) – East June 2011	Melton (S) Balance June 2011	Melton (S) – East June 2012	Melton (S) Balance June 2012	Victoria June 2012
Unemployment rate	5.9%	8.2%	7.2%	10.7%	5.5%
	Melton 2011	Greater Melbourne 2011	Victoria 2011		
Participation rate	66.0%	62.7%	61.8%		
Unemployment rate	6.1%	5.5%	5.4%		
	Melbourne Western	Melbourne Southern Outer			
Hours worked per week*	21.8 hours (2011)	23.2 hours (2011)			
Social security take-up*	12.3% (2011)	11.4% (2011)			

Security and crime

Perceptions of safety were measured in the 2007 Community Indicators Victoria survey.¹⁰ Respondents were asked to rate how safe they felt when walking alone in their local area during the day and at night. When walking alone in their local area during the day 96.3% of persons in Melton felt safe or very safe, compared to 94.6% in the Northern & Western Metro Region and the Victorian State average of 96%. When walking alone at night 63.3% of persons in Melton felt safe or very safe, compared to 61.3% in the Northern & Western Metro Region and the Victorian State average of 66.5%.

Crime statistics are produced annually by Victoria Police. Summaries of offences are reported per 100,000 population to enable comparisons across years and different areas. In 2010/2011 Melton, there were 1,057.1 recorded crimes against the person per 100,000 population compared to 1,119.7 in 2011/2012. There were 4,543.3 recorded crimes against property per 100,000 population in Melton, compared to 5,924.7 in 2011/2012 (Victoria Police, 2012). Drug offences and other crimes also increased between 2010/2011 and 2011/2012. See Table 11 for more detail and percentage change between years.

¹⁰ For more information on the Community Indicators Victoria's 2007 survey see, http://www.communityindicators.net.au/civ_survey_2007

Table 11: Social and human capital - security and crime (Source: Victoria Police, 2012)

	Offences recorded			Rate per 100,000 population		
	2010/11	2011/12	% change	2010/11	2011/12	% change
Crimes against the person	1,124	1,256	+11.7	1,057.1	1,119.7	+5.9
Crimes against the property	4,831	5,939	+22.9	4,543.3	5,294.7	+16.5
Drug offences	298	344	+15.4	280.3	306.7	+9.4
Other offences	521	731	+40.3	490.0	651.7	+33.0

Economic indicators

Wealth and housing affordability

Standard of living can be measured by disposable household income, adjusted for household size and controlling for housing costs¹¹. In the period between 2001-2007 household disposable income across Australia grew on average by 3.1% a year, accelerated to 6.5% per year during the Global Financial Crisis (2008-2009) and in the years since has dropped back to 1.6% (NIEIR, 2012). In the Melbourne Western region (which includes Melton and starts five kilometers from the Melbourne CBD) this growth has been greater, with disposable income increasing by a total of 20% in the period from 2007 to 2012, with no decrease during the GFC (NIEIR, 2012).

The National Institute of Economic and Industry Research (NIEIR) report calculates household wealth as the value of dwellings owned by residents of an LGA plus holdings in financial assets less the stock of household liabilities. As **Table 12** shows, household wealth has increased over the last decade, though it did decrease between 2007 and 2012. Household debt service ratios and the ratio of debt to income have also increased.

The 2012 (12 months to September 2012) average house price in Melton LGA was \$330,000, compared to \$780,000 for the Melbourne LGA. Median unit price trends reflect a similar pattern, at \$251,000 in Melton, compared to \$451,000 in Melbourne. While average dwelling prices are significantly lower than Melbourne LGA there is variability between suburbs with house price averages of \$416,000 - \$420,000 in suburbs closer to Melbourne (e.g. Caroline Springs and Burnside Heights) and compared to averages of \$222,000 - \$250,000 in areas closer to Melton town centre (e.g. Melton South and Melton).

¹¹ It can also be measured as average real GDP per capita, where 'real' refers to adjustment for inflation and GDP refers to annual economic output within a countries borders or in a broader way with various subjective measures of life satisfaction

Table 12: Economic capital - wealth and housing affordability

(Source: NIEIR, 2012) (Note: Melbourne Western starts five kilometres from the Melbourne CBD, and extends to the edge of the metropolitan area. The area is different to the Melton LGA and includes the major centres of Footscray, Werribee and Melton; *represents growth in chain volume measures using ABS methodology).

	Melbourne Western 2001	Melbourne Western 2011
Wealth per household*	\$417,000	\$622,000
Household debt service ratio	14%	22%
Household debt to gross income ratio	1.10	1.76
Average dwelling price	\$262,600	\$426,100
Average dwelling price to household disposable income	3.3	4.8

The proportion of Melton households experiencing mortgage stress or rental stress¹² is slightly higher than in Greater Melbourne and Victoria (see Figure 13 for a comparison). In 2006 in Melton, 11.3% of mortgaged owner-occupiers and 28.5% of private renters were classified as being in mortgage or rental stress, as shown in Table 13.

Table 13: Economic capital – housing (Source: PHIDU, 2010; ABS, 2007)

	Melton	Greater Melbourne	Victoria
Mortgage stress	11.3%	9.1%	9.2%
Rental stress	28.5%	23.7%	24.5%

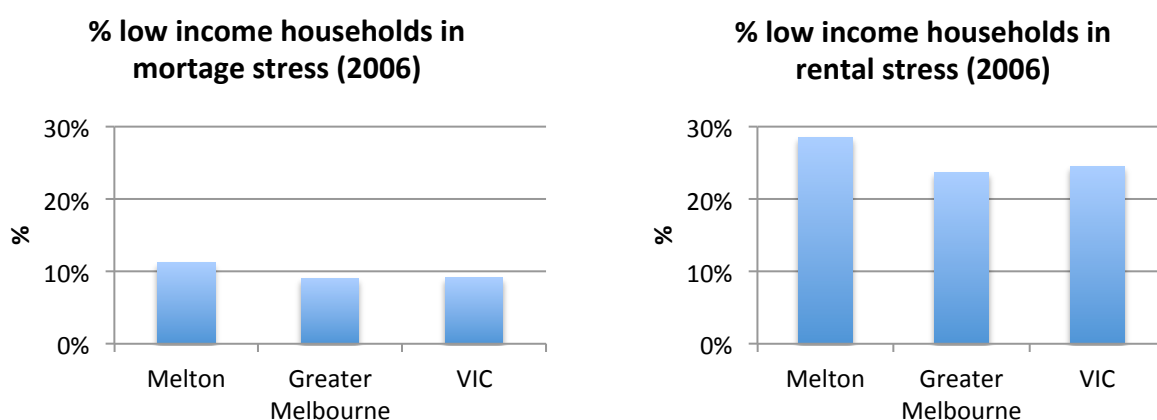


Figure 13: Comparison of % low income households in mortgage and rental stress (2006) (Source: PHIDU, 2010; ABS, 2007)

Melton has a lower percentage of dwellings rented from the government housing authority than Greater Melbourne or Victoria (1.0 % compared to 2.6% and 2.8% respectively), although as Table 14 below shows, between 2006 and 2011, the proportion of government rental housing in Melton increased significantly when compared to Melbourne and Victoria for the same period. However, as these figures are calculated off such a low base of dwellings (51 people in the 2011 census) they are not useful in making further conclusions.

¹² The definition of ‘mortgage stress’ or ‘rental stress’ encompasses those households in the bottom 40% of income distribution (with less than 80% of median income) that are spending more than 30% of household income on mortgage or rent.

Table 14: Economic capital – housing (Source: PHIDU, 2012; ABS, 2012)

	Melton	Greater Melbourne	Victoria
Dwellings rented from the government housing authority (2011)	1.0%	2.6%	2.8%
Dwellings rented from the government housing authority (% change 2006-11)	+17.1%	+1.2%	+1.2%

Transport and infrastructure

The Victorian Department of Transport has developed a ‘transport atlas’, which aims to bring together a number of transport themes and data sets, including journey to work, public transport infrastructure, car ownership, household activity and travel surveys, and population and employment data. According to this Atlas, 80% of work journeys from Melton were by car drivers, while only 9% were by public transport. The number of work journeys by car drivers increases when analysing the data for work journeys to Melton, with 84% by car drivers and only 2% by public transport. The geographic destination of travelers can be seen in Figure 14. The majority of work journeys to Melton originate in Melton (53%), with the neighbouring LGAs providing nearly 30% of work journeys to Melton, and only 15% of work journeys to Melton originating in Melbourne metro LGAs. When analysing the destinations of work journeys from Melton, it can be seen that Melbourne metro LGAs and Melbourne LGA were the destinations for almost half (42%) these journeys.

