
Bacchus Marsh Housing Demand & Supply – Background Paper

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EXECUTIVE SUMMARY

Spatial Economics Pty Ltd was engaged by Mesh Planning as sub-consultants to produce a demand and supply research paper for the Bacchus Marsh Study Area as an input to the Bacchus Marsh Housing Strategy. This research paper provides an integrated body of work capturing the key aspects of demand and supply for the Bacchus Marsh Study Area. The key aspects cover the drivers of demand, housing demand, socio-economic factors, urban form, residential supply and housing construction, residential land supply, affordability, housing needs and the balance between supply and demand within the Study Area.

Existing Demand

Current housing demand in the Outer Western Region is strong and the majority of that demand is flowing to the Growth Areas. These areas are absorbing rapid population growth and thus, the growth rate in the Outer West has increased and the share of total Melbourne population is similarly increasing. It will continue to do so, particularly as other regions have more limited housing opportunities where there is no greenfields land.

Within the Outer Western Region the location of supply in greenfields sites is the primary driver of the specific locations of demand (they draw in demand to where housing opportunities exist). The choice between locations such as Bacchus Marsh and Melton is complicated but there are always trade-offs including amenity, transport, access to jobs and price.

There are several major factors relating to small area (municipal, township and suburb) and micro level (smaller than suburb) demand that need to be considered:

- i: Complexity in changing housing demand at the micro level, complexity in household life cycles and suburban life cycles;
- ii: limited housing type choice within the area may impact on demand or hide the specific nature of dwelling demand;
- iii: The composition of housing stock that becomes available can influence demand due to temporal effects, price differentials or other more random demographic or market forces. This influence can pull in demand or push it out from/to different locations or it can pull forward or hold up demand;
- iv: There is a buffering effect of the two large Growth Areas adjacent to Bacchus Marsh which will strongly impact on the timing, quantity and pace of expressed demand; and
- v: While planning is largely focussed on new housing supply, housing demand is 'churning' in the housing market. It is looking at the whole of housing supply, where the majority is in fact existing housing stock.

Existing Demand - Population

Overall Bacchus Marsh is undergoing population growth though ageing in place and the addition of young families and children.

The majority of the population increase in Bacchus Marsh was people aged 55 to 69 years. There were also strong gains in young people aged 15 to 29 and adults aged 40 to 54 years. There were losses of population in the 5-9 year category and small losses of 30 to 39 years.

There are two key demographic trends evident. The ageing in place of middle aged people who are choosing to stay in the area; and the second is the loss of young adults aged 20 to 29. Some people in this age cohort moved out of Bacchus Marsh, however the comparison of 2001 and 2011 age profiles suggests that this trend (quite normal in rural and regional areas) is less pronounced in 2011 than it was



in 2001. Between 2001 and 2011 there were strong gains in older children and young adults (15 to 29 year olds). This reflects the changing role of Bacchus Marsh.

Existing Demand - Dwellings

Between 2001 and 2011 separate houses increased by 1,350 at an average annual rate of 2.7% per annum. Separate houses dominate the Study Area, accounting for 92% of the growth in dwellings between 2001 and 2011 and this type of dwellings represent 92% of the housing stock in the Study Area, steady since 2001.

Townhouses and apartment type dwellings make up only a small proportion of housing in the Study Area and grew by just 110 dwellings over the 10 years from 2001 to 2011, but at about the same rate as separate houses (2.6% per annum).

Combined with the large numbers of family household and the relatively affordable land, separate houses are likely to remain the dominant dwelling type for some time to come.

The existing dwellings in the Study Area are predominantly separate houses, reflecting the relative affordable house product and the resultant demand for housing in the area. The lot sizes are on average substantially larger than available in the growth areas of Wyndham and Melton but the lot sizes have reduced in recent years in line with the reduction in lot sizes in all other growth areas across Melbourne.

Existing Demand - Key Issues

Population growth is the major determinant of overall household growth and therefore housing demand. Total housing demand within the Study Area will largely be influenced by macro level and regional population growth.

Housing demand in the Study Area will depend largely on the ongoing capacities and pricing of broadhectare lots released within the Growth Areas of Melton and Wyndham to continue to cater for large scale demand. State and local government land use policies affecting the Growth Areas will significantly impact the future of the Study Area whether they are overtly recognizing this fact, or not

Dwelling demand is not solely generated by additional household growth, it is a factor of household lifecycle changes, preferences and needs. Additional dwelling demand will be generated via down/up-sizing, changing tenure (i.e. rental to purchaser) and net intra-national migration.

As demand continues to diversify over time (social change and ageing of the population), it will be important not to rely solely on past trends of demand as a guide to the future. This will be particularly important in planning for a variety of dwelling type options, in terms of dwelling size, location, access to amenities/services and built-form.

Future Demand

Between 2011 and 2041 Moorabool Shire will grow at slightly lower rates than the Outer West Region as a whole but the Bacchus Marsh area will largely match the growth rate for population (2.9% per annum), households (3.2% per annum) and dwellings (3.1% per annum).

From 2011 to 2041 the Study Area will experience its most rapid population growth in the older age categories (70 to 84 years) but its largest growing age ranges will be families and their children (30 to 39 and 0 to 14 years).

The Study Area will experience the strongest and most rapid growth in lone person households (3.0% per annum) and couples without dependents households (2.9% per annum). These smaller (one and two person) households will make up more than 60 per cent of the area's growth from 2011 to 2041.



Large family household (couples with dependents) will continue to grow and comprise more than 30 per cent of households in 2041.

Future Demand - Population Projections

The rate of growth in the Study Area is projected to be slightly faster than recent historical growth. This suggests that the rate of growth in demand for dwellings will increase, particularly in the coming 20 years.

Over the next 26 years to 2041, it is expected that there will be an average extra 500 residents per year.

Future Demand - Household/Dwelling Projections

These are formed from allocating large area demand and are constrained by realistic assumptions about opportunities to supply additional housing. If the constraints on supply are eased or restricted then the household projection can and will change (sometimes dramatically).

Household and dwelling projections are largely a function of population growth, changes to population growth at a national, state, metropolitan and regional level will impact population growth rates within the Study Area, and therefore household/dwelling projections.

During the projection period, households and dwellings in the Study Area are projected to grow at rates a little higher than recent historical growth rates. Over the forecast period it is expected that there will be around 220 dwellings built per year. However the capacity and pricing points of the designated Growth Areas of Wyndham and Melton will largely impact the demand in the Study Area. Significant constraints, or major new land opportunities and price/product differential in these areas will impact the current projections.

Future Demand - Household Type Projections

All household types will grow strongly particularly lone person and couples without dependents households. Additionally there will be steady strong growth in couple family with dependents households, which will remain the most prevalent household type.

The significant rate of growth of smaller one and two person households (lone person and couples without dependents) households may have some impact on dwelling type demand. Together with the ageing population, smaller, affordable and low-maintenance dwellings may see increasing demand, although this demand is likely to remain for separate houses or semi-detached units.

Future Demand - Age Projections

The population in the Study Area is ageing. That is, the proportion of older residents is increasing the most, with the fastest population growth of all age categories being in the 70 to 84 year age group, averaging around 4.3% per annum. This has implications in terms of ageing in place, service delivery, the potential 'churn' of housing stock i.e. downsizing of dwellings and the need for aged care housing (both independent and dependent housing/accommodation).

However there will be significant, large amounts of growth of family aged adults, children and empty nesters. These household will likely demand and consume traditional separate dwellings.

The largest growing age cohorts by amount will be in the 30 to 39 year old age ranges, the 0 to 14 year age ranges and in the 40 to 54 age ranges and 70 to 79 year age ranges. These numbers suggest that together with the ageing-in-place of older residents, there will be strong growth from adults in family households and their children. While the young adult age ranges grow by relatively lower amounts, the fact that they are growing show a different pattern to typical rural and regional areas which struggle to retain young adults who leave for the bigger regional and metropolitan centres.



Future Demand - Key Issues

Population, household and dwelling projections are a central input to analysing possible future housing demand. It is critical that any projections are routinely and continually monitored and updated as major demographic trends, and therefore assumptions change.

The rate of growth in housing demand within the Study Area will, to a large degree, be dependent on macro level demand, i.e. national, state, metropolitan and regional population growth. Housing demand within the Study Area will not be independent of population growth at higher order geographic areas.

The rate of growth in the Study Area is projected to be slightly faster than recent historical growth. This suggests that the rate of growth in demand for dwellings will increase, particularly in the coming 20 years.

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However there will be significant, large amounts of growth of family aged adults, children and empty nesters. These household will likely demand and consume traditional separate dwellings.

During the projection period, households and dwellings are projected to grow at rates a little higher than recent historical growth rates. However the capacity and pricing points of the designated Growth Areas of Wyndham and Melton will largely impact the demand in the Study Area. Significant constraints, or major new land opportunities and price/product differential in these areas will impact the current projections.

All household types will grow strongly particularly lone person and couples without dependents households. Additionally there will be steady strong growth in couple family with dependents households, which will remain the most prevalent household type.

The significant rate of growth of smaller one and two person households (lone person and couples without dependents) households may have some impact on dwelling type demand. Together with the ageing population, smaller, affordable and low-maintenance dwellings may see increasing demand, although this demand is likely to remain for separate houses or semi-detached units.

Affordability

The Bacchus Marsh Study Area is now part of the Melbourne metropolitan area and has become closely connected to the western growth areas of Melbourne. Hence Bacchus Marsh can now be considered to be part of the Outer West Region comprising Wyndham, Brimbank, Melton and Moorabool. In particular, Bacchus Marsh is closely connected to Melton and the price movements and land supply that occur in Melton closely affect Bacchus Marsh.

The median price for a house in 2014 in Bacchus Marsh Study Area was \$343,000; slightly less than the Outer West Region of Wyndham, Melton, Brimbank and Moorabool of \$381,000.

House prices have consistently remained 5-10% less than in the growth areas of Wyndham and Melton. Land prices are essentially the same in Bacchus Marsh as Melton however the median lot size is considerably larger in Bacchus Marsh than Melton. In Bacchus Marsh the recent median lot constructed is 686 sqm compared to 437 sqm in Melton. Per square metre for land, this equates to \$220 per sqm for land in Bacchus Marsh compared to \$340 per sqm in Melton. For the same price in Bacchus Marsh the buyer is purchasing 50% more land. The difference between Melton and Bacchus Marsh is of quality



rather than price. Consumers are prepared to pay similar prices for land as in Melton but expect more bang for their buck.

For middle income families (Couples with children) there is a reasonable ability to purchase a home. However for other family types on middle incomes there is less ability to purchase a home. An increase in the availability of units/villas/townhouses within the established area will help these households purchase a home.

Housing stress in growth areas is relatively high – compared to metropolitan Melbourne – as first home buyers commit heavily to purchasing their first house. The housing stress rate in Bacchus Marsh is less than the growth areas but this may rise due to the compositional change in buyers.

Although there is a relatively high proportion of new leases that are affordable to low income earners in the area, this does not mean that demand is being met as illustrated by the high proportion of low-income earners facing rental stress.

While the private housing market will account for the vast bulk of future housing provision in the Study Area there are, and in future will continue to be, some individuals and households who are unable to find housing they can afford in the private market.

Up to the present time the bulk of social housing in Bacchus Marsh has been provided by the State Government through the Department of Health and Human Service (DHHS). DHHS has a total stock of only **218 dwellings in Bacchus Marsh**. A further **28** affordable dwellings were managed by the community housing sector as at 2011.

Affordability - Key Issues

For middle income families (Couples with children) there is a reasonable ability to purchase a home. However for other family types on middle incomes there is less ability to purchase a home. An increase in the availability of units within the established area will help these households purchase a home.

Housing stress in growth areas is relatively high – compared to metropolitan Melbourne – as first home buyers commit heavily to purchasing their first house. The housing stress rate in Bacchus Marsh is less than the growth areas but this may rise due to the compositional change in buyers.

Although there is a relatively high proportion of new rental leases that are affordable low income households in the area, this does not mean that demand is being met as illustrated by the high proportion of low-income earners facing rental stress.

Restricting land supply increases land prices. This is true for both broadhectare and the established urban area. Hence in terms of affordability, there is an imperative to facilitate the orderly release of land and to provide the right conditions to facilitate infill development.

Affordability in the Study Area is linked to the amount of land per dwelling and the type of construction. The less land per dwelling the more affordable the product hence there will be an increasing demand for villa units/town houses as these dwelling types consume half to a quarter of the land previously occupied by a separate house. This trend of less land per dwelling is also evident in new broadhectare estates across metropolitan Melbourne, with the median lot size decreasing substantially in recent years.

It is important to facilitate affordability by allowing for a diversity of lot sizes within new broadhectare estates and the facilitation of villa units/townhouses across the established urban area.

The Study Area is currently providing a more affordable product both for separate houses and units than Wyndham and Melton. There is a quality difference, in terms of more land rather a significant price



difference. To maintain this point of difference in the Study Area, lot sizes need to stay relatively larger for comparable dwellings in Melton or the amenity dividend in the Study Area needs to increase to change/maintain consumer preferences.

The provision of and access to social and special needs housing is effectively supply not demand limited. Social housing supply in the Study Area had been somewhat 'opportunistic' rather than as part of a deliberate strategy. This primarily reflects the severe resource constraints faced by the public and community housing sectors.

Council's ability to directly influence achievement of this goal is limited. However there are actions it can undertake to advance achievement of the goal. For example it could:

- explicitly recognise the critical role of the social and special needs housing sectors in its housing strategy;
- advocate to the State and Commonwealth Governments in relation to the importance of social and special needs housing and the need to increase funding to service providers;
- follow the example set by some inner city councils and look at opportunities to use Council land holdings to facilitate the construction of additional social and special needs housing. This might involve the sale of surplus sites to community housing associations or other service providers at less than market prices, where this would make it viable for providers to construct additional social or special needs housing;
- commit to facilitating community consultation on and planning approvals for social or special needs housing projects;
- consider the use of techniques such as 'inclusionary zoning' to encourage the inclusion of a component of social or special needs housing when the rezoning of significant sites is expected to result in a substantial uplift in land values; and
- consider options to assist providers of services to the homeless meet escalating costs (such as through considering the provision of Council owned or supported premises to assist the provision of such services) and work with the service providers to facilitate meeting the critical day to day needs of local homeless people.

Finally and very importantly Council could, through its revised housing strategy, seek to reduce the ongoing demand pressures on the social housing sector by ensuring that its planning policies do not unnecessarily limit the scope for provision of lower cost options (such as studio apartments) through the private housing market.



Broadhectare Land Supply & Associated Adequacy

Residential land supply is analysed by supply type/location, namely:

- Minor Infill (vacant 'urban' lots);
- Broadhectare;
- Future Residential (unzoned); and
- Rural Residential (vacant lots).

For broadhectare land supply areas, anticipated lot construction timing is presented. This refers to the likely timing of lot construction, not dwelling construction. It is highlighted and highly recognised that the timing presented is a guide, it will not equate to full completion of activity, but rather a guide to broad likely development construction initiation or likely potential to.

Land Supply

As at September 2015 there were 5,828 lots identified as residential supply. This is comprised of:

- 5,003 zoned broadhectare lots (86% of supply);
- 646 vacant urban residential lots (11% of supply);
- 150 designated future residential lots (3% of supply); and
- 29 vacant rural residential lots (0.5% of supply).

There were 646 minor infill lots identified, with 91% of the lots smaller than 1200 sqm. Vacant land stock was concentrated in Bacchus Marsh (229 lots) and Farley (290 lots).

There were around 5,000 zoned lots available within broadhectare sites. The location of these lots were

- Bacchus Marsh (1,504 lots);
- Darley (966 lots);
- Maddingley (2,458 lots); and
- Pentland Hills (900 lots).

Over the next five years it has been identified that there is a potential for 320 broadhectare lots per annum constructed within zoned broadhectare estates. Recent broadhectare lot production has averaged 240 lots per annum, the expectation of 320 lots may be unlikely and more likely to follow recent trends. This however illustrates that there is sufficient zoned stocks that is development ready/intentions for construction that is sufficient to meet short-term demand.

There is an estimated lot potential within future residential of 150 lots located in Maddingley.

There are 21 vacant Rural Residential lots (14% of all rural lots). There are no identified/designated future rural residential areas within the Study Area (unzoned).

Adequacy of Broadhectare Land Stocks

The adequacy of residential broadhectare land supply was determined for four scenarios:

- Scenario 1: VIF projections and assuming 86 % of total demand will be for broadhectare residential construction (86% is the recent historical proportion of broadhectare land of total demand)
- Scenario 2: VIF projections with reduction in the proportion of broadhectare demand to 70% of total demand.
- Scenario 3: id Consulting projections and assuming broadhectare construction is 86% of total demand.
- Scenario 4: Dwelling projections assumed to grow at 3.5 % pa and broadhectare construction to stay at 86% of total demand.



In terms of zoned broadhectare residential land stocks it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **16 and 27 years** of demand, it is considered that **20 years of broadhectare supply is the most likely**.

Land Supply - Key Issues

A range of scenarios have been produced reflecting the uncertainty around demand and supply. Demand has the capacity to accelerate and reduce the years of supply. Conversely, there is a large potential for dispersed infill to increase substantially which would reduce demand for broadhectare land and subsequently increase the years of supply.

There is a high capacity for dispersed infill redevelopment within the Study Area that is not captured in the analysis of vacant lot stock. This means that there are readily alternative residential land supply stocks outside of undeveloped broadhectare estates - therefore a feasible opportunity to decrease the reliance on broadhectare land.

Dispersed infill as a housing supply source is likely to increase to cater for an increasing number of single and smaller households and as land values increase - properties with less land will be more affordable. Dispersed infill development activity is also likely to increase as development moves further from the centre of town, as households seek to be closer to facilities/amenities. This will have the effect of increasing the overall supply of dwellings within the Study Area.

There is ample opportunity in the Study Area for the development of villa units/townhouses due to the existing large block sizes and the relatively low capital improved value relative to land size of existing housing. This allows 'cottage industry' developers/builders to purchase single blocks and develop the site relatively cost effectively. This type of infill is opportunistic depending on the sale of the site and that the land economics are feasible to produce smaller dwelling units.

Estimates of broadhectare land supply capacity are essentially based on recent trends, planning permits and short to medium terms market expectations. Over the last ten years, the median broadhectare lot constructed within the growth areas of metropolitan Melbourne has dramatically declined. Therefore the estimate of broadhectare lot capacity can be seen as conservative. In the medium to longer term, it would be reasonable to expect broadhectare lot densities to increase, and thus, an increase in lot/dwelling capacity.

The release of broadhectare land has an unequivocal effect on land prices. Hence, the continued release of broadhectare land is a key to the continued levels of housing affordability within the Study Area.

Residential Lot/Dwelling Construction

Residential lot construction activity is detailed from July 2008 to September 2015 and is presented at an urban locality and Study Area level. Residential lot construction is further analysed by supply type/location, namely:

- Dispersed Infill;
- Retirement Village;
- Broadhectare; and
- Rural Residential.

Lot Construction Activity - Overview

From July 2008 to July 2015 residential building approvals averaged 291 per annum. This compares to 275 lots per annum that were constructed (the difference is that not all building approvals are



constructed). Of the lots constructed in the period, 86% were broadhectare, 11% dispersed with remainder aged care and rural residential.

Residential lot activity was divided between Darley (117 lots per annum – 45%), Bacchus Marsh (33% or 91 lots pa) and Maddingley (24% - 67 lots pa). Dispersed infill lot construction averaged 30 per annum.

The majority of dispersed infill projects resulted in 1 or 2 net additional dwellings. Since July 2008, 67% of dispersed infill were constructed on parent lot sizes less than 1200 sqm. Across the Study Area typical density pre-development was 933 sqm and post- development 368 sqm.

Broadhectare lot construction for the same period average 236 lots per annum. This represents 86% of all lot construction. The lots were located in Darley (100 lots pa), Bacchus Marsh (74), and Maddingley (61).

Median lot sizes of the respective years have varied from 509 sqm to 784 sqm with lot sizes typically 37% larger than broadhectare lots constructed in Melton. However there is a diverse range of sizes being produced. Typical broadhectare lot construction across the Study Area was around 590 sqm, by locality, typical broadhectare lot sizes range from:

- 384 sqm in Bacchus Marsh;
- 538 sqm in Maddingley; and
- 783 sqm in Darley.

Rural residential lot construction is limited within the Study Area.

Lot Construction Key Issues

Median lot sizes within new broadhectare estates for the respective years have varied from 509 sqm to 784 sqm with lot sizes typically 37% larger in the broadhectare estates of Melton. Recently, rather than a price differential between Melton and Bacchus Marsh, the trade-off has been for larger blocks of land. The likely implication is that if newly constructed lots are of similar size configuration to competing municipal areas within the Outer West Region (particularly without a proportion price decline differential), projected demand levels will likely be impacted.

Recent lot construction reveals the dominance of broadhectare lot construction compared to dispersed infill. As illustrated through the analysis of existing residential densities, there is ample latent supply that would readily support an increased share of dispersed infill development activity.

Demographic projections support the potential for an increase in dwelling products with a smaller land component than is currently produced. However, it is important to fully understand the development feasibility of higher density housing products within the Study Area (beyond scope of this study).

Dispersed infill development, although limited in terms of total lot/dwelling contribution, illustrates similar trends to that across metropolitan Melbourne. The vast majority of dispersed infill projects (61%) resulted in 1 or 2 net additional dwellings/lots, in terms of dwelling/ lot contribution this accounted for 31% of net additional dispersed infill lots/dwellings. Whereas, dispersed infill projects that yield 10 to 20 lots/dwellings represented only 6% of projects but 24% of the net dwellings/lots.

Specifically, larger infill projects will account for the bulk of the dwelling contribution, whilst smaller dispersed infill projects are numerous, they do not represent the bulk of net dwelling contribution.

The typical pre-development density for infill development was 933 sqm, post development 368 sqm. On average this results on 2.6 lots per development. This again reinforces that this type of infill development is likely to continue to occur in Bacchus Marsh due to the configuration of the existing lot



stock. However, larger sites (existing or through lot amalgamation) will result in higher yielding/density projects and a higher contribution in terms of the number of dwellings.

Urban Form

Bacchus Marsh, was and still is a market garden area, producing a large amount of the region's fruit and vegetables. An irrigation scheme laid the basis for dairying, market gardening and orchards. In recent decades it has transformed into the main commuter town on the Melbourne-Ballarat corridor due to its relative level of affordable housing. The Bacchus Marsh township was bypassed in 1972, and effectively splits the urban form of the Study Area, separating Darley to the north of the original township. The Maddingley brown coal open-cut mine (1932) is two kilometres south of the railway station and the sand quarry mines is located six kilometres north of the township.

Economic functions such as the coal and sand quarries, the irrigation district – environmental conservation areas such as the Werribee Gorge State Park, Lerderderg State Park, Long Forest Conservation Reserve – transport infrastructure such as rail, Western Freeway and geographical features such as the Pentland Hills, all have a major influence on the geographic spread of the historic, existing and future urban form.

This rapid expansion of the Study Area has had the effect of creating a trichotomy urban system role. It is still an important agricultural centre and services the surrounding farmland/orchards/market gardens, a regional centre within the Central Highlands providing regional retail, commercial, health and education services, but is now also an important source of broadhectare residential land supply and is increasingly functioning as a dormitory suburb for metropolitan Melbourne. Bacchus Marsh is now part of metropolitan Melbourne and functions within the Outer West Growth Region comprising Moorabool, Melton, Wyndham and Brimbank – however, providing in addition, a more traditional regional urban centre function.

Urban Form - Urban Footprint

The urban footprint of the Bacchus Marsh Study Area has greatly expanded over-time. From a small regional town occupying 47 hectares in 1940, it now covers 885 hectares and growing at an increasing rate. By 1960 the urban footprint had increased to 68 hectares (or 7% of the current urban footprint). From 1960, the Bacchus Marsh Study Area started to expand at a greater rate. In the period 1960 to 1980 the urban footprint of the Study Area increased by 87 hectares more than doubling the size of the town. By this stage the town covered 155 hectares and by 1990 the urban footprint had nearly doubled again to 296 hectares. This trend has continued to recent times with the last five years resulting in the addition of 290 hectares meaning that the urban area of the Bacchus Marsh Study Area has increased by over 40% in the last five years.

Continuing growth will see the urban footprint increase by another 50% or 475 hectares over the next 20 years as new broadhectare sites are developed (this is excluding any related industrial, commercial and public uses).

Recent growth has been characterised by urban sprawl with the development of low density lots with the majority of lots developed in the 500 sqm to 1000 sqm range in this period. The median lot size has reduced in line with metropolitan Melbourne trends with new 'master planned' estates commonly producing lots below 500 sqm. Even with the smaller lot sizes, there is an ever increasing urban footprint. This continued growth leads to a range of issues including:

- Connectivity – there are already significant traffic and connection issues in Bacchus Marsh relating to the historical development of the township and the freeway that divides the town in



two. These connectivity issues will only be more compounded as the Study Area continues to expand;

- Service Delivery – the increasing urban footprint and increasing population creates difficulties in delivering the appropriate services that new residents and existing residents require and expect. This includes public transport, social infrastructure and retail offer; and
- Sustainability – The continued development of broadhectare land for housing raises issues surrounding sustainability. The main issue is that there are large tracts of land used for housing that are not well serviced (currently). However, to ameliorate this effect there are many options to improve sustainability including efficient houses that use less natural resources through good design.

There has been limited dispersed infill development in recent years, with on average 30 extra dwellings per year being constructed. This equates to around four dwellings added for each existing 1000 dwellings. This is a low rate of infill development and it is very likely that this rate will increase given the future demand for smaller dwellings with less land and the ready supply of large developable lots that are available across the Study Area.

Urban Form - Residential Densities

There are approximately 6,840 dwellings within the Bacchus Marsh Study Area as at September 2015. Median dwelling density is 763 sqm compared to 568 sqm in Melton and 546 sqm in Wyndham. Most dwellings (77%) are situated on lots sized over 600 sqm. Whereas, 10% or 660 dwellings have densities of 300 sqm or less.

Urban Form - Dwelling Typologies

Separate houses dominate the Study Area with 92% of the growth in dwellings in recent years being separate house.

Of the 6,840 residential dwellings within the Study Area, the majority (58%) are suburban density dwellings i.e. a separate house with a density ranging from 500 to 1,000 sqm. Low density suburban represents 22% of the dwelling stock i.e. separate houses on land zoned GRZ, RGZ, NRZ with densities of greater than 1,000sqm. Of the higher density dwelling stock i.e. flats, units, apartments and separate houses on lots sized less than 500 sqm – represents 18% of all dwellings.

Due to relatively low house and land prices (compared to other growth areas in the western region) there is a preference for separate dwellings in the Study Area. There is a close link between land prices and separate dwellings with the cheaper the land the higher proportion of separate dwellings. This overall preference will remain in the near future, however there will most likely be an increase in dispersed infill within the Study Area in the medium term and a ratio of 20% of infill to total new dwellings is possible given current trends. This will be an outcome of market forces, as villa units/townhouses are more affordable due to the lower land content and relatively cheap building costs and a preference shift towards smaller dwellings with less land to manage. The dispersed infill development will be predominantly villa units/townhouses as opposed to apartments 'scattered' across the established urban area (due to opportunistic site acquisition/development opportunities).

Any artificial mechanism to try and accelerate dispersed infill development will most likely affect overall demand as purchasers have shown a distinct preference for separate houses on large lots as a trade-off to living in the Study Area as compared to the other growth areas of Melton and Wyndham, where individual lots are significantly smaller at the same price point – **IN THE SHORT TO MEDIUM TERM.**



Urban Form - Key Issues

The Bacchus Marsh Study Area now has competing roles to fulfil; a regional centre and as a dormitory suburb for Melbourne. This means that there are many competing land use requirements for the existing established urban area – medium/higher density housing, jobs, community facilities and commercial - for a relatively small established core commercial area and surrounding catchment.

The multiple roles of the Bacchus Marsh Study Area Age is reflected (outlined previously) by two key demographic trends 1) ageing population; and 2) growing number of families with children. This presents two differing demands for specific housing policy responses.

The majority of the existing lot stock in the Bacchus Marsh Study Area are greater than 600 sqm in size. This relatively low density of existing stock provides current and future opportunities for infill re-development.

The continued production of 'low density' separate houses means that there is limited diversity of housing types available and the continued rapid expansion of the urban footprint. This is potentially an issue for residents ageing in place and people looking for smaller (land component) and a more relative affordable housing product (i.e. less land component to the housing product).

The outcome of larger newly created residential lots (compared competing growth area municipalities in the Outer West Region) at similar land prices is a major factor that is contributing to existing and projected demand levels. Potentially, significant changes to the existing residential land product relative to the competing growth areas, will likely impact on future expressed demand levels.



1.0 INTRODUCTION

The Task

Spatial Economics Pty Ltd was engaged by Mesh Planning as sub-consultants to produce a demand and supply research paper for the Bacchus Marsh area as an input to the Bacchus Marsh Housing Strategy. This research paper provides an integrated body of work capturing the key aspects of demand and supply for the Bacchus Marsh Study Area. The key aspects cover the drivers of demand, housing demand, socio-economic factors, urban form, residential supply and housing construction, residential land supply, affordability, housing needs and the balance between supply and demand within the study area.

The Consultant Team

Spatial Economics put together a team of four experienced staff to undertake the consultancy:

- Dale Stokes - Dale has extensive experience in metropolitan and regional housing markets and planning for future housing needs and supply. Prior to the establishment of Spatial Economics Dale managed land supply and urban development programs within the Victorian, Western Australian and Northern Territory government agencies. Dale was the project manager for this consultancy.
- Peter Marshall - an urban economist with extensive experience in urban and regional economics and planning. His work focuses on the assessment of land supply, urban and regional economics, employment, growth strategies and associated policy issues.
- Chris Wight - a demographer with extensive experience in demographic and housing research and analysis particularly applied to strategic planning at the State and Local government levels. Chris most recently managed housing research for the Victorian Department of Planning and Community Development.
- Geoff Transom – a GIS programmer and analyst who is highly capable in manipulating complex datasets and producing high quality outputs. Prior to his employment at Spatial Economics, Geoff worked within the finance industry as both an analyst and programmer developing custom financial analytic software.

The Structure of Report

This report is divided into eight main sections in addition to a statistical summary/snap facts at the end of the report that detail key housing demand and supply information at a small area basis within the Study Area. The major sections include:

i) Macroeconomic Drivers of Housing Demand

This section discusses the drivers of demographic and housing demand at the macro level. The issue is approached from a top-down way to help understand the relationship between the drivers at the national level, the sub-regional level and the municipal/local level. The link between population growth and the demand for housing is also examined.

It is critical to properly understand these 'demand driver's' in order to be aware of the way in which changes in policies and demographic, economic and social trends that are in part beyond the control of governments (national, state or local) can influence future housing demand and needs at a local level.

This section concludes that the market is the best determinant of supply and demand and that there is at best a tenuous link between household formation and the demand for a type of housing.





ii) Historical Housing Demand

This section considers historical housing demand for the Bacchus Marsh Study Area but also considers the historical implications of housing demand in the metropolitan housing market and Outer Western Region.

The data presented covers trends in population and household growth, household structure and age profiles. The data presented draws upon ABS and State Government and Council sources.

This section provides an analysis of key demographic segments of the Bacchus Marsh population.

iii) Population and Housing Projections

The report contains detailed household by type and dwelling projections for the Bacchus Marsh Study Area. Spatial Economics has sought to compare the Bacchus Marsh Study Area with data for the Metropolitan and Outer West Region. The major trends affecting population and housing growth are discussed. They do not include projections by dwelling type. The dwelling type preferences of differing household types are complex and are governed in part by the nature and price of the available housing stock and the mix of new stock coming onto the market (which in turn will be partly influenced by Council planning controls).

The outcome of this section is a detailed understanding of housing needs.

iv) Housing Affordability

For the purpose of this report Spatial Economics have applied a number of alternative methodologies for assessing housing affordability in the Bacchus Marsh Study Area. This includes the application of a 'residual income' approach to identifying the affordability of housing for purchase by 'middle income' households (i.e. households in the fourth to sixth income deciles).

Standard housing affordability measures have been included for low income households – both rental and mortgage.

In addition we have assessed in detail the availability of affordable rental housing stock within Bacchus Marsh.

This section also explores the provision and need for social housing.

v) Urban Form

This section discusses the urban form of the Bacchus Marsh Study Area. This includes an analysis of the urban footprint which follows the growth and development of Bacchus Marsh over time. A detailed assessment of each lot was undertaken to determine dwelling densities. Housing typologies were broken into six categories across the Study Area and mapped and analysed.

vi) Residential Development Activity

This section of the report covers the trends and shifts in building activity across the Bacchus Marsh Study Area and provides an insight into proposed future residential development activity.

The information in this section has been compiled resulting from a number of comprehensive consultations with key representatives from the Shire of Moorabool. It is supported by datasets from the Australian Bureau of Statistics and primary data collection undertaken by Spatial Economics.

This section of the report details the recent activity of residential lot construction and dwelling approvals achieved across the Bacchus Marsh Study Area. Residential lot construction activity is detailed from July 2008 to September 2015 and is presented at an urban locality level. Residential lot construction is further analysed by supply type/location, namely: Dispersed Infill; Retirement Village; Broadhectare; and Rural Residential.



vii) Residential Land Supply

This section of the report details the stock (measured in lots) of residential land across the Study Area as at September 2015. Residential lot stock/supply is presented at a suburb, region and Study Area level. Residential land supply is further analysed by supply type/location, namely:

- Minor Infill (vacant 'urban' lots);
- Broadhectare;
- Future Residential (unzoned); and
- Rural Residential (vacant lots).

For broadhectare land supply areas, anticipated lot construction timing is presented. This refers to the likely timing of lot construction, not dwelling construction. It is highlighted and highly recognised that the timing presented is a guide, it will not equate to full completion of activity, but rather a guide to broad likely development construction initiation or likely potential to. The quantum of likely development timing is highly linked to the quantum of recent construction in the short-term (i.e. over next five years) as presented previously. Development timing is presented to illustrate likely development activity spatially.

viii) Adequacy of Broadhectare Land Stocks

This report incorporates the most recently available demand figures to project dwelling requirements and future adequacy of residential land. The results combine both supply and demand variables over the next 25 years to provide an assessment of the balance between supply and demand.

The two main projections available for Moorabool and small-areas within Moorabool are the Victorian State Government 'Victoria in Future 2015' (VIF2015) projections released in August 2014 and 'forecast.id' produced by 'id Consultants (id), released in September 2015. An additional demand scenario is presented that assumes a constant dwelling growth rate of 3.5% per annum. This is presented to illustrate a 'plausible' upper limit to projected growth.



The Study Area

The Study Area is illustrated below, it includes the localities of Darley, Bacchus Marsh and of Pentland Hills. The Study Area is referred to in the following report as: the Bacchus Marsh Study Area, the Study Area and Bacchus Marsh (if Bacchus Marsh is referenced to as a locality, this is specified).



2.0 MACRO DEMOGRAPHIC HOUSING DEMAND DRIVERS

Key Findings

Sub-Regional Housing Demand

Current demand in the Outer Western Region is strong, and the majority of that demand is flowing to the Growth Areas. These areas are absorbing rapid population growth and thus, the growth rate in the Outer West has increased and the share of total Melbourne population is similarly increasing. It will continue to do so, particularly as other regions have more limited housing opportunities where there is no greenfields land. However, demographics is not the only driver of sub-regional demand, nor where housing demand will be expressed on the ground.

A further dimension to sub-regional demand is the different effects on localised demand that different parts of the region will have, in particular different attractors of demand. Within the Outer Western Region the location of supply in greenfields sites is the primary driver of the specific locations of demand (they draw in demand to where housing opportunities exist). However, within the region there is also a significant impact on where demand will be located based purely on that great unknown: 'choice'. Sometimes these choices will be hard to define and sometime they will relate to characteristic of a particular area that are not directly connected with either population or housing factors.

The Outer Western Region also has many other factors affecting demand that do not relate specifically to population growth or resultant housing growth. The relative attractiveness is influenced by amenity - whether that is jobs and education opportunities, access to good transport, community services, parks and recreation opportunities. Sometimes it is simply the proximity of family and social networks that cause people to want to live in a particular area.

Municipal/Local Demand

Regional and sub-regional level housing demand, drive local level demand. There are several major factors relating to small area (LGA, township and suburb) and micro level (smaller than suburb) demand that need to be considered:

- i: Complexity in changing housing demand at the micro level, complexity in household life cycles and suburban life cycles;
- ii: limited housing type choice within the area may impact on demand or hide the specific nature of dwelling demand;
- iii: The composition of housing stock that becomes available can influence demand due to temporal (time) effects, price differentials or other more random demographic or market forces. This influence can pull in demand or push it out from/to different locations or it can pull forward or hold up demand;
- iv: There is a buffering effect of the two large Growth Areas adjacent to Bacchus Marsh which will strongly impact on the timing, quantity and pace of expressed demand; and
- v: While planning is largely focussed on new housing supply, housing demand is 'churning' in the housing market. It is looking at the whole of housing supply, where the majority is in fact existing housing stock.

In this section we will explore the broad drivers of demand for housing and highlight the key demographic trends that influence demand including the trends that underpin population and household growth and change. In particular we will highlight the factors where government is able to influence demand, whether it be total demand, or where demand for housing will be located.



Demographics

There is an inextricable link between population growth and the demand for housing. Macro level demand for housing is driven by population growth but both population and housing growth are at times influenced by outside (mainly economic) factors.

Macro level population growth

Total population change in any given area is comprised of two factors: natural increase (births minus deaths) and net migration (be it to or from other local or regional area or interstate or overseas migration). Over recent years, net overseas migration has contributed approximately 60% of the total annual growth in the Australian population.

Population growth at the local level (Bacchus Marsh), and indeed even at the metropolitan and State levels is therefore to a substantial degree driven by policy decisions made at a national level with little input from state governments and even less from local government. These national decisions are made for reasons that have little to do with, and often involve little consideration of their potential impact on, housing policy. This introduces a substantial element of uncertainty into the forecasting of local housing demand and planning for local housing supply.

The Australian Government, through immigration policy, can directly influence the level of migration to Australia. However, the federal government has little control over migration out of Australia. Historically, out-migration has been far surpassed by in-migration and so the federal immigration policy quite immediately and effectively controls the level of net overseas migration.

Over the past decade or more, Melbourne's population growth has been boosted both by relatively high levels of net overseas migration and also by an increase in the share of overseas migrants choosing to settle in Melbourne. The State Government's *Victoria in Future* population forecasts assumes a continuation of these recent trends.

Natural increase in population can be 'encouraged', though not controlled, through Commonwealth and State programs such as maternity and paternity leave, child care subsidies, and 'baby bonuses'. These policies have a much less direct and assured impact on population change that is the case for decision on the targets set for the level of overseas migration. To a much lesser extent the quality of local maternity, infant and child care services may have some influence on local birth rates – or more likely on the desirability of a particular locality over others when households make decisions on where to live.

In summary, the key drivers of population growth, and hence housing demand, are out of the control of local government.

The link between population growth and demand for dwellings

Population is linked to housing demand via the concept of households, i.e. an individual or group of people inhabiting a private dwelling are a household. It is population growth coupled with household formation that drives the long term demand for dwellings.

Data such as the Census gives us detailed information on past patterns of household formation. These patterns have changed significantly in Australia over the last 50 years as a result of a combination of demographic, social and economic factors. For example:

- the ageing of the population has contributed significantly to an increase in the percentage of one and two person households;
- social trends have seen higher rates of marriages breaking up resulting in greater numbers of lone person households and single parent families; and



- economic pressures, including the increasing cost of housing, have children leaving home later and sometimes returning.

Sometimes these types of factors are connected in complex ways and difficult to forecast. We see more people travelling and a more mobile populace in general, people changing jobs more frequently, and individuals spending longer periods in formal education.

One of the biggest unexpected demographic changes in recent years was the increase in fertility. The former Department of Transport Planning and Local Infrastructure (DTPLI) wrote an informative article about this in *Research Matters 67*. It points out that the increase in fertility was not predicted by anyone - all population projections had previously assumed a continued decline in fertility that would eventually flatten out. In fact over recent years there has been a significant upturn in fertility rates that has contributed (along with strong net overseas migration) to Australia's higher population growth rate – and, longer term, is likely to contribute to higher housing demand.

As a result of all of these changes we need to recognise that there are inevitably significant levels of uncertainty in any forecast of housing demand.

When planning for future housing demand (housing need) there are two key approaches that can help with this kind of uncertainty:

- firstly to 'lean' on the side of assuming stronger growth overall and in any given market segment. That is to ensure that (within reason) there is scope to meet any unexpected upturn in demand; and
- secondly to plan for a diversity of supply types and locations. Planning that locks in controls based on one set of demand projections is likely to make it very difficult for the market to adjust supply to cater for unexpected changes in housing demand.

2.1 Drivers of Sub-Regional Housing Demand

In looking at demand in the Outer West Region of Melbourne (Brimbank, Melton, Moorabool and Wyndham LGAs) there are three types of factors that need to be taken into account:

1. the regional pattern of demand driven by strong population growth and local level migration;
2. the nature of development in the Outer West Region where the dominant 'greenfields' land supply is being supplemented by other development types in areas where greenfield land is no longer available; and
3. a number of non-population and non-housing factors that are influencing demand.

The sub-region as a whole

While there are similarities to the patterns of growth at the metropolitan Melbourne level, there are particular sub-regional dimension to housing demand. While there are many differences between the four municipal areas in the Outer West Region of Melbourne, there are also some very strong links when it comes to population movements and dwelling demand.

The censuses results show that the largest net population movements are either to an adjacent municipality or to the nearest 'greenfields' (i.e. growth area) municipality (which in many regions of Melbourne is adjacent anyway). With two designated Growth Areas (Wyndham and Melton) and multiple development fronts, the Outer West Region of Melbourne is a strong attractor of population, particularly from the inner west of Melbourne and from new-comers to Melbourne.

Some people and households do make different choices - moving away from their current sub-region, sometimes to another Growth Area and sometimes (when they can afford to do so) to move closer to



inner Melbourne. But much larger numbers of people seek housing opportunities within their region. Demand is met largely by existing housing stock and the additional new housing across the region. When an individual or household is making a housing decision, if they cannot stay in the area they are already, they will most commonly move a 'little further out'. This may be the next suburb, or the next municipality but there is a high capacity for and a high level of containment of growth in the outer west region.

The changing region

Demand is strong and so the traditional way to cater for this has been largely supplied by new separate houses built on 'new' land on the fringe. While this housing form still dominated supply in the Outer West Region of Melbourne, with the existence of suburbs that have now undergone one or more full cycles of development, there are increasing opportunities for infill and redevelopment housing. While there is rapid growth on the fringe, this fringe pushes ever outward from the centre of Melbourne and has now led to statistical re-defining of Greater Melbourne by the ABS, bringing areas such as Moorabool into the functional area of the metropolis.

The ongoing availability of new land in the Outer West Region of Melbourne (including Bacchus Marsh) will heavily influence the distribution of demand within the region. If either Growth Area has restrictions of land before the other (through price and or availability), the demand will spill over into the other the Growth Area and Moorabool Shire.

Trade-offs within the region

A further dimension to sub-regional demand is the different effects on localised demand that different parts of the region will have. 'Competition' is not really the right word, it is more about trade-offs that households looking for homes will make. This simply adds another level of spatial unpredictability in the demand-supply loop. Adjacent supply (i.e. in different localities) or similar supply in a municipality in a different sub region of Melbourne, may be effectively substitutable for households. Thus it comes down to that great unknown: 'choice'. Sometime these choices will be hard to define and sometime they will relate to characteristic of a particular area that is not directly connected with population or housing factors. Anecdotally, it has been suggested by the land development industry that in recent history and currently broadhectare housing within Melton is readily substitutable by consumers for broadhectare housing in Bacchus Marsh.

Often the key distinction of housing choice is the trade-off between 'place' - established areas with high services and amenity and 'space' – and new housing on the fringe with 'my own backyard'

Non population or housing factors

The Outer West Region also has many factors affecting demand that do not relate specifically to population growth or resultant housing growth. The relative attractiveness is influenced by amenity - whether that is jobs and education opportunities, access to good transport, community services, parks and recreation opportunities or even access to the protected areas that border the outer edge of the eastern region. Sometimes it is simply the proximity of family and social networks that cause people to want to live in a particular area. These kinds of attractors add to the desirability of an area and will attract more population growth than areas that lack these levels of amenity.

Specifically, the existence of two heavy rail routes (Werribee and Melton) and the Princes Freeway/Western Ring Road/Western Freeway/Calder Freeway connections, much of the Outer West Region has theoretically good access by private or public transport to major employment hubs and to the CBD although congestion affects this. Proximity of the large employment hub in the west and to the Airport hub in the north-west will also play a part in the choices of people to live in the outer west.



Finally this is a region that is coming from a relatively lower population base in the past 20 years, compared to other parts of Melbourne. While in the past the west may have been less attractive, it has recently experienced rapid population growth particularly from later generations of the post-war migrant families who had located in the inner west and from new-comers to Melbourne, seeing as an advantage the relatively proximity to the CBD (compared to the outer south-east).

2.2 Drivers of Municipal/Local Demand

All of the factors previously mentioned drive high level demand at the regional and sub-regional level and in turn these drive demand at the local and township level. However, there are specific issues relating to demand for housing at the municipal/township level and within a particular municipality/township, that also come into play.

Areas such as Bacchus Marsh in the 'peri-urban' area of Melbourne tend to have a number of similarities in the drivers of the housing demand as well as factors intrinsic to smaller urban centres. These include:

- i. Housing demand is complex. There are known patterns of development and supply and demand, but every area is different and particular mix of opportunities and constraints influences not only supply by both the quantum and composition of demand;
- ii. In areas heavily dominated historically by one housing type (i.e. separate dwellings) this dwelling type becomes a de-facto "one size fits all" solution that may not necessarily well-suit all types of households, particularly as household formation changes, thus limiting future housing choice;
- iii. Further to this issue is the general issue of composition and availability of the existing and new housing markets, at any given time;
- iv. Peri urban areas are somewhat 'buffered' from sub-regional demand when large Growth Areas sit between them and the established parts of Melbourne.
- v. Data often hides the real size of demand, particularly when looking at net increases in population or housing stock. There is a lot of demand that is 'churning' in the housing market. It is looking at the whole of housing supply, where the majority is in fact existing housing stock. Planning for dwelling growth is only catering to one segment of demand and the larger segment (i.e. existing supply) is largely out of the control of government planning.

i. Complexity

There are many factors that will influence the specific location that demand for housing will target, and there really aren't any 'rules' to how this demand manifests at the very small scale. The traditional life cycle of suburbs (greenfields development, young families, ageing, empty nesters, retirees, regeneration) is still at play, and is generally most strongly held up in areas that are going through their first cycle of urban development. However, once an area has been established for a few generations, we start to see each of these factors re-emerging in different locales - the timing of these factors is not necessarily linear and we can have many of these factors going at the same time. With this sort of complex urban development and redevelopment happening, it is difficult to predict the manifestation of demand at the micro level (i.e. small areas within towns, suburbs and LGAs).

We can analyse the demographic characteristic of a micro level area but the extent to which existing demographics is a predictor of the desirability of a very small area for future demand is largely unproven. All areas are subject to both influences of migration and ageing-in-place. Where in-migration is dominated by young households, an area may appear to be 'getting younger' and attractive to these young adults or families. However, from day one, the area is also ageing, and the families get older, attendances at kindergartens and primary schools is one of the best early indicators of this. So, after 10



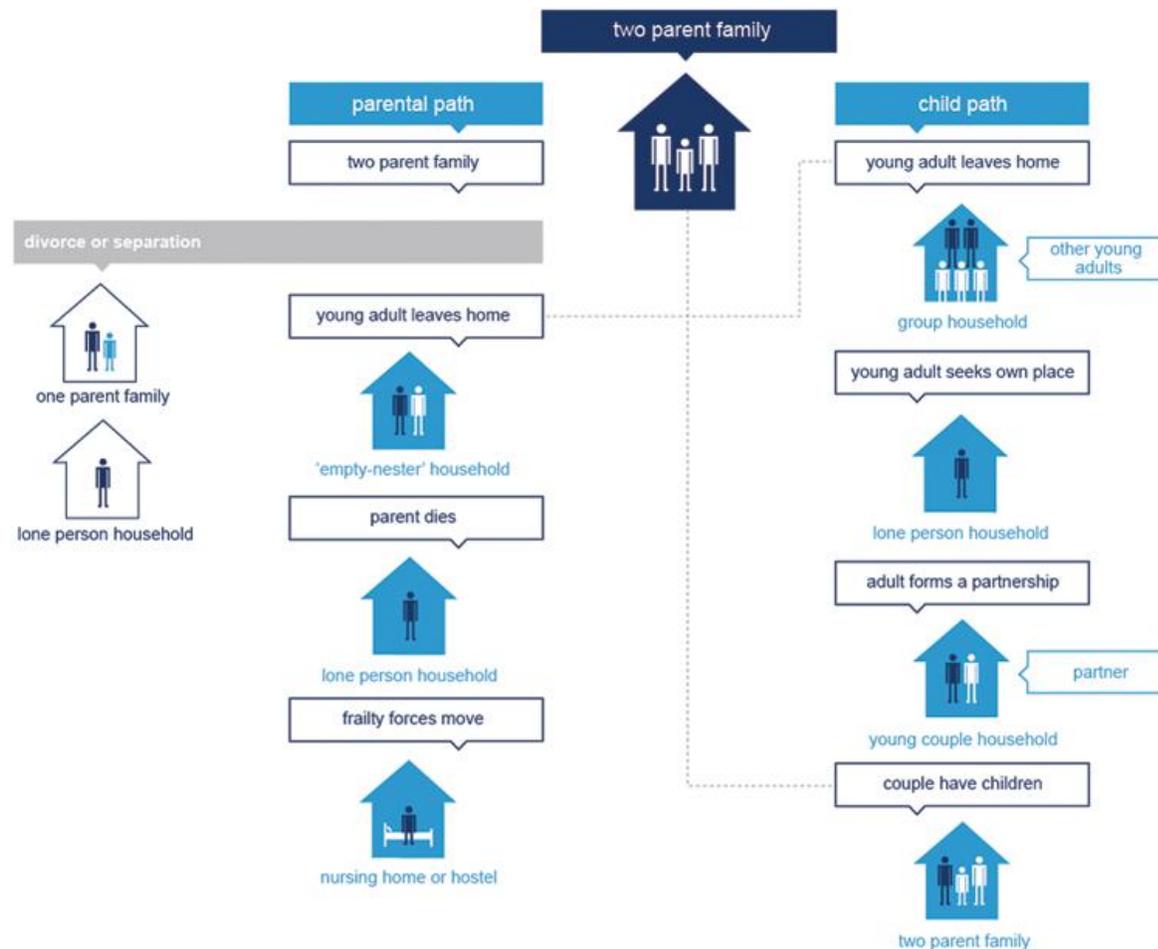
or 20 years, an area that attracted young families now has middle-aged families and empty-nesters - the future might look like this area is heading to be an 'old' suburb, but regeneration can occur, mixing up the demand once again.

Any area that has undergone regeneration is a mixture of young and old, established and new, working locally or commuting and so on. However, in an area like Bacchus Marsh with a relatively small long-established town and rapid suburban-style population growth occurring, there can be significant disparity between the patterns of demand within this area itself.

The implications for planning for this diverse demand is once again, not being focussed on trying to cater for every permutation of household demand, rather to focus on strategies and policies that encourage a mixture of development and redevelopment that allow the demand to 'sort itself out'. Providing a wide range of options in terms of dwelling type, affordability, accessibility is most likely to maintain and encourage diversity.

Complexity - Household Life Cycles

The type of households that people live in and changing preferences over time affects the way in which a population changes. As people grow from children to adults and into old age, they change the type of households that they live in. The traditional path has been to start as a child in a family household, move into a group or lone person household as a youth, becoming a part of a couple relationship within 5-10 years. Rearing of children is followed by an 'empty-nester' period and ultimately being a lone person, as partners die.



Understanding the changes that people make at different ages in their life, and the different types of housing they are likely to consume at those life stages is an important factor in forecasting future population and household types. The life stage which the majority of households in an area are going through gives an insight into its location in the suburb life-cycle (see below), and the likely life-path of those households in the future.¹

Complexity - 'Suburb' Life Cycles

The dominant household types present in a suburb or town - where the majority of the populations sit in the household life path - dictate in part the role and function of the area. This is shown by its place in the "suburb life cycle".

New ('greenfield') areas are typically settled by young households (young couples and young families, perhaps some mature families). As the families grow and mature, household size increases. After initial rapid development, most households "age in place", with slowly shifting demand for services, facilities and dwelling types.

As households age further and children begin to leave home, the average household size decreases, resulting in more empty nester (two person) households, often still living in large family homes. Family breakups can also result in single parent families and lone person households. If a suburb can't attract young families back to the area, it slowly becomes populated by older couples whose children have left home and older lone persons whose partners have died, resulting in declining population for some time.

Alternatively, if a suburb is in a location close to economic drivers of change, it may be able to attract families to move back into the older dwellings in the area, increasing household size and population again. This will generally happen sooner, with less loss of services if the area has a diversity of housing options suiting a wide variety of household types. Empty nesters are likely to downsize into lower maintenance properties, freeing up larger format housing for families to move into, and continue the cycle again.

Generally, more diverse communities are more sustainable in the long term, as they are able to maintain a range of services and facilities useful to all age groups. Certain policy responses can influence the suburb life cycle in different directions.

ii. Limited Housing Choice

While there is great complexity underlying the change in towns and suburbs over time, there has been a strong propensity in post-war housing development in Australia towards a predominantly simple solution: i.e. the (increasingly large), separate family house. In outer parts of Melbourne three quarters of the housing stock are separate dwellings. In the Growth Areas, this figure can climb into the mid-80%. In smaller towns and peri-urban areas this can be as high as 95% of all housing stock.

This limitation may not be an obvious problem and in some ways assuming housing is affordable and accessible, it is not. However, as the population ages and changes and suburbs and towns go through these life-cycles, this kind of built-form has limited capacity to cater for choice for anyone demanding a different kind of housing, e.g. single parents, divorcees, older empty nesters and older lone person households, all who may be looking for smaller, low maintenance housing in their existing town or area.

In an area with very few different dwelling type choices, there is a potential lack of supply of these types of dwellings now and into the future. Demand from all of these different household types may be affected due to this lack of choice. This could manifest in these households looking elsewhere for the

¹ Source: "id. the population experts." <http://forecast.id.com.au/moorabool/household-suburb-life-cycles>



dwelling type they prefer or paying more than they would otherwise for a larger dwelling than they desire.

iii. Composition and availability

Following on from the capacity of the somewhat homogenous existing housing stock (at least by type) to cater for different kinds of demand, is the issue of this stock becoming available or accessible and what the composition of this available stock is. The specific availability of certain types of supply, which may become available randomly, more or less at different times, can pull in demand from other possible locations or pull forward demand - i.e. creating new opportunities for household formation due to available supply or preventing another household from downsizing due to a lack of supply.

An example of this is when an older suburbs sees house prices dip below average, thus becoming more attractive for younger or lower income purchasers or renters. This can result in a boost to demand in this area, pulling in households from other relatively more expensive areas, or areas with less availability of supply and potentially encouraging new household formation, such as when adult child decides they can afford to move out on their own or in with a group of friends. Peri urban areas often see this price differential bringing demand from the relatively more expensive metropolitan areas.

iv. The Buffering Effect

Areas in the peri-urban fringe may come under additional development pressure due to the policies affecting adjacent metropolitan areas. Demand in areas such as Bacchus Marsh, adjacent to two Growth Areas is heavily influenced by what happens in these areas. The largest amounts of in-migration are from these adjacent municipalities. However, the fact these are designated Growth Areas means they absorb large amounts and high rates of growth, buffering the peri-urban areas from the most intense greenfields development.

Where this fact becomes particularly critical to planning for housing demand is when existing land in a Growth Area is effectively exhausted, or becomes very limited (leading to significant rises in price) or alternatively if new (previously unplanned for) land is made available within the Growth Area. These changes can lead to rapid and difficult to plan for changes in the peri-urban area. Local government may be hit with demand levels they are not prepared for or equipped to deal with, or alternatively local land holders and developers may be left wondering when their buyers are going to show up.

Thus it is vital for areas such as this to closely monitor adjacent Growth Areas and long term policies affecting these areas to be sure to be as best-informed as possible for potentially dramatic changes in demand in relatively short spans of time.

v. Churn

At the small area and micro levels of the housing market, there is considerable churn. That is, there are many houses being bought and sold and rented that do not result in a change in total housing stock. Demand for dwellings is constantly rearranging itself as stock becomes available; there is a large 'hidden' capacity for the market to sort itself out.

While the housing market is churning, so too is the composition of the population that is driving demand for dwellings. Some of this change within the population does not relate specifically to net changes in numbers of people or household, and so it may not look like changing demand for net housing stock, but it can result in a change in demand for different dwelling types.

This is evidenced by the number of rentals and sales that occur each year, compared to the net increase in households and dwellings. From 2006 to 2011, on an average annual basis in the Bacchus Marsh Study Area, there was a 197 new additional dwellings, 338 dwelling sales and 407 rental turnovers/additional rentals. As at 2011, this churn (excluding net dwelling change) represented 9% of



the dwelling stock, net addition to dwellings (new construction) represented 3.3% of the total dwelling stock.

It is important to highlight, that this level of churn is comparable to established municipal areas of Melbourne, such as Maroondah.

The issue of planning for net growth in dwellings needs to be viewed as *supplementing* the existing housing stock, not only as isolated additions to housing stock more commonly associated with greenfields development.

For example, in a given area, two single people may form a couple and want a larger home, here the number of households decreased by one, but there is demand for a different dwelling. Alternatively a couple may have a child or second or third child and similarly look for a different home without changing the number of dwellings needed. There is demand for a different dwelling but not necessarily an additional dwelling. Or an empty nester couple wants to downgrade to a lower-maintenance property. Once again a housing transition occurs without a net change in dwelling stock.

Caution should be exercised when looking at the connection between household types and dwelling types from the Census, particularly when drawing inference about 'expressed demand' or 'housing preference' and 'housing need'. There are two key issues that must be understood when considering household demand for particular dwelling types:

- As mentioned previously, the choices of the past have been somewhat limited due to the overwhelming majority of stock being only one type, namely separate houses on a large lots. While there are clear patterns of household size and type and dwelling size and type preferences, this data (usually from the Census) really tells us nothing of any unrealized demand for different dwelling types due to a lack of supply. While recent years have seen the necessary increase of medium and higher density housing forms these forms have not been popular in the past when cheap land and housing was readily available. Many housing markets around the world show that the large separate house is not necessarily the only way for families to live. But for the last 60 years or so, it has been almost exclusively what the market has offered across outer areas of Melbourne and the peri urban fringe.

It is impossible to say what latent demand exists within the housing market for alternative types of dwellings, but it is important to recognize the potential for this demand and be careful not to restrict the market from providing alternative forms of supply;

- Secondly, the specific circumstances of each household, and thus the type of dwelling it demands, is not indicated by simply looking at the household type. Specific examples of this are small households that are in a larger dwelling. This might include an elderly couple or single person household who does not want to move for sentimental reasons, or cannot afford the transaction cost of downsizing. It might include a single parent whose children spend most of their time with the other parent, but additional space is required for visiting weekends. And it may include a young couple who are planning for a large family. Conversely there are social trends such as co-sleeping where young families choose to share a bedroom and a bed for years after when traditional demand would suggest they need extra bedrooms.

At the large scale level, these nuances are masked by the large numbers and general trends. However, at the local level this complexity and diversity mean that the numbers we have today, do not necessarily give a detailed picture of future demand.



Key Issues

Population growth is the major determinant of overall household growth and therefore housing demand. Total housing demand within Bacchus Marsh will largely be influenced by macro level and regional population growth.

Housing demand in Bacchus Marsh will depend largely on the ongoing capacities and pricing of broadacre lots released within the Growth Areas of Melton and Wyndham to continue to cater for large scale demand. State and local government land use policies affecting the Growth Areas will significantly impact the future of Bacchus Marsh whether they are overtly recognizing this fact, or not.

Dwelling demand is not solely generated by additional household growth, it is a factor of household lifecycle changes, preferences and needs. Additional dwelling demand will be generated via down/up-sizing, changing tenure (i.e. rental to purchaser) and net intra-national migration.

As demand continues to diversify over time (social change and ageing of the population), it will be important not to rely solely on past trends of demand as a guide to the future. This will be particularly important in planning for a variety of dwelling type options, in terms of dwelling size, location, access to amenities/services and built-form.



3.0 HISTORICAL HOUSING DEMAND

The development of a housing strategy for any given local area carries the risk of missing vital drivers of demand and supply if that area is considered in isolation. This report, while focussed on the township of Bacchus Marsh, also considers the broader context around this area, including Melbourne as a whole, the Outer West Region of Melbourne and the Moorabool municipality.

3.1 Metropolitan Context

The broad context for Metropolitan Melbourne is one of changing growth patterns over the past forty years. While the directions laid out by the MMBW in the 1954 Plan (the growth corridor approach) has established the pattern for growth, there has also been strong inner city revival and established suburb infill growth. Also the population growth rate has waxed and waned throughout this period, but has been marked by strong growth since the turn of the 21st century.

Population

Looking at the ABS Estimated Resident Population (ERP), Greater Melbourne grew strongly at a rate of 1.8% per annum between 2001 and 2011 and 2.0% per annum from 2012 to 2014² (preliminary figure). This strong growth, totalling nearly 800,000 people, was driven by both strong net overseas migration and a previously unanticipated rise in births. Interstate migration was fairly neutral with some years of net loss and some years of net gain.

During periods of high population growth across the metropolitan area, the majority of growth tends to manifest in demand for new dwellings firstly on the urban fringe (i.e. Growth Areas) and secondly redevelopment and infill housing particularly the inner city.

Similarly in the context of this strong population growth across metropolitan Melbourne, peri-urban municipalities similarly experienced strong growth rates, from 2004 to 2014, the average annual population growth rate for peri-urban municipalities included:

- Macedon Ranges – 1.5%;
- Bass Coast – 1.8%;
- Moorabool – 2.0% (2.7% p.a. since 2012);
- Baw Baw – 2.3%; and
- Mitchell – 2.6% (3.2% p.a. since 2012)

The long-standing pattern of 'greenfields' development in Melbourne has been in the growth corridors first laid out in the 1954 plan. With the exception of the east of Melbourne, all growth corridors have continued to identify new land supply opportunities and the demand for housing has usually been ahead of this process, with significant pressures being applied beyond the identified growth boundaries and into the peri-urban fringe.

Households and dwelling growth

Data on dwellings and households is not published annually, so our comparison data is from the Census period from 2001 to 2011. During this time in Melbourne grew by over 235,000³ dwellings at a rate of 1.7% per annum, similarly the number of households grew at the same rate or an increase of 219,000 households. Average household size declined very slightly from 2.7 to 2.6 persons per household over this period.

² ABS, Regional Population Growth, Australia, 2013-14 (cat. no. 3218.0)

³ ABS, 2011 Census of Population and Housing, table T14



Understanding the detail of household formation as a driver of dwelling demand can quickly become complex. While a highly detailed analysis of changing trends in household numbers, their types and their dwelling preferences may not be worthwhile when considering dwelling demand. It is useful however, to understand the net changes in key household types and their implications for demand for different dwelling types. This is best explored at the regional and small area levels.

3.2 Historical Housing Demand – Outer Western Melbourne

Households rarely consider municipal boundaries when making decisions about where to live. At a broad scale locational choices are much more likely to be based on selection of a preferred sector of Melbourne (inner, north, south, east, west), then a region (inner, middle, outer, fringe) and then a specific suburb or town. Individual suburbs within a sector or a region are often fairly interchangeable or are chosen on the basis of a hierarchy of preferences. Few households would be expected to choose to live in 'Moorabool LGA' rather than outer 'Western Melbourne' or 'Melton' or 'Bacchus Marsh' or 'Ballan'.

Another way of looking at this is to say municipal boundaries are arbitrary when it comes to analysing both short and longer term housing demand. Therefore it is important to understand individual municipality demand forecasts within the context of the trends revealed by regional data. For the purposes of this report we are looking at four outer western municipalities (Brimbank, Melton, Moorabool and Wyndham). Based on our analysis of migration and journey to work patterns, we believe that housing demand in Bacchus Marsh will be heavily influenced by migration to and from and housing supply opportunities across all of these municipalities.

Table 3.1: Moorabool LGA, 5 year Migration: Top 10 LGAs ranked by net gain to the area, 2006 to 2011

	In migration	Out migration	Net migration
Wyndham (C)	707	200	507
Brimbank (C)	365	108	257
Melton (S)	877	628	249
Hobsons Bay (C)	200	85	115
Maribyrnong (C)	143	45	98
Hume (C)	133	41	92
Moreland (C)	117	53	64
Yarra Ranges (S)	55	10	45
Knox (C)	52	13	39
Darebin (C)	76	38	38

Source: ABS Census 2011

The table above shows that the largest net movements to Moorabool between 2006 and 2011 were from Wyndham, Melton and Brimbank. The largest net out- movements was to Ballarat (-359 people). In terms of housing demand driven by inward migration, the three LGAs in the Outer West of Melbourne as well as internal demand in Moorabool itself, contribute the bulk of demand.

Population Growth

During the period from 2004 to 2014, the four municipalities comprising Outer West Region grew by over 188,000 people⁴. This accounted for nearly a quarter (23.6%) of the total growth for Greater

⁴ ABS, Regional Population Growth, Australia, 2013-14 (cat. no. 3218.0)

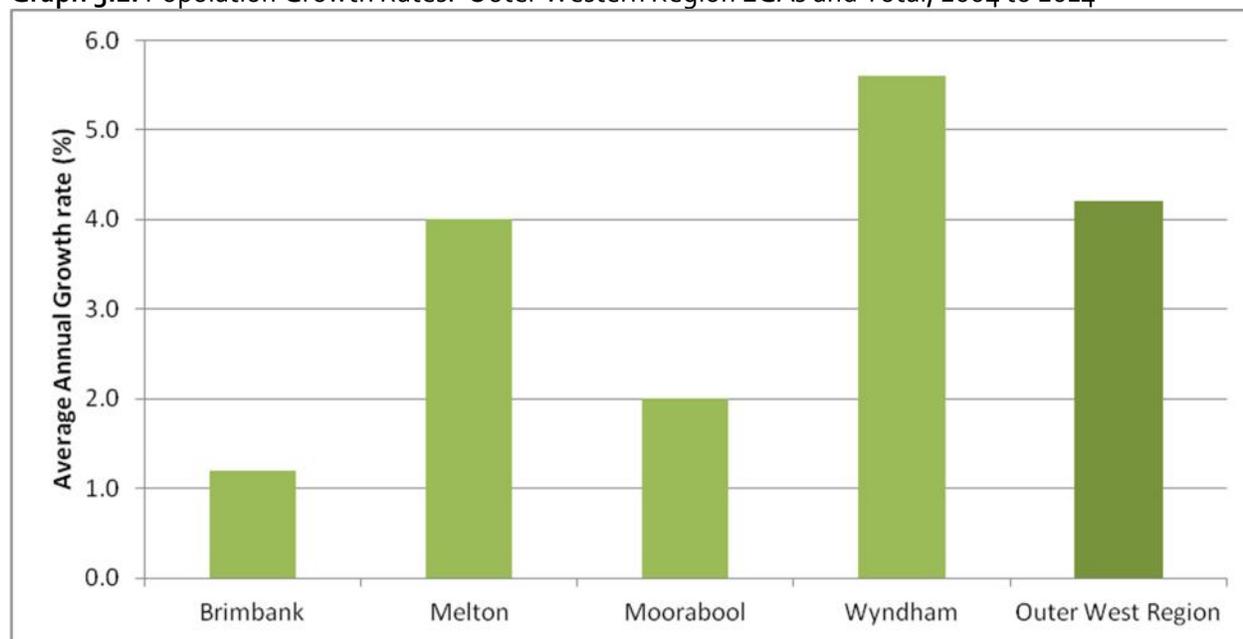


Melbourne and saw this area of Melbourne increase from 10.1% (2004) to 12.5% (2014) of the total population of Melbourne.

Over the past 10 years there has been a clear pattern of strong growth in the Outer West Region. Home to two designated Growth Areas, there have been multiple development fronts in each of Melton and Wyndham. The region as a whole has been growing at more than double the rate of Greater Melbourne over the 2004 to 2014 period.

Population growth in the Outer West Region between 2004 and 2014 averaged 4.2% per annum. Based on the average annual population growth rates over this period, within the region there were two apparent patterns of population growth, which were in fact three different patterns.

Graph 3.1: Population Growth Rates: Outer Western Region LGAs and Total, 2004 to 2014



Source: ABS, Regional Population Growth, Australia, 2013-14 (cat. no. 3218.0)

Wyndham and Melton have both experienced high population growth and rapid population growth rates. They are home to the majority of available broadhectare residential land in two of Melbourne's five designated Growth Areas. Wyndham has lead the charge, coming from around 100,000 people in 2004 it has nearly doubled in size by 2014. Melton, starting from a lower base has also grown rapidly.

Looking at the chart above, it might be assumed that Brimbank and Moorabool had similar patterns of growth over the last decade. However the average growth figures don't tell us that in fact two different trends have been developing. In 2004, Brimbank was by far the largest population municipality in the Outer West Region (interesting Wyndham has now surpassed its' total population). Brimbank's population growth has been lower than that of Melton and Wyndham because it has reached the end of its life as a major Growth Area and population growth is now finding housing opportunities mainly in remnant broadhectare sites, redevelopment sites and infill development.

Moorabool is almost the complete opposite. As a small (by population compared to the other three municipalities) peri-urban municipality it has always attracted a certain level of 'spill-over' growth from Melbourne and those seeking a peri-urban lifestyle within easy commuting distance to Melbourne. However, over the past decade, rising land prices and the continued outward push of the designated Growth Areas have seen population growth trending upwards. In particular in the areas closest to the



Urban Growth Boundary, namely Bacchus Marsh. Without pre-empting the population and household projections analysis too much, it is highly likely that population growth in Moorabool is likely to trend upwards, while growth in Brimbank will continue to moderate.

Households

Household and family types are an indicator of the demand for different types of housing. While housing preferences vary, there are some key trends in household change across the Outer West Region which has formed the underlying demand for housing in the region.

The amount of household growth varied, particularly between the high growth LGAs of Wyndham and Melton and the lower growth LGAs of Brimbank and Moorabool. Across the Outer West Region the majority of growth (68.7%) came from family households. Of these, *Couple family with Children* grew by the largest amount, despite the fact that there was a decline of nearly 1,500 *Couple family with Children* in Brimbank and relatively low growth in Moorabool.

Table 3.2: Change in Households by type: LGAs and Outer Western Region, 2001-11⁵

	Couple family with no children	Couple family with children	One parent family	Total family*	Lone person households	Group households	Total*
Brimbank (C)	2,815	-1,484	2,279	3,979	3,084	885	9,304
Melton (S)	4,310	7,636	2,498	14,672	3,449	443	19,513
Moorabool (S)	714	173	282	1,193	712	82	2,161
Wyndham (C)	6,763	9,682	3,332	20,119	4,695	931	27,216
Outer West Region	14,602	16,007	8,391	39,963	11,940	2,341	58,194

Source: ABS Census 2011

* Total includes *Other Family* and *Other Households* (not shown in table)

The large growth in *Couple family with Children* households in Wyndham and Melton is the result of the same trend (i.e. families moving to new housing and having children), while in Brimbank the large decline in *Couple family with Children households* and in Moorabool the relatively low growth are due mainly to children leaving the family home. In the case of Brimbank, this is part of the normal life cycle of older suburbs where children move out of home and often move further out, in search of cheaper housing opportunities. Whereas in Moorabool, the trend is more typical of regional town and rural areas where young people move to larger centres for education and job opportunities.

While family household growth dominated the region, there was also a significant growth in *lone person households*. More than 20 per cent of the population growth in the region was in *lone person households*. This is largely driven by the ageing population.

⁵ ABS, 2011 Census of Population and Housing, table T14



Dwellings

In looking at medium and high density housing trends it is important to note that there have been issues with dwelling type data from the Census. Dwelling type is classified by the individual Census collector and this has led to two issues:

- in 2001 there were relatively high numbers of 'dwelling type not stated' in the data. By 2011 dwelling type identification had improved. This leads to growth figures that may be artificially high with some of the 'growth' coming from better classification of dwellings i.e. villas versus separate houses; and
- there are also classification errors in distinguishing between the two categories of '*Semi-detached, row or terrace house, townhouse etc*' and '*Flat, unit or apartment*'. This remains an issue with the 2011 data.

As a result we have chosen to combine the Census data for the 'townhouse' and 'apartment' categories. The category of *separate houses* has some problems but is far more reliable.

In the Outer West Region, between 2001 and 2011, the vast majority of growth was in *separate houses*, with more than 85% of all additional dwellings being *separate houses*. The medium and high density housing (ABS categories *Semi-detached, row or terrace house, townhouse etc.* and *Flat, unit or apartment*) made up the remainder (around 15%) of additional dwellings. Proportionally this category saw the strongest growth in Brimbank with around 27% of additional dwelling being medium density and lowest growth was in Moorabool with just 6.5% of additional dwellings between 2001 and 2011.

This pattern of dwelling growth is typical of areas dominated by new suburbs, Growth Areas, the urban fringe and anywhere with relatively high amenity and accessibility and relatively low land prices. The Outer West Region of Melbourne displays all of these characteristics.

Table 3.3: Change in Dwellings by type: LGAs and Outer Western Region, 2001-11⁶

	Separate house	Semi-detached, row or terrace house, townhouse etc. and Flat, unit or apartment:	Total*
Brimbank (C)	7,077	2,571	9,304
Melton (S)	16,856	2,661	19,513
Moorabool (S)	2,068	143	2,161
Wyndham (C)	24,312	3,198	27,216
Outer West Region	50,313	8,573	58,194

Source: ABS Census 2011 * Total excludes *Other Dwellings* and *Dwelling type not stated* (not shown in table). Also total include better classification of 'dwelling type not stated' from 2001 (ABD methodology improvement), therefore summing the categories shown will not add up to the total change

3.3 Historical Housing Demand – Moorabool

Over the period from 2004 to 2014 the population of Moorabool LGA increased from around 25,400 to 30,900 at an average annual rate of 2.0% per annum. It is crucial to understand the composition of this population change.

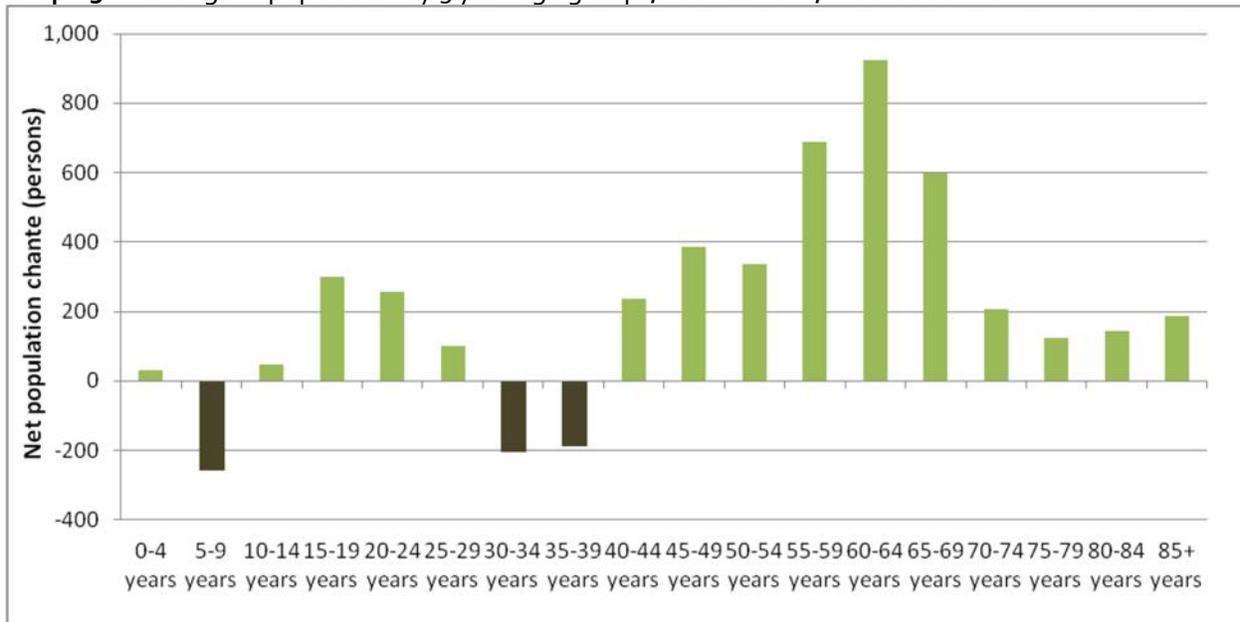
Census data, available (for 2001 to 2011) gives us deeper insights into the composition of population change in Moorabool.

⁶ ABS, 2011 Census of Population and Housing



The majority of the population increase in Moorabool was people aged 40 years and over and particularly aged 55 to 69 years. There were also some gains in young people aged 15 to 24. This increase in young adults was offset by a loss in 5 to 9 year old, indicating a significant number of children aged in place over the 2001 to 2011 period. There were also declines in 30 to 39 year olds, which indicates, in fact, the losses of 20 to 29 year-olds (in 2001) from Moorabool.

Graph 3.2: Change in population by 5 year age groups, 2001 to 2011, Moorabool LGA

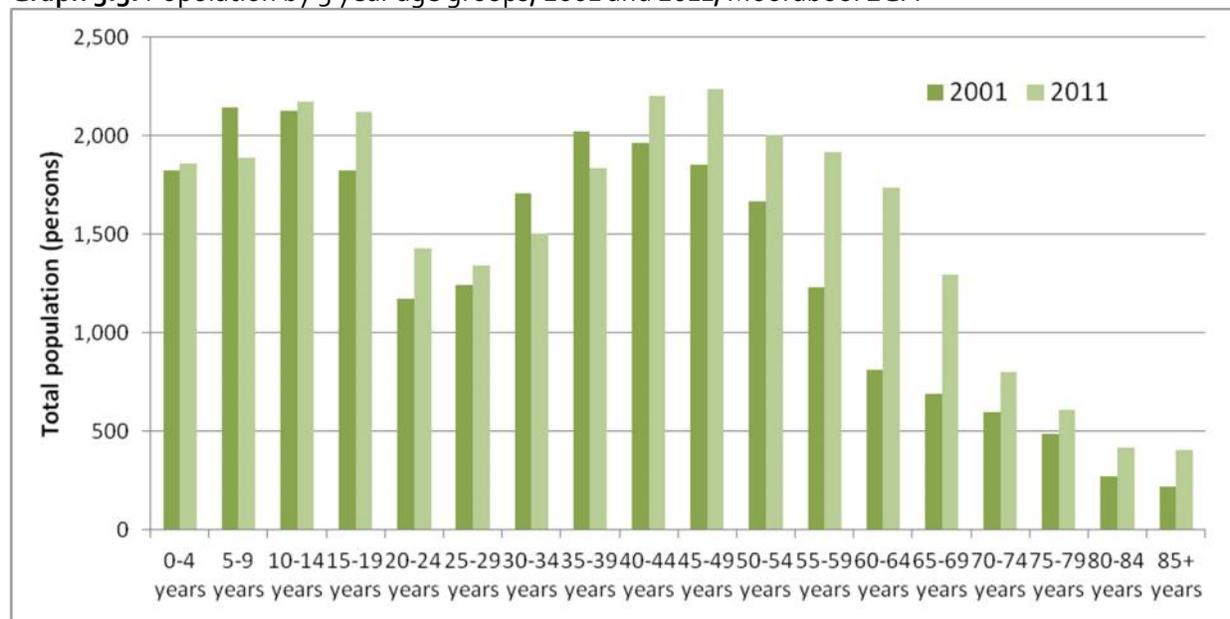


Source: ABS Census 2001, 2011

There are two key demographic trends evident from this data: The first is the ageing in place of middle aged people who are choosing to stay in the area; the second is the loss of young adults aged 20 to 29. Significant numbers of people in this age cohort moved out of the Moorabool Shire (migration data suggests the majority of these moved to adjacent LGAs of Ballarat or Melton), most likely for tertiary education or job opportunities.