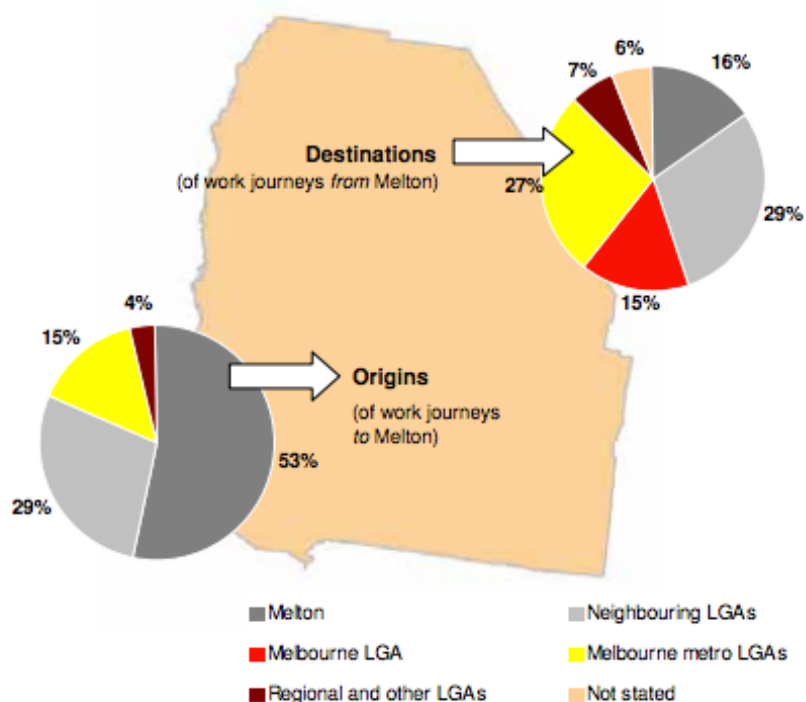


Figure 14: Work trips to and from Melton (Source: Department of Transport, 2012)

Analysis from 2011 Census data on journey to work patterns shows that Melton residents are highly reliant on their car, either as drivers or passengers. Only a very small percentage of the population utilised public transport on Census day (less than 6%). This compares to 12.2% of Greater Melbourne residents. **Table 15** provides a further comparison of modes of transport between Melton, Greater Melbourne and Victoria as a whole.

Table 15: Economic capital – transport (Source: ABS, 2012)

	Melton	Greater Melbourne	Victoria
Car as driver	84.7%	78.2%	80.1%
Car as passenger	6.7%	5.6%	6.0%
Public transport	5.9%	12.2%	9.8%
Bicycling	0.2%	1.7%	1.6%
Other	0.5%	0.6%	0.6%

Access to broadband Internet connections is a common measure of communications infrastructure. Uptake of broadband services rapidly increased between the 2006 and 2011 census periods. In 2006 40.6% of Melton residents had access to a broadband Internet connection; this increased to 80.9% in 2011. In 2011 the proportion of residents with a broadband connection was higher in Melton than in both Melbourne and Victoria. However, in 2006 Greater Melbourne had a higher proportion of residents with broadband connections than Melton, and Melton higher than the rest of Victoria (see Figure 15). The rate of uptake in Melton (176.5% increase between 2006 and 2011) was significantly higher than in Greater Melbourne and Victoria as a whole (94.5% and 108.5% increase between 2006 and 2011 respectively).

% private dwellings with broadband internet connection

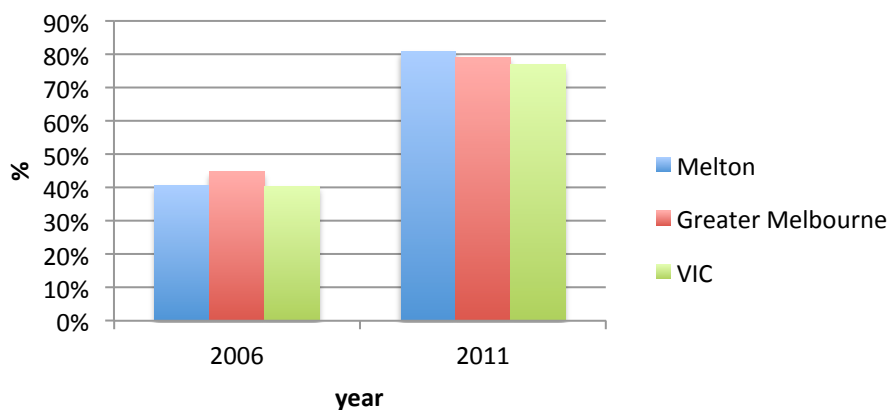


Figure 15: Comparison of broadband internet connection (2006 & 2011) (Source: ABS, 2007 & 2012)

Productivity

There is very little productivity data available at smaller geographical levels unless it is commissioned, and then it tends to be collected on an ad hoc basis. As reported earlier, the 2012 Regional Development Australia Plan for Western Melbourne, reported that the area contributes approx. 11% of Melbourne's gross regional product (Melbourne CBD removed from the calculation).

Earlier work completed by NIEIR for a report titled *Growing Melbourne's West*, found productivity per employee was \$66,100 per employee in 2001, below the Metropolitan Melbourne level of \$72,400, and the Australian level of \$70,800 (Sheenan and Wiseman, 2004). However GRP in the western region grew by the largest amount of all Melbourne regions except the inner city between 1991-2001. The Western region per annum growth was 3.7%, compared with inner Melbourne (4.1%) and Australia generally (3.2%) (Sheenan and Wiseman, 2004: 16).

Business innovation

Local level business innovation data is generally non-existent, apart from scattered small, locally based surveys. Patent counts per population are often used as proxies for innovation, but these are often unsuitable, as patents are only used in certain types of innovation (technology based and radical innovative activity) and will excluded other more common forms of innovative activity such as service or organizational innovation.

The NIEIR State of the Regions report calculates patent applications per 100,000 population for the Melbourne Western region to be 11.05 patents applications per capita (applications between 1994-2011), compared with the Australian average of 21.01.

Stakeholders

A total of 78 stakeholders were identified from a process of stakeholder mapping. This list was refined and selected stakeholders were invited to participate in an interview.

A total of 12 stakeholder interviews were conducted from 14 to 21 November 2012. The list of stakeholders interviewed is shown below.

Table 16: List of stakeholders

Interviewee	Position and Organisation	Role of organisation	Category
Michael Tudball	Growth Areas Executive, Melton Council	Local Government	Planning, Social
Luke Shannon	General Manager Planning & Development, Melton Council	Local Government	Planning
Lynette Green	Community Support and Development Acting Manager, Melton Council	Local Government	Social
Lyn Holdsworth	President, Friends of Toolern Creek	Local NGO	Environmental
Daryl Akers	President, Melton Environmental Group	Local NGO	Environmental
Ruth Spielman	Executive Officer, National Growth Areas Alliance	Peak NGO	All
Ollie Tabone	President, Greater Melton Chamber of Commerce	Peak NGO	Economic
Tom Dickson	Vice President, Greater Melton Chamber of Commerce	Peak NGO	Economic
Nathan Stribley	Policy Manager, Committee for Melbourne	Peak NGO	Economic, Planning
Thanuja Gunatillake	Manager Public Transport and Mobility, RACV	Service Provider	Economic, Social
Tim Peggie	Director, Structure Planning, Growth Areas Authority	State Government	All
Linda Bulner	Community Development Officer, Lend Lease	Developer	All

Positive and negative views about population growth

Population growth was seen by interviewees as a significant feature of Melton, and one which brings potential and risks. Many of the stakeholders felt a sense of inevitability in the face of rapid population growth, *'regardless of what we do, it will happen, so we will plan for it.'* Others felt similarly that population growth wasn't *'good or bad, it just has to be properly managed.'*

Some of the main concerns include to coordination of growth, the potential for population growth to compound existing city issues, and funding for infrastructure. Interviews also identified the opportunity for population growth to bring benefits including greater lobbying power, social diversity and key pieces of additional infrastructure. In many cases tradeoffs or linked positive and negative impacts were identified.

In terms of impacts, many recognized that if development was not carefully planned the potential positives of population growth would be accompanied by a number of negatives outcomes. For example, stakeholders thought population growth creates the opportunity for *'renewal, creative planning and innovative solutions'* but were wary of the impacts of uncoordinated development.

'There are huge opportunities with population growth. There are greenfield areas doing great sustainable work and development, but other than these areas, it is mainly happening in an ad hoc way.'

If development does happen in an *'ad hoc way'*, stakeholders felt that wellbeing of residents could decrease in a number of areas, mainly in education, jobs, transport and infrastructure delivery. Poor planning for population growth was expected to lead to:

'...poorer outcomes in terms of education, such as leaving school before completion, lower involvement in tertiary education, lower number of professionals, more difficult to access jobs, which in turn leads to higher unemployment which leads to lower levels of social cohesion and populations that are poorer than the average metropolitan area.'

Another concern shared by several stakeholders was that the suburban growth area already has some deficits and that these were likely to be compounded by continued growth. However, stakeholders cited research that shows if growth areas invest in the infrastructure to address these issues, the government and community will get a return on the investment. However they also suggested that one of the major challenges to this approach is that *'councils struggle to finance the infrastructure'* and it is *'always challenging to find the funds.'* On the other hand, most stakeholders felt that population growth provides a *'critical mass'* for community and physical infrastructure in general.

'Things will get done now with the preparation for the growth. You can see what has been done in Caroline Springs - a great example of planned growth.'

Stakeholders felt increased population growth means increased ability to lobby for services, or as one put it, *'you can put forward a case to get a hospital from state government'*. They also felt that it helps create opportunities to *'connect communities through public and active transport'*, and add key arterial roads to the network.

Another specific example of the juxtaposition of potentially positive and negative impacts was highlighted by several stakeholders who felt that population growth provides a more rich and diverse society, however without opportunities for interaction the diversity could lead to segregation or social division. Similarly in terms of social cohesion, some stakeholders believed that contributions for new

development could be used *'to regenerate existing areas'*. However, if contributions are used inequitably, or unwisely, stakeholders believed that feelings of inequality and even animosity could develop between the regenerated areas and those areas that are seen to have been neglected.

Several stakeholders identified that one of the most notable positives of population growth is in relation to employment and economy. They suggested that population growth *'provides the biggest opportunity for increased employment, business creation and economy'* and that *'economic drivers are stronger as a result of population growth'*. Some believed that population growth will *'get the larger, big box stores flocking to the area'* and that the *'higher end businesses will get drawn out here.'* Stakeholders reported that most people in Melton currently go shopping in the city for *'higher end retail'*, but many felt that this was likely to change as the population continued to grow. One stakeholder estimated that 50% of shopping can be satisfied in Melton now, but *'in the future, it may be 90%'*.

Living standards were another area where people expressed optimism in relation to growth. Interviews with stakeholders revealed a fairly widespread view that improvement in living standards is *'strongly correlated to economic growth, as well as improvement of social cohesion and equity'* and that living standards could subsequently increase with population growth. However, with an increase in businesses, economy and infrastructure, it was noted that there will be *'a loss of that country town feeling for the people who have been living there for a long time.'*

In general, stakeholders interviewed saw the development in Melton as representing the effort to *'even up'* the suburban spread across the Melbourne region, which has been previously focused in the southeast (as opposed to Melton in the northwest). From this larger regional perspective, the development in Melton was thought to be a positive, because it provides more housing choice and has a *'great proximity to Melbourne'* and is *'ideally positioned'* with Melton 45 kilometres and Caroline Springs 30 kilometres from Melbourne.

Overall, stakeholders expressed that development in Melton was a positive because of its ability to provide more affordable housing to new populations. However stakeholders also spoke of negative impacts of population growth in relation to inadequate service delivery that impact of residents' quality of life, with longer commuting times, lack of mobility and a sense of isolation.

Environmental issues

There were three main issues raised by stakeholders in the environmental domain: perception of open space, conservation of habitat, and the design of buildings and developments. One stakeholder raised particular concerns about coal seam mining in the area. The underlying theme of these issues for stakeholders is that the environment appears always to come last, after social and economic considerations.

Perception of open space

Before the extension of the Urban Growth Boundary, Melton was thought of as a *'satellite town'* with *'a very small base'*, but with the growth areas designation, Melton has *'gone from open space and paddocks'* to several large and growing developments, such as Catherine Springs, Toolern and Atherstone. Many stakeholders noted the rate of population growth, highlighting that Melton *'is moving from 100,000 to 500,000 people.'*

The difference in perception of open space was quite distinct between old and new and development locations. Stakeholders suggested that before Melton was designated a growth town, original residents thought open space provided protection from the urban lifestyle, while newer residents feel that the open space represents a significant barrier to accessing services.

All stakeholders recognize the challenge in balancing growth and the environment. One stakeholder voiced the inherent conflict in this situation: *'it is challenging as a growth area, as we say we are pro environment, but we are continually eating away at it.'* Several stakeholders firmly believed that *'the continual expansion of urban areas is not sustainable'*.

'Most metropolitan strategies talk about infill development, which is great, but there are concerns about developing further and further out, especially when we can't manage the suburban growth we have right now.'

Other stakeholders were certain that the two goals of development and environmental outcomes are not mutually exclusive.

'People characterize suburban development as sprawl and 'sprawl' is an unfortunately negative connotation. People think of it as a sea of houses, but in fact there are a number of good things that need to be remembered, like some good environmental outcomes have been achieved from the sophisticated councils.'

For one stakeholder the recent development of coal seam mining exploration permit in Melton is another example of the open space in western suburbs being perceived as *'wasteland'* to be used by industry: *'western suburbs appear destined to be the dumping ground for toxic and noxious industries.'*

'Neither coal mining nor underground methane-production are acceptable in Melton. Both Melton and Werribee are two of the fastest growing municipalities in Australia. Urban Growth Boundaries have recently been expanded to include large areas in the western region for the development of residential communities. These new communities will be directly impacted by proposed underground methane-production, if these proposals go ahead. Melton has only just been declared a city. It seems ironic that a municipality only recently recognized as being worthy of city status is now to be threatened by the spectre of underground methane-production.'

Conservation and restoration

As a result of the amount of *'open space'* decreasing in Melton and being explored for energy mining, many stakeholders mentioned the conservation of grassland areas and restoration of waterways as two important issues.

In general, it was felt that Melton *'has a nice physical landscape'* with several major creek waterways running through the council area. Council has a number of programs to help maintain biodiversity and landscapes, such as providing support to local environmental groups, providing rate discounts to farmers to reduce the spread of invasive weeds, and successfully setting aside regional parks, such as Toolern Creek Regional Park. Several stakeholders believe this regional park represents a good balance between the needs of increasing population and environmental outcomes. The 131-hectare park is intended for species conservation, such as yellow box trees and legless lizards.

'Toolern Creek Regional Park is a good example of achieving both [policies on growth and the environment], as there will be a gradation of the intensity of land use within the park. It will start with a residential area next to it, with community centres and open space on the edge, ovals and pitches next, and then grassland and creek bank, so it will be a mixed-use reserve with community access.'

While it was recognized that the Council's existing programs were helpful, several stakeholders expressed the sentiment that sufficient and appropriate mechanisms aren't available to support conservation and restoration. For example, in relation to the regional Park above, there was a concern that when the park is handed over to a higher jurisdiction to manage, the amenity of the park will deteriorate due to insufficient budgets for park management.

Before development began, biodiversity surveys in Victoria were undertaken for areas within the Urban Growth Boundary (Growth Areas Authority, 2010a and 2010b). While these biodiversity surveys may have been the largest undertaken, there were concerns among stakeholders that the surveys were not representative, as they were *'conducted during a prolonged drought.'* Now that the drought has ended, endangered floras, such as orchids, have been sighted in areas being developed, yet the development has already received approval to proceed.

The EPBC Act sets out the requirements for offsetting the development of nationally significant areas, which Council can achieve relatively easily if they *'are able to offset it with other areas that Council owns locally.'* However, stakeholders questioned whether it is helpful or appropriate for developers to offset land further down the coast, as this does not provide benefits for the local area.

Victoria has only 0.1% of native grassland left (Victorian National Parks Association, 2012) and two large native grassland reserves are to be created in this region to *'protect those few grassland remnants still surviving here.'* One of the large reserves, a 15,000-hectare site, is *'not a museum site,'* meaning the stakeholder felt the reserve has quantifiable ecological value. Several stakeholders stated *'the reality is that our reserves are getting smaller'* and felt these museum size [small] pieces are ineffective. The appropriateness of a reserve in the middle of a development was also questioned.

'The two significant patches we have here are right in the middle of the development. You have to burn them every so often. What would you think if you bought your dream home across the street from a location that had to be regularly burned? People think this is a major risk. If you didn't know what the reserve was you would think its an eyesore. You can't walk through it to collect the rubbish that gathers there. We have a viewing tower for the significant area behind the police department, which makes people respect the reserve. You can see the kangaroos; which is also a risk, because they run out into the road. The frog population has gone up because they like the disturbed habitat. This grassland is a big issue. It's hard to maintain in the middle of suburbia.'

In regards to waterway conservation and restoration, the local environmental groups have planted almost 8,000 trees in the past two years and 21,000 grasses this year alone. However, the community groups also experience difficulties in achieving their conservation work. There was a belief that *'most people do not realise that the creeks exist.'* Additionally, there are *'only 3-4 people that are the main players'* in the environmental groups, which limits the pace of progress, and while population growth will increase waterway degradation, *'you don't get any more volunteer help with more people'* moving to the area. A particularly frustrating burden felt by environmental groups is around funder requirements for documenting the impact of funder donations.

'I have to buy, cook and sell sausages, to buy ink, to print pictures to show [our funders] what we have done. There are too many extra burdens that prevent it from being simple to get on and do our work.'

Currently, there is also a lack of water, which is *'the biggest killer in looking after the environment; we have 4,000 plants ready to go but can't plant them until we can get some more water.'*

Home design and development layout

Home design and the layout of each development can significantly impact the surrounding environment and there was an identified need for guidance on how to build sustainable and resilient suburbs *'in the face of increasing floods, fires, droughts, rising resource costs, and economic bubbles.'* The layout of the developments and their distance from public transportation will contribute to carbon emissions and climate change, particularly in relation to the car commute emissions, with 80% of Melton's residents travelling to Melbourne for work every day. The majority of commuters travel by car, because of the

decision not to build a planned train station in the new development area. Buses to Melbourne were not seen as a viable option because of their infrequent schedule.

Several developers in the area were modeling sustainable home design by constructing and showing *'display homes that are 7 or 8 stars'* and enforcing *'very strict design guidelines and controls for the builders'*, such as north-facing homes. Even with the sustainable home rating schemes, there was a feeling that *'the way we build housing in Australia isn't sustainable; we have poor insulation, over reliance on air-conditioning, particularly in the cheaper housing types.'* In addition, the absolute environmental performance of these homes was questioned and education was suggested as a solution for better environmental outcomes.