Graph 3.3: Population by 5 year age groups, 2001 and 2011, Moorabool LGA



Source: ABS Census 2001, 2011

Looking at the overall age profile of Moorabool we see the 'hollowed out' young adult ages 20 to 29. Between 2001 and 2011, no age cohort declined dramatically, rather another key feature of data is the 'filling out' of the middle-aged (40 to 69 year old) population in Moorabool. There has been some change in the numbers of children in the various age cohorts, but there remain large numbers of young children, indicating Moorabool continues to retain and attract young families.

Households

Moorabool grew from 8,300 (2001) to 10,450 (2011) households at an average annual rate of 2.3%. This rate of growth was faster than the population growth (1.5%) for the same period. However there are significant differences in the patterns of change between the various household types.

Table 3.4: Total household change by household type, Moorabool LGA, 2001 to 2011

	2001	2006	2011	Total Growth 2001-2011	Average annual growth rate 2001-2011
Couple family with no children	2,048	2,371	2,762	714	3.0%
Couple family with children	3,462	3,456	3,635	173	0.5%
One parent family	886	982	1,168	282	2.8%
Family Total	6,454	6,885	7,647	1,193	1.7%
Lone person households	1,502	1,754	2,214	712	4.0%
Group households	139	184	221	82	4.7%
Total*	8,293	9,085	10,454	2161	2.3%

Source: ABS Census 2011

* Total includes *Other Family* and *Other Households* (not shown in table)



There were strong increases in both *lone person* households (up 700 at 4.0% per annum) and *couple family with no children* households (up 700 at 3.0% per annum). From the age profile change, we can surmise that the growth in *lone person* and *couple family with no children* households largely reflects a strong increase in older empty-nester and lone person households. *Couple family with children* households remained the largest household type but grew only at a modest rate of 0.5% per annum (a net increase of 173 households).

Dwellings

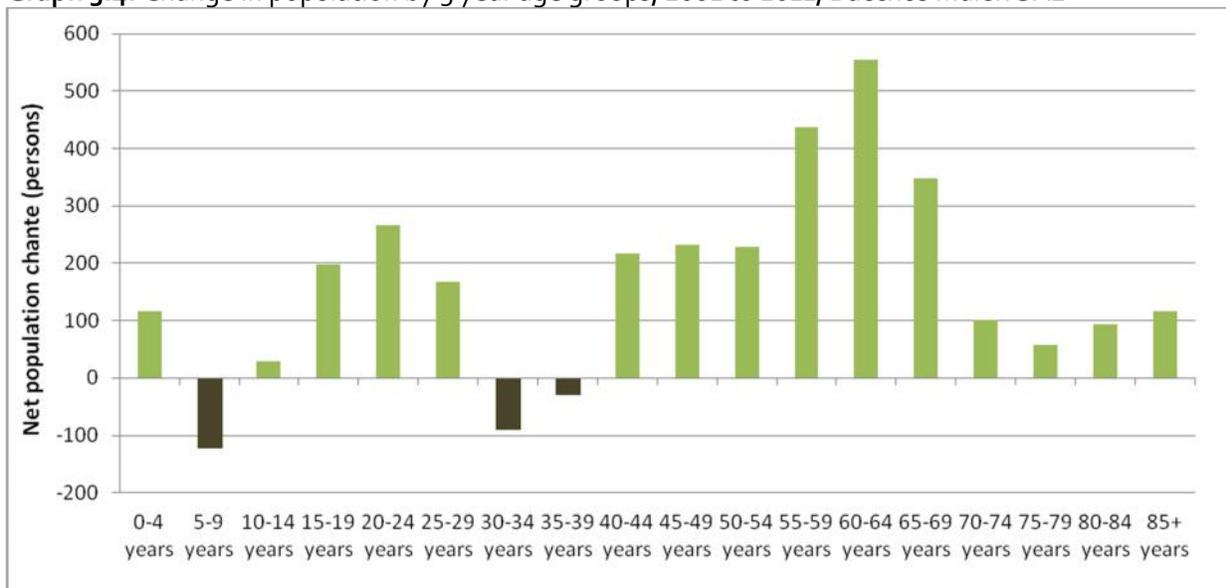
As stated previously the application of Census data distinction between *townhouses* (medium density) and *apartments* (high density) is not entirely consistent between Censuses. However if we combine these two categories the census data shows that between 2001 and 2011, *separate houses* increased by 2,100 at an average annual rate of 2.4% per annum. *Separate houses* dominate Moorabool, accounting for over 93% of the growth in dwellings between 2001 and 2011 and this type of dwellings represent more than 94% of the housing stock in Moorabool.

Townhouses and apartment type dwellings make up only a small proportion of housing in Moorabool and grew by just 140 dwellings over the 10 years from 2001 to 2011.

3.4 Historical Housing Demand – Bacchus Marsh

Focusing in on Bacchus Marsh we can use the ABS-defined SA2 area 'Bacchus Marsh'. Over the period from 2004 to 2014 the population of Bacchus Marsh increased from around 15,000 to 19,400 at an average annual rate of 2.6% per annum. This was faster than Moorabool as a whole and reflects its proximity to the Melton and Wyndham Growth Area and Greater Melbourne.

Graph 3.4: Change in population by 5 year age groups, 2001 to 2011, Bacchus Marsh SA2



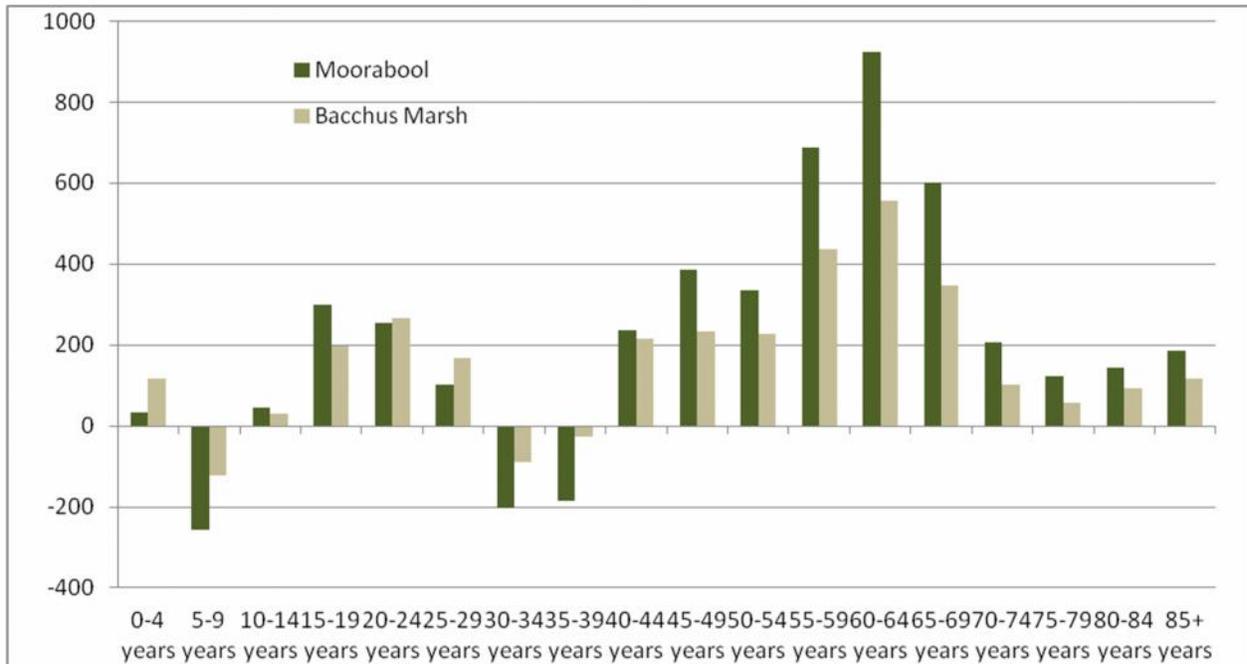
Source: ABS Census 2001 & 2011

The majority of the population increase in Bacchus Marsh SA2 was people aged 55 to 69 years. There were also strong gains in young people aged 15 to 29 and adults aged 40 to 54 years. There were losses of population in the 5-9 year category (indicating aging of children, not being replaced by as many babies) and small losses of 30 to 39 years (usually indicating some of the 20-29 year households in 2001 moved away by 2011).



These patterns of change, closely mirror Moorabool LGA as a whole, albeit at reduced numbers and with one minor difference in that Bacchus Marsh saw a much more significant net increase in 0-4 years on 2011 compared to Moorabool. This is likely due to Bacchus Marshes role increasing as a spill-over growth area and it points to likely increases in children of all ages in the future.

Graph 3.5: Change in population by 5 year age groups, 2001 to 2011, Moorabool LGA and Bacchus Marsh SA2

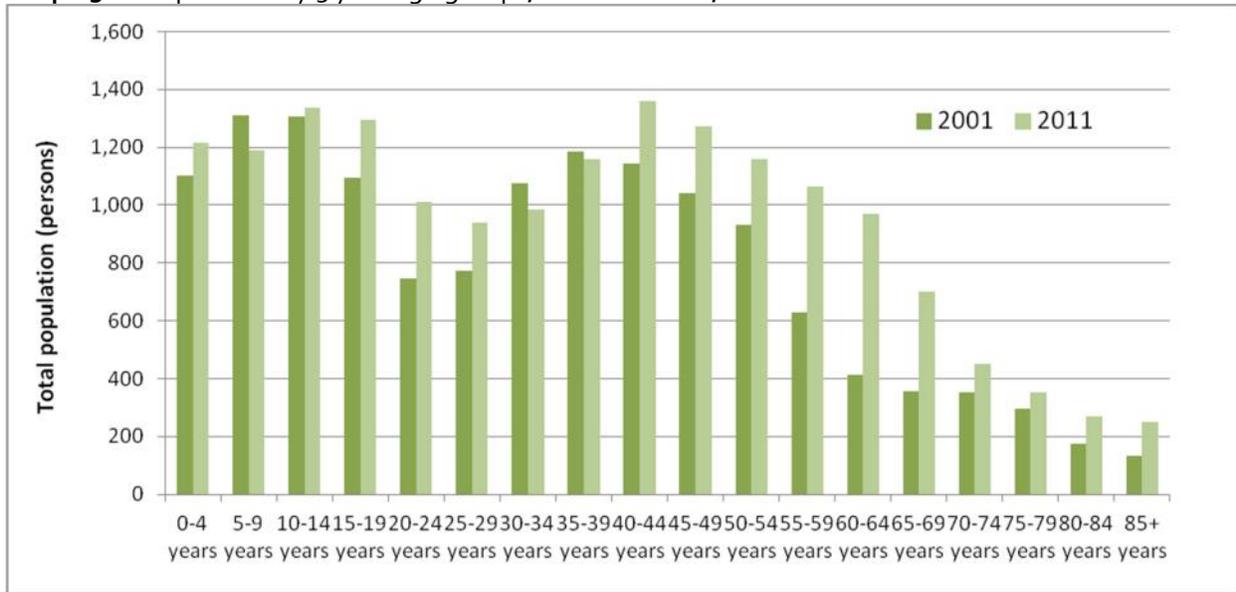


Source: ABS Census 2001, 2011

As with Moorabool as a whole, there are two key demographic trends evident from this data: The ageing in place of middle aged people who are choosing to stay in the area; and the second is the loss of young adults aged 20 to 29. Some people in this age cohort moved out of Bacchus Marsh, however the comparison of 2001 and 2011 age profiles suggests that this trend (quite normal in rural and regional areas) is less pronounced in 2011 than it was in 2001. The normal 'hollowed out' young adult ages 20 to 29 seen in Moorabool as whole is much less pronounced in Bacchus Marsh. In fact, between 2001 and 2011 there were strong gains in older children and young adults (15 to 29 year olds).



Graph 3.6: Population by 5 year age groups, 2001 and 2011, Bacchus Marsh



Source: ABS Census 2001, 2011

Overall, Bacchus Marsh is experiencing population growth both through ageing in place and the growth and addition of young families and children.

Households

Bacchus Marsh grew from 4,850 (2001) to 6,300 (2011) households at an average annual rate of 2.6% (slightly ahead of Moorabool as a whole - 2.3% per annum). This rate of growth was faster than the population growth (1.9%) for the same period.

Similar to Moorabool as a whole, there were strong increases in both *lone person* households (up 470 at 4.4% per annum) and *couple family with no children* households (up 376 at 2.9% per annum). There was also rapid growth in *one parent family* households (up 200 at 3.1% per annum). Again, similarly to Moorabool as a whole, the growth in *lone person* and *couple family with no children* households largely reflects a strong increase in older empty-nester and lone person households. *Couple family with children* households remained the largest household type and grew 0.9% per annum (a net increase of 200 households), nearly double the rate of Moorabool LGA. *Family* households remain the dominant household type, in total making up over 75% of all (known) households in Bacchus Marsh. This is a slight decline from around 70% in 2001 and this is due almost solely to the rapid increase in *lone person* household.



Table 3.5: Total household change by Household and Family Composition, Moorabool LGA, 2001 to 2011⁷

	2001	2006	2011	Total Growth 2001-2011	Average annual growth rate 2001-2011
Couple family with no children	1,121	1,272	1,497	376	2.9%
Couple family with children	2,056	2,097	2,256	200	0.9%
One parent family	583	638	792	209	3.1%
Family Total	3,796	4,048	4,604	808	1.9%
Lone person households	877	1,008	1,345	468	4.4%
Group households	83	111	135	52	5.0%
Total*	4,858	5,318	6,307	1,449	2.6%

Source: ABS Census 2011

* Total includes *Other Family* and *Other Households* (not shown in table)

Dwellings

Between 2001 and 2011, *separate houses* increased by 1,350 at an average annual rate of 2.7% per annum. *Separate houses* dominate Bacchus Marsh, accounting for 92% of the growth in dwellings between 2001 and 2011 and this type of dwellings represent 92% of the housing stock in Bacchus Marsh, steady since 2001.

Townhouses and apartment type dwellings make up only a small proportion of housing in Bacchus Marsh and grew by just 110 dwellings over the 10 years from 2001 to 2011, but at about the same rate as *separate houses* (2.6% per annum)..

Combined with the large numbers of family household and the relatively affordable land, *separate houses* are likely to remain the dominant dwelling type for some time to come.

⁷ ABS, 2011 Census of Population and Housing, table T14



Key Issues

The Outer West Region has seen strong population, household and dwelling growth in the past decade. While one area of available broadhectare land has become exhausted over this period (Brimbank), Melton and Wyndham continue to be among the fastest and greatest growing areas in Victoria.

Moorabool Shire has in the past seen some population and household growth from those seeking more affordable housing options and semi-rural lifestyles in the peri-urban area around Melbourne.

However in the past decade, while coming from a lower population base and being outside the designated Growth Areas, Moorabool has begun to experience stronger demand for housing as prices and pressures grow, closer to Melbourne.

Bacchus Marsh has reflected the overall demand pressure facing Moorabool Shire, and being closer to Melbourne than other parts of the Shire, is likely to experience increasing demand into the future.

Historical housing demand within Moorabool and Bacchus Marsh are only guides to future demand. The demographic profile of demand is likely to be influenced by two key trends:

- The ageing of the population; and
- Demand from young families for affordable family housing.

These two major demand and supply issues will result in the need for additional supply opportunities to be realised, within in the context of a mostly one style only supply (i.e. separate dwellings).

Increasing growth-area style demand from families will continue to demand mainly *separate dwellings*. However the ageing population, who are happy ageing in place, may have higher propensities for alternative dwelling types – with lower maintenance options. Nevertheless, this demand is likely to remain small unless price pressures reduce the relative affordability of *separate dwellings*.

Housing demand within Bacchus Marsh is influenced by and influences its neighbouring municipalities within the region. Any opening or restriction of supply opportunities within specific parts of the region will see the transfer of demand between these municipalities. In particular the years of remaining supply in Wyndham and Melton and more particularly relative pricing of residential broadhectare lots will provide a strong forward indicator of further demand pressures in Bacchus Marsh.

Finally, the State-level policy around designated Growth Areas will also influence demand and will need to be well understood and changes monitored carefully i.e. permanent UGB, increased mandatory densities.



4.0 PROJECTIONS

Key Findings

The long term (2011 to 2041) projections for the Greater Metropolitan Melbourne area are for steady growth of population (1.7% per annum), households (1.8% per annum) and dwellings (1.8% per annum).

In the Outer Western Region, growth will be more rapid, averaging 2.9% per annum for the population, 3.1% per annum for households and 2.9% per annum for dwellings.

This equates to 387,000 additional people, and 141,000 additional households and dwellings between 2011 and 2041 in the Outer West Region.

Between 2011 and 2041 Moorabool Shire will grow at slightly lower rates than the Outer West Region as a whole but the Bacchus Marsh area will largely match the growth rate for population (2.9% per annum), households (3.2% per annum) and dwellings (3.1% per annum).

From 2011 to 2041 Bacchus Marsh will experience its most rapid population growth in the older age categories (70 to 84 years) but its largest growing age ranges will be families and their children (30 to 39 and 0 to 14 years).

Bacchus Marsh will experience the strongest and most rapid growth in lone person households (3.0% per annum) and *couples without dependents* households (2.9% per annum). These smaller (one and two person) households will make up more than 60 per cent of the area's growth from 2011 to 2041. Large family household (*couples with dependents*) will continue to grow and comprise more than 30 per cent of households in 2041.

4.1 Population, household and dwelling projections

Population, household and dwelling projections form a central input to analysing possible future housing demand. When using them for strategic planning purposes it is important to understand how they are produced and thus should be interpreted and utilised.

Most population projections are produced at a large-scale (national or state) level using the *cohort component* method. This method basically takes the population variables, births, deaths and migration and applies specific assumptions regarding each of these variables to the existing population to get one year's growth (or decline). This process is repeated for each year of the projection. The cohorts are separated by age (usually individual years) and sex, as males and female have different death rates and only females give birth.

This macro-level projection is basically unconstrained - there is an assumption that whatever amount of population growth occurs, it will fit into the country, state or metropolitan area. However the next step, which is to break the population down into small areas (LGAs, suburbs and other statistical areas) is constrained by one key factor - that is the capacity of any given area to house additional population. So in order to break down the macro-level population spatially, projections employ a *household formation* (or *household propensity*) and a *housing unit* method.

These methods aggregate the existing and projected populations into *households* based on existing household patterns and assumptions about future household formation rates. These households are then allocated to *dwellings* (mostly private but some non-private) and an assumption made regarding the numbers of dwellings that area likely to remain vacant. The number of dwellings and households for each small area is known from the Census. The projected macro number of households can then be allocated to the small areas. The assumed number of dwellings in each area begins with the number



counted in the Census but is assumed to grow year by year according to the both specific planning knowledge about planned dwelling development and assumptions about each area's capacity to add additional housing stock.

Once the household and dwelling projections are balanced (usually across many small area in the case of State Government projections e.g. 79 LGAs in Victoria), the projected numbers are then broken back down by age and sex at the new smaller geographies. Balancing these projections in a sensible manner is a complex task and these processes can take many iterations.

Relationship between a metropolitan projection and small area housing 'demand'

Small area projections are the result of allocating large area demand. These projections are constrained by knowledge and assumptions about supply opportunities - or put another way: demand for dwellings is **driven** by the high level population projection and **constrained** by the assumed opportunity to provide supply at the local level.

In most established area there are realistic limits to the rate at which additional housing supply can be added. The key issue to understand when looking at projections as a source of information about dwelling demand is that the numbers themselves have been derived using a process that has already made use of existing knowledge and has made specific assumptions about future supply. **Thus it is important to be careful not to fall into the trap of believing the projection is the only possible future.** The process of strategic planning work provides an opportunity to change that future by impacting (whether positively or negatively) the ability of the housing market to produce the assumed housing supply over time. And similarly as knowledge of demand and development opportunities changes (e.g. new supply opportunities are found or macro-level demand goes up or down) projections need to be updated.

4.1.1 Metropolitan population, household and dwelling projections

The broad context for population growth is given by briefly looking at the greater metropolitan area of Melbourne. The headline is that strong and steady population growth is currently projected for Melbourne, through the projection period from 2011 to 2041.

Population projections for metropolitan Melbourne are available from the Victorian State Government (Department of Environment, Land, Water and Planning) 'Victoria in Future 2015' (VIF2015) projections. Melbourne is defined as the Greater Melbourne Capital City Statistical Area, a large area defined by the ABS that represents the functional metro area.

The VIF2015 projection has Melbourne growing by over 2.7 million people in the 30 years from 2011 to 2041 at an average rate of 1.7% per annum. This is considered strong growth by historical standards and reflects both strong natural increase and net overseas migration. Net interstate migration is projected to be slightly positive to Melbourne over this period. However, Melbourne is projected to lose significant numbers to regional Victoria over the projection period. Much of this latter movement is likely to be 'hopping the boundary' as people move into peri-urban areas and to the major regional centres within two hours travel from Melbourne.



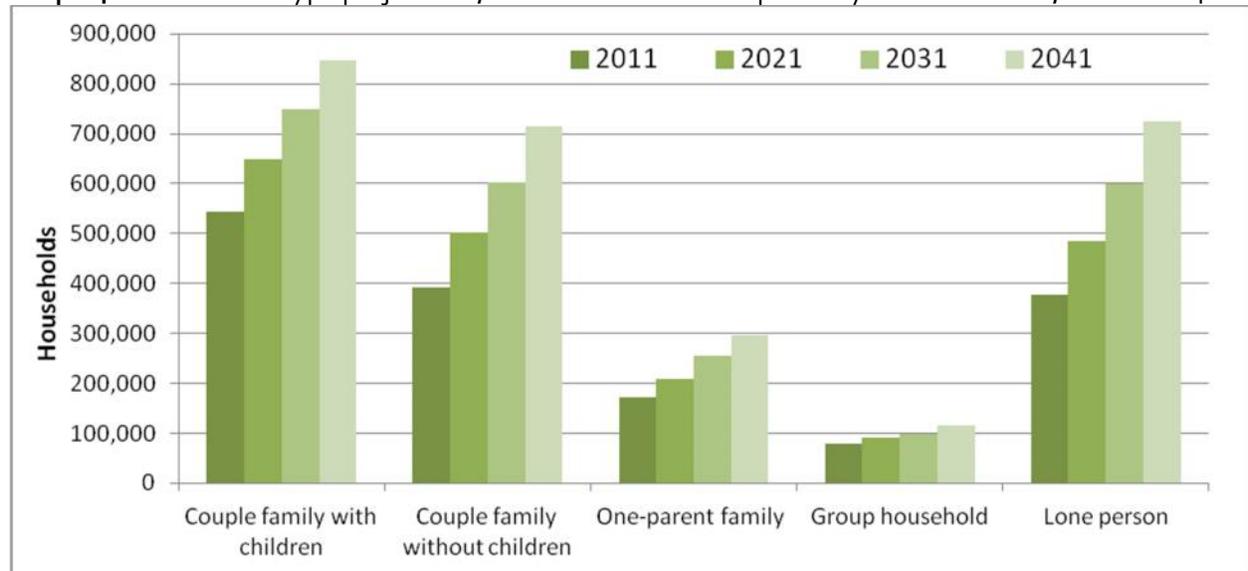
Table 4.1: Population, household and dwelling projections, Greater Melbourne Capital City Statistical Area, 2011 to 2041

	2011	2021	2031	2041	2011-41 change	2011-41 avg annual change %
Population						
Estimated Resident Population (ERP)	4,169,366	5,078,373	5,982,778	6,893,923	2,724,557	1.7%
Households						
Occupied Private Dwellings (OPD)	1,588,009	1,967,266	2,338,324	2,737,082	1,149,073	1.8%
Average Household Size	2.59	2.54	2.51	2.47	-0.12	n/a
Dwellings						
Structural Private Dwellings (SPD)	1,674,623	2,071,518	2,448,592	2,869,099	1,194,476	1.8%
Occupancy Rate	95%	95%	95%	95%	n/a	n/a

Source: DELWP: Victoria In Future 2015

In Melbourne, between 2011 and 2041, household numbers are projected to grow by 1,150,000 at a rate of 1.8% per annum. Total dwellings are assumed to increase at the same rate (1.8% per annum) but by an even larger amount, 1,190,000. As with population growth, these can be considered to be strong growth projections and will result in a significant challenge to Melbourne’s capacity to produce the required number of dwellings.

Graph 4.1: Household type projections, Greater Melbourne Capital City Statistical Area, 2011 to 2041



Source: DELWP: VIF2015



Demand for dwellings is driven by household growth. Looking at the change in numbers of different household types in Melbourne from 2011 to 2041 shows that there will be strong growth in each of the three largest household types *couple family with children, couple family without children and lone person* households. The fastest growth will be in *lone person* households (growing at 2.2% per annum) and *couple family without children* households (growing at 2.0% per annum). While not the fastest growing category, *couple family with children* households will grow strongly (at 1.5% per annum) and remain the largest single household type in 2041.

4.1.2 Outer West Region population, household and dwelling projections

The main sources of demand for dwellings in Moorabool and Bacchus Marsh, comes from the Outer Western Region of Melbourne (Wyndham, Melton, Brimbank and Moorabool LGAs combined). State population and household projects (VIF2015) are only available to 2031.

Table 4.2: Population projections, Outer West Region, 2011 to 2031

	2011	2021	2031	2011-31 change	2011-31 avg annual change %
Brimbank	191,495	207,288	223,046	31,551	0.8%
Melton	112,643	169,922	258,903	146,260	4.2%
Moorabool	28,664	36,484	45,414	16,749	2.3%
Wyndham	166,698	266,458	359,542	192,844	3.9%
Outer Western Region	499,501	680,153	886,905	387,404	2.9%

Source: DELWP: VIF2015

Population growth in the Outer West Region will be faster than that of Melbourne as a whole throughout the period from 2011 to 2031. This is primarily due to the availability of substantial broadhectare residential land stocks in the designated Growth Areas attracting mainly family households. The region as whole is projected to grow by 387,000 people at an average annual rate of 2.9%. There are variations between the municipalities that comprise the region, particularly the rapid growth in the Growth Areas of Wyndham and Melton, strong growth in Moorabool but only modest population growth in Brimbank, where greenfield land is exhausted and new housing development opportunities are more limited.

Table 4.3: Household projections, Outer West Region, 2011 to 2031

	2011	2021	2031	2011-31 change	2011-31 avg annual change %
Brimbank	65,196	74,140	82,083	16,887	1.2%
Melton	37,810	57,185	88,266	50,456	4.3%
Moorabool	10,904	14,477	18,414	7,510	2.7%
Wyndham	57,655	90,785	124,440	66,785	3.9%
Outer West Region	171,565	236,588	313,203	141,637	3.1%

Source: DELWP: VIF2015



Projected household growth is at a slightly higher rate, compared to population growth for the Outer West Region, averaging 3.1% per annum from 2011 to 2031. This represents an additional 142,000 households, most of which will be in Wyndham and Melton.

Table 4.4: Dwelling projections, Outer West Region, 2011 to 2031

	2011	2021	2031	2011-31 change	2011-31 avg annual change %
Brimbank	67,189	75,762	83,632	16,443	1.1%
Melton	40,483	59,695	92,108	51,625	4.2%
Moorabool	11,636	15,311	19,368	7,732	2.6%
Wyndham	63,802	94,897	129,266	65,464	3.6%
Outer West Region	183,110	245,665	324,374	141,263	2.9%

Source: DELWP: VIF2015

Projected dwelling growth for the Outer West Region matches household growth almost exactly in total numbers (141,000 additional dwellings from 2011 to 2031). This reflects anticipated steady occupancy rates across the region.

This highlights a key issue in that it is well worth remembering that when projections are allocated to small areas, an assumption about dwelling supply is made (in fact many assumptions are made based on past trends and current data on local development intentions and strategic planning). Thus, given the strong demand from population growth at the metro level, the population, household and dwelling growth projections for the Outer West Region strongly reflect the assessments of those doing the projections on the **capacity** of this region to take/house this growth rather than a detailed assessment of the actual level of **demand in the region**.

Total demand is likely to be higher, but will, in part be pushed into other areas due to assumed limits on reasonable levels of supply provision. If supply is different to the projection, demand will change - it doesn't appear or disappear, it would come from, or go to another place. Therefore, if any of the municipalities in the Outer West Region have significant constraints on supply or relative land/housing price differentials, or are able to produce greater than the currently assumed/projected supply (i.e. mandated increased average densities), this will likely impact first on projected demand levels within Bacchus Marsh.

4.2 Household type projections, Outer West Region, 2011 to 2031

We can also look at projected changes in household types for the Outer Western Region from the VIF2015 projections. The data gets complex when we start breaking the projections down into different household types, so for the purposes of this analysis we have presented some categories in aggregated form and only the total projected change in numbers and percentages of households from 2011 to 2031.

In the Outer West Region, the most prevalent household type is the *couple family with children*. While this household type will be the slowest growing household type in the region between 2011 and 2031 (2.6 per cent per annum), it will be the largest growing by number (+47,000 households) and will remain the largest household type in 2031.

Lone person households will grow at the fastest rate (3.7 per cent per annum), and will nearly double in number by 2031(+32,200 households). This category will be followed closely by *couple family without*



children households, growing at 4.3 per cent per annum and by 37,200 households between 2011 and 2031.

Table 4.5: Change in households by type (number), Outer West Region and LGAs, 2011 to 2031

	Couple family with children	Couple family without children	One-parent family	Other family	Group household	Lone person	All Household Types
Brimbank	3,549	4,997	2,527	155	214	5,444	16,887
Melton	18,787	12,096	7,283	565	1,076	10,649	50,456
Moorabool	1,898	2,372	776	61	145	2,259	7,510
Wyndham	22,819	17,774	9,372	919	2,014	13,887	66,785
Outer West Region	47,053	37,238	19,959	1,700	3,450	32,238	141,637

Source: DELWP: VIF2015

While all municipalities in the region will see growth in these household types, there are significant variations between municipalities in the Region. Wyndham and Melton will see strong household growth in all household types, whereas Brimbank will see moderate growth in *lone person* and *couple family without children* households, but only slow growth in *couple family with children* households. Again this pattern reflects the more fully developed nature of Brimbank compared to the designated Growth Areas of Wyndham and Melton. Household growth in Moorabool will be slightly below the region-wide average indicating strong projected growth across the board, but not at the rates of the metro growth areas.

Table 4.6: Change in households by type (average annual per cent change), Outer Western Region and LGAs, 2011 to 2031

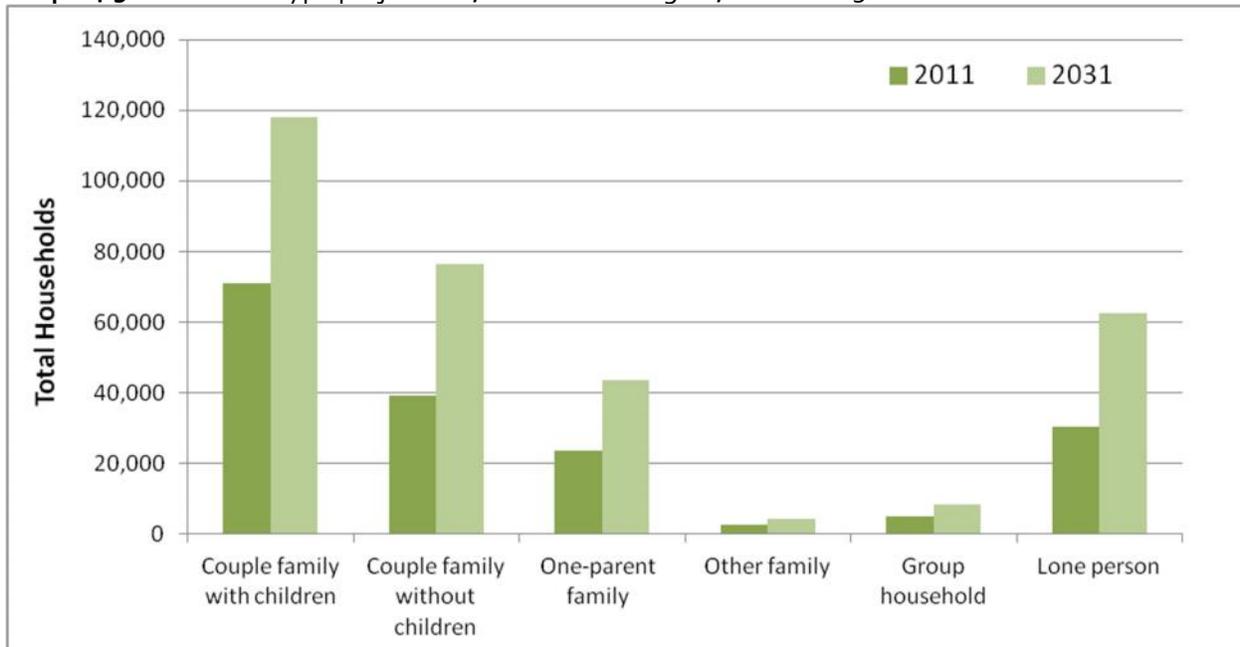
	Couple family with children	Couple family without children	One-parent family	Other family	Group household	Lone person	All Household Types
Brimbank	0.6%	1.5%	1.1%	0.6%	0.5%	1.9%	1.2%
Melton	3.8%	4.6%	4.6%	4.2%	4.1%	5.1%	4.3%
Moorabool	2.0%	3.0%	2.4%	2.7%	2.3%	3.3%	2.7%
Wyndham	3.4%	4.3%	4.2%	4.1%	4.0%	4.5%	3.9%
Outer West Region	2.6%	3.4%	3.1%	2.6%	2.7%	3.7%	3.1%

Source: DELWP: VIF2015

For the projection period of 2011 to 2031, while there will be strong growth across the Outer West Region, the majority of households will still be family households, with the largest group remaining *couple family with children* households.



Graph 4.3: Household type projections, Outer West Region, 2011 to 2031



Source: DELWP: VIF2015

4.3 Description and analysis of Moorabool LGA and Bacchus Marsh Statistical Area Projections: VIF and id

The two main projections available for Moorabool and small-areas within Moorabool are the Victorian State Government 'Victoria in Future 2015' (VIF2015) projections released in August 2014 and 'forecast.id' produced by 'id Consultants (id), released in September 2015.

Both of these projections are based on mostly the same data, in particular 2011 Census, 2013 revised and 2014 preliminary ABS ERPs and ABS data on fertility and mortality rates and migration data. We can presume both projections have slightly different assumptions about dwelling supply and thus there are slight differences in the projections. However, they are both very close to one another and will have similar confidence limits/potential for error. For the purposes of strategic planning either projection would suffice. The key advantage of the id projection is that it is publicly available beyond 2031, and is thus more useful for this analysis through to 2041.

For the Study Area of Bacchus Marsh, the geographies vary between VIF and id. The VIF projection uses statistical areas (VIFSAs) constructed by the State Government (Department of Environment, Land, Water and Planning). Id use smaller regions and to create a similar area we have aggregated the population for the 'small areas' called Bacchus Marsh, Darley and Maddingley to approximate the full Study Area (Bacchus Marsh).

It is useful to think of difference in the projection as not so much a difference in the amount of people, households or dwellings at any given year, but rather a difference in the *timing* in which those people households or dwellings will arrive or be constructed.



4.3.1 Moorabool LGA projections: VIF and id

For the projected population, the main difference between VIF and id is that the id projection has Moorabool growing slower in the later period between 2021 and 2031, whereas the VIF projection has more growth in this later period. The id projection has Moorabool growing by the largest 10-year amount in the period from 2031 to 2041, albeit at a slowing growth rate. Both projections have the population growth rate slowing over the projection period and both cases this is likely due to overall population growth (State-wide) remaining strong, but the pace of growth moderating somewhat over the next 20 to 30 years.

By 2031 the difference of 1,000 people is equivalent to about 15 months population growth in either projection.

Table 4.7: Moorabool population projections - VIF compared to id

Population	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	28,664	36,484	45,414	16,749	n/a	n/a
id the population experts	28,680	36,457	44,403	15,723	53,270	24,590
Difference	-16	27	1,011	1,026	n/a	n/a

Source: VIF2015, forecast.id

For households, there is a small difference between VIF and id from the base year. This is likely due to the need to reconcile ERP (Estimated Resident Population) data and Census-based dwelling and household counts and shows that there must be a slight difference in the base-year assumption. This difference is likely to influence the projection but we can see from the numbers that the id projection again has a slightly lower rate than the VIF projection. By 2031, the net difference of around 700 households is equivalent to around 2 years of growth. That is that the VIF projection suggests slightly higher demand, earlier than the id projection.

Table 4.8: Moorabool household projections - VIF compared to id

Households	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	10,904	14,477	18,414	7,510	n/a	n/a
id the population experts	10,704	13,997	17,485	6,781	21,251	10,547
Difference	200	480	929	729	n/a	n/a

Source: VIF2015, forecast.id

As with the population numbers the id projection sees the largest growth in the 2031-41 period and both projections see declining rates of growth but increasing amounts of growth. This contrast in rates and amounts is due to the increasing base-line numbers. So both projections have continued strong growth, but it is not accelerating in either projection period.

Table 4.9: Moorabool Dwelling Projections - VIF compared to id

Dwellings	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	11,636	15,311	19,368	7,732	n/a	n/a
id the population experts	11,682	15,032	18,495	6,813	22,337	10,655
Difference	-46	279	873	919	n/a	n/a

Source: VIF2015, forecast.id



The dwelling projections reflect the exact same patterns as the population and household growth numbers: VIF has slightly higher and faster growth but both projections see rates of growth moderating over the projection period, but strong increases in dwellings continuing throughout the projection periods.

4.3.2 Study Area projections: VIF and id

Looking at the Bacchus Marsh statistical area, it is important to note that the areas are not directly comparable (however they are practically identical with exception on one rural residential estate). Therefore direct comparisons of the amounts of population growth are not necessarily as helpful as a comparison of projected growth rates.

Table 4.10: Bacchus Marsh population projections - VIF compared to id

Population	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	17,488	23,833	31,085	13,597	n/a	n/a
<i>VIF growth rates</i>	-	3.1%	2.7%	2.9%	n/a	n/a
id the population experts	15,742	21,662	26,223	10,481	30,519	14,777
<i>id growth rates</i>	-	3.2%	1.9%	2.6%	-	2.2%
Difference	1,746	2,171	4,862	3,116	n/a	n/a

Source: VIF2015, forecast.id

In Bacchus Marsh, id and VIF project similar rates of population growth in the 2011 to 2021 period (3.2 per cent and 3.1 per cent respectively). However in the 2021 to 2031 period, there is a noticeable difference with VIF maintaining stronger growth (2.7% per annum) and id projecting a decline in growth to 1.9% per annum). The id forecast sees the population growth rate in Moorabool drop further to 1.5% per annum between 2031 and 2041, (averaging 2.2% per annum for whole the 2011-41 period).