'The problem with the 5-star home is that you can still have 8 bedrooms with 2 kids. You could argue that this match-up is not environmentally friendly, but yet it has achieved a five-star standard. That's why education is so important. The design of the home has a big impact on the owners as well. Natural lighting if the home faces north creates a nicer feeling to the house as well as lower maintenance prices and energy and water prices. There needs to be a drive at a federal level to let people know the financial benefits of a sustainable home and to let them know that there is a payback. People need a helping hand to know about this.'

The number of people moving into the growth area also has an impact on total waste production and water use.

'Wyndham is receiving 250 new residents a week, with an average of 2.7 people per dwelling. Imagine the reaction to the waste guy when seeing another 12 new bins each week on his rounds!'

Water scarcity is a concern for Melton, not only for habitat restoration but also for service delivery. Melton receives less rainfall than surrounding areas, and the new developments are trying to address this by incorporating integrated water management systems, for water re-use and recycling. It is expected that the integrated water management systems will increase resilience against climate change, but it was also noted that the area is expected to have increased rainfall with climate change.

Social issues

The social issues raised by stakeholders related mainly to the mismatch between service expectations and service delivery, low levels of community cohesion, and the prevalence of social isolation and vulnerability. Each of these issues was seen to contribute to or exacerbate one another.

Levels of service

Stakeholders suggested that the ability of Council to provide community infrastructure services currently does not meet the required need.

'Access to services is one of the key issues. We are geographically situated away from Melbourne, away from the focus of existing services. Our existing services are becoming more stressed and stretched.'

'Often people will move out [to these areas] with high expectations about services, like kindergarten, particularly if they have moved from a neighborhood where it exists. And it takes time for these services to become available.'

Education was continually highlighted as one of the services that did not meet the current or growing need in Melton. Many stakeholders felt that a *'key challenge is getting schools in place in time'* and

several mentioned that Victoria *'has only approved two new school this year alone, for Melbourne, and Melton needs ten.'* The inadequate number of schools is felt acutely across Melton.

That is something that is hitting us in the face right now. Each year about 6,100 plus people move into the municipality, or about 2,000 families, and that equals 1 primary school and 1.5 community centres. 42 babies are born each week, that's two kindergarten classes, and we weren't the winner of the two schools. You can easily see how we fall behind and then all of sudden we are four schools behind. It's staggering. And this is our current rate of growth, this is not taking into account what is coming.

Not every development in Melton was experiencing a severe shortage of schools. Caroline Springs, for example, was highlighted as a development with sufficient schools; that is they have *'ten for the entire development'*. However, growing pains were still experienced in Caroline Springs. One stakeholder suggested *'some of the schools weren't designed to cope with the growth - the Catholic school was built for 400 but it got up to 800 students.'* Yet another school in the development tried to temporarily meet the growth with 24 double story portables, but unfortunately it became *'clear that the peak of students was going to last much longer'* and the resulting advice for future developments was, *'don't ever push to try to limit the school footprint; it doesn't work to meet population growth with portables.'*

In regards to healthcare, there was satisfaction with access and service received at a local clinic, but access to hospitals was cited as a major issue. Currently Melton does not have a hospital closer than a half hour drive away. The closest hospital is Sunshine Hospital in St. Albans.

'There are health issues. We are heavily reliant upon the Sunshine hospital. We have massive growth, but currently no state plans to build a hospital here. It's really hard for families to get to the hospital, and this difficulty adds to the trauma of a health or injury event.'

One of the main reasons for the lag in infrastructure is difficulty in securing the funding. Several partnership models have been trialed in Melton to overcome issues of funding deficits. In 2000, Caroline Springs had three schools and as one stakeholder reported:

'There was collaborative use of infrastructure although it didn't work to some degree, when catholic and public schools were using the same infrastructure. The private school parents wondered why they were having to pay more for fees if the students were using the same infrastructure.'

Later, in 2006, the previous Department of Community Development and Planning (DCDP) identified projects in development areas, including one in Caroline Springs that required or could benefit from a partnership approach. *'Instead of having a small school library and small public library, the school and Council joined funds'* to deliver a shared library. The current state government has indicated the potential of using the Public Private Partnerships (PPPs) to delivery school infrastructure (The Australian 2012).

Several stakeholders believed that the state's *'corridor planning provides a hierarchy and helps with balancing timely and appropriate delivery of infrastructure,'* however others felt this alone was not sufficient. Several stakeholders were calling for a *'pipeline of state and federal funding of infrastructure projects'* and a *'30-year build plan, that lays out when the construction of schools and hospitals will begin and where'*.

Vulnerability and social isolation

Stakeholders suggested vulnerability and social isolation are common issues for people and families moving to the new development, high growth areas. One of the main causes of vulnerability is the

compounded impact of lack of services and lack of mobility, with affordable housing perhaps representing something of a *'false economy'*.

'People are often sold the dream, but they come from an area where they had family and support, but they don't have two cars and the problems become exacerbated because they don't have the support, services and access that they did previously...When the 80% leave for work each day and the one family car is gone and there are health issues at home during the day, then there are big problems.'

Moving away from family, services and support, to an area without mobility can have potentially grave impacts for young mothers, which represents a sizeable portion of the young family demographic purchasing in the new developments.

'There is vulnerability for young mums out here. A mum had post-natal depression, and drowned her baby at home. It was awful, and from that a group of mums got together to help mums; the mothers network of Caroline Springs and Burnside. They have been together for 9 years and have helped 250 families. They come to people's homes and help with families. They organise and help around the house. Its really isolating when you come out here and if you haven't made the connection to the community, and if you left a full time job, it could be a disaster if you are stuck with a crying baby.'

Families invest in the growth areas because they are able to *'buy a 4-bedroom home, 36 kilometres away from the city for about \$260,000.'* However with local employment unavailable and a lack of services, the cost of living is often much higher than anticipated.

'Buying a home out here would appear that it is more affordable, but people find transport costs higher, and time requirements for travel higher and access to jobs harder and then small problems blow out to crises.'

'By the end of the first year you are already seeing families that are experiencing financial difficulty and cannot make their mortgage payments, and then domestic violence increases.'

Research shows that many housing developments in Australia are not suitable for the changing demographic structure (Kelly 2011). Several stakeholders suggested that a better harmony between the new housing stock and specific needs of the incoming demographics would decrease the financial vulnerability for people. The *'housing stock is mainly for large families'; 'a 3-bedroom home with 300 square meters isn't the type of housing everyone wants, but this is the house type most often built'*. The state is trying to address this mismatch by waiving the requirement for a developer to build 300 square metre sites, if the developer meets certain criteria. Another solution to financial vulnerability is in-home financial literacy and counseling.

'In Atherstone, we have a program with Uniting Care. It addresses the gap with financial literacy and offers counseling. The program is about helping people understand the impacts of energy use and getting household budgets right. We asked ourselves, what can we do to be proactive about ensuring this [home foreclosure] doesn't happen.'

Similarly, the lack of mobility (including personal, public and active transport) coupled with minimal local employment, creates significant social impacts on the inter- and intra-family isolation. People are *'working full time to pay off the house, spending time in car, and not spending time with family'*. Nor do they have time to contribute to the community by joining in *'volunteer'* activities or *'playing with the football club'*. The social impacts on children caused by lack of mobility can also be quite significant.

'On the weekends for the kids to get into the city it's too hard. The kids here do not have options for public transport, so their option is for a taxi or their parents to pick them up in the city and bring them home. And then they wonder why the kids get in trouble. There are

thousands of kids here and if you let them run the streets, that is when you get problems. And this is their community too. The community should be inclusive [of young people].'

To decrease the feelings of isolation and impacts on children, the design principle of co-location of services has been used in Caroline Springs.

'We have tried to get as much engagement with the schools as we can, by co-location, by placing maternal and child health next to childcare next to schools. The intention is to get the schools to connect to the families much earlier. In the shire, kindergarten participation rates is quite high, but still this helps to engage everyone earlier.'

The council recognizes the relationships between the social issues and transport, which is why *'key work and social focus for council is around transport.'*

Low community cohesion

Stakeholders shared the sentiment that Melton has low levels of community cohesion. These low levels of cohesion stem from three things: the relationship dynamics between old and new developments, a lack of a shared identity and the few opportunities for interaction between the different socio-economic groups.

The older developments in Melton have feelings of inequality or of *'being neglected'* in the distribution of resources, funding and attention, which contribute to the tensions between the old and new developments in Melton.

'Residents see the difference in the amount of effort council is putting in to maintaining the new streetscape. The resentment is nothing personal [against the new residents], it is aimed more at council. It is a feeling that you are treating this new group more fairly than us.'

The descriptions of the level of current tensions varied. At one end of the spectrum, a stakeholder believed:

'Right now it is not bad, but in the future with a gleaming new resident area, there will be an element of resentment, say between a 30 year old suburb and a new shiny development.'

Another stakeholder felt that currently there was *'a bit of tension'* between Melton and Caroline Springs while at the other end of the spectrum; several stakeholders felt that two suburbs have *'fighting resident groups'*.

'We even have resident groups fighting each other. The resident group in Melton will only let residents in the post code areas 3337 and 3338 join... We are getting to the stage where this suburb [Caroline Springs] will join up with Melton, and the residents association might be out there with their picket signs.'

Individuals in Caroline Springs recognized that for a while their development *'was the Council's baby'*, but also felt that some of the resentment is unfair.

'The community in Melton has felt that all of the Council money was coming down here [to Caroline Springs]. They were jealous of the whiz-bang library, but for 10 years we didn't have a library.'