We can take into account the 1,700 difference in population at the base year, and extrapolate forward this number by the population growth rate. This gives us an estimate 3,100 difference at 2031, due to the difference in defined areas. Thus, the net difference in population changing between VIF and id, is in the order of 1,750 more population growth, according to VIF.

When faced with different projections such as these, what at first may feel confusing can best be understood again as being a *range* of potential futures that we need to plan for. Thus, considering both id and VIF, we are expecting projected population growth in the order of 11,800 to 13,600 between 2021 and 2031 and around 14,500 (at least) by 2041.

Table 4.11: Bacchus Marsh household projections - VIF compared to id

Households	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	6,581	9,309	12,370	5,789	n/a	n/a
id the population experts	5,892	8,296	10,359	4,467	12,306	6,414
Difference	689	1,013	2,011	1,322	n/a	n/a

Source: VIF2015, forecast.id

For households, the difference in the base year of around 700 would likely grow to around 1,300 by 2031. Thus the difference in growth of 1,300 households from 2011 to 2031 is more likely around 600 households higher in the VIF projection. Applying the same estimates to projected dwellings, the difference would be around 500 additional dwellings projected by VIF.



These differences of 600 households and 500 dwellings over the 20 years to 2031 equate to around 2 years of growth. That is to say VIF is projecting more rapid growth than id, but by 2033 the id projection would be reaching the VIF projection for 2031 (adjusting for the difference in statistical areas).

Table 4.12: Bacchus Marsh dwelling projections - VIF compared to id

Dwellings	2011	2021	2031	2011-31	2041	2011-41
Victoria in Future 2015	6,745	9,454	12,520	5,775	n/a	n/a
id the population experts	6,209	8,674	10,757	4,548	12,749	6,540
Difference	536	780	1,763	1,227	n/a	n/a

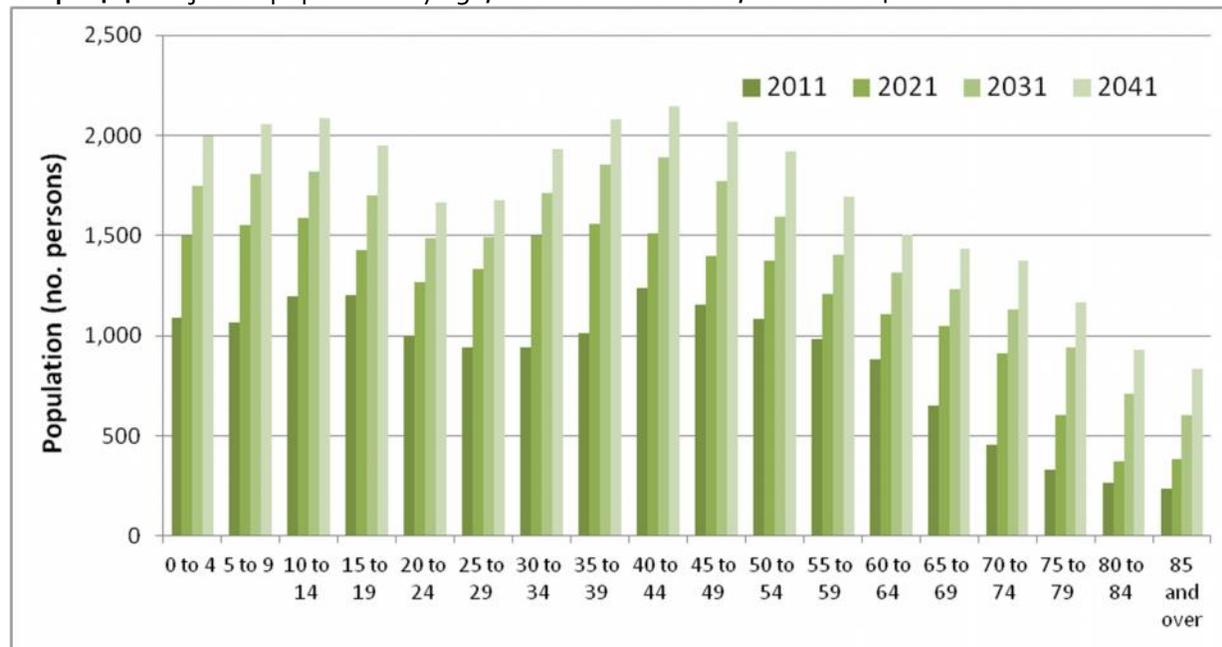
Source: VIF2015, forecast.id

All of these somewhat complex comparisons are useful only to a certain extent. If we want to better understand the nature of housing demand, it is best to move on from comparing difference projections for slightly different geographical area and focus on one projection that give us insight into the composition of the projected growth and hence, demand. For this we will move forward using the id projection for Bacchus Marsh, which comprises their Bacchus Marsh, Darley and Maddingley 'small areas'.

4.4 Population age structure projections – Study Area

The forecast.id projections give us detailed information on the projected population by age for Bacchus Marsh area. For all age groups, there will be population growth. However the fastest population growth will be in the 70 to 84 year age group, averaging around 4.3% per annum. This growth will be driven largely by ageing in place, although some net in-migration will contribute to demand as well. Coming from a relatively low base in 2011, this will mean that the older population in Bacchus Marsh will *more than triple* in numbers over the 30 years to 2041.

Graph 4.4: Projected population by age, Bacchus Marsh area, 2011 to 2041

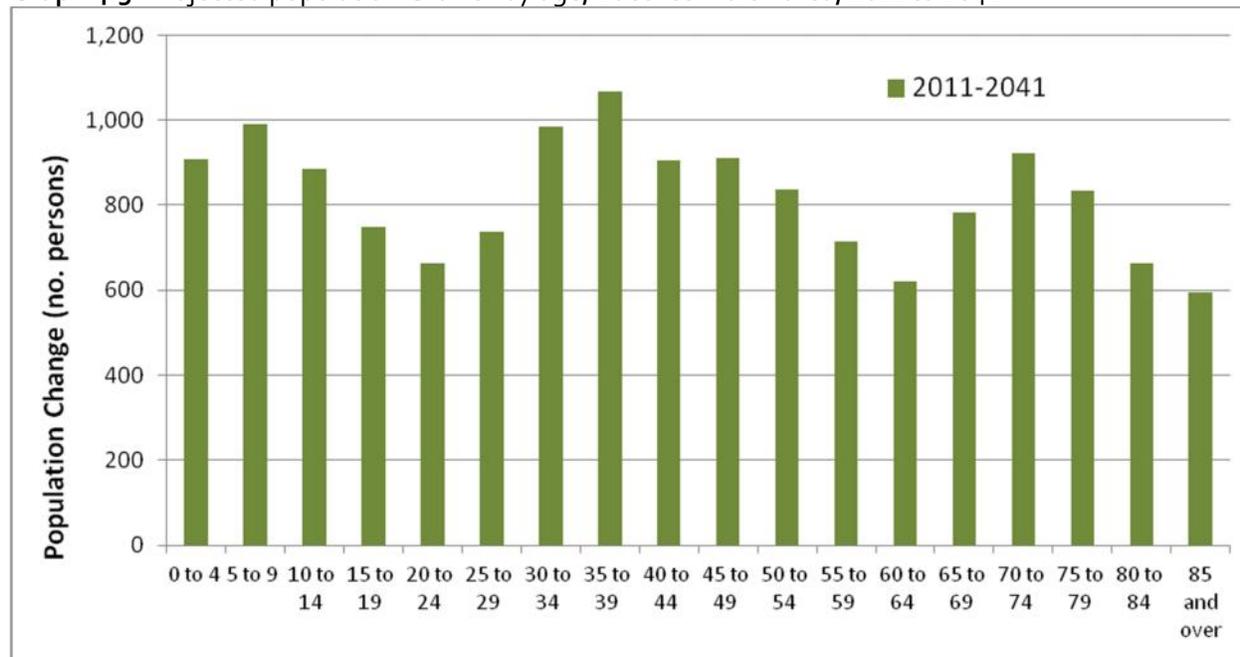


Source: forecast.id



The largest growing age ranges by amount will be in the 30 to 39 year old age ranges, the 0 to 14 year age ranges and in the 40 to 54 age ranges and 70 to 79 year age ranges. These numbers suggest that together with the ageing-in-place of older residents, there will be strong growth from adults in family households and their children. While the young adult age ranges grow by relatively lower amounts, the fact that they are growing show a different pattern to typical rural and regional areas which struggle to retain young adults who leave for the bigger regional and metropolitan centres.

Graph 4.5: Projected population Growth by age, Bacchus Marsh area, 2011 to 2041



Source: forecast.id

4.5 Household Type Projections – Study Area

Projections by household type are also available for Bacchus Marsh from 'forecast.id'. I use the term 'dependents' rather than 'children' to denote persons living in the household that are dependent on the adults in the household (usually, but not always parents of children).

Table 4.13: Projected households by type, Bacchus Marsh, 2011 to 2041

	2021	2021	2031	2041	2011-41	Avg Ann.
Couple families with dependents	2,070	2,763	3,266	3,731	1,661	2.0%
Couples without dependents	1,446	2,208	2,815	3,368	1,922	2.9%
One parent family	765	999	1,221	1,432	667	2.1%
Other families	112	146	168	188	76	1.7%
Group households	130	177	214	252	122	2.2%
Lone person households	1,369	2,003	2,675	3,335	1,966	3.0%
Total households	5,892	8,296	10,359	12,306	6,414	2.5%

Source: forecast.id



The largest and fastest growth in households in the Bacchus Marsh area will be *lone person* households, growing by nearly 2,000 between 2011 and 2041 at an average annual rate of 3.0%. This will be closely followed by *couples without dependents*, growing by 1,900 at an average annual rate of 2.9%. *Couple family with dependents* is the largest household type and is projected to grow strongly (1,650 households at 2.0% per annum) and remain the most prevalent household type in 2041.

This data indicates that around 61 per cent of household growth in Bacchus Marsh from 2011 to 2041 will be in smaller one or two person households (*lone person* and *couples without dependents*). While much of this is likely to be empty nesters, it will also in part be due to households that have not yet had children or never will.

While there is not an available projection for dwellings by type for Bacchus Marsh, it is likely that the overwhelming majority of demand will be for *separate houses*, rather than medium or higher density dwellings. However, looking at the growth in smaller households, there may be some opportunity for smaller dwellings (even if they are smaller separate houses) to be offered for the growing and ageing population.

Key Issues

Population, household and dwelling projections are a central input to analysing possible future housing demand. When using them for strategic planning purposes it is important to understand that they are 'projections' and are based on the most recent data/trends/information available – and are developed through a set of comprehensive assumptions. These assumptions will inevitably change in the future. It is critical that any projections are routinely and continually monitored and updated as major demographic trends, and therefore assumptions change.

Caution is highlighted in using all projections. Any formulation and subsequent implementation of planning/policy/strategy projects should consider both upper and lower growth ranges to a presented set of demand projections to encompass a range of possible future growth outcomes.

The rate of growth in housing demand within Bacchus Marsh will, to a large degree, be dependent on macro level demand, i.e. national, state, metropolitan and regional population growth. Housing demand within Bacchus Marsh will not be independent of population growth at higher order geographic areas.

Two major population, household and dwelling projections were assessed, namely id Consulting 'forecast.id' and the State Government's – *Victoria in Future 2015*. Both of these projections are highly regarded within the land use planning industry and related.

Population Projections

The rate of growth in Bacchus Marsh is projected to be slightly faster than recent historical growth. This suggests that the rate of growth in demand for dwellings will increase, particularly in the coming 20 years.

Age Projections

The population in Bacchus Marsh is ageing. That is, the proportion of older residents is increasing the most, with the fastest population growth of all age categories being in the 70 to 84 year age group, averaging around 4.3% per annum. This has implications in terms of ageing in place, service delivery, the potential 'churn' of housing stock i.e. downsizing of dwellings and the need for aged care housing (both independent and dependent housing/accommodation).

However there will be significant, large amounts of growth of family aged adults, children and empty nesters. These households will likely demand and consume traditional separate dwellings.



Household/Dwelling Projections

These are formed from allocating large area demand and are constrained by realistic assumptions about opportunities to supply additional housing. If the constraints on supply are eased or restricted then the household projection can and will change (sometimes dramatically).

Household and dwelling projections are largely a function of population growth, changes to population growth at a national, state, metropolitan and regional level will impact population growth rates within Bacchus Marsh, and therefore household/dwelling projections.

During the projection period, households and dwellings in Bacchus Marsh are projected to grow at rates a little higher than recent historical growth rates. However the capacity and pricing points of the designated Growth Areas of Wyndham and Melton will largely impact the demand in Bacchus Marsh. Significant constraints, or major new land opportunities and price/product differential in these areas will impact the current projections for Bacchus Marsh.

Household Type Projections

All household types will grow strongly particularly *lone person* and *couples without dependents* households. Additionally there will be steady strong growth in *couple family with dependents* households, which will remain the most prevalent household type.

The significant rate of growth of smaller one and two person households (*lone person* and *couples without dependents*) households may have some impact on dwelling type demand. Together with the ageing population, smaller, affordable and low-maintenance dwellings may see increasing demand, although this demand is likely to remain for separate houses or semi-detached units.



5.0 HOUSING AFFORDABILITY

Key Findings

Housing affordability is a complex issue with a myriad of views on the causes and appropriate responses. In recent years it is well documented that housing affordability has diminished and that the proportion of household income required to purchase or rent the average house has increased substantially.

Residential Dwelling Sales Value/Pricing Trends

The median price for a house in 2014 in Bacchus Marsh Study Area was \$343,000; slightly less than the Outer West Region of Wyndham, Melton, Brimbank and Moorabool of \$381,000.

House prices for the Bacchus Marsh Study Area have stayed relatively stable compared to house prices in Wyndham and Melton consistently being around 5-10% cheaper for the 2004-2014 period. Since 2004, housing prices have increased by 4.7% and 4.7% in Maddingley and Darley respectively compared to a growth rate of 3.8% in Bacchus Marsh. It is clear that Bacchus Marsh is now heavily influenced by metropolitan prices, in particular the adjoining growth area of Melton. In Melton the price of vacant land has stagnated compared to the rest of Melbourne and Bacchus Marsh. Vacant land price growth in Melton was only 2.3% over the 10 year period to 2014. Vacant land prices have grown at 5.8% for Wyndham and 5.4% for the Bacchus Marsh Study Area.

However, looking at house price growth over this period shows that Melton and Bacchus Marsh Study Area have had similar growth rates of 4.5% and 4.4% respectively. Land prices are essentially the same in Bacchus Marsh as Melton however the median lot size is considerably larger in Bacchus Marsh than Melton. In Bacchus Marsh the recent median lot constructed is 686 sqm compared to 437 sqm in Melton. Per square metre for land, this equates to \$220 per sqm for land in Bacchus Marsh compared to \$340 per sqm in Melton. For the same price in Bacchus Marsh the buyer is purchasing 50% more land.

This analysis suggests that Bacchus Marsh has become part of the metropolitan housing market and needs to consider decisions in relation to the market in the Outer West Region of Melbourne, in particular the growth areas of Melton. It is important to continue to monitor the trends and land supply in Melton and Wyndham as any significant changes in these areas may have significant impacts on the demand for housing in Bacchus Marsh.

Housing Affordability – Middle Income Earners

A residual income approach to analysing housing affordability was employed to assess the number of affordable dwelling sales available from 2004 to 2014 for middle household income earners across Bacchus Marsh. Middle income households are defined from as including the 4th to 6th income decile range (middle income earners).

The results of this analysis show wide variability in affordability for the different household categories and across the 4th, 5th and 6th deciles. The variability reflected differences in the median incomes of categories of household in Bacchus Marsh.

At the bottom end of the scale if you are from a *single person* household on the 4th or 5th income decile it is unlikely that the household will be able to purchase a dwelling. Conversely, Couples with Children in the 6th decile were able to afford nearly twice the median house price.



Housing Affordability – Low Income Earners

The most widely accepted indicator of housing stress is the 30:40 rule. This is where a household is considered to be in financial housing stress if the household's housing costs exceed 30% of their income and the household is in the bottom 40 % of household income distribution.

For the Bacchus Marsh area, 11.3% of all households can be deemed to be in housing stress i.e. paying more than 30% of household income in either rent or mortgage repayments.

Melton has the highest level of housing stress with the Bacchus Marsh Study Area close to the Metropolitan Melbourne average of 11%. The Outer West Region has a high level of housing stress at 15% reflecting the high number of first home buyers. Darley has the highest level of housing stress of the three suburbs followed by Maddingley and Bacchus Marsh.

Stock of Affordable Rentals – (Low income Households)

In the March quarter 2015, only 8.3% of all new lettings across Melbourne were affordable to lower income households. Over the five years from 2006 to 2011 the availability of affordable housing in metropolitan Melbourne declined markedly - from over 32% in mid-2006 to a low of 7.4% in the March quarter 2011.

Relative to metropolitan Melbourne, the Bacchus Marsh Study Area has a significantly higher proportion of affordable new rental leases, as at the March quarter 2015, 65% of new leases were affordable for low income in the Study Area. It is important to highlight that even though within the Study Area has a relatively high proportion of affordable new residential leases, this does not mean that the supply of affordable rental stock is meeting the demand as there are a high percentage of low income rental households experiencing rental housing cost stress.

Future demand for social housing

While the private housing market will account for the vast bulk of future housing provision in the Study Area there are, and in future will continue to be, some individuals and households who are unable to find housing they can afford in the private market.

Up to the present time the bulk of social housing in Bacchus Marsh has been provided by the State Government through the Department of Health and Human Service (DHHS). DHHS has a total stock of only **218 dwellings in Bacchus Marsh**. A further **28** affordable dwellings were managed by the community housing sector as at 2011.

There is little point in seeking to forecast social and specialist housing needs using a demographic/household formation methodology of the type set out in the preceding sections. The provision of and access to social and special needs housing is effectively supply not demand limited – that is the demand for such housing is far in excess of the supply and the key determinant of the quantum of such housing developed is not demand, but the level of funding available to providers to construct additional housing.

Victoria has the lowest percentage (3.4%) of social housing of all Australian states and territories. The State Government of Victoria (through DHHS) manages a total stock of approximately 65,000 properties. This compares with a public housing waiting list of 35,000⁸ households of whom approximately 10,000 are in the highest priority category. It was identified through discussion with social housing providers that, for those who do not meet the eligibility criteria to go on the priority waiting list there is in effect an indefinite waiting period.

⁸ Department of Human Services



5.1 Housing Affordability Macro Issues

Housing affordability is a complex issue with a myriad of views on the causes. In recent years it is well documented that housing affordability has diminished and that the proportion of household income required to purchase the average house has increased substantially. In other words house prices have consistently outpaced household income growth in recent years.

Two major factors have changed the ability of households to borrow more, hence increasing the price of housing. These are structurally lower interest rates and financial deregulation. In the early 1990's Australia moved to a low inflation environment that saw the cost of borrowing consistently lower than the previous two decades. Importantly the move to a low inflation environment has been permanent and borrowers' expectations are that interest rates will not scale the heights of 1991 when interest rates hit 17%. This drop in interest rates and the corresponding expectations means that households are willing to borrow more.

This willingness to borrow was matched by the financial system being de-regulated in the 1980's and lenders were prepared and able to lend a significant larger amount for housing. These two factors largely led to a once-off structural change that occurred over the decade from 1996-2006 and led to significantly higher housing prices. The repayments required by households easily outstripped the increase in household income.

Other structural factors have also contributed to the continuing increase in house prices affecting housing affordability. On the demand side there have been a number of factors. Households have been prepared to commit substantially more of their weekly income to household costs as household real disposable income has increased. There has also been a significant increase in two household income families as women have moved into the workforce increasing households' ability to borrow money.

Household formation through changing age structure and social norms has meant that households have got smaller, meaning there has been more demand for housing given the same population. Different household structures have risen in recent years including the increase in one parent families and lone households. These households have a lesser ability (on average) to afford housing.

Further there has been high immigration in recent years corresponding to an increased demand for housing.

The recent fall in interest rates in recent years has highlighted the effects of the tax system and the role of investors in housing affordability. Without discussing the relative merits and consequences, the existing tax system is having an effect on housing affordability through the redistribution of wealth. Lower interest rates have seen further increases in housing prices in recent times particularly in Sydney and Melbourne.

On the supply side, Australia has significant problems in keeping up with a sufficient amount of housing to meet demand. There is no doubt that across Australia there is a continual struggle to meet housing demand in preferred locations. A large percentage of new housing has historically occurred on the fringes of the major cities however this model is stretching infrastructure and every new development is further from the respective Central Business Districts.

Australia is dominated by large cities notably Melbourne and Sydney. Large cities have higher housing prices all other things equal as there are greater employment opportunities amongst other factors. The initial fabric of our urban cities where housing blocks were in the 600-800 sqm range means that large tracts of the urban area are occupied by existing low density housing. This form means that densification is difficult in existing established areas and that in recent years nearly all densification has occurred in commercial or industrial areas or on large residential lots. This outcome has changed



recently with the implementation of the new Residential Growth Zones that attempt to provide a location for medium density housing often in existing residential areas close to activity centres.

New housing needs to be well-located and viewed on life cycle basis that takes into account other costs such as transport and commuting time. This leads to the need to supply a diversity of housing wherever possible within the existing established urban area. This diversity will help satisfy the increase in demand for alternative forms of housing or where the demand is prepared to trade-off housing choice for locational advantages such as access to work, transport and amenities.

Other issues cited in the restriction of supply include planning delays at the State and Local Council levels. It is argued that these delays add to the holding costs of developments and these costs are passed directly onto the buyers. In the same vein, it is often cited that construction costs are high particularly for medium/high density construction. It is more expensive per square metre to build a high rise building than costs in the cottage industry. These extra costs add to the cost of alternative forms of housing such as apartments.

Government taxes and developer contributions also add to the cost of housing construction and hence the price of housing. There is an increasing trend for Councils and State Government to target new construction to recoup costs incurred for infrastructure. These extra costs may add to the cost of new housing. A combination of these factors has contributed to Australia having some of the highest housing prices in the world.

With the exception of planning processes and local developer contribution charges, these forces are beyond the power of local councils to significantly influence except through lobbying State and Federal Government.

5.2 Residential Dwelling Sales Value/Pricing Trends

The following provides a brief overview of residential dwelling pricing trends for Bacchus Marsh and Moorabool, the Outer West Sub-Region and metropolitan Melbourne as background information for the assessment of relative affordability in Bacchus Marsh.

The median price for a house in 2014 in the Bacchus Marsh Study Area was \$342,700 well below the Melbourne metropolitan average of \$550,000. House prices in Bacchus Marsh Study Area have grown at 4.5% over the 10 year period compared to 5.9% for metropolitan Melbourne. This is a significant difference: if Bacchus Marsh Study Area prices had grown at the metropolitan rate, then the current house price in Bacchus Marsh Study Area would be \$395,100 rather than the current \$342,700. Graphs 5.1 and 5.2 show house prices for the period 2004-2014 for selected locations.



Table 5.1 House and Unit Prices and Growth Rates 2004-2014

	Houses			Units		
	2004	2014	% Annual Growth	2004	2014	% Annual Growth
<i>Bacchus Marsh</i>	240000	347500	3.8	209000	296500	3.6
<i>Darley</i>	225000	360500	4.8	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Maddingley</i>	203000	320000	4.7	142500	205000	3.7
Bacchus Marsh Study Area	222700	342700	4.4	175750	250750	3.6
Moorabool	219000	337750	4.4	197250	283000	3.7
Wyndham	230000	375000	5.0	196500	280000	3.6
Melton	240000	372000	4.5	220000	285000	2.6
Brimbank	240000	405000	5.4	200000	311250	4.5
Outer West Region	235400	381000	4.9	203500	289750	3.6
Metro Melbourne	310000	550000	5.9	275000	432000	4.6

Source: Valuer Generals sales price reporting

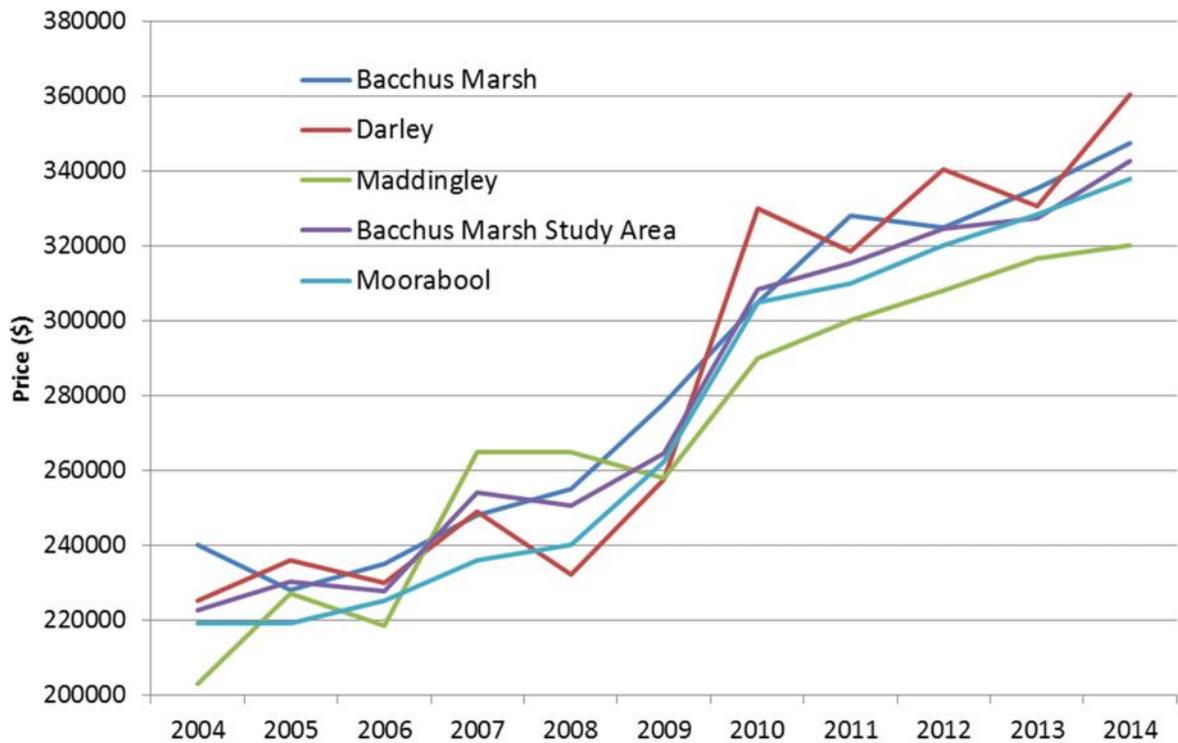
Table 5.1 shows the house and unit prices and growth rates for selected areas for the period 2004-2014. Bacchus Marsh Study Area house prices have grown at a rate less than for the Outer West Region as a whole with growth rates higher the closer to the centre of Melbourne. The suburb of Darley has the highest median at \$360,000 as of 2014. Of the three suburbs of Bacchus Marsh, Darley and Maddingley, Bacchus Marsh has had the lowest growth rate for houses of 3.8% over this period. This has seen a convergence of prices between Bacchus Marsh and Maddingley and Darley. In 2004 the median house price in Bacchus Marsh was higher than in Darley. By 2014 this relativity had reversed with the median house price higher in Darley rather than Bacchus Marsh.

Unit prices have not grown at the same pace as house prices in all areas. This market is more affordable than separate houses reflecting the style of development. Units tend to be on small lots dispersed within the established area with future development likely to continue to occur opportunistically as small developers subdivide existing lots.

House prices for the Bacchus Marsh Study Area have stayed relatively stable compared to house prices in Wyndham and Melton consistently being around 5-10% cheaper for the 2004-2014 period. Brimbank prices have grown at a faster rate than Melton, Wyndham or Moorabool.

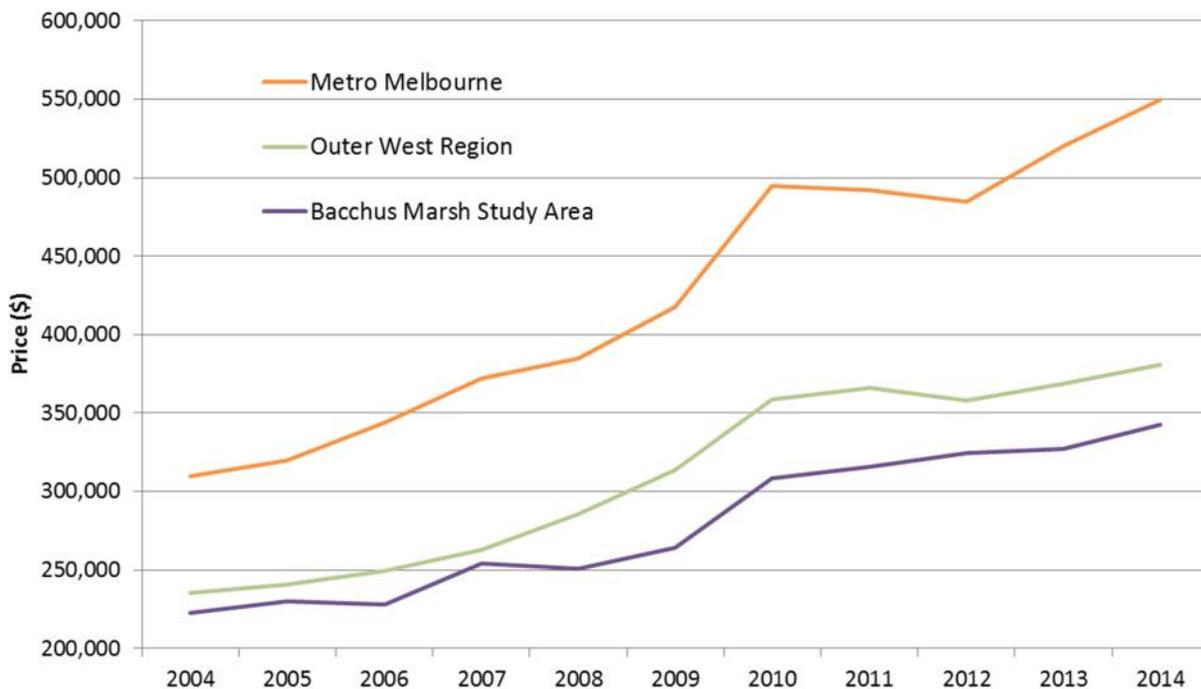


Graph 5.1: Median House Sales Prices for Bacchus Marsh Study Area, Maddingley, Darley and Bacchus Marsh: 2004-2014



Source: Valuer Generals sales price reporting

Graph 5.2 Median House Sales Prices for Bacchus Marsh Study Area, Outer West Region and Metropolitan Melbourne: 2004-2014



Source: Valuer Generals sales price reporting



Table 5.2 shows the vacant land prices for the suburbs comprising Bacchus Marsh, Bacchus Marsh Study Area and the LGAs comprising the Outer West Region. It is clear that Bacchus Marsh is now heavily influenced by metropolitan prices, in particular the adjoining growth area of Melton (Graph 5.3). In Melton the price of vacant land has stagnated compared to the rest of Melbourne and Bacchus Marsh. Vacant land price growth in Melton was only 2.3% over the 10 year period to 2014. Vacant land prices have grown at 5.8% for Wyndham and 5.4% for the Bacchus Marsh Study Area.

However, looking at house price growth over this period shows that Melton and Bacchus Marsh Study Area have had similar growth rates of 4.5% and 4.4% respectively. Land prices are essentially the same in Bacchus Marsh as Melton however the median lot size is considerably larger in Bacchus Marsh than Melton. In Bacchus Marsh the recent median lot constructed is 686 sqm compared to 437 sqm in Melton. Per square metre for land, this equates to \$220 per sqm for land in Bacchus Marsh compared to \$340 per sqm in Melton. For the same price in Bacchus Marsh the buyer is purchasing 50% more land.

Even with the smaller lots, Melton is delivering higher value housing product as the imputed house price (house prices minus land prices) is around 10% higher than in Bacchus Marsh.

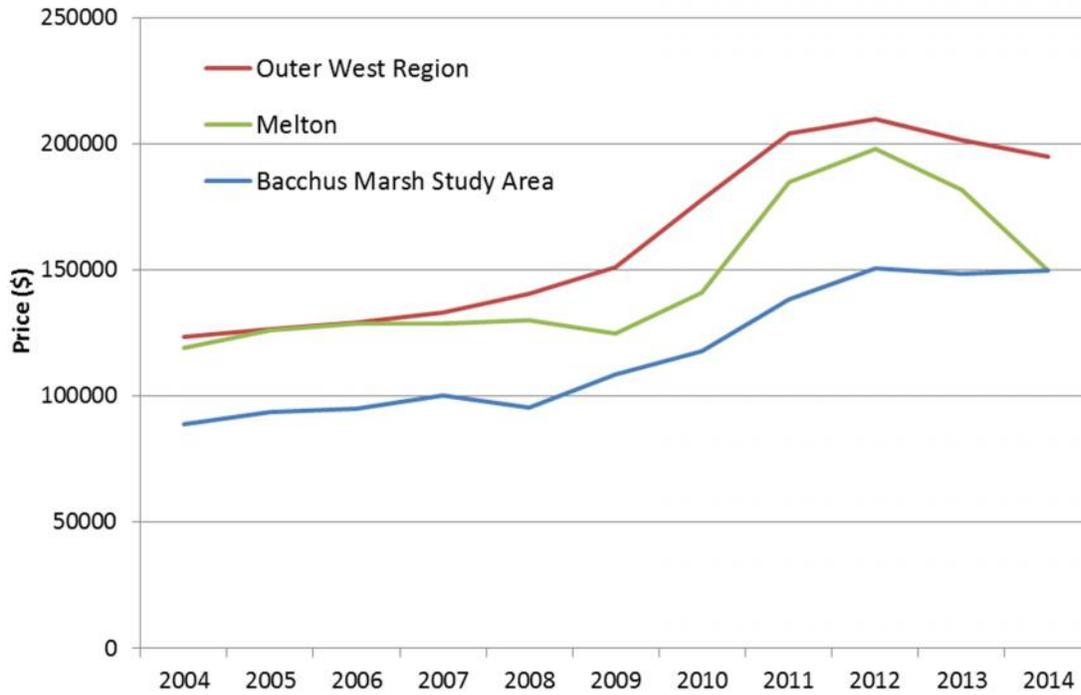
Table 5.2 Vacant Land Prices and growth rates 2004-2014

	2004	2014	% Annual Growth
<i>Bacchus Marsh</i>	87500	150000	5.5
<i>Darley</i>	98000	150000	4.3
<i>Maddingley</i>	81000	149000	6.3
Bacchus Marsh Study Area	88800	149700	5.4
Moorabool	90000	140000	4.5
Wyndham	125000	220000	5.8
Melton	119000	150000	2.3
Brimbank	145000	300000	7.5
Outer West Region	123500	195100	4.7
Metropolitan Melbourne	135000	210000	4.5

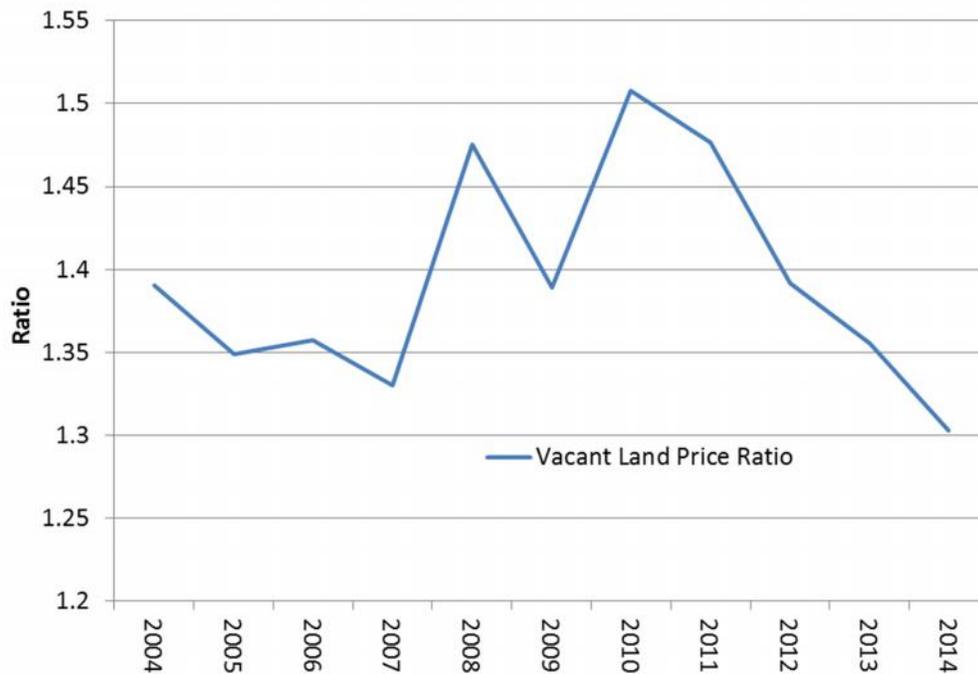
Source: Valuer Generals sales price reporting



Graph 5.3 Vacant Land Prices for Bacchus Marsh Study Area, Melton and Outer West Region 2004-2014



Graph 5.4 Relative Vacant Land Prices for Bacchus Marsh Study Area and Outer West Region 2004-2014



Graph 5.4 shows the relative price ratio of vacant land between the Outer West region and Bacchus Marsh Study Area. Land was relatively most affordable in Bacchus Marsh in 2010; however there has



been a steady downward trend since then with land prices for Bacchus Marsh and the growth areas of Wyndham, Brimbank and Melton slowly converging.

This analysis suggests that Bacchus Marsh has become part of the metropolitan housing market and needs to consider decisions in relation to the market in the Outer West Region of Melbourne, in particular the growth areas of Melton. It is important to continue to monitor the trends and land supply in Melton and Wyndham as any significant changes in these areas may have significant impacts on the demand for housing in Bacchus Marsh.

5.3 Rental Stock – An Overview

In 2011, the housing tenure of households in the Bacchus Marsh Study Area included:

- 31% who owned dwelling outright;
- 46% who owned a dwelling with a mortgage;
- 21% or 1,300 households who rented – of which;
 - 12% or 685 households rented privately;
 - 4% of households (247) rented from a social housing service provider.

The most accurate and detailed information regarding rental costs is sourced from the Department of Human Services. Table 5.3 details the median weekly rental value of new leases in the Bacchus Marsh Study Area by dwelling type and number of bedrooms. Data for 2014 indicates the median rental value by dwelling type and number of bedrooms varies. In terms of flats, the median value ranges from \$175 per week for a one bedroom to \$265 for a three bedroom flat. Whereas, a two bedroom house was \$243 per week, increasing to \$336 per week for a four bedroom house.

Table 5.3: Bacchus Marsh (Study Area) - Median Weekly Rental Value (\$) of New Leases, 2006 to 2014

	2006	2007	2008	2009	2010	2011	2012	2013	2014
1 bdrm Flat	95	338	251	143	143	158	180	175	175
2 bdrm Flat	151	160	175	187	205	209	228	224	228
3 bdrm Flat	n.a.	n.a.	n.a.	n.a.	253	270	284	287	265
2 bdrm House	175	165	175	199	248	231	246	238	243
3 bdrm House	192	205	230	243	257	280	285	285	290
4 bdrm House	238	254	300	310	332	328	331	338	336

Source: Department of Human Services.