To try to address any current or future tensions between developments, Council has a program of *'forward planned improvements'* to ensure there is a transparent process for community members

to see all of the improvements Council is making, the priority and the timing. *'And we just keep talking to people.'*

'We are not a hugely resourced council, but we have to be out talking with the community, the more we can talk and engage about things that effect their community, the more understanding there is.'

Aside from the tensions between old and new developments, several stakeholders felt that the name of 'Melton City Council' actually hindered community cohesion.

'The biggest thing is our name, the City of Melton. It's just a terrible name, and it incorporates 15 postcodes, but everyone assumes it's just the town of Melton. Everyone assumes the council boundary stops at Melton. A lot of the new Shires take on a new name so that the all towns within the shire can have a new collective identify. For me, there is that sense of disengagement...and so the sense of identity isn't there for our shire. Melton has been around since the 1800s and it was previously farmland. Caroline Springs is one thing, Melton is another, and now Atherstone will only have its own identify.'

There was a sense that the name of the City of Melton exacerbates the geographic and mental boundary between the two towns.

'As a city we are spread out geographically, we have pockets of population. Melton considers themselves the original inhabitants. There is already the separation and segregation. The segregation is strange because we are only 20 minutes apart. The agricultural land sets up a false boundary.'

Other contributors to the low levels of community cohesion are the pockets of communities with varying social-economic and cultures levels across the council. There are *'90 nationalities in the shire'* and *'people are struggling and incomes are low, but it varies across the council; Caroline Springs is affluent, Melton South is disadvantaged.'*

Stakeholders reiterated the importance of building these community connections, but again it was felt that Caroline Springs had more resources to build these connections. This access to resources was felt to contribute to the positive experience at the high school.

'The high school, Lake View School, has no racial tension. They are very accepting. There are over 100 different nationalities and almost as many different languages here. The high school is a really good example of good fast growing culture. Given the pressures, they have done really well.'

Stakeholders recognized that these issues of isolation, vulnerability and cohesion are systemic and related to many different factors. *'Isolation can be a problem because of lack of transport, services, cultural differences, language differences.'* Not only is lack of transport *'something that really starts to create that polarization of cultures'* but the *'disconnection from public transport services increases vulnerability in living away from services and from increased oil price'*. There is also the idea that employment helps to build social capital. In some of the areas where they have struggled to build employment this could be one of the reasons as to why lower levels of social cohesion have been registered.

Economic issues

The main economic issues raised by stakeholders were related to the lack of economic centres, diverse businesses and employment, as well as insufficient transport options.

Economic activity centres and business mix

Melton is experiencing several challenges with its current economic activity centres and business mix. According to stakeholders, *'there haven't been appropriate places for businesses to set up.'* Historically, *'Central Activity District policies have been focused on retail, but it has been hard to establish businesses in these areas.'* One reported that Melton has *'a lot of empty of shops'* and that *'IGA just moved out of Caroline Springs.'*

According to some stakeholders, these economic challenges are because *'Melton is not planned, it is spread out everywhere; to get to a bank, you have to drive around the block ten times.'* Another suggested that Melton residents have to go to Warribee to shop as *'we just don't have enough here.'*

There was a sense of frustration among many stakeholders that insufficient planning and preparation was occurring in order to realise the significant opportunities of population growth.

'If Melton was the focus to build up, it could be like the second CBD. This shire could be the bridge between Melbourne and Ballarat, but I don't see that happening.'

To address the *'lag in provision of more local shopping opportunities'* and *'encourage more early business enterers into this market'*, stakeholders espoused differing interpretations of appropriate long-term economic strategies. Several felt that the *'largest push'* or main strategy should be to encourage more *'higher-end'* retail businesses to establish in Melton.

'Council put in Kmart and a Big W. We have stated the obvious to council, but it was after council approved these businesses and they agreed with us, but they are still putting in garbage shops. That's what makes us frustrated.'

'We have a shopping strip here, but we need to lift the economy to one with higher order facilities.'

One suggested that the health precinct planned for Toolern represented an opportunity bring in higher order facilities, such as medical imaging.

Recently this year, Melton Council in partnership with Lend Lease, Burbank Group of Companies, and the Kangan Institute received \$14.6M for the Western Business Accelerator and Centre for Excellence (BACE), under the federal Suburban Jobs program (DSEWPAC 2012). According to the Suburban Jobs Program, BACE will provide training for construction businesses on issues such as environmentally sustainable building design and construction and small business owners will also be able to access training in business management skills. The Suburban Jobs program believes this focus on the construction sector is appropriate for Melton because, *'Fifteen new housing developments are underway in the municipality and more than 34 per cent of all new businesses registered in the Shire are part of this industry.'* Sustainability Minister Tony Burke believes this program will have systemic impacts.

'The population of the City of Melton is expected to double by 2031 and 83 per cent of its workforce are currently forced to leave the area for work. This project will help create local jobs and take cars off the road, allowing Melton residents to spend more time with family and friends.'

Stakeholders felt that the *'local job market is not keeping up with growth.'* Stakeholders repeatedly mentioned that 80% of Melton leaves the area for work, and that Melton is below the target of 1 job per household. Stakeholders pointed out that the *'workers here are predominantly blue collar'* and suggested that *'in the next few years, the jobs will be anything in the construction game.'* However several stakeholders believed these construction jobs would not last. Some felt BACE needed to be

supplemented with retail opportunities and others nominated a need for more *'white collar'* businesses. As one put it *'the white collar workers are moving out here, but not their businesses'*.

One difficulty with assessing the dynamics of economic development is the varying timeframes used by stakeholders. Several stakeholders felt that developers tend to operate within a 10-year time frame whereas state government operates within a 30-year time frame. Stakeholders suggested one example of how these different timeframes lead to conflicting strategies is the location of Caroline Springs High School. For many, its location is a positive:

'A lot of people don't understand why you put schools on the mainstream street, but in Caroline Springs it has been a great way of generating activity in the retail and the students get access to bus transport.'

This proximity of the school to the town centre was also considered instrumental in addressing student exodus rates from the Melton area, with one suggesting *'the majority of students leave Melton'*. Because of the proximity of the school to the development's activity hub, West Waters Hotel, a nationally accredited program could be developed for training students, including an 8 to 9 month program in the hospitality industry.

'The hospitality industry usually employs transient people but if you invest in the kids, the hotel is one block from school and this training program gives them skills they can take anywhere in the world.'

However for other stakeholders, the placement of the school in close proximity to economic activity centres was inappropriate.

'We try to ensure that schools do not sit on top of communities' centres. One of the key drivers of the growth areas are the activity and employment centres. We try to plan for opportunities for medium density housing around the activity centres. Caroline Springs school precinct is too close to the main street, this is one of our main criticisms. We would say with a larger town centre that you are better off having the school site behind the centre. By locating the school away from the town centre, there is a better opportunity for mixed use in the town centre, business on ground floor and residents above; or opportunities for people who live above to provide a service in the space below.'

Stakeholders reported that State government strategic planning is trying to support earlier and appropriate development of economic activity centres. One of the large benefits of corridor planning is that it *'provides certainty that that these developments will come, so it gives new businesses confidence the populations will come.'* One point on which all stakeholders agreed, is the frustration and negative impacts that follows when approved and agreed plans do not come to fruition or when local plans are not thoroughly developed. Several stakeholders pointed out the irony that Caroline Springs has a road called Commercial Road that was planned for mixed-use business in the middle of the development, but that *'it is now all residential.'* One stakeholder summarised the general sense of frustration about the lack of commercial and infrastructure development:

'Do we need a whole strip of apartments? Where are the employment opportunities? Where is the infrastructure, like the train station? We have a commercial district of Melton and arguably a commercial district of Caroline Springs. But there doesn't seem to be a focus on the business and commercial development of the shire as a whole. We keep seeing residential development, but I haven't seen any plans for commercial development. It didn't help that our train station was cancelled. All of these people came here thinking there was going to be a train station and now that opportunity is gone.'

Insufficient transport options

As discussed above, the provision (or lack of) transport infrastructure and services can have both social and environmental ramifications. It also has economic impacts. Many stakeholders believed the minimal transport options to Melbourne and around the City of Melton are dissuading businesses from entering the area.

In terms of road access, it was acknowledged that the *'Western freeway is a good connection to the city'* but that it struggles with traffic jams because of the increasing traffic and because *'some of the other key roads are not built yet'*.

'When coming to Caroline Springs now, after a meeting, the traffic is backed up 2 kilometres on the highway because they have to get off at the same exit. And this is the traffic jam before all of the housing is even completed.'

Some stakeholders believed that *'If we built up Melton, this would take some of the traffic pressure off the highway'* by encouraging people to work locally, but options for public transport would still have to be improved between the two developments. To travel from Melton to Caroline Springs requires two buses, *'so you have to be in a serious situation without any other options to get the bus to Melton'*.

Stakeholders also suggested that another major transport issue in Melton that will intensify with continued population growth is train capacity because the existing train services in Melton is currently at capacity. One stakeholder reported that *'if you go to the train station in Melton, you will see cars parked there for miles.'* Another suggested that the biggest inhibitor is the *'single line because trains can't go in and out.'* Others felt that the train line *'needs a lot of upgrades'* and the service times *'are not frequent enough.'*

In terms of getting a return on investment, stakeholders recognized that the delivery of train stations in the growth areas are a good return relative to the amount spent. However, the new growth areas are experiencing delays and barriers in building new train infrastructure. One stakeholder reported that in the City of Melton, *'the liberal government pulled the plugged on the train station for Caroline Springs even though the parking lot was built and the train goes past already.'* Another felt that the train station had been *'put on the back burner until further notice.'* As to when the train station would be constructed, one suggested that, *'it's anybody's guess, but it is a big one if we are bridging the gap between Melbourne and Caroline Springs.'* The decision to not build the train station was seen to be impacting on peoples' desire to move to other new developments in Melton because *'even though a train is promised, who is to say the train will actually come in.'* Funding appears to be a major barrier, with one stakeholder reporting that *'train stations at Toolern and Atherstone are planned, but there are no funds for delivery.'*

For many residents, it appears that the response to the lack of public transport and the prospect of spending an hour and a half commuting by public transport to the city is to buy a car. One stakeholder reported that when the council completes surveys on whether community members have transport difficulties, the answer is often *'I did until I bought a car.'* However as discussed above, the need for so many residents to purchase private vehicles in order to live in Melton not only contributes to high levels of fossil fuel use, pollution and congestion, it also increases peoples' financial vulnerability as it greatly increases the cost of living in the area.

Challenges and issues of population growth in Melton

The main challenges of population growth in Melton will be building the appropriate settlement design, creating a thriving and diverse local economy and providing timely and appropriate social and physical infrastructure to meet the needs of the growing population. Governments at all levels will need to explore new methods and strategies for funding infrastructure, coordinating priority actions and preventing or mitigating long-term impacts if infrastructure development cannot keep pace with population growth.

Settlement design and approval

One of the biggest challenges faced by Melton is to make suburban areas *'as sustainable as they need to be, in the face of increasing floods, fires, economic bubbles'* or in other words create a resilient community. Stakeholders suggested that we need to ask *'What's the right type of settlement?'* with one suggesting a *'polycentric settlement'* should be considered. Another pointed to the need for governments to demonstrate greater initiative and a greater willingness to collaborate:

'If local and state governments designate the land as a growth activity area, we need to really work out what is required to get a proper town centre going. Government needs to lead the way with actions like putting their offices in the city centre. The centre needs to have transport connecting to it. It needs to have at least one anchor, like a university. Governments need to provide incentives to the private sector and get their hands dirty to lead the way. It has to be a partnership, it's not any one sector that can achieve good design, but the government has to lead the way. Ideally we need to have a bipartisan approach, so you don't get upheaval every time the government changes.'

Stakeholders also reiterated that the settlement design needs to match its facilities to the demographic moving to the area. They saw the appropriate provision of housing types as imperative to minimize financial vulnerability. They stressed that social infrastructure will need to be considered and planned to achieve long-term benefits for the communities, and that this includes the location of this infrastructure – as the school example discussed above demonstrates. Stakeholders agreed that considering the proximity of Melton to Melbourne was an integral part of this planning process:

'We have to consider things like performing arts centres for Melton. You might think that access to \$250,000 means starting a performing arts centre here, but our proximity to Melbourne means that the arts and performance groups won't come out to perform here; so should you pursue a performing art centre for here? I would say no, focus on what is appropriate for Melton.'

Stakeholders also suggested that even when plans are set out by the state government, local government would have to manage the conflict between long term planning and meeting the community's immediate needs. One suggested that currently, the *'statutory side'* of council can come into conflict with the *'community side,'* meaning development is *'controlled by a few individuals'* which compromises the integrity of any long-term planning.

Creating local economy

State government will be planning for 0.5 million people in the Western Corridor in 30 years and is striving to provide work where people live (Victorian Government 2012). As the population in Melton doubles, it will remain a challenge to meet or exceed the 1 job per household target established in the

metropolitan plan. Stakeholders suggested that plans are needed to help government and business groups *'ensure that the population lives, breathes, eats and works here.'* Some suggested that council isn't doing enough to develop local opportunities, *'they need to be living and breathing the idea of working local'*. Another felt that *'in the short term, the challenge is partly matching the people who are buying homes to the skills currently needed – to attract the people with blue collar construction industry skills to live here as well.'*

As noted earlier in the case study, currently the state Corridor Plans lay out the growth areas for Melbourne and areas within the Urban Growth Boundary. The Corridor Plans are then implemented in the Precinct Structure Plans (PSP). The PSPs aim for well-connected business and activity centres. The city is also going through a reconfiguration of its metropolitan strategy; and one stakeholder reported that the *'links between connecting jobs to people and people to jobs is one of the key things that is being explored.'* Using these state level tools as a guide, this stakeholder suggested that the Melton area will have to work to *'match industry to context and context to industry'* over the long term. Another suggested Melton *'needs to have a 50 year business plan'*. One suggested that a 50-year business plan could *'help question how to shift the focus from retail to more of a mixed use activity area'* and *'transition to higher order sectors'* before the construction industry phases out.

State government appears to be focusing on the economic drivers for Melbourne, like higher education, hospitality, health, and asking what spatial policies are needed at a metropolitan level for these industries. These industries are not currently identified as having their own spatial requirements. Stakeholders suggested this approach could be beneficial for suburban areas in creating a sustainable local economy.

Providing timely infrastructure

It appears that government will be continually challenged to provide social and physical infrastructure in a timely way to meet the increased needs associated with population growth. The direct and flow-on impacts of delayed infrastructure can hinder community development long after the infrastructure is eventually provided. As one stakeholder put it, *'Councils realise that if you don't address these larger issues right away, there will be big long-term cost implications'* suggesting that *'for example, if schools don't come, then people have to get child care, school and employment out of the area'*. Another suggested that *'if you don't instil in the community the behaviour of using public transport from the start, it is difficult to change afterwards.'*

One of the main hindrances for timely infrastructure delivery is funding. One stakeholder suggested *'Councils feel frustrated because right now there are no agreements around state government proportions to kick-in for infrastructure, and councils have to go begging.'* There might be grants available, but these were often small and very tightly targeted to specific facilities.

It appears that governments are investigating other delivery models to ensure infrastructure can keep pace with the rate of growth. State government has recently indicated their intention to use alternative forms of funding such as PPPs, which one stakeholder interpreted as meaning *'government then isn't hindered by having to generate the capital.'* State government has also changed its developer levy on new land releases to \$100,000 per gross hectare, which is intended to help address the cost of infrastructure.

However, several stakeholders suggest that taxation may be the way forward to fund infrastructure sufficiently.

'The ideal situation would be that the taxation system funds the infrastructure because infrastructure is intergenerational and once it is built, infrastructure is in place for a long-time and it has a long-term payback.'

Council will also need to consider ways of building the new infrastructure to minimize the level of maintenance in the long-term, so that after developers leave the area, council is able to maintain the amenity, without straining their budget or compromising the sense of fairness in the community.

Role of local government

Stakeholders suggested the City of Melton is still defining and learning what it means to be a local government with jurisdiction over a major growth area. This role will continue to evolve and the challenge will be for Melton to try new approaches and reflect on what is working. According to stakeholders, *'Melton is open to development, so they will find the resources to find the skills'* to meet the challenges associated with population growth. Many felt that the business incubator (BACE) was a good example of Melton's progressive approach to population growth.

In regards to population growth, several stakeholders said the *'State government believes it's council's role to address these larger issues.'* However many also felt that *'Local government is usually the one to pick up the pieces but they are struggling to resource themselves to be able to do this.'* Stakeholders emphasized that, *'councils shouldn't be left to deal with such issues on their own'* and *'not having the resources to deal with these problems is something that needs to be addressed.'*

Several approaches were mentioned for council to address these larger issues, including a sub-regional approach, developing partnerships and advocacy. For example, one stakeholder suggested that a sub-regional approach *'will help Melton more effectively address issues such as rail transport and industry development'*.

Melton has been developing partnerships at the local, regional and national level including a joint development program with Lend Lease, developing stronger relationships with local government areas Wyndham and Hume and Melbourne's Interface Councils, and participating in the National Growth Areas Alliance (NGAA). Melton's challenge will be to continue to develop and leverage these types of partnerships.

Council is also engaged in greater levels of advocacy because *'they can see for their communities that these hard issues need to be addressed but councils don't have enough money to do it on their own.'* Stakeholders felt that council finds itself advocating either alone or together with other councils, yet they are advocating for *'a finite amount of resources among many growth areas'*. It appears that growing and strengthening Council's advocacy skills will continue to be part of the challenge of addressing the challenges of population growth.