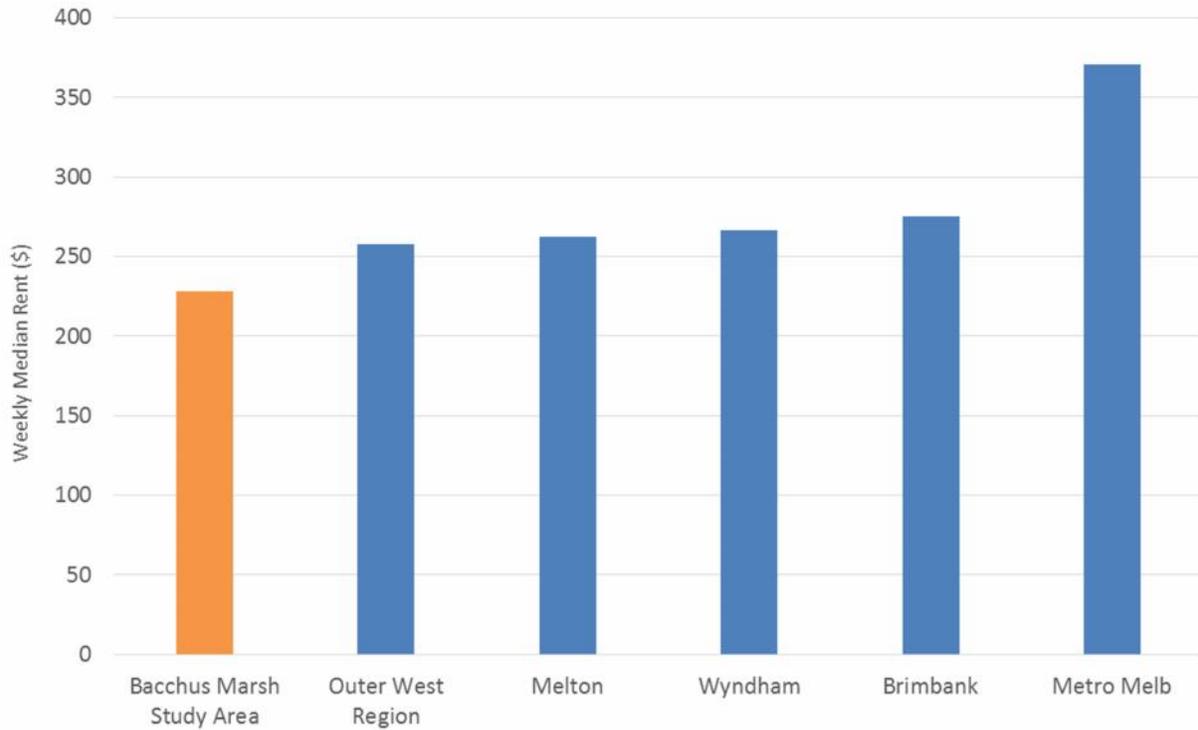
The median value of new residential leases within the Bacchus Marsh Study Area by the number of bedrooms and dwelling type as measured from 2006 to 2014 has increased consistently by around 4 to 5% per annum. In 2014, the rental values of a two bedroom flat and house are comparable.

Graphs 5.5 and 5.6 summarise the median rental value of new leases at 2014 for the Bacchus Marsh Study Area relative to the composite Outer Western Region municipalities and metropolitan Melbourne for both a two bedroom unit and a three bedroom separate house.

For a two bedroom unit, the median rental value in 2014 for the Bacchus Marsh Study Area is 12% less expensive than the median for the Outer West Region at \$228 per week compared to \$258. Melton, Wyndham and Brimbank have more expensive median weekly rent ranging from \$262 in Melton to \$275 per week in Brimbank. A two bedroom flat in the Study Area compared to metropolitan Melbourne is 38% less expensive.

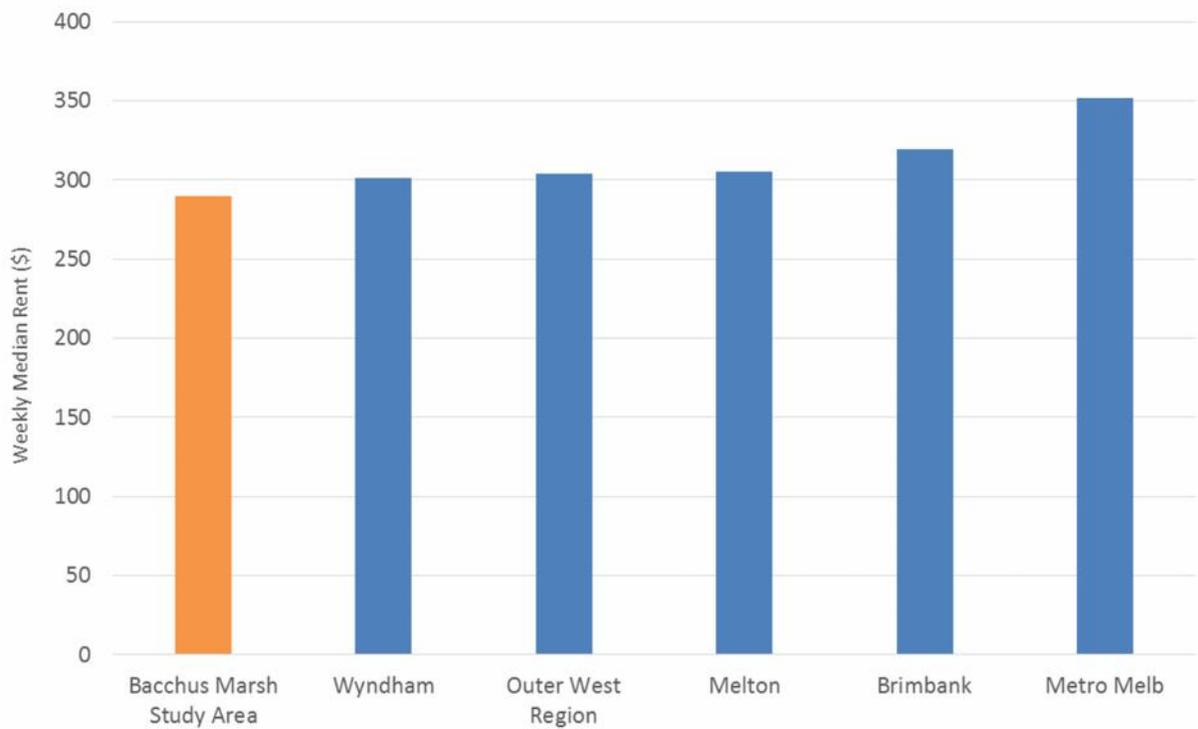


Graph 5.5: Median Weekly Rental Value (\$) of New Leases of 2 Bedroom Flats/Units/Apartments, 2014



Source: Department of Human Services.

Graph 5.6: Median Weekly Rental Value (\$) of New Leases of 3 Bedroom Houses, 2014



Source: Department of Human Services.



Whereas, a three bedroom house is 18% cheaper to rent in the Bacchus Marsh Study Area compared to the metropolitan median at \$352 per week rent. Rental values compared to the Outer West Region are comparable at \$290 and \$303 respectively.

5.4 Residual Income or Budget Standard Housing Affordability (Housing Affordability Middle Income Earners)

The most commonly used approach to housing affordability is 30-40 rule. That is anyone on the 40th percentile income (4th decile) paying more than 30 per cent of their household income on rent or a mortgage, is said to be in 'housing stress'.

While this method is commonly used, there are significant limitations with its application to real-world situations and small-area data. In particular:

- there is a need to consider the different purchasing (or rental) power of households on different incomes, not just those at the 40th percentile;
- to consider the different living costs of different household types. This is sometimes referred to as residual income referring to the residual income, after housing costs and comparing that with calculated living-cost benchmarks; and
- it is also useful to consider the difference between renter and purchaser households as they have different housing costs, in particular insurance, local taxes (rates) and maintenance for home-buyers.

There are other, finer nuances to the affordability story, including rent assistance for low income pensioners, variations to income over time, variations to housing cost over time, variability of household size, and hence income required to maintain a living standard over time, non-income or hidden capacity to pay (e.g. sub-let renters) and differences in the asset to debt ratio for home purchases. All these factors play a part, but are difficult to obtain more than anecdotal or case-specific data on. Thus we will focus on including the three main points listed above in our affordability analysis.

In various publications⁹ produced by Michael Stone from the University of Massachusetts and Terry Burke and Liss Ralston from Swinburne University, the Residual Income Approach to housing affordability is discussed and analysed. Among their findings is "the usefulness of the residual income method as a basis for more informed decision-making around affordability issues and for more detailed analysis of the implications." (AHURI Final Report No. 176, p5).

Taking this approach to housing affordability, Spatial Economics has followed the Burke et al method, looking at household budget standard for four household types. Current data on budget standards does not exist, therefore data we have used the Reserve Bank of Australia's (RBA) published figures inflated the data published to 2015 values. We have used the 'modest' budget standard as we believe it better reflects Australian lifestyle balance, whereas the 'low' budget standard, reflecting near poverty line living standards, is not what we aspire to. We have also inflated Census income to 2015 using the same RBA data.

⁹ *What is Housing Affordability? The Case for the Residual Income Approach*, Stone 2006

The Residual Income Approach to Housing Affordability: The Theory and the Practice, Stone, Burke, Ralston, 2011
AHURI Final Report No. 176 *The residual income method: a new lens on housing affordability and market behaviour*
Burke, Stone, Ralston, 2011

AHURI Research and Policy Bulletin 153: *What does the residual income method tell us about housing affordability in Australia?* Stone, Burke, Ralston, 2012



We have selected four key household types: Couple with no children, Couple with two Children, Single Parent with one Child and Lone Person Household. The budget standard data from 2010 is available for a wider range of household but we have matched these four categories¹⁰.

Table 5.4 Weekly budget (\$) for non-housing essential by selected deciles (3rd to 6th) by household type, 2015.

	Couple with no Children	Couple with two Children	Single Parent with one Child	Lone person
Modest budget	680	1068	639	418
Low Budget	443	668	369	292

Source: SPRC Budget Standard, Burke et al, RBA, Spatial Economics modelling

Census income data is available for household type, so we have created income deciles for each of these household types. Of particular interest in housing affordability are households in the 4th, 5th and 6th income deciles (middle income earners).

Table 5.4 shows the range of expenditure for the different households and for a low budget and a modest budget. The essential costs range from \$292 for a lone person on a low budget to \$1,068 for a couple with two children on a modest budget.

Table 5.5 Weekly Incomes (\$) by selected deciles (4th to 6th) by household type, 2015.

	Couple with no Children	Couple with two Children	Single Parent with one Child	Lone person
4th decile	1,010	1,950	709	461
5th decile	1,201	1,986	794	567
6th decile	1,532	2,356	985	774

Source: ABS Census, RBA, Spatial Economics modelling

Table 5.5 is the estimated weekly income for these household groups for the 4th, 5th and 6th decile. A couple with no children in the Bacchus Marsh has a range of \$1,010 to \$1,532 between the 4th and 6th decile income range. This compares to the incomes of lone person households of between \$461 and \$774 per week.

When we put these data together, we can calculate the percentage of residual income household would have for housing.¹¹ If household at these income deciles are paying higher than these thresholds, they may be said to be in housing stress. That is they would have to reduce their budget below this modest level in order to afford their housing.

¹⁰ For Couple with no children and Lone Person households, the budget standard data distinguishes between under and over 65 year old household due to different taxation and benefits based on age (or retirement status). For this exercise we have used the under 65 year-old households.

¹¹ "...the residual income method calculates how much is left over for housing rents or mortgage *after* relevant expenditure items for different household types have been taken into account. If there is insufficient left for rents and mortgages after meeting this budget standard, a household has an affordability problem. The basis for formulating such a measure for Australia was enabled by the development of indicative budget standards by the Social Policy Research Centre (SPRC) at the University of New South Wales (Saunders et al. 1998). They established a low cost budget standard (LCBS) and a modest cost budget standard (MCBS); the former might be seen as a minimum level of consumption in contemporary Australia, while the latter allows for a comfortable but far from luxurious lifestyle." (AHURI Final Report No. 176, P1)



Using this data we have the weekly income that each household group for the 3 deciles can afford to commit to housing. This is shown in Table 5.6 and provides the basis of calculating the price at which each household type can afford to buy. This calculation is based on disposable income (after income tax is applied). The higher expenses incurred by the couple with children household is counter acted by the significantly higher incomes that this group earn in Bacchus Marsh. After modest expenses the Couple with Children household can afford to spend between \$837 and \$1,288 whereas a Lone Person household is only able to afford between \$43 and \$356.

Table: 5.6 Residual income available for housing by household type, 2015

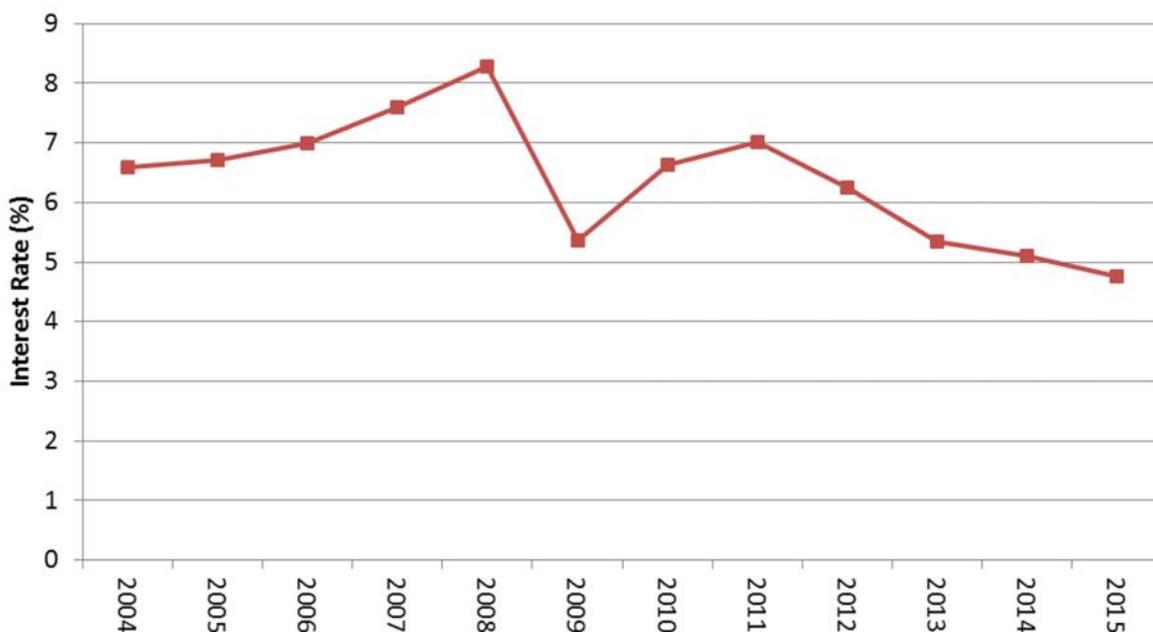
	Couple with no Children	Couple with two Children	Single Parent with one Child	Lone person
4th decile	330	837	70	43
5th decile	521	918	155	149
6th decile	852	1,288	346	356

Source: ABS Census, RBA, Spatial Economics modelling

Given this level of incomes we have calculated for the years 2004 – 2014, the amount each household for the 4th, 5th and 6th deciles can afford to buy. We have used standard loan requirements of 10% deposit and 30 year loan repayment period. Over this period mortgage rates have varied so we have used annual averages of the standard mortgage rate as reported by the Reserve Bank of Australia. Banks build in a factor to allow for an increase in mortgage rates.

The movement in mortgage rates is shown in Graph 5.7. The rate averaged 6.6% in 2004 reaching 8.3% in 2008 before the sharp fall in interest rates due to the Great Financial Crisis. By 2009 mortgage rates on average for the year were 5.3%. After rising again through 2010 and 2011, interest rates have steadily fallen to around 4.75% in 2015.

Graph 5.7 Average Yearly Mortgage Rates (%) 2004 – 2015



Source: RBA

Using these interest rates and the loan assumptions, the borrowing capacity and hence the amount each household group can spend on a dwelling. This is illustrated in Table 5.7 that show that Couples



with children in the 6th decile can afford to buy a dwelling up to the value of \$1,189,000 based on the weekly income and modest essential expenditure. This assumes that the household has a 10% deposit available to make the purchase. The price points vary greatly within each household group and across the three decile ranges.

Table 5.7 Dwelling Affordability Price Point for each Household Type at 4th, 5th and 6th Decile - 2015

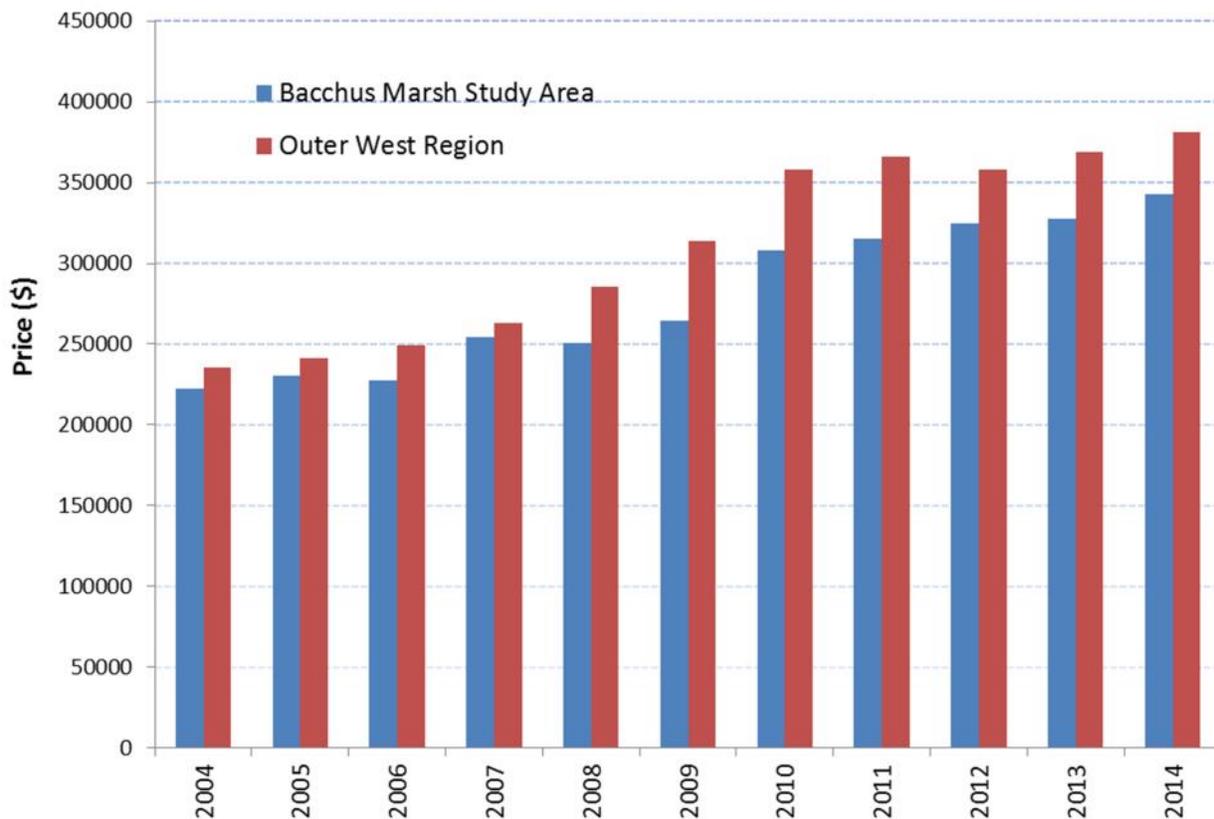
Decile	Couples No Children	Couples with Children	One Parent Family	Single
4th	\$211,400	\$386,100	\$25,600	\$39,500
5th	\$281,100	\$407,400	\$99,500	\$137,900
6th	\$503,700	\$623,500	\$228,500	\$328,600

Source: ABS, RBA Spatial Economics, Valuer General

These price points have been calculated for all the years from 2004 – 2014 using the deflated income series and applying the historical average of mortgage rates. Using this series of dwelling price points we can compare each year’s median price to calculate the ratio of the median that each group can afford. This calculation becomes an outcome from three factors; the level of income available for housing, the prevailing interest rate and dwelling prices.

The final part of the affordability calculation is housing prices. Using yearly sales data, the median price for housing is displayed in Graph 5.8

Graph 5.8 Median Annual House Prices for Bacchus Marsh and Outer West Region



Source: Valuer General



There has been a steady growth in house prices in the Outer West Region up until 2010 where prices have flattened and only grew again in 2014. The median price in Bacchus Marsh is consistently below the median price for Outer West Region for the entire period.

Using the median house prices for Bacchus Marsh and the price points for each household group results in the proportion of the median price that each household group is able to afford for each year by the 4th, 5th and 6th decile.

Table 5.8 Proportion of the Median House Price that each Household Group is able to afford for the 4th, 5th and 6th Deciles in 2014

Income Decile	Couples No Children	Couples with Children	One Parent Family	Single
4th	58%	107%	7%	11%
5th	78%	113%	27%	38%
6th	139%	172%	63%	91%

Source: ABS, RBA Spatial Economics, Valuer General

The results in Table 5.8 show the wide variability for the household groups and across the 4th, 5th and 6th deciles. At the bottom end of the scale if you are from a single person household, the proportion of the median house price was 11% for a single person in the 4th income decile. Realistically, households in the 4th and 5th decile in the household groups One Parent Family and Single could not afford a house in Bacchus Marsh.

Couple households with children can afford the most houses and have the highest income in this comparison. This is because a large proportion of the families with children will have two incomes. In contrast the single households and couples with no children categories will comprise a higher proportion of households that are either retired or on welfare.

Bacchus Marsh's housing supply to a large extent of separate housing on substantial blocks. This type of housing is highly desirable to families and combined with the affordable level of housing in the area means that there is a self-selection process to the types of households that make up the households in Bacchus Marsh. The change in household composition and change in household preferences will affect the type of housing that is required in Bacchus Marsh.

Over time the affordability of housing in Bacchus Marsh varies. The main factor affecting this affordability has been the interest rate with changes in income and changes in house prices also having an effect on affordability over time. For example Table 5.9 shows the comparable affordability percentages for the period 2004-2014. There is considerable variation in the ability of certain households at different decile levels to afford a dwelling. For example for the Couples with no Children group at the 5th decile in 2014, they could afford 78% of the median price whereas in 2008 this cohort could only afford 58% of the median price. For One Parent families in the 6th decile, they could afford 91% of the median price in 2014 whereas this cohort could afford only 68% of the median price in Bacchus Marsh in 2008.



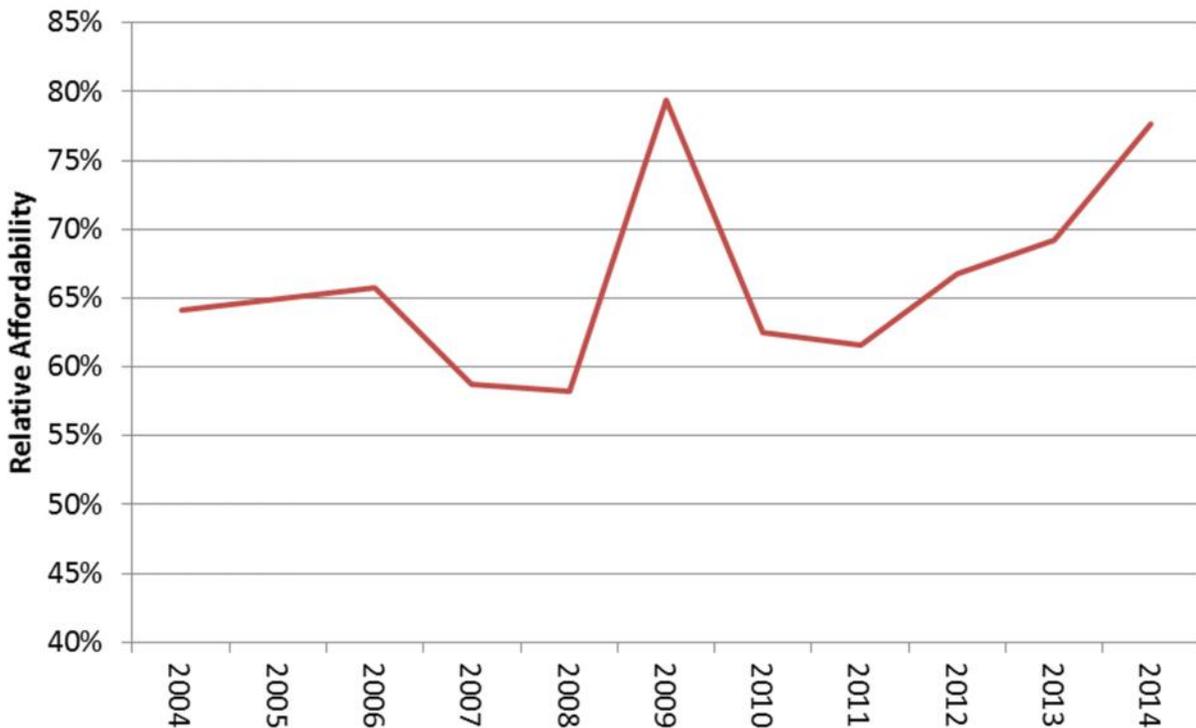
Table 5.9 Percentage of Available Income as a Ratio to Median Price for 2004 - 2014

	Decile	Couples No Children	Couples with Children	One Parent Family	Single
2014	4th	58%	107%	7%	11%
	5th	78%	113%	27%	38%
	6th	139%	172%	63%	91%
2013	4th	52%	95%	6%	10%
	5th	69%	100%	24%	34%
	6th	124%	153%	56%	81%
2012	4th	50%	92%	6%	9%
	5th	67%	97%	24%	33%
	6th	120%	148%	54%	78%
2011	4th	46%	85%	6%	9%
	5th	62%	89%	22%	30%
	6th	110%	137%	50%	72%
2010	4th	47%	86%	6%	9%
	5th	63%	91%	22%	31%
	6th	112%	139%	51%	73%
2009	4th	60%	109%	7%	11%
	5th	79%	115%	28%	39%
	6th	142%	176%	65%	93%
2008	4th	44%	80%	5%	8%
	5th	58%	84%	21%	29%
	6th	104%	129%	47%	68%
2007	4th	46%	81%	5%	8%
	5th	64%	93%	23%	31%
	6th	105%	130%	48%	69%
2006	4th	49%	90%	6%	9%
	5th	66%	95%	23%	32%
	6th	118%	146%	53%	77%
2005	4th	49%	89%	6%	6%
	5th	65%	94%	23%	32%
	6th	105%	129%	47%	68%
2004	4th	48%	88%	6%	9%
	5th	64%	93%	23%	31%
	6th	115%	142%	52%	75%

Source: ABS, RBA Spatial Economics, Valuer General

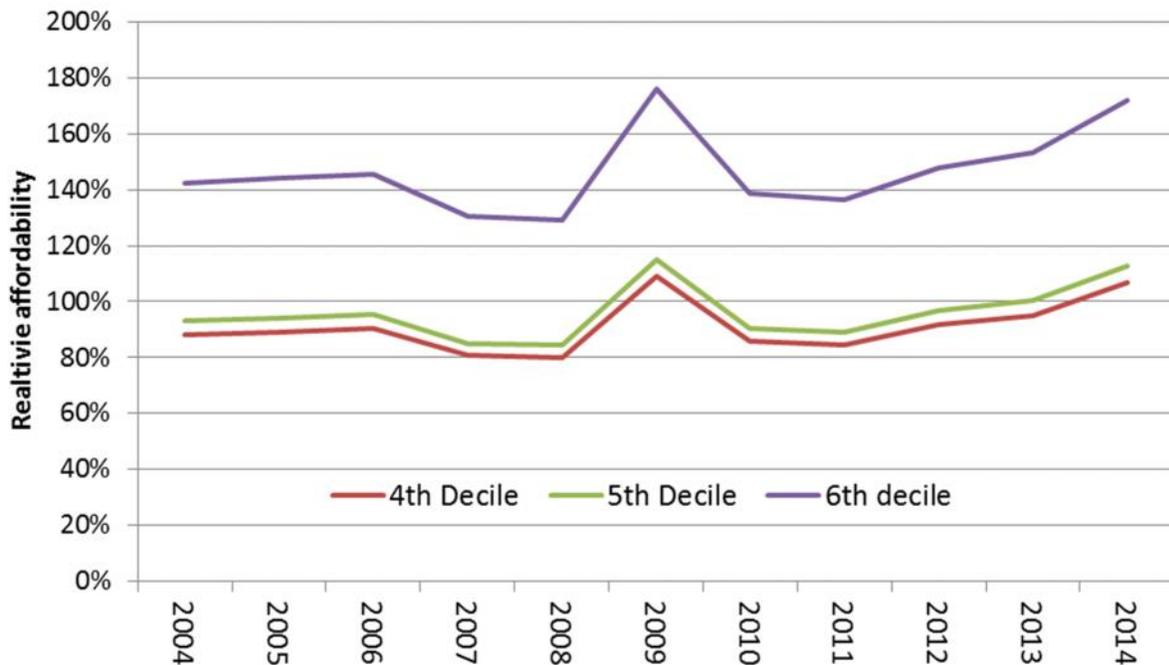


Graph 5.9 Couples No Children for the 5th Decile 2004 - 2014



Source: ABS, RBA Spatial Economics, Valuer General

Graph 5.10 Couples with Children, 4th, 5th and 6th Deciles 2004 - 2014



Source: ABS, RBA Spatial Economics, Valuer General

The variation in affordability for certain cohorts is high In Graph 5.9 the variability for Couples with no children in the 5th decile is quite significant as the factors affecting affordability change. The proportion



of the median house that this cohort could afford varies over time with the most affordable time occurring in 2009 and in 2014 due mainly to low interest rates.

This trend is again shown in Graph 5.10 which shows the trends over time for the three deciles for Couples with Children. There is significant variability over the different deciles with the variability increasing for the lower 4th decile.

5.5 Housing Affordability – Low Income Earners (Home Purchase)

The most widely accepted indicator of housing stress is the 30:40 rule. This is where a household is considered to be in financial housing stress if the household’s housing costs exceed 30% of their income and the household is in the bottom 40 per cent of household incomes. The 30:40 rule splits the population into two distinct groups: those households that earn above 40% of average household income and those that earn less than 40% of average household income. Under this measure those who are in the above 40% income group cannot be considered in housing stress no matter their individual situation. Conversely only those earning below 40% of average household income can be considered in housing stress.

Clearly there will be households in the upper income segment above 40% of average income that are in household stress, however this measure has been reviewed and critiqued extensively and given the individual nature of every household’s situation provides a reasonable guide to housing stress.

It should be recognised that the 30:40 rule is an aggregate measure and does not reflect individual choices/decisions and only measures financial stress. The 30:40 rule also provides a good indicator of relative stress across different geographic areas as the criteria is consistent for all areas. In this sense the 30:40 rule is reasonably accurate at highlighting areas where households are more stressed than others.

Table 5.10 lists the percentage of households in household stress for Bacchus Marsh Study Area, the suburbs of Bacchus Marsh, Darley and Maddingley as well as the LGAs of Wyndham, Moorabool, Melton and Brimbank.

Table 5.10 Low Income Households in Mortgage Stress for Selected Areas, 2011

Housing Market/LGA	No. of HHs	% of HHs
<i>Bacchus Marsh</i>	228	8.7
<i>Darley</i>	363	13.7
<i>Maddingley</i>	110	12
Bacchus Marsh Study Area	701	11.3
Moorabool	1353	11.7
Wyndham	9115	15.4
Melton	6970	18
Brimbank	8041	12.3
Outer West Region	25478	14.6
Metro Melbourne	179978	11

Source: Australian Bureau of Statistics and Spatial Economics Pty Ltd

Melton has the highest level of housing stress with the Bacchus Marsh Study Area close to the Metropolitan Melbourne average of 11%. The Outer West Region has a high level of housing stress at 15% reflecting the high number of first home buyers. Darley has the highest level of housing stress of the three suburbs followed by Maddingley and Bacchus Marsh.



There are 701 households in mortgage stress in the Bacchus Marsh Study Area.

5.6 Housing Affordability – Low Income Earners (Rental)

Of the households renting a dwelling in the Bacchus Marsh Study Area 470 low income households are deemed to be in rental stress, representing 7.6% of total households.

The percentage of low income households in rental stress in Bacchus Marsh is similar to that for the Outer West Region and slightly below the average for metropolitan Melbourne.

Table 5.11: Low Income Households in Rental Stress for Selected Areas, 2011

Housing Market/LGA	No. of HHs	% of HHs
<i>Bacchus Marsh</i>	268	10.2
<i>Darley</i>	124	4.7
<i>Maddingley</i>	78	8.5
Bacchus Marsh Study Area	470	7.6
Moorabool	636	5.5
Wyndham	4913	8.3
Melton	2788	7.2
Brimbank	5753	8.8
Outer West Region	14089	8.1
Metro Melbourne	158708	9.7

Source: Australian Bureau of Statistics and Spatial Economics Pty Ltd

5.7 Stock of Affordable Rentals – (Low Income Households)

The following provides a summary of the affordability of rental housing for lower income households compared to municipalities in the Outer East Region and metropolitan Melbourne as a total.

The method used in this section measures the supply of affordable new lettings based on the Rental Tenancy Board data. The affordability benchmark used is that no more than 30% of gross income is spent on rent. Lower income households are defined as those receiving Centrelink incomes.

The table below summarises the Centrelink payments (excluding rent assistance) and indicative affordable rent levels by household. It assumes an appropriate dwelling type for each category of household.

Table 5.12: Rental affordability by indicative households on Centrelink incomes

Household type	Singles on Newstart	Single Parent with 1 child	Couple on Newstart with 2 children	Couple on Newstart with 4 children
Assumed property size	1 bdrm	2 bdrm	3 bdrm	4+ bdrm
Weekly income (net of RA)	\$246	\$510	\$724	\$933
Affordable weekly rent	\$135	\$225	\$290	\$365

Source: Department of Human Services



For a single parent with one child on Centrelink income, only 2.3% of new residential leases for two bedroom dwellings across Melbourne were affordable as at the March Quarter 2015 or 372 properties. For larger families, the supply of affordable three and four bedroom dwellings is better and reflects the predominance of this size of dwelling in outer suburban locations such as the Bacchus Marsh Study Area. A couple on Newstart with four dependent children could afford 31.5% of four bedroom new lettings in Melbourne in the March quarter 2015 down from almost 33.4% in the previous quarter.

In metropolitan Melbourne, the availability of affordable rental lettings varies between different types of households. Due to a limited supply of affordable one bedroom dwellings, low income single person households face the most difficulties in accessing affordable rental housing. Across Melbourne, just 0.3% of one bedroom dwellings let in the March quarter 2015 were affordable to low income singles (28 properties).

In the March quarter 2015, only 8.3% of all new lettings across Melbourne were affordable to lower income households. Over the five years from 2006 to 2011 the availability of affordable housing in metropolitan Melbourne declined markedly - from over 32% in mid-2006 to a low of 7.4% in the March quarter 2011.

Graph 5.11 summarises the proportion of new affordable lettings by number of bedrooms in the Bacchus Marsh Study Area. Measured from 2006, the proportion of total affordable new lettings has dramatically declined from a total of around 92%, to 69% in 2014. In 2011 and 2012, the level of affordable new rental leases was at its lowest at around 61% respectively. The proportion of new affordable rental leases has increased in 2013 and further increasing in 2014.

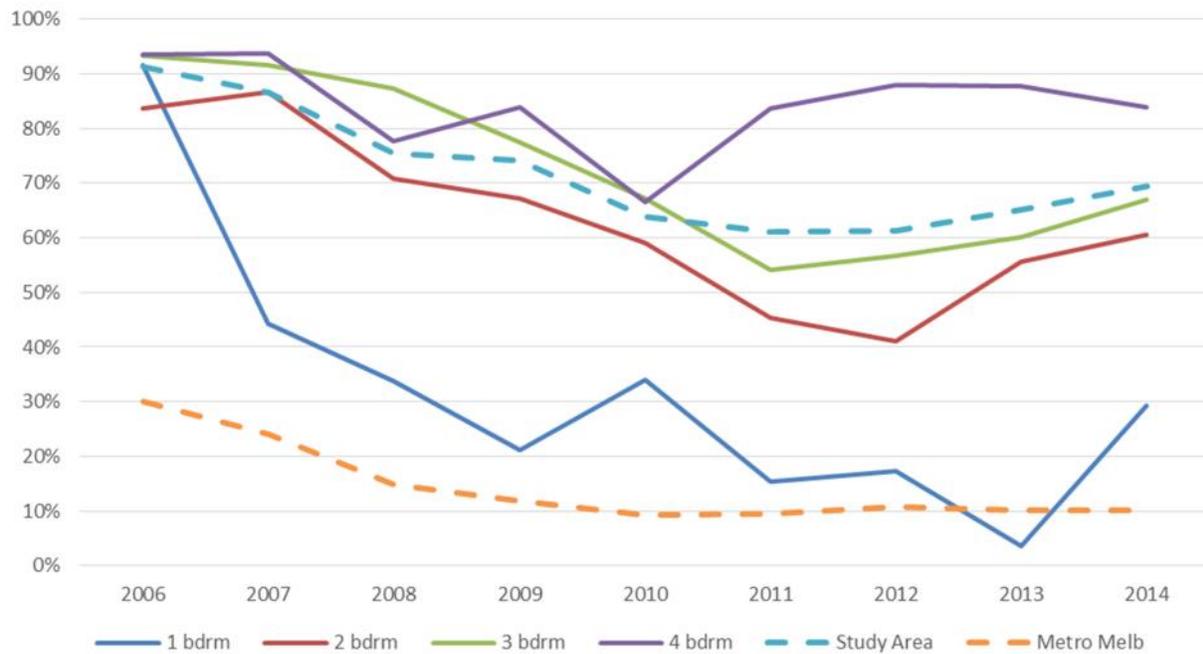
Relative to metropolitan Melbourne, the Bacchus Marsh Study Area has a significantly higher proportion of affordable new rental leases, as at the March quarter 2015, 8.3% of new leases were affordable for low income houses across metropolitan Melbourne compared to 65% in the Study Area. It is important to highlight that even though within the Study Area has a relatively high proportion of affordable new residential leases, this does not mean that the supply of affordable rental stock is meeting the demand, as illustrated previously by the number of low income rental households experiencing rental housing cost stress.

The number of new affordable rentals that became available in the Bacchus Marsh Study Area in 2014 (calendar year) is summarised below:

- 1 bedroom, total 7 lettings, 2 affordable – 29%;
- 2 bedroom, total 1,119 lettings, 61 affordable – 61%;
- 3 bedroom, total 1,121 lettings, 191 affordable – 67%; and
- 4 bedroom, total 268 lettings, 148 affordable – 84%.



Graph 5.11: Proportion of New Affordable Rental Dwellings by No. of Bedrooms, Bacchus Marsh Study Area



Source: Department of Human Services

Table 5.13 and 5.14 summarise the number and proportion of affordable rental lettings for the calendar year of 2014 for the Bacchus Marsh Study Area, composite Outer Western Region municipalities and metropolitan Melbourne. Relative to metropolitan Melbourne, the proportion of affordable new rental lettings is considerably more across all dwellings by number of bedrooms.

The Bacchus Marsh Study Area relative to the Outer West Region and composite municipalities has higher proportions of affordable rental dwelling stock.