Information gaps and opportunities

When reviewing the indicator framework, many stakeholders reflected on the high level of ‘granularity’ required for data in order to calculate meaningful indicators, reiterating that *‘the meaningfulness of the indicators depends on the level at which the data is gathered and analysed.’* As one put it, *‘one of the biggest problems with local indicators is the level at which you gather the data’* and *‘there is no easy answer for the question of the appropriate level to data collection.’* Stakeholders’ experience was that regional data *‘sometimes masks what is happening at the local level but on the other hand a neighbourhood survey is expensive to conduct.’* Several examples of data collection issues were provided:

- *‘Deer Park and Caroline Springs are in the same postcode, but they are in two different local government areas, so using the same postcode for data collection means the data is not relevant for the LGA.’*
- *‘If you go to Melton south, it is a very disadvantaged community verses Caroline Springs which is much more affluent, therefore you need to be able to collect data at a level that reflects these differences.’*

One stakeholder suggested that some discussions of population growth were not sufficiently nuanced to be useful at the local level:

‘Suburban growth in metropolitan cities as a phenomenon is not recognised separately in statistical collections. ABS collects data and analyses data as ‘capital city’ and ‘other’, and our issues get hidden within those reporting categories’

Stakeholders also provided their opinions on the types of indicators that are beneficial, and not beneficial, to collect. One suggested that *‘leading indicators’* are for *‘the things we should have our eye on’* but that leading indicators are not always obvious. For example, *‘if domestic violence rates are comparatively very high in one council, that could be a red flag, but it could be because of a range of issues.’* One stakeholder pointed to the lessons learned by Toronto’s *‘vital signs’* indicators about the importance of using indicators to monitor a range of factors:

‘In Toronto, they saw a rise in shooting among young black men, and they realised if they had been following some important indicators, they would have seen this type of rise in shooting on the horizon. The signs were there in that kids were not staying in school and there was a decreased number of kids engaging in recreational activities. If they had put these indicators together they would have seen trouble coming.’

Stakeholders also provided several responses directly about the indicator framework.

Social domain:

- *‘Need for indicators that can measure community connectedness and community participation.’*

Economic domain:

- Number of SME start-ups or new business start-ups and closures is missing. One suggested an indicator for *‘New business start-ups would be more meaningful, because you can compare apples to apples across the jurisdictions’*;
- The current indicator relating to businesses with innovative activity was seen to be somewhat subjective – what is the definition of an innovative business activity;

- Level of self-containment of jobs should be an indicator for sustainability and growth of council; *'We should measure how many jobs are available within 30 minutes travel (by car).'*

Environmental domain:

- Stakeholders felt carbon emissions should be monitored at LGA level, but not at the household level.

Table 17: Natural capital - data availability, gaps and alternative measures

Natural Capital				
Theme	Indicator	Measure	Data availability at case study level	Alternative case study level measure (if applicable)
Climate and atmosphere	1. Air quality	Number of days in year that key pollutants exceed national air quality standards	Not available	Yearly maxima – ozone (O ₃) ppb
	2. GHG emissions	Net greenhouse gas emissions	Not available	No alternative measure available
		Greenhouse gas emissions per capita	Not available	No alternative measure available
	3. Energy usage	Residential and non-residential electricity use	Not available	Electricity consumption per dwelling; Gas consumption per customer
Ecosystems and biodiversity	4. Terrestrial ecosystems	Extent of native vegetation	Not available	No alternative measure available
		Extent and distribution of protected areas	Not available	No alternative measure available
	5. Vulnerable and endangered species	Number of endangered species, population and communities listed under the <i>EPBC Act</i>	Available	Number of threatened species listed under the <i>Victorian Flora and Fauna Guarantee Act 1998</i>
	6. Reestablishment of local vegetation communities	Number of hectares under restoration by Council and volunteers	Not available	No alternative measure available
Water	7. Water consumption and availability	Water consumption (per capita)	Not available	No alternative measure available
		Water availability to meet demand	Not available	No alternative measure available
Land	8. Ground cover	Ground cover	Not available	No alternative measure available
Waste	9. Waste disposed to landfill	Waste disposed to landfill	Not available	Household waster per person (kg)

	10. Recycling rates	Proportion of waste generated being recycled	Not available	Material recycled (%)
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Table 18: Social and human capital - data availability, gaps and alternative measures

Social and Human Capital				
Theme	Indicator	Measure	Data availability at case study level	Alternative case study level measure (if applicable)
Skills and education	11. Educational attainment and qualification	Highest level of educational attainment	Available	n/a
	12. Education services	Ratio of childcare places to population of children aged 0-5 years resident in the LGA	Not available	No alternative measure available
		Ratio of primary school places to population of primary aged children resident in the LGA	Not available	No alternative measure available
Health	13. Self-reported health status	% reporting fair to poor health	Available	n/a
	14. Life expectancy	Life expectancy	Not available	No alternative measure available
	15. Persons who smoke daily	% of adults who are daily smokers	Available	n/a
	16. Obese persons	% of adults that are overweight or obese	Available	n/a
	17. Mental health	Proportions of adults rated as psychologically distress	Available	n/a
	18. Access to open space	Open space per capita	Not available	No alternative measure available
Institutions and governance	19. Fair and functioning institutions and governance	Levels of trust in key institutions	Not available	No alternative measure available
	20. Community engagement	Proportion of people who volunteer	Available	n/a
Employment	21. Under-employment	Underemployment rate	Not available	Hours worked per week
	22. Unemployment	Unemployment rate	Available	n/a
	23. Local employment	% people working and living in the same LGA	Not available	Participation rate

Security	24. Security	Feelings of safety	Available	n/a
		Incidence of personal and household crime	Not available	Offences reported per 100,000 population: against the person and against property

Table 19: Economic capital - data availability, gaps and alternative measures

Economic Capital				
Theme	Indicator	Measure	Data availability at case study level	Alternative case study level measure (if applicable)
Wealth	25. Household net wealth	Household net worth	Not available	Wealth per household
Housing	26. Housing supply gap	Net dwelling gap	Not available	Average dwelling price
	27. Housing affordability	Low income households in rental stress	Available	n/a
		Low income households in mortgage stress	Available	n/a
Transport and infrastructure	28. Mode of transport to work	Car as driver	Available	n/a
		Car as passenger	Available	n/a
		Public transport	Available	n/a
		Bicycling	Available	n/a
		Other	Available	n/a
	29. Transport infrastructure	Kilometres of dedicated cycling paths	Not available	No alternative measure available
	30. Access to broadband internet	% households with broadband connection	Available	n/a
Income	31. Income disparity	Disparity in disposable household weekly income	Not available	Social security take-up; Household debt service ratio; Household debt to gross income ratio

Productivity and innovation	32. Multifactor productivity	Multifactor productivity	Not available	Gross regional product
	33. Innovation	Business with innovative activity	Not available	Patent counts per population
Socio-economic status	34. Relative socio-economic disadvantage	ABS Index of Relative Socioeconomic Disadvantage (IRSD) score	Available	n/a

Table 20: Contextual indicators - data availability, gaps and alternative measures

Contextual Indicators				
Theme	Indicator	Measure	Data availability at case study level	Alternative case study level measure (if applicable)
Population	35. Population size	Number of persons	Available	n/a
	36. Rate of growth	Annual rate of population growth	Available	n/a
	37. Population density	Number of persons per square kilometre	Available	n/a
	38. Gender and age profile	Gender and age profile	Available	n/a
Land use	39. Land use change	Rates of greenfield development	Not available	No alternative measure available
Cultural diversity	40. Proficiency in spoken English	% do not speak English well or not at all	Available	n/a
	41. Indigenous population	% indigenous	Available	n/a
	42. Country of birth	Country of birth	Available	n/a
Regional migration	43. Net overseas migration	Net overseas migration	Not available	No alternative measure available
	44. Overseas born	% born overseas	Available	n/a
	45. Domestic or internal migration	Net number of regional internal migrants	Available	n/a

Summary of theme and indicator data for Melton

Table 21: Natural capital - data figures

Natural Capital						
Theme	Indicator	Measure	Data	Frequency	Spatial resolution	Data source
Climate and atmosphere	1. Air quality	Yearly maxima – ozone (O ₃) ppb	112 (2003), 71 (2011), Decrease but not consistent across the years	Annual	LGA	EPA Victoria
	2. GHG emissions	Net greenhouse gas emissions	Not available	n/a	n/a	n/a
		Greenhouse gas emissions per capita	Not available	n/a	n/a	n/a
	3. Energy usage	Electricity consumption per dwelling (MWH/HH)	Melton (S) – East: 5.2 (2004), 5.4 (2007) Melton (S) – Balance: 5.2 (2004), 5.7 (2007)	Annual (2004-2007)	LGA	DSE
		Gas consumption per customer (GJ/GC)	Melton (S) – East: 58 (2004), 58.9 (2007) Melton (S) – Balance: 54.9 (2004), 53 (2007)	Annual (2004-2007)	LGA	DSE
Ecosystems and biodiversity	4. Terrestrial ecosystems	Extent of native vegetation	Not available	n/a	n/a	n/a
		Extent and distribution of protected areas	Not available	n/a	n/a	n/a

	5. Vulnerable and endangered species	Number of species in area listed under the <i>EPBC Act</i>	7 plant species, 4 animal species	One off	LGA	Independent organisation - Viridans
		Number of threatened species listed under the <i>Victorian Flora and Fauna Guarantee Act</i>	29 plant species, 46 animal species	One off	LGA	Independent organisation - Viridans
	6. Reestablishment of local of vegetation communities	Number of hectares under restoration by Council and volunteers	Not available	n/a	n/a	n/a
Water	7. Water consumption	Water consumption (per capita)	Not available	n/a	n/a	n/a
		Total LGA waster consumption	Not available	n/a	n/a	n/a
Land	8. Ground cover	Ground cover	Not available	n/a	n/a	n/a
Waste	9. Waste disposed to landfill	Household waster per person (kg)	632 kg Melton (2006/07) 540 kg Victoria (2006/07)	One off (2006/07)	LGA	Local Council
	10. Recycling rates	Material recycled (%)	54% Melton (2006/07) 62% Victoria (2006/07)	One off (2006/07)	LGA	Local Council