Table 5.13: Number of Affordable New Lettings by LGA/Region, 2014

	1 bdrm	2 bdrm	3 bdrm	4 bdrm	Total
Bacchus Marsh Study Area	7	61	191	148	407
Wyndham	0	97	1,439	1,429	2,965
Melton	0	96	1,040	772	1,908
Brimbank	2	170	891	386	1,449
Outer West Region	9	424	3,561	2,735	6,729
Metro Melbourne	106	1,665	8,454	6,175	16,400

Source: Department of Human Services



Table 5.14: Proportion of Affordable New Lettings by LGA/Region, 2014

	1 bdrm	2 bdrm	3 bdrm	4 bdrm	Total
Bacchus Marsh Study Area	29%	61%	67%	84%	60%
Wyndham	0%	14%	50%	65%	51%
Melton	0%	27%	49%	66%	52%
Brimbank	1%	19%	31%	53%	31%
Outer West Region	8%	30%	50%	67%	45%
Metro Melbourne	0%	3%	16%	33%	10%

Source: Department of Human Services

5.8 Social and Special Needs Housing In Bacchus Marsh – An Overview

A component of this report focuses on housing needs that are expected to be met through the operation of the private market. The report uses the term 'effective demand' when presenting forecasts of the likely scale of additional housing, both sale and rental, that will need to be provided in the Study Area through the private market.

While the private housing market will account for the vast bulk of future housing provision in Bacchus Marsh there are, and in future will continue to be, some individuals and households who are unable to find housing they can afford in the private market. For these individuals and households the available housing options are limited and involve either accessing some form of social housing, moving out of Bacchus Marsh to a more affordable location or slipping into homelessness.

Preceding sections of the report outlined the extent of households experiencing significant problems with housing affordability in Bacchus Marsh. This section seeks to present an overview of the scale of the housing need in the Study Area that will not be met through the private market.

We emphasise that these findings are indicative – good data is hard to find especially in relation to homelessness. Even where data is available there are significant issues in interpreting its significance for Council's housing planning and policy making.

It is important to understand both the contribution of and limitations on social housing provision as it relates to Bacchus Marsh's future housing needs.

In terms of its contribution there is no doubt that, for those who struggle to continue to meet the cost of private housing (either purchase or rental), accessing social housing represents a preferable alternative. Social housing includes both 'public housing' provided directly by state government (DHHS) and housing provided at sub-market rentals by community housing associations. In addition there are specialist organisation (most often charities) providing for the housing needs of aged, disabled and other special needs groups who cannot access suitable housing through the private market.

Among Australian states and territories Victoria has the lowest percentage of its total housing stock provided as social housing. A 2013 analysis by Terry Burke of Swinburne University showed the percentage of social housing in Victoria at 3.4%. This compared to an Australian average of close to 5% (4.8%) and a comparable figure of 5.2% for NSW. The Victorian average, although the lowest in Australia, may tend to understate the extent of the problem faced by many low income households in accessing social housing in their local area as it hides significant variations from area to area across the state. In Bacchus Marsh at 2011 census social housing as a percentage of the total housing stock was 4.6%.



Up to the present time the bulk of social housing in the Study Area has been provided by the State Government through the Department of Health and Human Service (DHHS). DHHS has a total stock of approximately 65,000¹² dwellings across the state but only 218 are in Bacchus Marsh. A further 28 were managed by the community housing sector as at 2011¹³.

For the purposes of this report we have been unable to obtain any information from DHHS regarding the Department's future intentions in relation to the public housing stock in Bacchus Marsh. However, on the basis of the increasingly difficult financial position faced by public housing agencies not just in Victoria but across Australia, it would be wise to assume no significant future increase in the DHHS housing stock within the Study Area.

DHHS completed a major redevelopment of ageing 1960's public Housing in Bacchus Marsh at 44 Young Street. It was built for low income public housing residents aged over 55. The new accommodation was purpose built for older people with 1.5 bedroom apartments that include a flexi room to be used as a carer's temporary accommodation or storage area. The development maintains affordable housing for older people in Bacchus Marsh, so that local people can remain close to their community as they age.



New public housing at Young Street



The original Young Street housing

Over recent years a number of community housing providers have established a presence in Bacchus Marsh – including Community Housing Ltd, Community Equity Housing Ltd, Catholic Homes and Uniting Care (Ballarat). These entities provide social/community housing for low to moderate income earners. Child and Family Services (CAFS) has been in Bacchus Marsh since 1995, they offer a number of programs, however specifically in regard to housing offers transitional and crisis support services to young people, families, single parents and individuals, who are either homeless or are at risk of becoming homeless. Their program aims to assist people to achieve the maximum level of self-reliance and independence by:

- Assisting them to resolve crisis;
- Re-establishing family links where appropriate;

¹² Department of Human Services

¹³ Australian Bureau of Statistics. 2011 Population and Housing Census.



- Improving their access to a range of social supports, education and employment opportunities; and
- Securing long term affordable housing.

CAS representatives highlighted that in Bacchus Marsh there is an extreme need for additional emergency accommodation for the region's homeless – demand being greater than they are able to provide. It was highlighted that anyone could experience homelessness. Factors which impact upon a person becoming homeless are: family violence, relationship breakdown, family conflict, housing affordability, loss of employment, gambling, financial issues, mental health issues, health issues, drug and alcohol dependencies. The "faces of homelessness can be a child, a single parent, an elderly person/couple, a person with a disability."

In the course of preparation of this report we spoke to both Community Equity Housing Ltd and Community Housing Ltd (as a community housing associations currently involved in Bacchus Marsh) and also the Community Housing Federation of Victoria (the peak organisation for the community housing sector in this state). On the basis of these discussions it is apparent that the involvement of the sector in meeting housing need in Bacchus Marsh had been somewhat 'opportunistic' rather than as part of a deliberate strategy. This primarily reflects the severe resource constraints faced by the community housing sector.

As a significant housing provider the community housing sector is relatively recent in Australia. As with public housing agencies, the community housing sector is facing demand much greater than its current capacity to grow its housing stock. Over recent years its growth to be a significant but still very much constrained housing supplier was enabled primarily by a combination of transfers of public housing stock by state governments together with funding for new social housing construction provided by the former Commonwealth Government under the National Rental Affordability Scheme and the Social Housing Initiative under the Nation Building program. These two programs funded the provision of nearly 4,600 additional social housing units in Victoria. Of these 2,432 are owned and managed by housing associations, 811 are owned by DHHS but managed by housing associations and 1,349 are both owned and managed by DHHS.

A condition of this Commonwealth funding was a requirement that the funded housing associations provide 25% of the construction cost of funded projects.

A by-product of this funding requirement has been that many community housing associations are now carrying significant debt that they will take years to pay down. As a result they are now expecting to go through what the Federation describes as a period of slow 'organic' growth (averaging perhaps 1% to at most 2% a year).

In this environment, and with housing associations facing a backlog of unmet demand across most areas of Victoria, the sector has little option but to take an opportunistic rather than strategic or targeted approach to the location of future expansion of its housing stocks. That is community housing associations are unlikely to set specific targets or commit to an ongoing program for investment in new housing stock in Bacchus Marsh or the sub-region. Instead they will respond to specific opportunities when and if they arise and any proposed new investment will need to at least break even financially from the associations point of view.

The only potential for change to this situation would arise if the State Government chose to transfer title to additional public housing stock to housing associations. Such a transfer could possibly enable the recipient associations to 'leverage' the value of the transferred properties in order to support additional capital investment in additional housing projects. The former State Government had



committed to transfer an additional 12,000 public housing units to the community housing sector (in the context of COAG having set a target of moving to 35% of total social housing stocks to be controlled by the community housing sector). The intentions of the current government in relation to such stock transfers are unknown.

In this context the Moorabool Shire will need to actively promote and facilitate local development by the community housing sector if it wishes to see an increase in social housing provision in the local area, as part of its revised Housing Strategy. This could, for instance, involve following the example of a number of inner city Councils in making council land available at a discounted price as sites for community housing projects (in some instances this has involved transferring surplus land holdings or even making available rights for development over council car parks). It could also involve Council committing to an accelerated approval process for community housing projects and lobbying the State Government in relation to the importance of encouraging the continuing growth of the community housing sector.

Cultural and linguistic diversity (CALD)

Cultural and linguistic diversity (CALD) is a very broad concept and encompasses the differences that exist between people, such as language, dress, traditions, food, societal structures, art and religion. Recently arrived CALD/refugee families need special support due to poor language proficiency, unique housing needs of large families and difficulties understanding the requirements of the housing market.

Among the housing-related concerns identified by a literature review include:

- the challenges newly arrived refugees have in finding housing, with a lack of rental history in Australia and language barriers being significant obstacles when competing for a limited number of affordable rental properties;
- the financial burden of the high cost of housing on people on low incomes;
- the importance of support and advice to newly-arrived refugees who have a limited understanding of rental processes or their rights as tenants or the expectations of landlords; and
- the additional challenges faced by larger families.

In the Study Area, according to the 2011 Census, 17% of the total population was born overseas. This compares with 33% of the total population born overseas across metropolitan Melbourne. In 2011, 5% of people in the Study Area, came from countries where English was not their first language. The main non-English speaking countries of origin include Italy, Malta and India. The migrants have come through both the skilled migration and humanitarian streams.

The Study Area has recently experienced growth in Indian and Chinese settlers through family or skills based migration streams.

Aged Persons

The population in the Study Area is becoming older and this trend will continue in the future. Although older residents in Bacchus Marsh are currently more likely to own their own homes than any other age group, the proportion of older people who are renting or still paying off a mortgage is rising and this trend is likely to continue and be exacerbated in the future. Within the Study Area, it is projected from 2016 to 2041 there will be a 157% increase (an additional 2,633 persons) aged over 70.

Housing is essential to safety and wellbeing. A secure home is a source of personal confidence and financial security. The World Health Organization (WHO) reinforced the impact of appropriate housing



and access to community and social services on people's quality of life and level of independence¹⁴. Older people strongly value housing and support that allows them to age comfortably and safely within a community where they feel a sense of belonging. The demand for seniors housing is expected to increase significantly in line with the ageing of the population over the coming decades. Broad changes to the housing situations of older people and the household structures in which they live have significant implications for successful ageing. To ensure the wellbeing of older Australians, policy and planning for age friendly housing needs to consider the design, demand, affordability, supply and location of housing solutions for this age group.

The demand for new housing specifically targeting older Australians is not only being driven by the ageing of the population, but also by the age/amenity/condition of many of the existing housing options. Old stock is not just problematic because it requires maintenance, but also because it fails to meet the design standards and lifestyle expectations for older Australians today, let alone into the future.

There is a common perception that older Australians remaining in large family homes as 'empty nesters' are distorting the dwelling market. However, research has found that many retired couples make good use of the space in their home for leisure and productive activities.

'Ageing in place' means being able to continue to live independently in the community but not necessarily in the family home. It can also mean in a downsized home, rented home (whether public or privately rented) or in alternative accommodation such as a caravan park or boarding house. The desire to 'stay put' can depend more upon attachment to location rather than emotional attachment to the family home.¹⁵

For ageing in place to be successful, it must build link to relevant community care, specialist equipment, support and health care infrastructure and services.

Future demand for social housing and related services

As part of this project we were asked to address not just housing needs provided through the normal market mechanisms but also the need for social and special needs housing. These paragraphs seek to briefly address the way in which Council might approach addressing such specialised housing needs in its revised housing strategy.

There is little point in seeking to forecast social and specialist housing needs using a demographic/household formation methodology of the type set out in the preceding sections. The provision of and access to social and special needs housing is effectively supply not demand limited – that is the demand for much housing is far in excess of the supply and the key determinant of the quantum of such housing developed is not demand but the level of funding available to providers to construct additional housing.

While this is the case Australia wide it is especially so in Victoria given that (as pointed out earlier in this report) this state has the lowest percentage (3.4%) of social housing of all Australian states and territories.

For example across Victoria DHHS manages a total stock of approximately 65,000 properties. This compares with a public housing waiting list of 35,000 households of whom approximately 10,000 are in the highest priority category. It was identified through peak social housing body providers that, for those who do not meet the eligibility criteria to go on the priority waiting list there is in effect an

¹⁴ WHO Library Cataloguing-in-Publication Data Global age-friendly cities: A guide, 2007.

¹⁵ Associate Professor Diana Olsberg PhD FAICD University of New South Wales



indefinite waiting period. Similarly some community housing associations have experienced demand that is so far in excess of their capacity to provide additional housing that they have closed their waiting lists. It is understood that DHHS public housing waiting list time estimates are not published or publicly available for Bacchus Marsh and or the western region of Melbourne.

A similar situation exists in relationship to services to the most housing disadvantaged group in the community – the homeless. In Bacchus Marsh, Child and Family Services (CAFS) is the key provider of homelessness services. As with the community housing agencies it is experiencing growing financial pressures on its ability to provide services and has been forced to prioritise the groups it can assist in such a way that some categories of homeless persons are not able to be assisted.

In this context producing demand projections based upon forecasts of demographic and socio-economic factors is pointless. Indeed it could be argued that it may even be counterproductive in that it may lead to a conclusion that the gap between demand and supply is so great as to be unbridgeable.

Instead we suggest that for the purposes of its revised housing strategy Council should consider adopting a goal of advocating for and working towards a target of having social housing comprise a designated percentage of the total housing stock within the Study Area. For example to at least reach the national average (approximately 5%) in terms of social housing as a percentage of total housing stock.

Key Issues

The Bacchus Marsh Study Area is now part of the Melbourne metropolitan area and has become closely connected to the western growth areas of Melbourne. Hence Bacchus Marsh can now be considered to be part of the Outer West Region comprising Wyndham, Brimbank, Melton and Moorabool. In particular, Bacchus Marsh is closely connected to Melton and the price movements and land supply that occur in Melton closely affect Bacchus Marsh.

House prices have consistently remained 5-10% less than in the growth areas of Wyndham and Melton. Land prices are essentially the same in Bacchus Marsh as Melton however the median lot size is considerably larger in Bacchus Marsh than Melton. In Bacchus Marsh the recent median lot constructed is 686 sqm compared to 437 sqm in Melton. Per square metre for land, this equates to \$220 per sqm for land in Bacchus Marsh compared to \$340 per sqm in Melton. For the same price in Bacchus Marsh the buyer is purchasing 50% more land. The difference between Melton and Bacchus Marsh is of quality rather than price. Consumers are prepared to pay similar prices for land as in Melton but expect more bang for their buck.

For middle income families (Couples with children) there is a reasonable ability to purchase a home. However for other family types on middle incomes there is less ability to purchase a home. An increase in the availability of units within the established area will help these households purchase a home.

Housing stress in growth areas is relatively high – compared to metropolitan Melbourne – as first home buyers commit heavily to purchasing their first house. The housing stress rate in Bacchus Marsh is less than the growth areas but this may rise due to the compositional change in buyers.

Although there is a relatively high proportion of new leases that are affordable low income earners in the area, this does not mean that demand is being met as illustrated by the high proportion of low-income earners facing rental stress.

Among Australian states and territories Victoria has the lowest percentage of its total housing stock provided as social housing. A 2013 analysis by Terry Burke of Swinburne University showed the percentage of social housing in Victoria at 3.4%. This compared to an Australian average of close to



5%. While the private housing market will account for the vast bulk of future housing provision in Bacchus Marsh there are, and in future will continue to be, some individuals and households who are unable to find housing they can afford in the private market.

In this context the Moorabool Shire will need to actively promote and facilitate local development by the community housing sector if it wishes to see an increase in social housing provision in the local area, as part of its revised Housing Strategy. This could, for instance, involve following the example of a number of inner city Councils in making council land available at a discounted price as sites for community housing projects (in some instances this has involved transferring surplus land holdings or even making available rights for development over council car parks). It could also involve Council committing to an accelerated approval process for community housing projects and lobbying the State Government in relation to the importance of encouraging the continuing growth of the community housing sector.

The provision of and access to social and special needs housing is effectively supply not demand limited. Social housing supply in the Study Area had been somewhat 'opportunistic' rather than as part of a deliberate strategy. This primarily reflects the severe resource constraints faced by the public and community housing sectors.

Spatial Economics suggest that for the purposes of its revised housing strategy Council may wish to consider adopting a goal of advocating for and working towards a target of having social housing comprise a designated percentage of the total housing stock within Bacchus Marsh. For example to at least reach the national average (approximately 5%) in terms of social housing as a percentage of total housing stock.

Council's ability to directly influence achievement of this goal is limited. However there are actions it can undertake to advance achievement of the goal. For example it could:

- explicitly recognise the critical role of the social and special needs housing sectors in its housing strategy;
- advocate to the State and Commonwealth Governments in relation to the importance of social and special needs housing and the need to increase funding to service providers;
- follow the example set by some inner city councils and look at opportunities to use Council land holdings to facilitate the construction of additional social and special needs housing. This might involve the sale of surplus sites to community housing associations or other service providers at less than market prices, or more novel options such as making available 'air rights' above council car parks etc, where this would make it viable for providers to construct additional social or special needs housing;
- commit to facilitating community consultation on and planning approvals for social or special needs housing projects;
- consider the use of techniques such as 'inclusionary zoning' to encourage the inclusion of a component of social or special needs housing when the rezoning of significant sites is expected to result in a substantial uplift in land values; and
- consider options to assist providers of services to the homeless meet escalating costs (such as through considering the provision of Council owned or supported premises to assist the provision of such services) and work with the service providers to facilitate meeting the critical day to day needs of local homeless people.

Finally and very importantly Council could, through its revised housing strategy, seek to reduce the ongoing demand pressures on the social housing sector by ensuring that its planning policies do not



unnecessarily limit the scope for provision of lower cost options (such as studio apartments) through the private housing market.

6.0 URBAN FORM

Key Findings

The urban footprint of the Bacchus Marsh Study Area has greatly expanded over-time. From a small regional town occupying 47 hectares in 1940, it now covers 885 hectares and growing at an increasing rate.

The Bacchus Marsh Study Area is fulfilling two main roles. Its traditional role is the centre of a thriving market garden area and recently as a dormitory suburb servicing metropolitan Melbourne. Bacchus Marsh is now part of metropolitan Melbourne and functions within the Outer West Growth Region comprising Moorabool, Melton, Wyndham and Brimbank.

There are approximately 6,840 dwellings within the Bacchus Marsh Study Area as at September 2015. Median dwelling density is 763 sqm compared to 568 sqm in Melton and 546 sqm in Wyndham. Most dwellings (77%) are situated on lots sized over 600 sqm.

Separate houses dominate Bacchus Marsh with 92% of the growth in dwellings in recent years being separate house.

Of the 6,840 residential dwellings within the Study Area, the majority (58%) are suburban density dwellings i.e. a separate house with a density ranging from 500 to 1,000 sqm. Low density suburban represents 22% of the dwelling stock i.e. separate houses on land zoned GRZ, RGZ, NRZ with densities of greater than 1,000sqm. Of the higher density dwelling stock i.e. flats, units, apartments and separate houses on lots sized less than 500 sqm – represents 18% of all dwellings.

This section discusses the urban form of the Bacchus Marsh Study Area. This includes an analysis of the urban footprint which follows the growth and development of Bacchus Marsh over time. A detailed assessment of each lot was undertaken to determine dwelling densities. Housing typologies were broken into 6 categories across the Study Area and mapped and analysed.

6.1 Urban Footprint

Detailed analysis of all existing urban uses on a lot by lot basis has been undertaken to establish the urban footprint overtime within the Bacchus Marsh Study Area, dating pre 1940 to September 2015. All urban uses have been identified, ranging from schools, parks, industrial, commercial, residential and public uses that have a significant element of built form. The analysis measures only the allotments and therefore excludes any roads, footpaths and easements. It is also highlighted and acknowledged that previous uses replaced with a more recent use, the most recent development date is recorded. The analysis excludes farms, golf courses, quarries, roads, caravan parks, easements and uses that are predominantly land based as opposed to capital.

Results from the analysis allow the visualisation of the urban footprint over time, associated land consumption, development patterns and physical urban structure of Bacchus Marsh (Study Area).

Map 6.1 below illustrates the urban footprint for the Bacchus Marsh Study Area over time.

The Bacchus Marsh Study Area covers the urban centre of Bacchus Marsh, which is comprised of three major localities and distinct urban areas. Namely, Bacchus Marsh (suburb) where its core commercial area is centred along Main Street between Bennett Street to the north, Grant Street/Gisborne Road to the west, Young/Lord Streets to the east and Waddell/Simpson Streets to the south. Darley, north of



the suburb of Bacchus Marsh which is separated by the Western Freeway and Maddingley which is south of the Bacchus Marsh suburb and south of the Werribee River – it is also the location of the Bacchus Marsh railway station.

Bacchus Marsh, was and still is a market garden area, producing a large amount of the region's fruit and vegetables. An irrigation scheme laid the basis for dairying, market gardening and orchards. In recent decades it has transformed into the main commuter town on the Melbourne-Ballarat corridor due to its relative level of affordable housing. The Bacchus Marsh township was bypassed in 1972, and effectively splits the urban form of the Study Area, separating Darley to the north of the original township. The Maddingley brown coal open-cut mine (1932) is two kilometres south of the railway station and the sand quarry mines is located six kilometres north of the township.

Economic functions such as the coal and sand quarries, the irrigation district – environmental conservation areas such as the Werribee Gorge State Park, Lerderderg State Park, Long Forest Conservation Reserve – transport infrastructure such as rail, Western Freeway and geographical features such as the Pentland Hills, all have a major influence on the geographic spread of the historic, existing and future urban form.

Pre 1940, Bacchus Marsh (Study Area) was largely focussed in and around the existing commercial district of the Bacchus Marsh suburb i.e. south of the existing Western Freeway and north of the Werribee River. Bacchus Marsh and the surrounding suburbs currently occupy 885 hectares. In contrast the original town prior to 1940 only occupied 47 hectares or 5% of the current urban footprint.

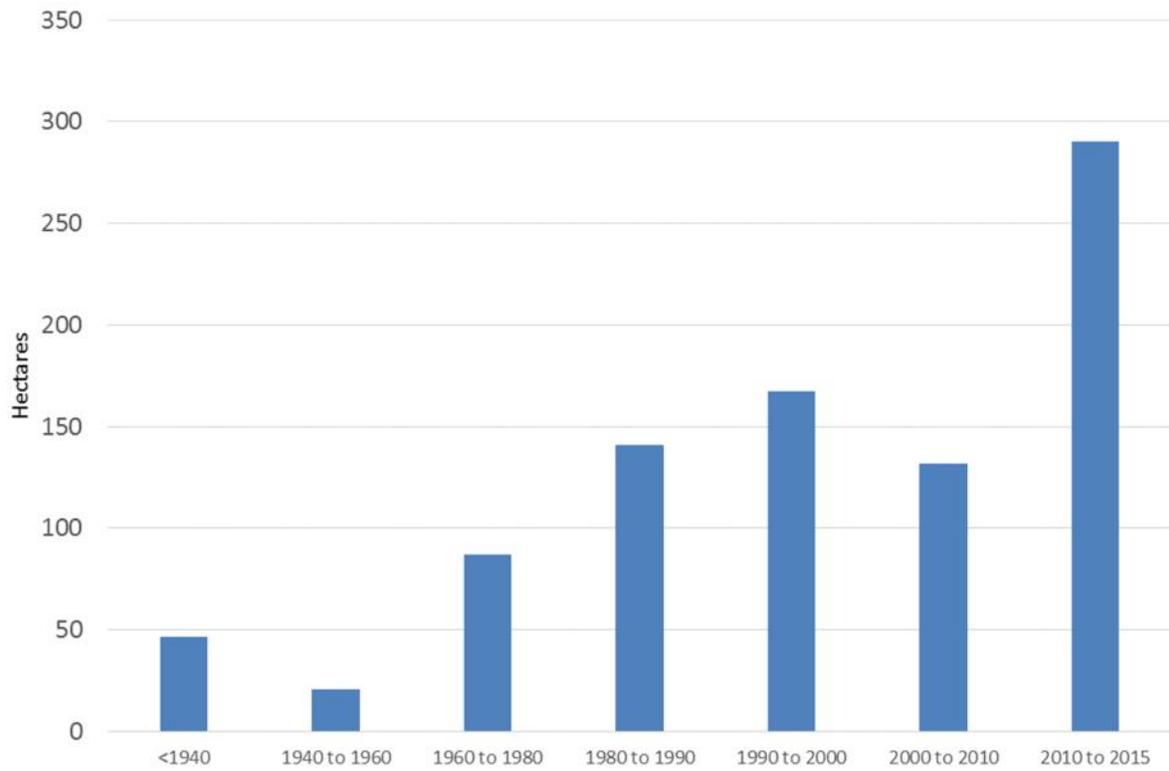
The map and graph below illustrates the urban footprint over time for the Study Area. By 1960 the urban footprint had increased to 68 hectares (or 7% of the current urban footprint). From 1960, the Bacchus Marsh Study Area started to expand at a greater rate. In the period 1960 to 1980 the urban footprint of the Study Area increased by 87 hectares more than doubling the size of the town. By this stage the town covered 155 hectares and by 1990 the urban footprint had nearly doubled again to 296 hectares. This trend has continued to recent times with the last five years resulting in the addition of 290 hectares meaning that the urban area of the Bacchus Marsh Study Area has increased by over 40% in the last five years.

This is a dramatic change for once what was a small regional town. Bacchus Marsh is now officially part of the Melbourne metropolitan area and is now functioning both as a regional centre and a residential growth area (in terms of broadhectare land supply). The Bacchus Marsh Study Area can now be considered as part of the Outer West Regional Area which consists of the municipalities of Moorabool, Brimbank, Wyndham and Melton.

This rapid expansion has had the effect of creating a trichotomy within the Study Area. It is still an important agricultural centre and services the surrounding farmland/orchards/market gardens, a regional centre within the Central Highlands providing regional retail, commercial, health and education services, but is now also an important source of broadhectare residential land supply and is increasingly functioning as a dormitory suburb for metropolitan Melbourne. This leads to the multiple roles that the Study Area is fulfilling.



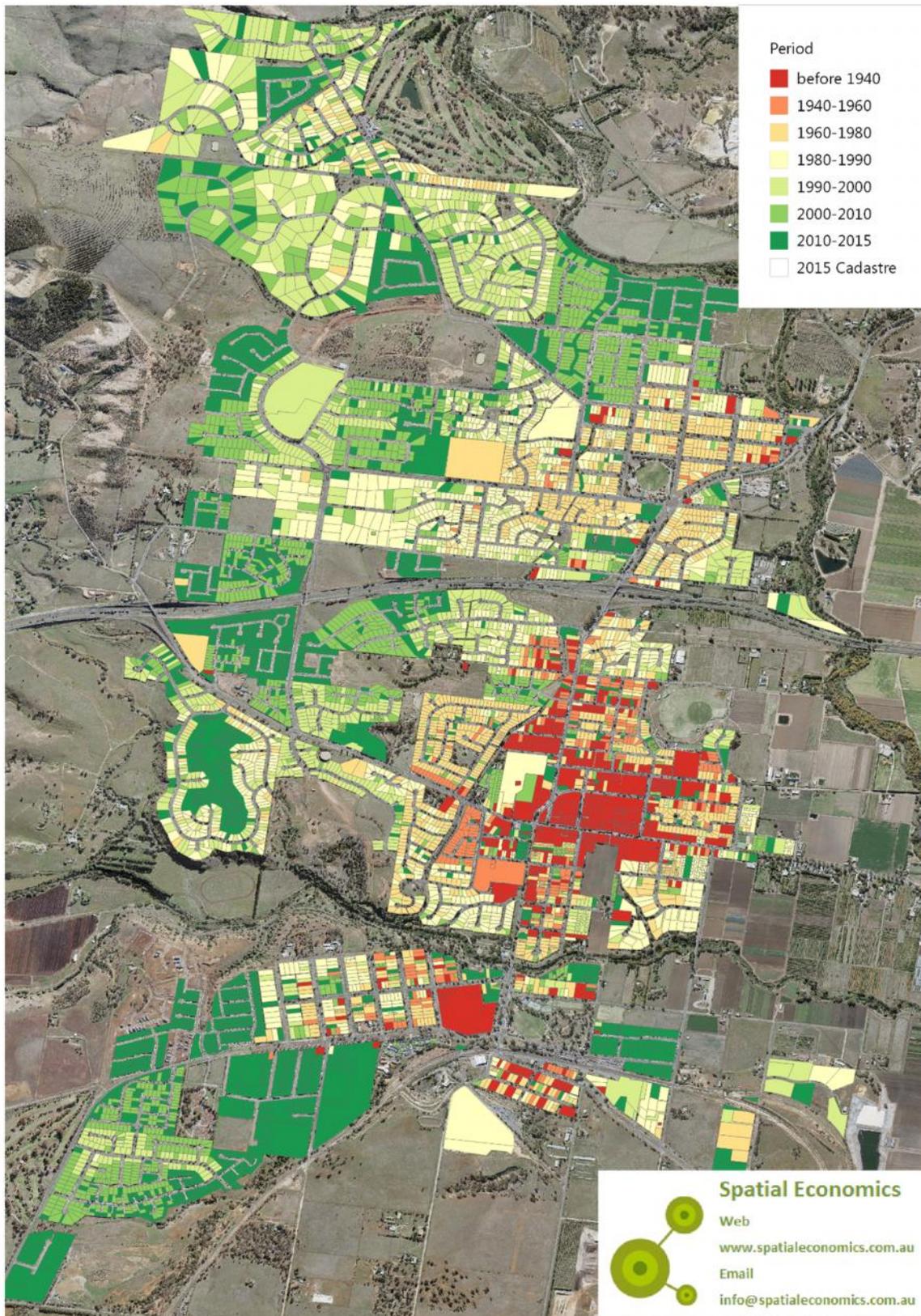
Graph 6.1: Net Change in Area (hectares) of the Urban Footprint Over-Time, Bacchus Marsh Study Area



Source: Spatial Economics Pty Ltd



Map 6.1: Urban Footprint – Bacchus Marsh Study Area



In particular, given the small size of the older/established area of the Study Area, there are competing uses for this limited area, this completion will be exacerbated with projected future population growth. There will be an overarching need for jobs, in particular higher order white collar jobs within the old commercial area as well as increased demand for retail and local service requirements as Bacchus Marsh continues to grow strongly as well as a higher demand for medium/high density housing. As well as these roles, the older/established centre will be expected to continue to fulfil its community based role and also to service the surrounding market gardens and farm districts.

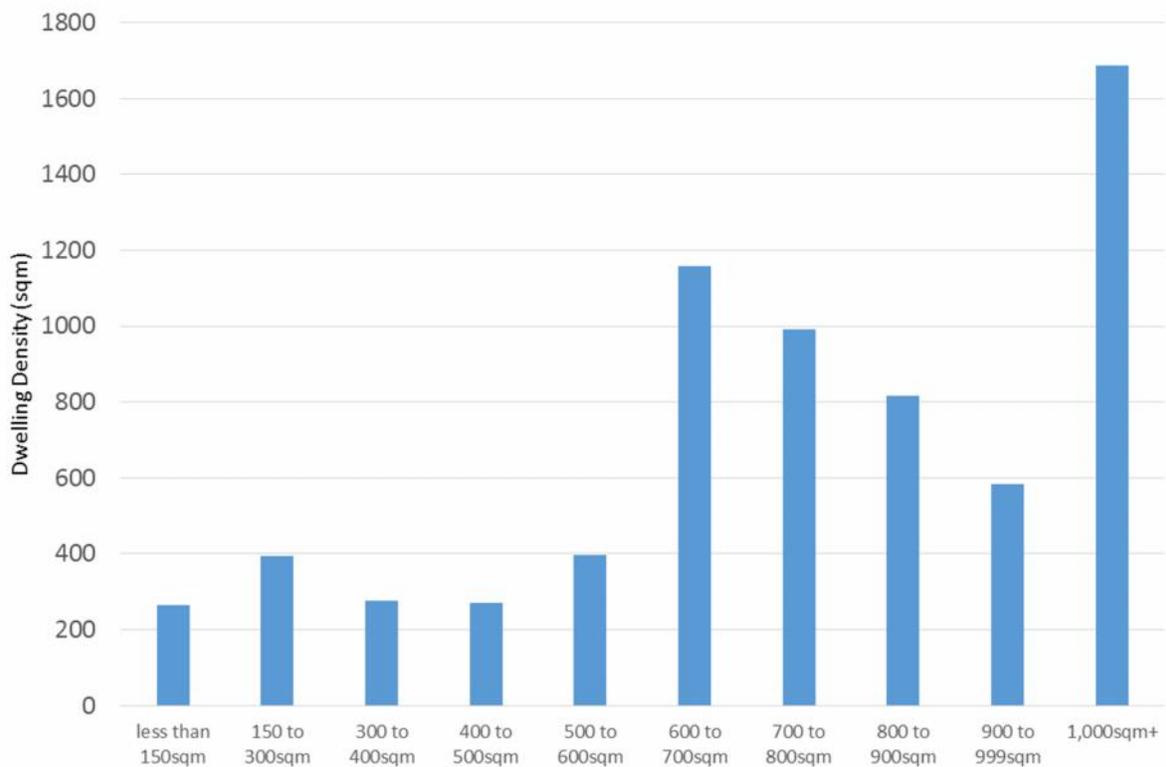
With only a relatively small older established urban area, the 'competition' for this space will require careful and detailed land use planning solutions to accommodate the differing roles and functions within the existing urban area and future planned undeveloped urban areas.

6.2 Housing Density

A detailed assessment has been undertaken to determine the existing residential dwelling densities of all dwelling stock within the Study Area as at September 2015. The measurement is actual density, not a measure of lot size. For example, three dwellings located on one lot is measured by allocating the specific lot size for that dwelling and an equal share of the driveways or shared space is allocated to each dwelling – therefore proving an accurate measure of residential dwelling densities.

The graph and map below illustrate the current residential dwelling densities as at September 2015 across the Study Area

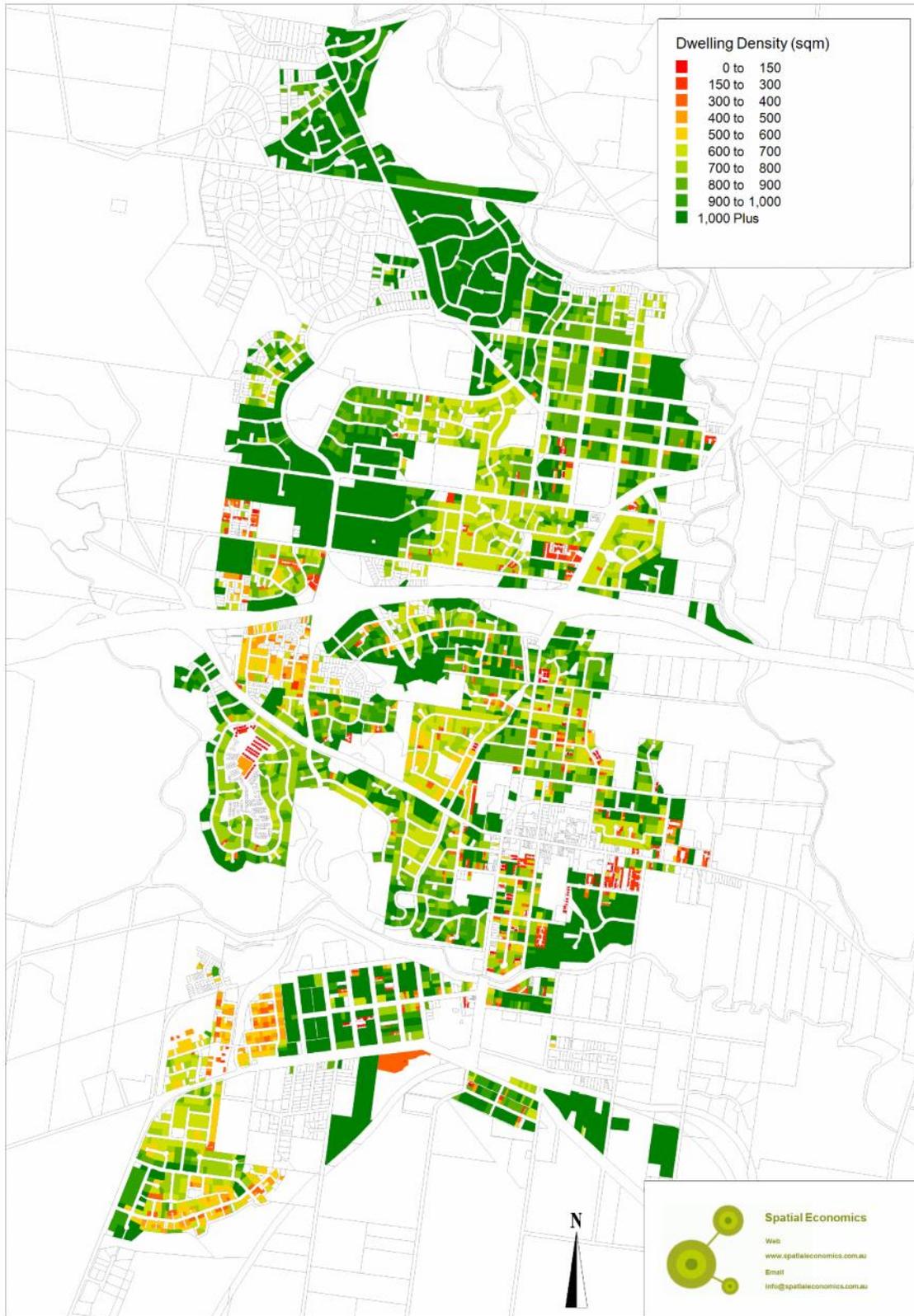
Graph 6.2: Dwelling Density Size Distribution – Bacchus Marsh Study Area, September 2015



Source: Spatial Economics Pty Ltd



Map 6.2: Existing Residential Dwelling Density, September 2015



As at September 2015, it is estimated that there were approximately 6,840 residential dwellings within the Bacchus Marsh Study Area. The median residential dwelling density was 763 sqm, this compares to Melton at 588 sqm, Wyndham at 546 sqm and Brimbank at 571 sqm.

Across the Bacchus Marsh Study Area there is a wide range of residential dwelling densities, however, there is a concentration of lower density dwellings, 77% of the existing dwelling stock is sized over 600 sqm. Whereas, 10% or 660 dwellings have densities of 300 sqm or less. The relatively low density of the existing dwelling stock does represent current and future opportunities for infill housing redevelopment. However, it is recognised that the value of existing dwellings and the development feasibility relative to the cost/value of broadhectare lot supply will influence the timing and yield of such opportunities.

6.3 Housing Typologies

Further analysis was undertaken to determine the existing housing types across the Bacchus Marsh Study Area as at September 2015. The dwelling typologies are defined as:

- Medium density dwellings (including flats, villas, apartments and separate houses) where the individual dwelling density is less than 300 sqm;
- Compact suburban dwellings includes separate houses where the individual dwelling density is between 300 sqm to 500 sqm;
- Suburban dwellings includes separate houses where the individual dwelling density is between 500 sqm to 1,000 sqm;
- Low density (suburban) includes separate houses on normal residential zoning where the individual dwelling density is greater than 1,000sqm
- Rural residential, includes all dwellings located on land that is zoned Low Density Residential (LDRZ) or Rural Living (RLZ); and
- Farm – dwellings located on land zoned farm (FZ).

Between 2001 and 2011, separate houses increased by 1,350 at an average annual rate of 2.7% per annum. Separate houses dominate Bacchus Marsh, accounting for 92% of the growth in dwellings between 2001 and 2011 and this type of dwellings represent 92% of the housing stock in the Bacchus Marsh Study Area, steady since 2001.

Townhouses and apartment type dwellings make up only a small proportion of housing in Bacchus Marsh and grew by just 110 dwellings over the 10 years from 2001 to 2011, but at about the same rate as separate houses (2.6% per annum).