Table 22: Social and human capital - data figures

Social and Human Capital						
Theme	Indicator	Measure	Data	Frequency	Spatial resolution	Data source
Educational attainment	11. Educational attainment and qualification	% adults with tertiary qualifications	7.0% (2001), 10.4% (2006), Increase*	5 years (Census)	LGA	ABS
		% adults with Certificate/ Adv Diploma	22.1% (2001), 25.0% (2006), Increase*	5 years (Census)	LGA	ABS
	12. Education services	Ratio of childcare places to population of children aged 0-5 years resident in the LGA	Not available	n/a	n/a	n/a
		Ratio of primary school places to population of primary aged children resident in the LGA	Not available	n/a	n/a	n/a
Health	13. Self reported health status	% reporting fair to poor health	10.3% (2007), VIC 11.1% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	14. Life expectancy	Median age at death (years)	Not available	n/a	n/a	n/a
	15. Persons who smoke daily	% of adults who are daily smokers	18.2% (2007), VIC 15.4% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	16. Obese persons	% of adults who are overweight or obese	34.3% (2007), VIC 35.7% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data
	17. Mental health	% of adults rated as psychologically distress	10.0% (2007), VIC 9.3% (2007)	2004 & 2007	LGA	PHIDU, compiled from ABS & NHS data

	18. Access to open space	Open space per capita	Not available	n/a	n/a	n/a
Institutions and Governance engagement	19. Fair and functioning institutions and governance	Levels of trust in key institutions	Not available	n/a	n/a	n/a
	20. Community engagement	% of volunteering	10.8% (2006), 10.5% (2011), Decrease*	5 years (Census)	LGA	ABS
Employment	21. Underemployment rate	Hours worked per week	21.8 hours (2011), 6.0% decrease from 2007	Annual	NIEIR region	SoR
	22. Unemployment rate	Unemployment rate	June 2012: 7.2% (Melton (S) - East), 10.7% (Melton (S) Bal), 5.5% (VIC)	Monthly	DEEWR labour force region	DEEWR, Labour Force Region
	23. Local employment	Participation rate	Melton 66.0% (2011), VIC 61.8% (2011)	Monthly	DEEWR labour force region	DEEWR, Labour Force Region
Security	24. Security	Feelings of safety: when walking alone in local area during day	Melton 96.3% (2007), Northern & Western Metro Region 96% (2007)	2007	LGA	Community Indicators Victoria
		Feelings of safety: when walking alone at night	Melton 63.3% (2007), Northern & Western Metro Region 61.3% (2007)	2007	LGA	Community Indicators Victoria
		Offences reported per 100,000 population: against the person	Melton 1,065 recorded crimes (2010-11) Northern & Western Metro Region 1,044 (2010-11)	Annual	LGA	Victoria Police

		Offences reported per 100,000 population: against property	Melton 4,518 recorded crimes (2010-11) Northern & Western Metro Region 4,551 (2010-11)	Annual	LGA	Victoria Police
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Table 23: Human capital - data figures

Economic Capital						
Theme	Indicator	Measure	Data	Frequency	Spatial resolution	Data source
Wealth	25. Household net wealth	Wealth per household	\$417,000 (2001), \$622,000 (2012), Increase*	Annual	NIEIR region	SoR
Housing	26. Housing supply gap	Average dwelling price	\$262,600 (2001), \$426,100 (2012), Increase*	Annual	NIEIR region	SoR
	27. Housing affordability	Households in rental stress	28.5% (2006); VIC 24.5% (2006)	5 years (Census)	LGA	PHIDU
		Households in mortgage stress	11.3% (2006); VIC 9.2% (2006)	5 years (Census)	LGA	PHIDU
Transport and infrastructure	28. Mode of transport to work	Car as driver	Melton 84.7% Greater Melbourne 78.2%	5 years (Census)	LGA	ABS
		Car as passenger	Melton 6.7% Greater Melbourne 5.6%	5 years (Census)	LGA	ABS
		Public transport	Melton 5.9% Greater Melbourne 12.2%	5 years (Census)	LGA	ABS
		Bicycling	Melton 0.2% Greater Melbourne 1.7%	5 years (Census)	LGA	ABS
		Other	Melton 0.5% Greater Melbourne 0.6%	5 years (Census)	LGA	ABS
	29. Transport infrastructure	Kilometres of dedicated cycling	Not available	n/a	n/a	n/a
	30. Access to broadband internet	% households with broadband	40.6% (2001), 80.9% (2006), Increase*	5 years (Census)	LGA	ABS

Income	31. Income disparity	Social security take-up	12.3% (2011), 0.8% decrease from 2007	Annual	NIEIR region	SoR
		Household debt service ratio	14% (2001), 22% (2011), Increase*	Annual	NIEIR region	SoR
		Average dwelling price to household disposable income	3.3 (2001), 4.8 (2011), Increase*	Annual	NIEIR region	SoR
Productivity and innovation	32. Multifactor productivity	GRP	~11% of Melbourne's GRP (minus Melbourne CBD)	One off (2012)	Western Melbourne RDA region	Western Melbourne RDA
	33. Innovation	Patent counts per population	11.05 per 100,000 (1994-2011), national average 21.01	Annual	NIEIR region	SoR
Socio-economic status	34. Relative socio-economic disadvantage	ABS IRSD score	Melton 1010, Greater Melbourne 1022, VIC 1010	5 years (Census)	LGA	ABS

Table 24: Contextual indicators - data figures

Contextual Indicators						
Theme	Indicator	Measure	Data	Frequency	Spatial resolution	Data source
Population	35. Population size	Number of persons	29,379 (2001), 24,691 (2011), Increase*	Annual	LGA	ABS
	36. Rate of growth	Annual rate of population growth	Average 1.7% per annum 2001-2011	Annual	LGA	ABS
	37. Population density	Number of persons per square kilometre	40.8 (2001), 48.2 (2011), Increase*	Annual	LGA	ABS
	38. Gender and age profile	Gender and age profile	See Figure 3	5 years (Census)	LGA	ABS
Land use	39. Land use change	% infill development	Not available	n/a	n/a	n/a

		% greenfield development	Not available	n/a	n/a	n/a
Cultural diversity	40. Proficiency in spoken English	% do not speak English well or not at all	0.4% (2001), 0.5% (2011), Increase*	5 years (Census)	LGA	ABS
	41. Indigenous population	% indigenous	2.7% (2001), 3.1% (2011), Increase*	5 years (Census)	LGA	ABS
	42. Country of birth	Country of birth	See Table 25	5 years (Census)	LGA	ABS
Regional migration	43. Net overseas migration	Net overseas migration	Not available	n/a	n/a	n/a
	44. Overseas born	% born overseas	16.0% (2001), 17.2% (2011), Increase*	5 years (Census)	LGA	ABS
	45. Domestic or internal migration	Net number of regional internal migrants	Data inconclusive ¹³	Annual (2006-2010)	SLA	ABS

¹³ ABS (cat. no. 3412.0) Migration, Australia, 2010-11 experimental regional internal migration estimates. Data for Melton inconclusive.

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Appendix A

Table 25: Contextual indicators - country of birth (Source: ABS, 2012b)

Country of birth	2001	2011	Percentage point change 2001-2010
Australia	80.5%	79.8%	-0.7%
Bosnia and Herzegovina	0.0%	0.0%	0.0%
Cambodia	0.0%	0.0%	0.0%
Canada	0.3%	0.4%	0.1%
China (excl. SARs and Taiwan)	0.1%	0.4%	0.3%
Croatia	0.0%	0.0%	0.0%
Egypt	0.0%	0.0%	0.0%
Fiji	0.1%	0.1%	0.0%
Former Yugoslav Republic of Macedonia	0.0%	0.0%	0.0%
Germany	0.7%	0.8%	0.1%
Greece	0.1%	0.1%	0.0%
Hong Kong (SAR of China)	0.1%	0.1%	0.0%
India	0.2%	0.3%	0.1%
Indonesia	0.1%	0.1%	0.0%
Iraq	0.0%	0.0%	0.0%
Ireland	0.2%	0.2%	0.0%
Italy	0.2%	0.2%	0.0%
Japan	0.1%	0.1%	0.0%
Korea, Republic of (South)	0.1%	0.1%	0.0%
Lebanon	0.0%	0.0%	0.0%
Malaysia	0.2%	0.3%	0.1%
Malta	0.0%	0.0%	0.0%
Netherlands	1.3%	1.0%	-0.3%
New Zealand	1.1%	1.2%	0.1%
Philippines	0.2%	0.2%	0.0%
Poland	0.1%	0.1%	0.0%
Singapore	0.1%	0.1%	0.1%
South Africa	0.6%	0.9%	0.3%
South Eastern Europe	0.0%	0.0%	0.0%
Sri Lanka	0.1%	0.1%	0.0%
Thailand	0.0%	0.1%	0.1%
Turkey	0.0%	0.0%	0.0%
United Kingdom, Channel Islands and Isle of Man	7.9%	7.5%	-0.4%
United States of America	0.4%	0.6%	0.2%
Vietnam	0.0%	0.0%	0.0%
Born elsewhere	1.9%	2.2%	0.3%
Country of birth not stated	3.5%	3.0%	-0.5%