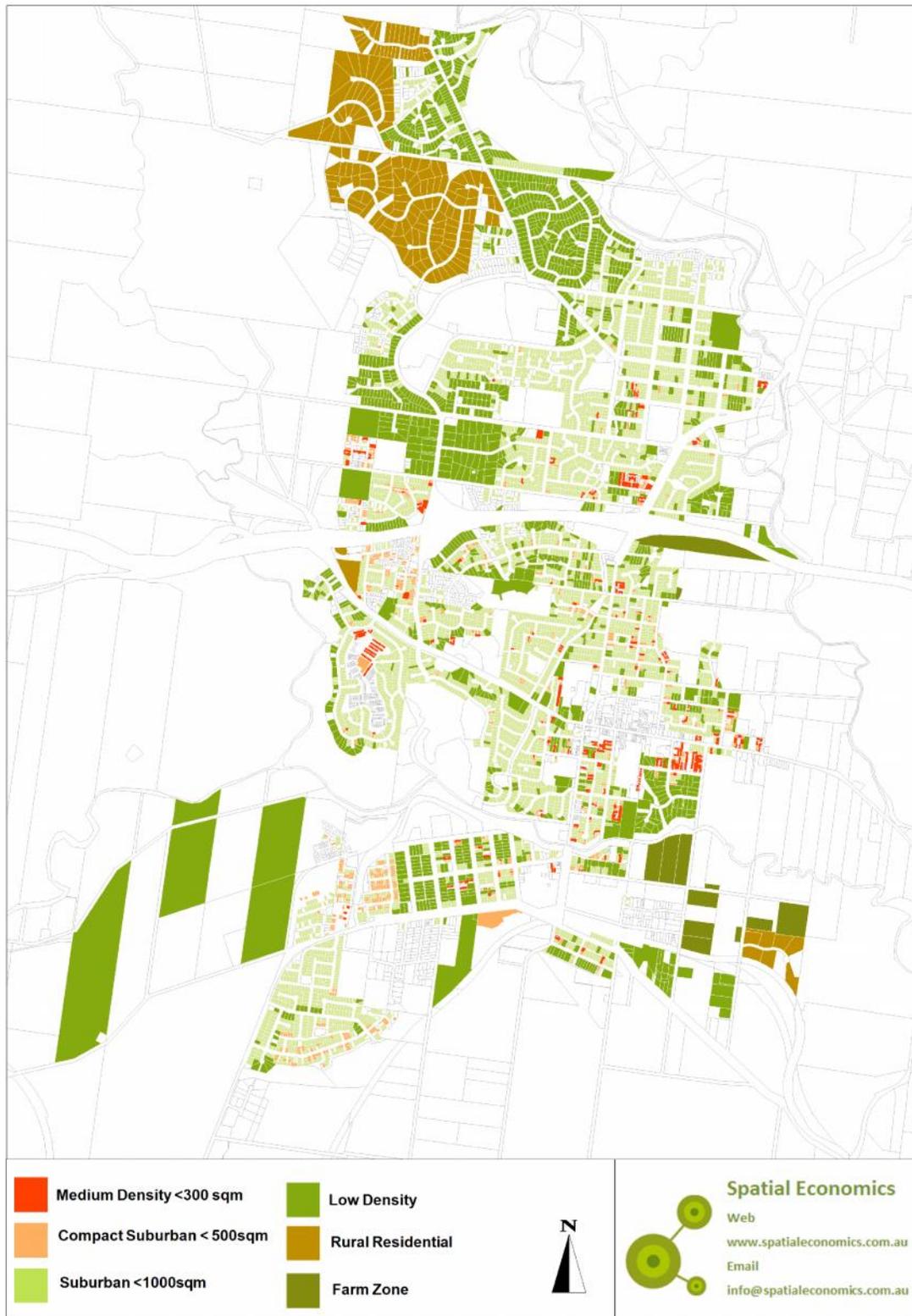
Combined with the large numbers of family households (existing and projected) and the relatively affordable land, separate houses are likely to remain the dominant dwelling type for some time to come. The graph and map below illustrate the distribution of dwelling typologies as at September 2015 across the Bacchus Marsh Study Area.

Of the 6,840 residential dwellings within the Study Area, the majority (58%) are suburban density dwellings i.e. a separate house with a density ranging from 500 to 1,000 sqm. Low density suburban represents 22% of the dwelling stock i.e. separate houses on land zoned GRZ, RGZ, NRZ with densities of greater than 1,000sqm. Of the higher density dwelling stock i.e. flats, units, apartments and separate houses on lots sized less than 500 sqm – represents 18% of all dwellings.

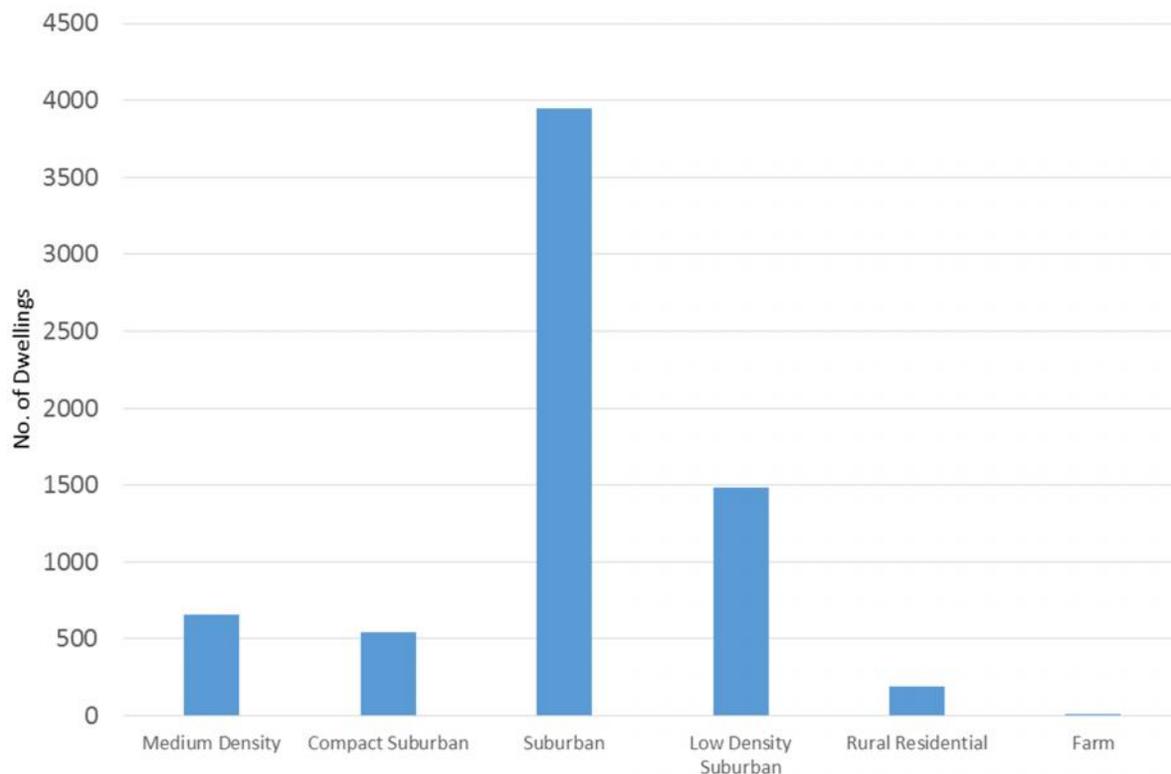
There are 204 dwellings located on land zoned Low Density Residential (LDRZ) and Farm (FZ) within the Study Area.



Map 6.3: Existing Residential Dwelling Typologies, September 2015



Graph 6.3: Residential Dwelling Typologies, Bacchus Marsh Study Area, September 2015



Source: Spatial Economics Pty Ltd

Key Issues

The Bacchus Marsh Study Area has competing roles to fulfil as regional centre within the Central Highlands; servicing its' district (agriculture industry and local communities/settlements) and as a dormitory suburb for Melbourne. The Bacchus Marsh Study Area is emerging as a key regional service hub, particularly in terms of retail, education, health and services). This means that there are many competing land use requirements for the existing established urban area – medium/higher density housing, jobs, community facilities and commercial - for a relatively small established core commercial area and surrounding catchment.

The dual role of the Bacchus Marsh Study Area Age is reflected (outlined previously) by two key demographic trends 1) ageing population; and 2) growing number of families with children. This presents two differing demands for specific housing policy responses.

The majority of the existing lot stock in the Bacchus Marsh Study Area are greater than 600 sqm in size. This relatively low density of existing stock provides current and future opportunities for infill re-development.

The continued production of 'low density' separate houses means that there is limited diversity of housing types available and the continued rapid expansion of the urban footprint. This is potentially a problem for residents ageing in place and people looking for smaller (land component) and affordable housing product.

Similarly, the continued production of 'low density' separate houses will be the key driver of a rapidly increasing urban footprint. There are physical limits to the Bacchus Marsh Study Area in terms of the reliance on 'low density residential broadhectare development.



The outcome of larger newly created residential lots (compared competing growth area municipalities in the Outer West Region) at similar land prices is a major factor that is contributing to existing and projected demand levels. Potentially, significant changes to the existing residential land product relative to the competing growth areas, will likely impact on future expressed demand levels.



7.0 RESIDENTIAL LAND & HOUSING CONSTRUCTION

Key Findings

From July 2008 to July 2015 residential building approvals averaged 291 per annum. This compares to 275 lots per annum that were constructed (the difference is that not all building approvals are constructed). Of the lots constructed in the period, 86% were broadhectare, 11% dispersed with remainder aged care and rural residential.

Residential lot activity was divided between Darley (117 lots per annum – 45%), Bacchus Marsh (33% or 91 lots pa) and Maddingley (24% - 67 lots pa). Dispersed infill lot construction averaged 30 per annum.

The majority of dispersed infill projects resulted in 1 or 2 net additional dwellings. Since July 2008, 67% of dispersed infill were constructed on parent lot sizes less than 1200 sqm. Across the Study Area typical density pre-development was 933 sqm and post- development 368 sqm.

Broadhectare lot construction for the same period average 236 lots per annum. This represents 86% of all lot construction. The lots were located in Darley (100 lots pa), Bacchus Marsh (74), and Maddingley (61).

Median lot sizes of the respective years have varied from 509 sqm to 784 sqm with lot sizes typically 37% larger than broadhectare lots constructed in Melton. However there is a diverse range of sizes being produced. In terms of broadhectare lot construction, there is significant variance in terms of the typical lot size achieved as measured across the three localities of the Study Area.

From July 2008 to September 2015 the typical broadhectare lot was sized around 590 sqm, by locality, typical broadhectare lot sizes range from:

- 384 sqm in Bacchus Marsh;
- 538 sqm in Maddingley; and
- 783 sqm in Darley.

Rural residential lot construction is limited within the Study Area.

This section of the report covers the trends and shifts in building activity across the Bacchus Marsh Study Area and provides an insight into proposed future residential development activity.

The information in this section has been compiled resulting from a number of comprehensive consultations with key representatives from the Shire of Moorabool. It is supported by datasets from the Australian Bureau of Statistics and primary data collection undertaken by Spatial Economics.

This section of the report details the recent activity of residential lot construction and dwelling approvals achieved across the Bacchus Marsh Study Area. Residential lot construction activity is detailed from July 2008 to September 2015 and is presented at an urban locality and Study Area level. Residential lot construction is further analysed by supply type/location, namely:

- Dispersed Infill;
- Retirement Village;
- Broadhectare; and
- Rural Residential.

7.1 Residential Building Approvals

As measured from July 2008 to July 2015 residential building approval activity within the Bacchus Marsh Study Area has averaged 299 per annum, the amount of building approval activity as measured on an

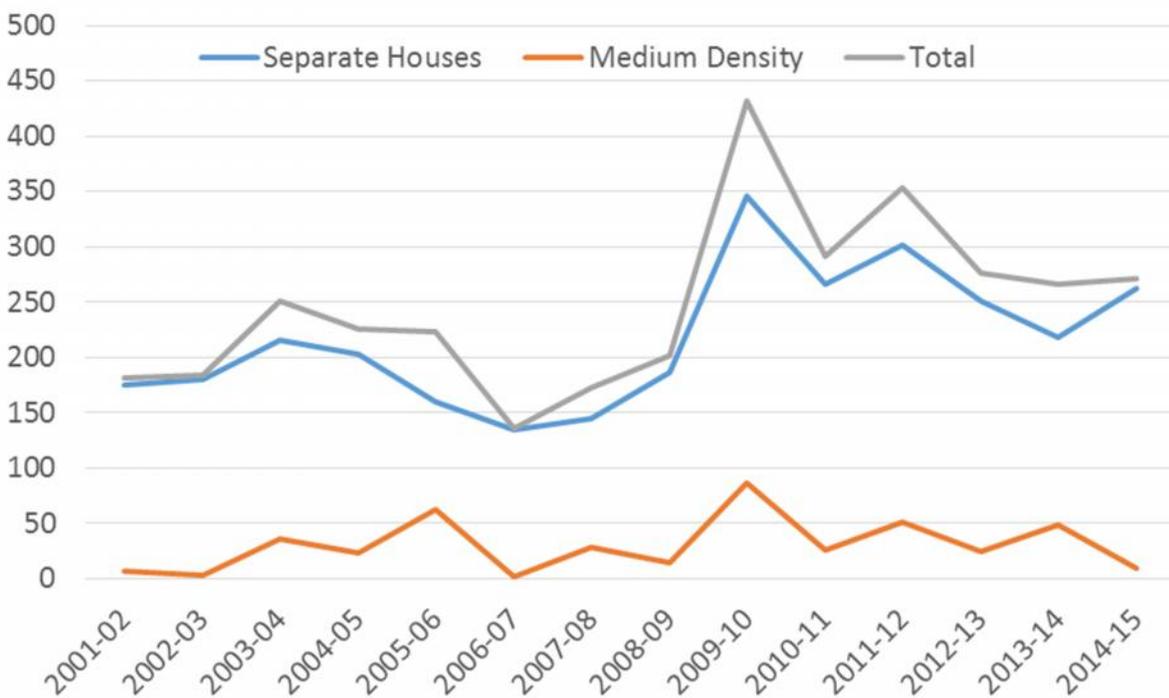


annual basis has illustrated a degree of variability. In 2008/09 there was a low of 202 residential building approvals, increasing substantially the following year with 432 approvals. From 2012/13 to 2014/15 residential building approval activity has been relatively constant at around 270 per annum.

Graph 7.1 illustrates the amount of building approval activity by dwelling type on an annual basis for Bacchus Marsh.

The vast majority of building approvals (88%) since July 2008 have been separate houses.

Graph 7.1: Number of Residential Building Approvals



Source: Australian Bureau of Statistics, Catalogue No.8731.0

7.2 Residential Lot Construction

Analysis has been undertaken to determine on a lot by lot basis the location and amount of residential lot construction activity from July 2008 to September 2015. Lot construction activity has been classified into distinct supply types and or supply locations as defined above.

Graph 7.2 summarises the amount of residential lot construction by supply type for the Bacchus Marsh Study Area. From July 2008 to September 2015 there was an average annual residential lot construction of 275. Of this lot construction (86%) was broadectare, followed by dispersed infill lot construction at 11%, 3% aged care/retirement village and rural residential at 1%.

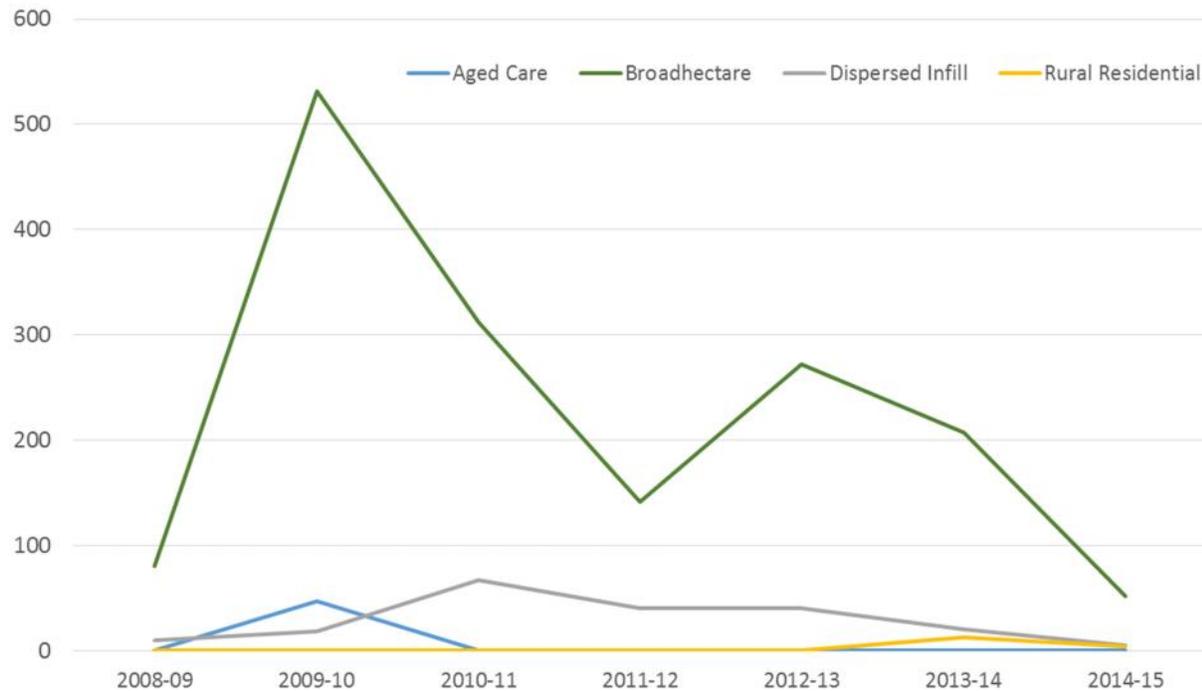
In comparison to the annual volume of residential building approvals, residential lot construction varies considerably. Residential lot construction was the lowest in 2008/09 at 90 lots and 'peaked' in 2009/10 at 596 lots. In 2009/10 there was 206 lots constructed within the Underbank Lifestyle Village, as at September 2015 143 of these lots are still vacant. In recent years, lot construction activity has averaged around the 240 mark.

The lot construction variance over-time is a typical trend illustrated from the land development industry and indicates no significant supply or policy issues.



Residential lot construction activity was relatively evenly spread across the localities within the Study Area. The majority (45% - 117 lots pa) of residential lot construction activity was located in Darley, followed by Bacchus Marsh (33% - 91 lots pa) and Maddingley (24% - 67 lots pa).

Graph 7.2: Number of Residential Lots Constructed by Supply Type, July 2006 to March 2013



Source: Spatial Economics Pty Ltd

7. 2.1 Dispersed Infill Lot Construction

Dispersed infill lot construction activity as measured from July 2008 to September 2015 across the Study Area averaged 30 lots per annum. This represents 11% of all residential lot construction activity.

Dispersed infill lot construction activity was primarily located in the locality of Darley (48% of activity or 14 lots per annum) and to a lesser degree in Bacchus Marsh (32% of activity or 9 lots per annum) and Maddingley (6 lots per annum).

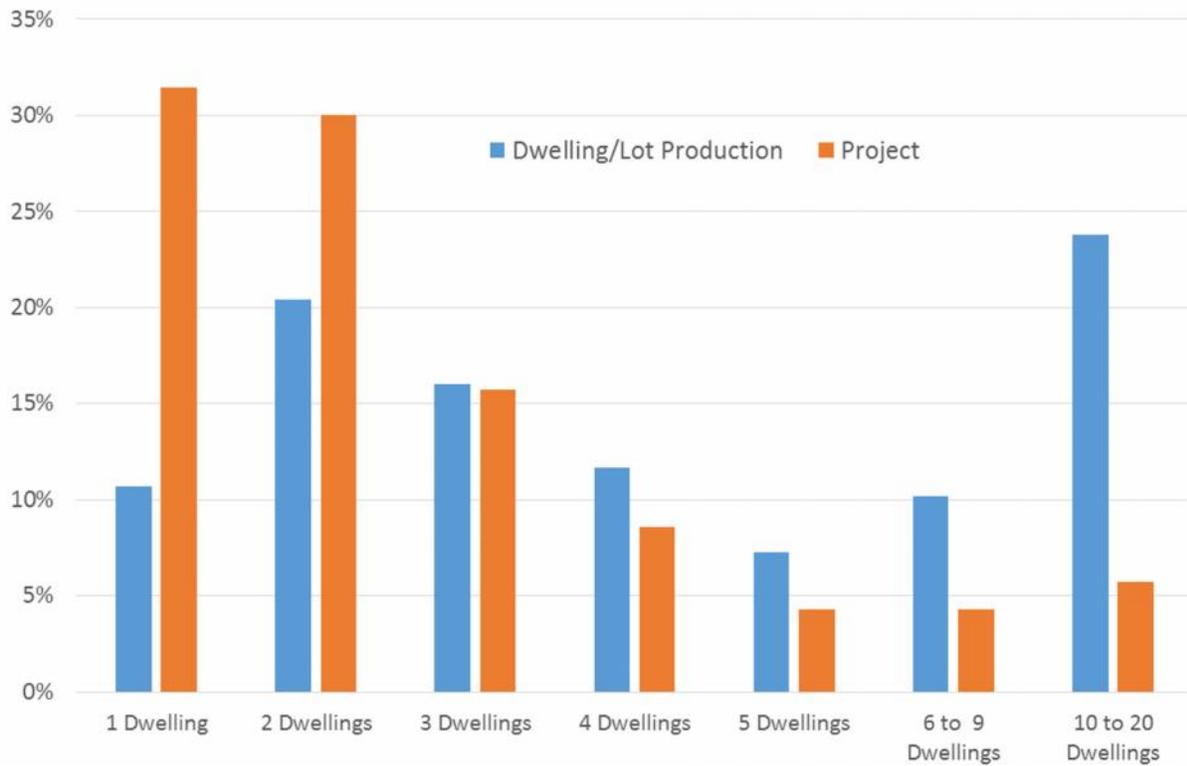
As measured annually from July 2008 to September 2015, the amount of dispersed infill lot construction activity has varied significantly. In 2008/09 there was approximately 10 dispersed infill lots constructed, peaking at 67 lots in 2010/11, steadily declining since, to 20 in 2013/14.

Project Size

Analysis has been undertaken to establish the dwelling/lot (net) yield or project size of dispersed infill residential development projects. The net measure in this instance refers to the statistical removal of lots/dwellings remaining from the original/parent lot, specifically if an allotment is subdivided and the original dwelling remains, this is statistically ignored in terms of the analysis. The measures specifically identifies new lot and new dwelling construction from July 2008 to September 2015.

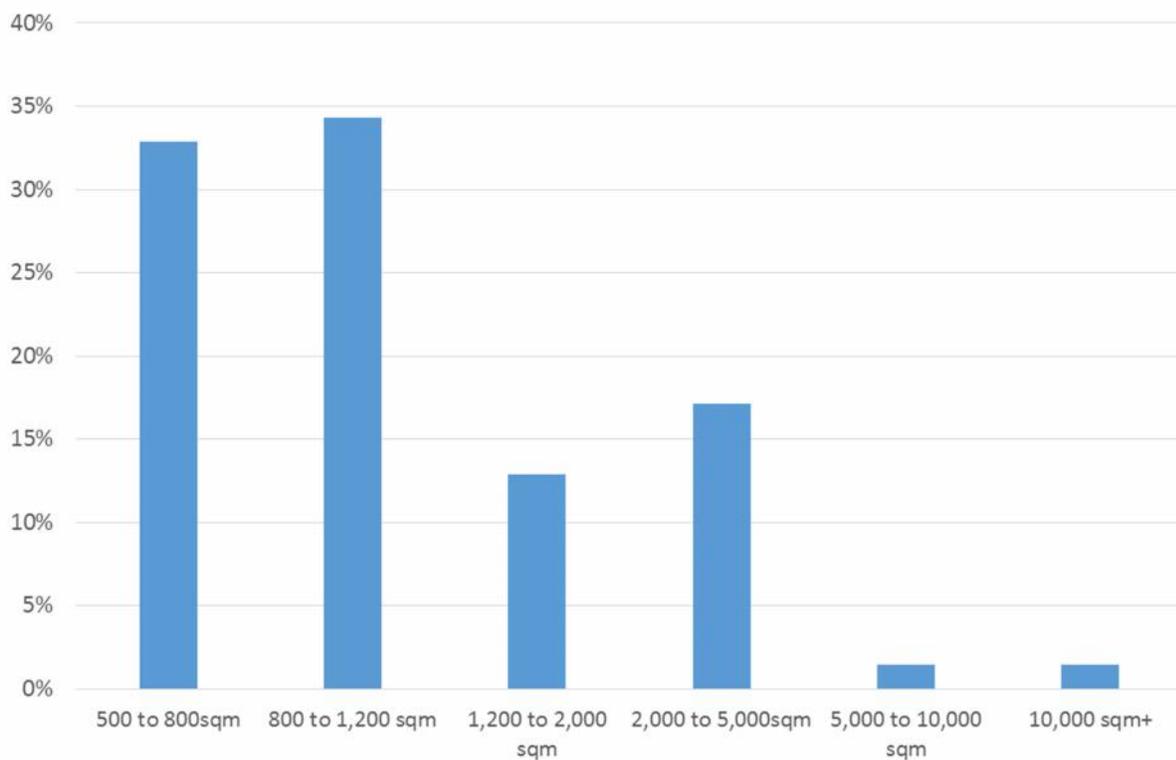


Graph 7.3: Dwelling/Lot Yield (net) by Project Size for Dispersed Infill Projects, 2008 to 2015



Source: Spatial Economics Pty Ltd

Graph 7.4: Parent Lot Size of Dispersed Infill Lot Subdivision, July 2008 to September 2015



Source: Spatial Economics Pty Ltd



The vast majority of dispersed infill **projects** (61%) resulted in 1 or 2 net additional dwellings/lots, in terms of **dwelling/ lot** contribution this accounted for 31% of net additional dispersed infill lots/dwellings. Whereas, dispersed infill projects that yield 10 to 20 lots/dwellings represented only 6% of projects but 24% of the net dwellings/lots.

Parent Lot Size

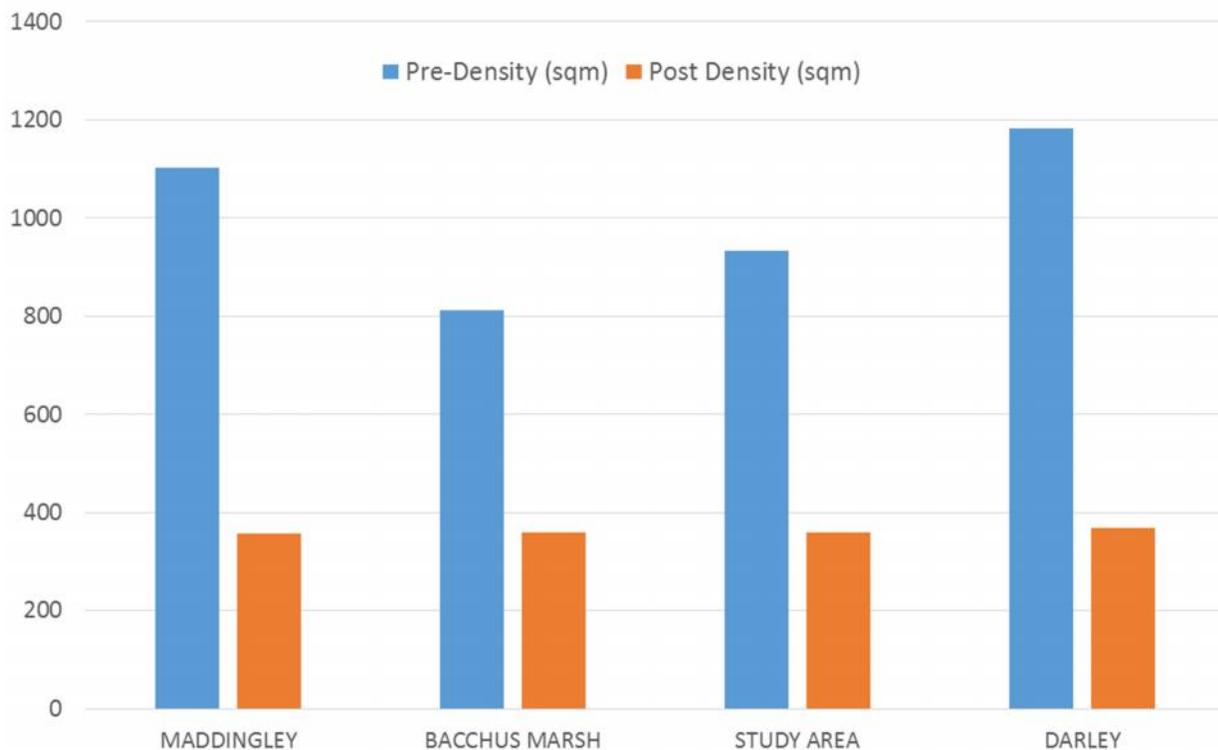
Of all of the dispersed infill lots/dwellings constructed since July 2007, 67% were constructed on 'parent' lots sized less than 1,200 sqm. There were 12 projects (17%) on parent lots sized from 2,000 to 5,000sqm. Only 25 of dispersed infill projects were on 'parent' lots sized greater than 5,000 sqm. This illustrates that the vast majority of dispersed infill activity is on typical existing lots within the Study Area. Graph 7.4 summarises the volume of dispersed infill projects by 'parent' lot size cohorts. Note: - parent lot size refers to the size of the allotment prior to subdivision.

Pre and Post Development Density

Analysis of dispersed infill projects from July 2008 to September 2015 illustrates the typical pre and post density (median) i.e. what the lot/dwelling size was before development and what the resultant density achieved.

Cross the Study Area the typical density pre development was 933 sqm, post development – 368 sqm. This equates to a net addition of 2.6 lots/dwellings post redevelopment. This varies slightly across the Study Area, specifically: 3.2 dwellings post development in Darley, 3.1 in Maddingley and 2.3 in Bacchus Marsh.

Graph 7.5: Pre and Post Density Development (sqm) - Dispersed Infill, July 2008 to September 2015



Source: Spatial Economics Pty Ltd



7.2.2 Broadhectare Lot Construction

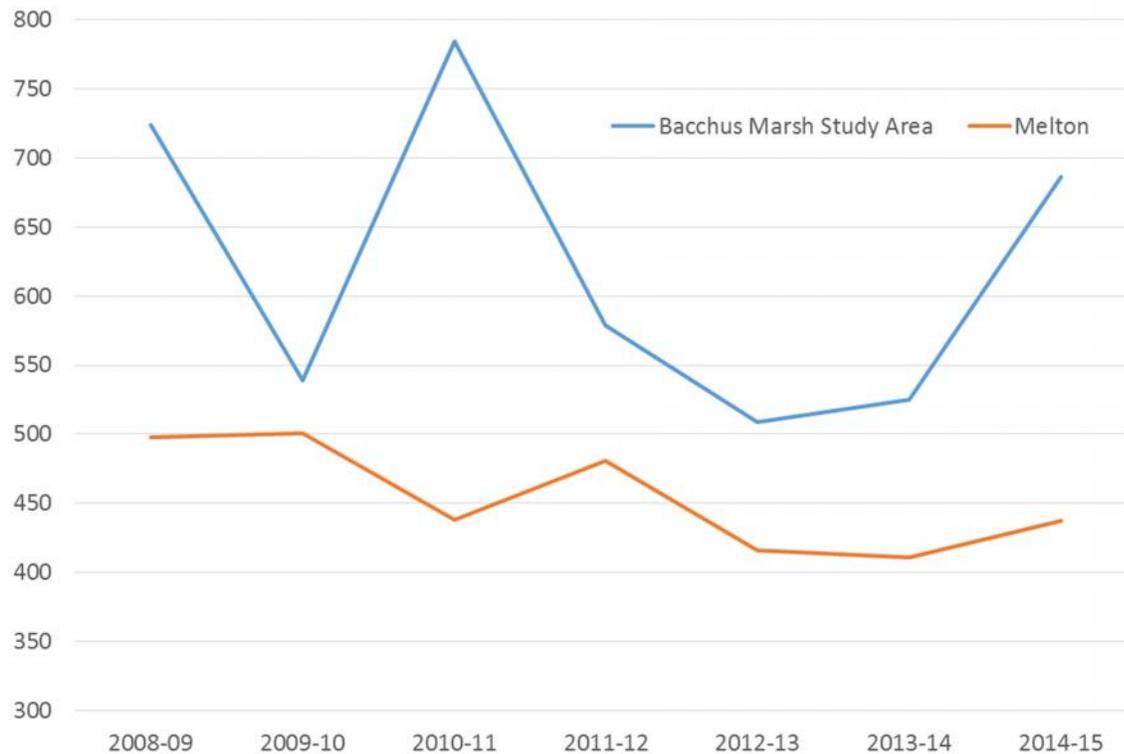
Broadhectare lot construction activity as measured from July 2008 to September 2015 across the Study Area averaged 236 per annum. This represents 86% of all residential lot construction activity. Of this lot construction activity, 100 lots per annum were located within Darley, 74 lots per annum within Bacchus Marsh and 61 lots within Maddingley.

As measured annually from July 2008 to September 2015, the amount of broadhectare lot construction activity has varied significantly. In 2008/09 there was approximately 80 broadhectare lots constructed, increasing to a 'peak' production of 531 in 2009/10. In 2010/11 lot production decreased to 312 and in recent years has averaged around 200 per annum.

The size of broadhectare lot construction varies significantly across the differing active and completed broadhectare housing estates. However, there is an underlying downward trend in terms of lot size. From July 2008 to September 2015 broadhectare lots construction achieved median lot sizes from 509 sqm to 784 sqm. The graph below illustrates the median lot size of broadhectare lot construction activity for the Study Area and in comparison to Melton.

Typically, broadhectare lot sizes are 37% larger in the Bacchus Marsh Study Area compared to Melton as measured from 2008 to 2015. However, it is observed that broadhectare lot production activity within the Study Area has produced a diverse range of lot sizes from relatively high density, to lots sized typically achieved within the Growth Areas of metropolitan Melbourne to relatively larger allotments.

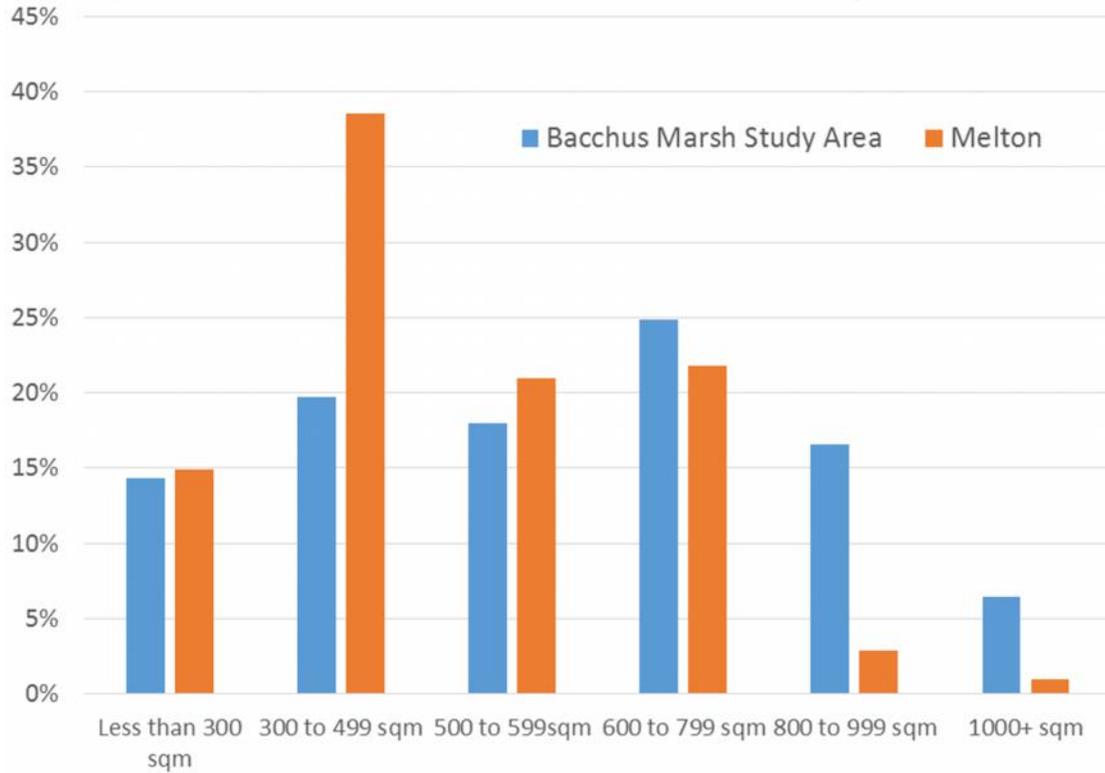
Graph 7.6: Median Lot Size of Broadhectare Lot Construction (sqm)



Source: Spatial Economics Pty Ltd

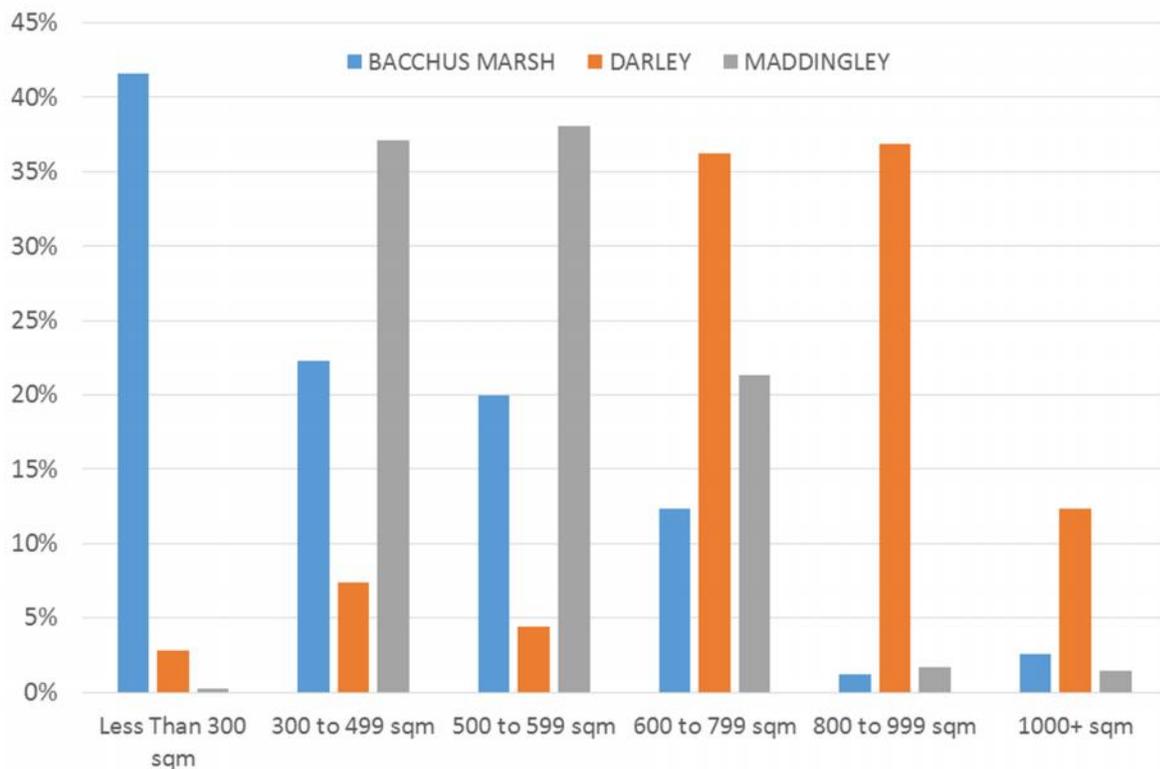


Graph 7.7: Broadhectare lots constructed – lot size profile, 2008 to 2015



Source: Spatial Economics Pty Ltd

Graph 7.8: Broadhectare lots constructed – lot size profile distribution, by Locality 2008 to 2015



Source: Spatial Economics Pty Ltd



In terms of broadhectare lot construction, there is significant variance in terms of the typical lot size achieved as measured across the three localities of the Study Area. From July 2008 to September 2015 the typical broadhectare lot was sized around 590 sqm, by locality, typical broadhectare lot sizes range from:

- 384 sqm in Bacchus Marsh;
- 538 sqm in Maddingley; and
- 783 sqm in Darley.

Graph 7.8 illustrate the lot size distribution of recently constructed broadhectare lots by locality. It clearly illustrates that higher density broadhectare lot construction is concentrated in Bacchus Marsh. Whereas, mid-range size densities are located in Maddingley (300 to 599 sqm) and lower density lot product (greater than 600 sqm) are concentrated in Darley.

7. 2.3 Rural Residential Lot Construction

Rural residential lot construction is limited, primarily due to the Study Area boundary. As measured from July 2008 to September 2015 there was a total of 17 rural residential lots constructed, 13 in Darley and 4 in Bacchus Marsh.

Of this lot construction activity – all was zoned Low Density Residential (LDRZ). Typically, rural residential lot construction was 4,400 sqm in size.

7. 2.4 Aged Care Construction Activity

From July 2008 to September 2015, there were 47 lots/dwellings constructed for the purpose of aged care housing, all of which occurred in 2009/10.



Key Issues

Median lot sizes within new broadhectare estates for the respective years have varied from 509 sqm to 784 sqm with lot sizes typically 37% larger in the broadhectare estates of Melton. Recently rather than a price differential between Melton and Bacchus Marsh, the trade-off has been for larger blocks of land. The likely implication is that if newly constructed lots are of similar size configuration to competing municipal areas within the Outer West Region (particularly without a proportion price decline differential), projected demand levels will likely be impacted.

Recent lot construction reveals the dominance of broadhectare lot construction compared to dispersed infill. As illustrated through the analysis of existing residential densities, there is ample latent supply that would support that would readily support an increased share of dispersed infill development activity.

Demographic projections support the potential for an increase in dwelling products with a smaller land component than is currently produced. However, it is important to fully understand the development feasibility of higher density housing products within the Study Area (beyond scope of this study).

Dispersed infill development, although limited in terms of total lot/dwelling contribution, illustrates similar trends to that across metropolitan Melbourne. The vast majority of dispersed infill **projects** (61%) resulted in 1 or 2 net additional dwellings/lots, in terms of **dwelling/ lot** contribution this accounted for 31% of net additional dispersed infill lots/dwellings. Whereas, dispersed infill projects that yield 10 to 20 lots/dwellings represented only 6% of projects but 24% of the net dwellings/lots.

Specifically, larger infill projects will account for the bulk of the dwelling contribution, whilst smaller dispersed infill projects are numerous, they do not represent the bulk of net dwelling contribution.

The typical pre-development density for infill development was 933 sqm, post development 368 sqm. On average this results on 2.6 lots per development. This again reinforces that this type of infill development is likely to continue to occur in Bacchus Marsh due to the configuration of the existing lot stock. However, larger sites (existing or through lot amalgamation) will result in higher yielding/density projects and a higher contribution in terms of the number of dwellings.



8.0 RESIDENTIAL LAND SUPPLY

Key Findings

As at September 2015 there were 5,828 lots identified as residential supply. This is comprised of:

- 5,003 zoned broadhectare lots (86% of supply);
- 646 vacant urban residential lots (11% of supply);
- 150 designated future residential lots (3% of supply); and
- 29 vacant rural residential lots (0.5% of supply).

There were 646 minor infill lots identified, with 91% of the lots smaller than 1200 sqm. Vacant land stock was concentrated in Bacchus Marsh (229 lots) and Farley (290 lots).

There were around 5,000 zoned lots available within broadhectare sites. The location of these lots were

- Bacchus Marsh (1,504 lots);
- Darley (966 lots);
- Maddingley (2,458 lots); and
- Pentland Hills (900 lots).

Over the next five years it is anticipated that there will be 320 broadhectare lots per annum constructed within zoned broadhectare estates. Recent broadhectare lot production has averaged 240 lots per annum, the expectation of 320 lots may be unlikely and more likely to follow recent trends.

There is an estimated lot potential within future residential of 150 lots located in Maddingley.

There are 21 vacant Rural Residential lots (14% of all rural lots). There are no identified/designated future rural residential areas within the Study Area (unzoned).

This section of the report details the stock (measured in lots) of residential land across the Study Area as at September 2015. Residential lot stock/supply is presented at a locality and Study Area level. Residential land supply is further analysed by supply type/location, namely:

- Minor Infill (vacant 'urban' lots);
- Broadhectare;
- Future Residential (unzoned); and
- Rural Residential (vacant lots).

For broadhectare land supply areas, anticipated lot construction timing is presented. This refers to the likely timing of lot construction, not dwelling construction. It is highlighted and highly recognised that the timing presented is a guide, it will not equate to full completion of activity, but rather a guide to broad likely development construction initiation or likely potential to. The quantum of likely development timing is highly linked to the quantum of recent construction in the short-term (i.e. over next five years) as presented previously. Development timing is presented to illustrate likely development activity spatially.

It is considered, that the level of actual lot construction activity will align closely to recent construction trends (particularly in the short to medium term). However, the location of the anticipated lot construction activity illustrated will generally commence development (e.g. 1-2 years), although complete 'build-out' will not be achieved within the stated time-frames.



Table 8.1 details the residential land supply, measured in lots, by supply type across the Study Area as at September 2015. In total there is a total residential lot supply of approximately 5,828. This is comprised of:

- 5,003 zoned broadhectare lots (86% of supply);
- 646 vacant urban residential lots (11% of supply);
- 150 designated future residential lots (3% of supply); and
- 29 vacant rural residential lots (0.5% of supply).

Each of the supply types are further detailed below, including maps of broadhectare supply, including the location of recent residential lot construction activity. It is highlighted that dispersed infill redevelopment dwelling supply potential is not included in the assessment.

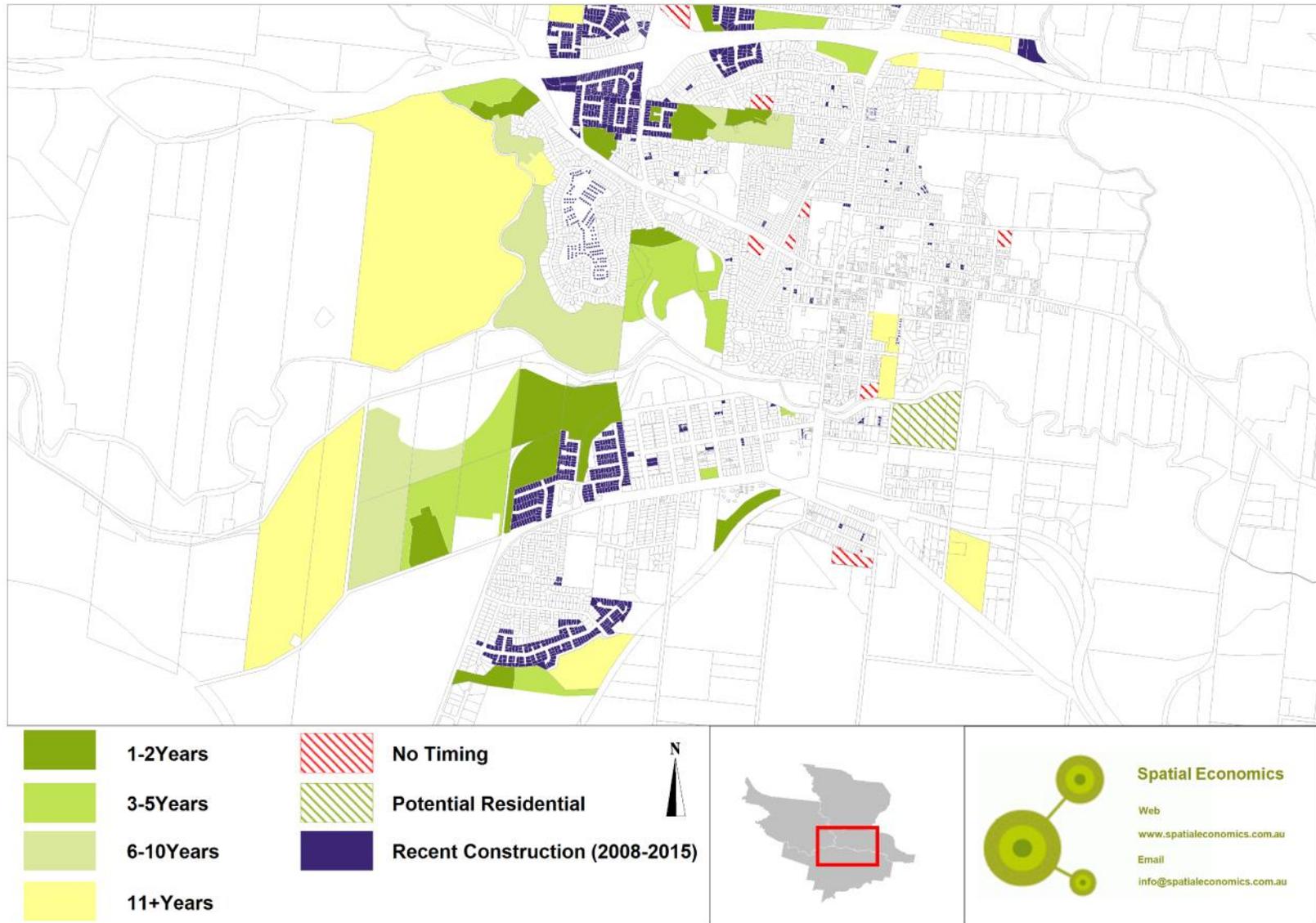
Table 8.1: Residential Lot Potential by Selected Supply Types, September 2015

	Broad hectare	Potential Residential (unzoned)	Vacant 'Urban' Lots	Rural Residential	Total Lots
BACCHUS MARSH	1202		299	3	1504
DARLEY	650		290	26	966
MADDINGLEY	2251	150	57		2458
PENTLAND HILLS	900				900
TOTAL STUDY AREA	5003	150	646	29	5828

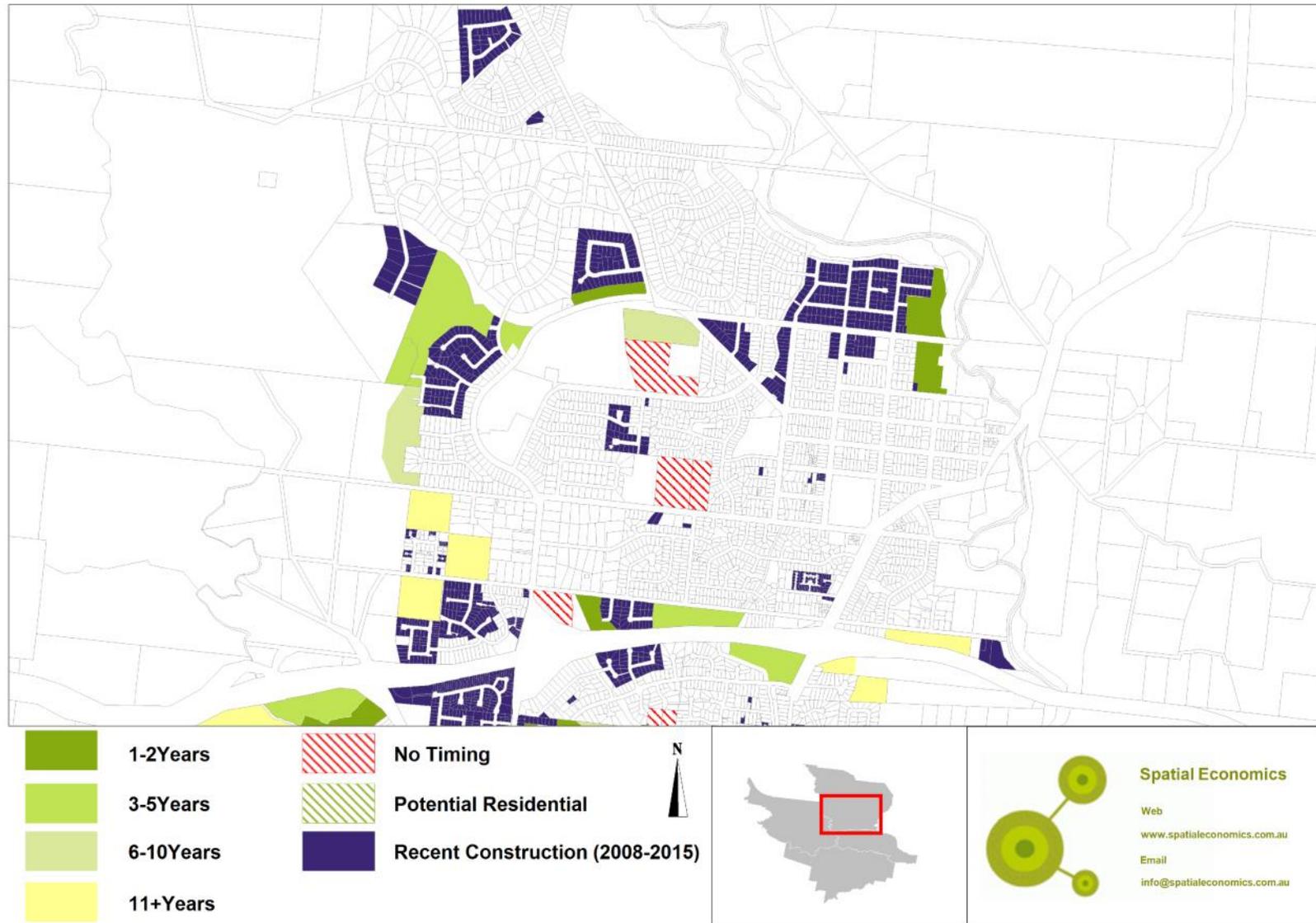
Source: Spatial Economics Pty Ltd



Map 8.1: Broadhectare Residential Supply & Recent Residential Lot Construction – Bacchus Marsh/Maddingley/Pentland Hills, 2015



Map 8.2: Broadhectare Residential Supply & Recent Residential Lot Construction – Darley, 2015



8.1 Dispersed Infill Supply

A parcel by parcel assessment was undertaken to identify minor infill supply, specifically zoned vacant allotments sized less than 5,000sqm. All vacant allotments are zoned to support urban residential development (e.g. GRZ1, GRZ2 & GRZ3). The assessment is based on information sourced from the Housing Development Data as at September 2015. The identification of vacant allotments sized less than 5,000sqm does not provide an estimated dwelling yield. Rather it simply identifies the vacant allotment by lot size and location.

Dwelling yields on such allotments can vary significantly, examples range from:

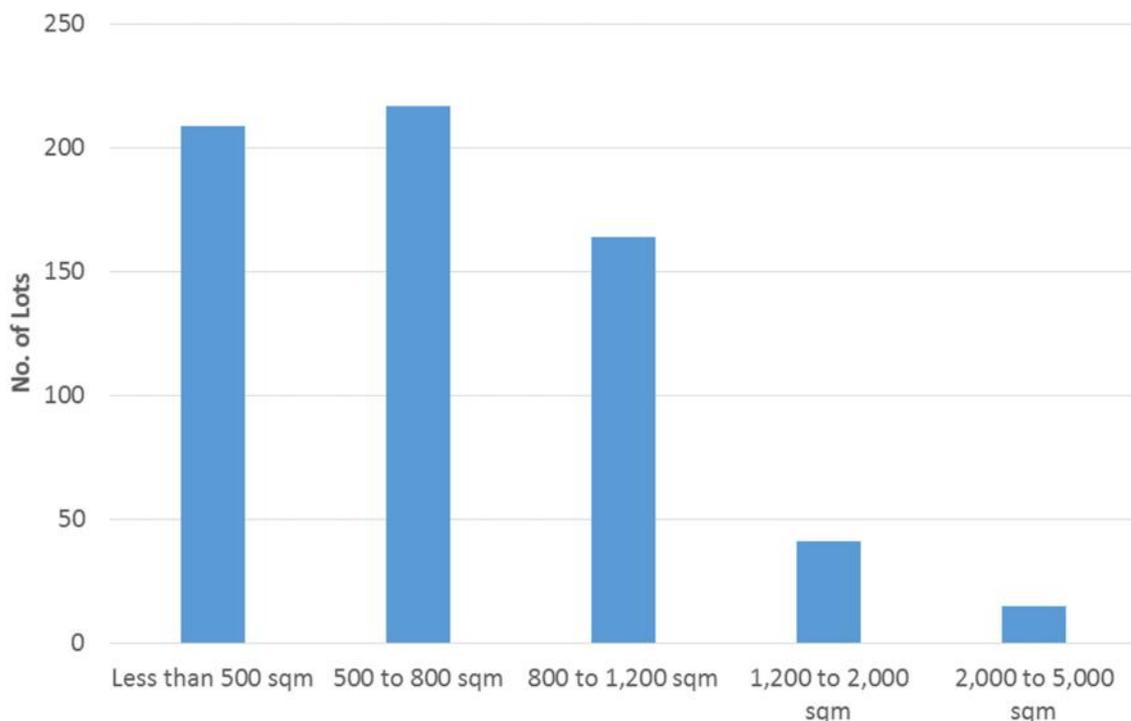
- 800 sqm vacant allotment within a broadectare estate typically would yield one dwelling;
- 800 sqm vacant allotment within the urban centre, could typically range from one to four dwellings; and
- 5,000sqm allotment within a township zone (un-sewered) one dwelling versus anything from five plus dwellings within a larger urban settlement.

As at September 2015, there was 646 minor infill lots identified. Of these lots, 590 were sized less than 1,200sqm or 91% of the identified lots. In addition there were:

- 41 vacant lots sized between 1,200 to 2,000 sqm; and
- 15 lots sized from 2,000 to 5,000 sqm.

Graph 8.1 summarises the size distribution of identified minor infill supply. Vacant lot stock was concentrated within the localities of: Bacchus Marsh (299 lots), Darley (290 lots) and Maddingley (57 lots).

Graph 8.1: Minor Infill Supply – Number of Vacant Zoned Residential Allotments, by Lot Size Cohort, 2015



Source: Spatial Economics Pty Ltd

8.2 Broadhectare Supply

As at September 2015, there was a residential lot capacity within zoned broadhectare sites of approximately 5,000.

The location of zoned broadhectare residential land stocks is primarily located within the following localities:

- Maddingley – 2,251 lots (45% of supply);
- Bacchus Marsh – 1,202 lots (24% of supply);
- Pentland Hills – 900 lots (18% of supply); and
- Darley – 650 lots (13% of supply).

Table 8.2 identifies the lot yield and estimated development timing of zoned broadhectare lot stock.

Table 8.2: Anticipated Broadhectare Lot Construction Activity, 2015

	Anticipated Development Timing (lots)					Total Zoned (lots)	Potential Residential (unzoned)	Total Supply
	1-2 years	3-5 years	6-10 years	11+ years	No Timing			
BACCHUS MARSH	151	284	458	293	16	1202		1202
DARLEY	119	174	94	173	90	650		650
MADDINGLEY	460	414	432	945		2251	150	2401
PENTLAND HILLS				900		900		900
STUDY AREA	730	872	984	2311	106	5003	150	5153

Source: Spatial Economics Pty Ltd

Based on existing planning permits, recent construction activity and primarily Council feedback it is anticipated that over the next five years, on average 320 lots/dwellings per annum will be constructed within existing zoned broadhectare areas. Historically, broadhectare lot construction has averaged 240 per annum.

It is considered that the quantum of anticipated broadhectare lot construction is unlikely, however, it does illustrate there is sufficient zoned broadhectare land that is likely to be developed relative to existing demand levels.

In addition to the identified zoned broadhectare land stocks with an estimated development timing, there is broadhectare/major infill land stocks where a no timing and in some cases no yield have been established. This is primarily due to the identified site being highly likely to be developed at some point however, due to for example existing or underutilised uses – likely development timing is highly speculative. Similarly, in many instances no yield estimates have been applied, as due to their location, the potential dwelling yield could vary significantly.

In total, there are 12 separate likely development sites that are defined as 'No Timing' with an area of 20 hectares.

8.3 Future Residential Land Supply (unzoned)

Analysis has been undertaken in conjunction with municipal planning officers to identify the location and associated lot yield of future residential land stocks. Future residential land stocks are identified by the Moorabool Shire Council, and contained within various municipal planning policy and strategy planning documents.



Future residential land stocks are not zoned to support immediate 'normal' residential development, and rezoning and structure planning processes are required before normal residential development proceeds.

Within the Study Area, there is an estimated lot potential within Future Residential areas of approximately 150, which is located Maddingley (Taverner Street).

8.4 Rural Residential Supply

The stock of both occupied and vacant rural residential allotments have been determined on a lot by lot basis as at September 2015 2012. A Rural Residential allotment is defined as all allotments that are zoned Low Density Residential (LDRZ) and Rural Living (RLZ). Occupied is defined as evidence of a 'habitable' dwelling and vacant is defined as no evidence of a habitable dwelling via the interpretation of aerial imagery.

As at September 2015 across the Bacchus Marsh Study Area there was a total lot stock of rural residential allotments of 221. Of this stock, 29 lots were vacant, a lot vacancy rate of 13%.

By zone type, as at September 2015 there were 214 Low Density Residential (LDRZ) allotments, of which 29 were vacant, a lot vacancy of 14%. In comparison, there were a total of 7 Rural Living (RLZ) zoned allotments, of which zero were vacant.

The location of the majority of the vacant rural residential lot stock is located in Darley.

There are no identified future rural residential (LDRZ and or RLZ) unzoned areas within the Study Area.

Key Issues

There are expectations that there will be 320 broadhectare lots per annum constructed in broadhectare estates in the next five years, however this is a substantial increase on recent activity that has averaged 240 lots per annum. It is considered that broadhectare lot construction activity will follow closely to recent trends. However, it does illustrate there is sufficient zoned broadhectare land that is likely to be developed relative to existing demand levels in the short to medium term.

There is a high capacity for dispersed infill redevelopment within the Study Area that is not captured in the analysis of vacant lot stock. This means that there are readily alternative residential land supply stocks outside of undeveloped broadhectare estates - therefore a feasible opportunity to decrease the reliance on broadhectare land.

Estimates of broadhectare land supply capacity are essentially based on recent trends, planning permits and short to medium terms market expectations. Over the last ten years, the median broadhectare lot constructed within the growth areas of metropolitan Melbourne has dramatically declined. Therefore the estimate of broadhectare lot capacity can be seen as conservative. In the medium to longer term, it would be reasonable to expect broadhectare lot densities to increase, and thus, an increase in lot/dwelling capacity.

There are also identified zoned broadhectare land stocks where no yield has been allotted, as the likely yield is highly variable due to a range of factors such as their location. This also understates the number of potential lots/dwellings.



9.0 ADEQUACY OF BROADHECTARE LAND STOCKS

Key Findings

Three demand projections are presented resulting in a total dwelling requirement from **2016 to 2031** of:

- VIF – 4,483 dwellings (299 pa);
- id – 3,389 dwellings (225 pa); and
- 3.5% growth rate scenario – 5,150 dwellings (343 pa).

As measured from **2016 to 2041**:

- id – 5,381 dwellings (215 pa); and
- 3.5% growth rate scenario – 10,395 dwellings (416 pa).

The adequacy of residential broadhectare land supply was determined for four scenarios:

Scenario 1: VIF projections and assuming 86 % of total demand will be for broadhectare residential construction (86% is the recent historical proportion of broadhectare land of total demand)

Scenario 2: VIF projections with reduction in the proportion of broadhectare demand to 70% of total demand.

Scenario 3: id Consulting projections and assuming broadhectare construction is 86% of total demand.

Scenario 4: Dwelling projections assumed to grow at 3.5 % pa and broadhectare construction to stay at 86% of total demand.

In terms of zoned broadhectare residential land stocks it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **17 and 26 years** of demand, it is considered that **20 years** of broadhectare supply is the most likely.

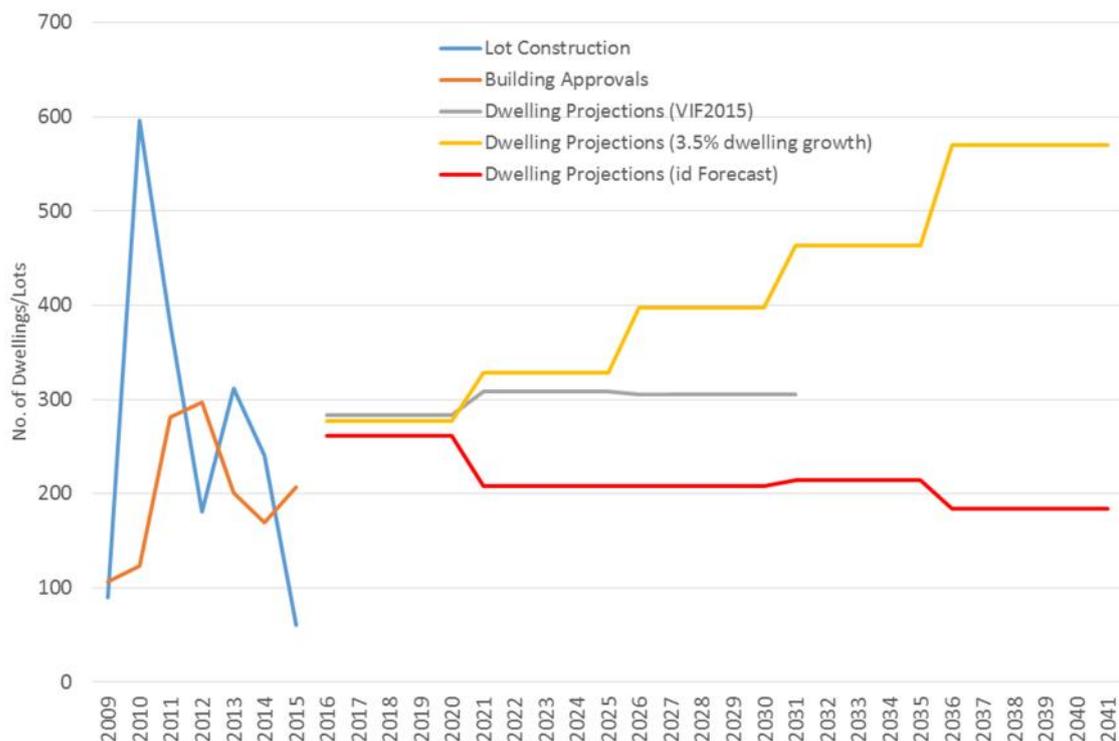
In terms of future residential (unzoned) land supply stocks, there is sufficient land to satisfy less than one years' worth of demand under any demand scenario.

This report incorporates the most recently available demand figures to project dwelling requirements and future adequacy of residential land. The two main projections available for Moorabool and small-areas within Moorabool are the Victorian State Government 'Victoria in Future 2015' (VIF2015) projections released in August 2014 and 'forecast.id' produced by 'id Consultants (id), released in September 2015. An additional demand scenario is presented that assumes a constant dwelling growth rate of 3.5% per annum. This is presented to illustrate a 'plausible' upper limit to projected growth. VIF2015 projections are published to 2031 and id are published to 2041.

Graph 9.1 summarises the projected population based demand scenarios for residential dwellings across the municipal the Study Area. In addition, it highlights historic actual construction of residential lots and residential building approvals.



Graph 9.1: Historic and Projected Demand for Residential Dwellings, 2009 to 2031



Source: DELWP: VIF2015: Population and Household Projections.
 forecast.id Population and Household Projections
 Australian Bureau of Statistics, Catalogue No.8731.0
 Spatial Economics Pty Ltd

VIF 2015 Demand Projections

Projected dwelling requirements sourced from VIF2015 indicate that from **2016 to 2031** there will be a total dwelling requirement of 4,483 (299 average per annum or 3.0% growth rate).

id Forecast Demand Projections

Projected dwelling requirements sourced from id Forecast indicate that from **2016 to 2031** there will be a total dwelling requirement of 3,389 (225 average per annum or 2.6% growth rate).

From **2016 to 2041**, it is forecast that there will be a total dwelling requirement of 5,381 (215 average per annum or 2.2% growth rate).

3.5% Dwelling Growth Demand Scenario

Projected dwelling requirements assume a dwelling growth rate of 3.5% per annum indicate that from **2016 to 2031** there will be a total dwelling requirement of approximately 5,150 (343 average per annum).

From **2016 to 2041**, based on an annual dwelling growth rate of 3.5% per annum there will be a total dwelling requirement of 10,395 (416 average per annum).

9.1 Adequacy of Residential Broadhectare Land Stocks

Analysis has been undertaken to estimate the years of residential broadhectare land supply for the Bacchus Marsh Study Area. In estimating the years of residential land supply only zoned broadhectare and future residential land supply types are considered. In the assessment of adequacy or establishing the estimated years of supply, the demand component for the above supply types are estimated via the assessment of historic construction and stated assumptions for alternative demand scenarios.



Four demand scenarios are used:

Scenario One: Dwelling projections contained in the State Governments Population, Household and Dwelling projections (VIF2015) and assuming a constant (86%) of demand will be for broadhectare residential construction.

Scenario Two: Dwelling projections contained in the State Governments Population, Household and Dwelling projections (VIF2015) and assuming a decreased share of broadhectare development or in other words an increase demand and supply for dispersed infill redevelopment assumed at 70% for broadhectare demand and supply.

Scenario Three: Dwelling projections sourced from id Consultants and undertaken for the Moorabool Shire Council and assuming a constant (86%) of demand will be for broadhectare residential construction.

Scenario Four: Dwelling projections assumed to grow from 2016 at a constant 3.5% annual growth rate and assuming a constant (86%) of demand will be for broadhectare residential construction.

Table 9.1, and Graph 9.2 summarise the estimated years of supply by demand scenario for broadhectare stocks across the Bacchus Marsh Study Area by demand scenario.

In terms of zoned broadhectare residential land stocks it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **16 and 27 years** of demand, it is considered that **20 years** of broadhectare supply is the most likely.

In terms of future residential (unzoned) land supply stocks, there is sufficient land to satisfy less than one years' worth of demand under any demand scenario.

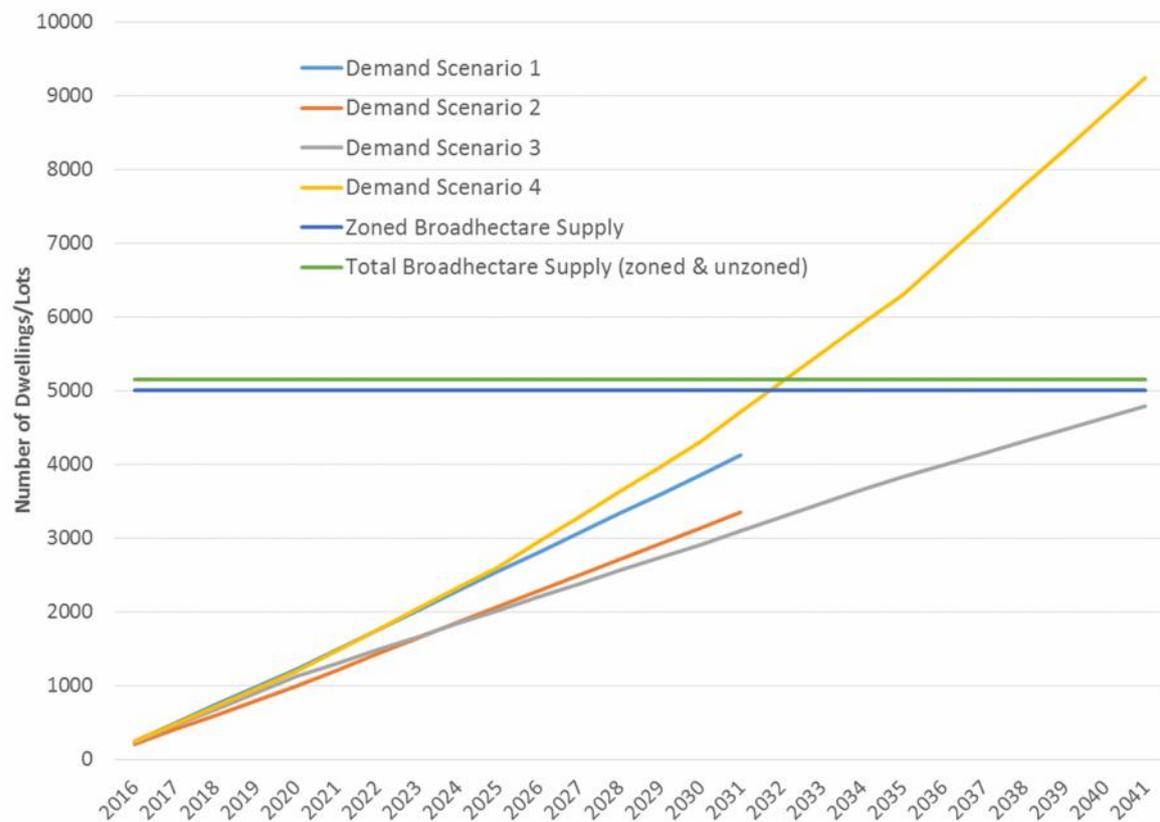
Table 9.1: Estimated Years of Residential Broadhectare Land Supply, 2015

	Total Zoned (lots)	Potential Residential (unzoned)	Total (lots)
Demand Scenario 1	20	0.6	20.6
Demand Scenario 2	24	0.7	24.7
Demand Scenario 3	27	0.8	27.8
Demand Scenario 4	16	0.4	16.4

Source: Spatial Economics Pty Ltd



Graph 9.2: Adequacy of Broadhectare Land Stocks – Bacchus Marsh Study Area, 2015



Source: DELWP: VIF2015: Population and Household Projections.
forecast.id Population and Household Projections
Spatial Economics Pty Ltd

Key Issues

A range of scenarios have been produced reflecting the uncertainty around demand and supply. Demand has the capacity to accelerate and reduce the years of supply. Conversely, there is a large potential for dispersed infill to increase substantially which would reduce demand for broadhectare land and subsequently increase the years of supply.

Assumptions pertaining to broadhectare land capacity is largely based on recent trends, current permit activity and a short/medium term view on broadhectare development densities. If densities that are currently being achieved within the growth areas of metropolitan Melbourne in the Study Area, the years of broadhectare supply will be substantially extended. This may have a flow on impact (increased densities) of altering demand levels.



10.0 SNAP FACTS – LOCAL AREA COMPARISON

The following provides a brief snap-shot of both supply and demand related information for localities within the Study Area that is contained within the supply and demand assessment for the Study Area.

10.1 Forecast Population & Dwelling Stock

Forecast Population & Dwelling Stock - 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Population	12215	9043	9261	30519
Dwellings	5620	3517	3612	12749

id Forecast

Forecast Total Population & Dwelling Change, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Population	5713	172	6049	11934
Dwellings	2674	342	2365	5381

id Forecast

Forecast Average Annual Population & Dwelling Change, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Population	229	7	242	477
Dwellings	107	14	95	215

id Forecast

Forecast Average Annual Percentage Change - Population & Dwelling, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Population	2.6%	0.1%	4.3%	2.0%
Dwellings	2.6%	0.4%	4.3%	2.2%



10.2 Forecast Population by Selected Age Cohorts

Forecast Population by Selected Age Cohorts - 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Babies and pre-schoolers (0 to 4)	742	538	716	1,996
Primary schoolers (5 to 11)	1,016	882	990	2,889
Secondary schoolers (12 to 17)	877	793	781	2,451
Tertiary education and independence (18 to 24)	916	754	750	2,420
Young workforce (25 to 34)	1,415	941	1,254	3,610
Parents and homebuilders (35 to 49)	2,316	1,697	2,277	6,290
Older workers and pre-retirees (50 to 59)	1,443	1,050	1,127	3,620
Empty nesters and retirees (60 to 69)	1,351	963	622	2,937
Seniors (70 to 84)	1,722	1,194	556	3,472
Elderly aged (85 and over)	415	230	189	834
Total persons	12,215	9,043	9,261	30,518

id Forecast

Forecast Total Population Change by Selected Age Cohorts, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Babies and pre-schoolers (0 to 4)	352	-88	440	703
Primary schoolers (5 to 11)	489	-123	625	992
Secondary schoolers (12 to 17)	420	-83	542	879
Tertiary education and independence (18 to 24)	313	-59	487	741
Young workforce (25 to 34)	617	-141	725	1,201
Parents and homebuilders (35 to 49)	1,171	-239	1,521	2,452
Older workers and pre-retirees (50 to 59)	583	-92	828	1,320
Empty nesters and retirees (60 to 69)	521	79	411	1,012
Seniors (70 to 84)	983	757	371	2,111
Elderly aged (85 and over)	263	159	100	522
Total persons	5,713	172	6,049	11,933

id Forecast



Forecast Average Annual Change in Selected Age Cohorts, 2016 to 2041

	Bacchus			Study
	Marsh	Darley	Maddingley	Area
Babies and pre-schoolers (0 to 4)	14	-4	18	28
Primary schoolers (5 to 11)	20	-5	25	40
Secondary schoolers (12 to 17)	17	-3	22	35
Tertiary education and independence (18 to 24)	13	-2	19	30
Young workforce (25 to 34)	25	-6	29	48
Parents and homebuilders (35 to 49)	47	-10	61	98
Older workers and pre-retirees (50 to 59)	23	-4	33	53
Empty nesters and retirees (60 to 69)	21	3	16	40
Seniors (70 to 84)	39	30	15	84
Elderly aged (85 and over)	11	6	4	21
Total persons	229	7	242	477

id Forecast

Forecast Average Annual percentage Change in Selected Age Cohorts, 2016 to 2041

	Bacchus			Study
	Marsh	Darley	Maddingley	Area
Babies and pre-schoolers (0 to 4)	2.6%	-0.6%	3.9%	1.8%
Primary schoolers (5 to 11)	2.7%	-0.5%	4.1%	1.7%
Secondary schoolers (12 to 17)	2.6%	-0.4%	4.9%	1.8%
Tertiary education and independence (18 to 24)	1.7%	-0.3%	4.3%	1.5%
Young workforce (25 to 34)	2.3%	-0.6%	3.5%	1.6%
Parents and homebuilders (35 to 49)	2.9%	-0.5%	4.5%	2.0%
Older workers and pre-retirees (50 to 59)	2.1%	-0.3%	5.5%	1.8%
Empty nesters and retirees (60 to 69)	2.0%	0.3%	4.4%	1.7%
Seniors (70 to 84)	3.4%	4.1%	4.5%	3.8%
Elderly aged (85 and over)	4.1%	4.8%	3.1%	4.0%
Total persons	2.6%	0.1%	4.3%	2.0%

id Forecast



10.3 Forecast – Family Types

Forecast Total Number of Families by Type - 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Couple families with dependents	1,322	1,136	1,273	3,731
Couples without dependents	1,451	1,063	854	3,368
Group households	108	62	82	253
Lone person households	1,774	739	822	3,335
One parent family	640	356	436	1,432
Other families	74	68	46	189
Total Families	5,369	3,424	3,513	12,308

id Forecast

Forecast Total Change in Number Families by Type - 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Couple families with dependents	611	-127	839	1,324
Couples without dependents	702	275	585	1,561
Group households	43	0	54	99
Lone person households	894	251	554	1,699
One parent family	299	-30	283	552
Other families	32	-6	28	56
Total Families	2,581	363	2,343	5,291

id Forecast

Forecast Average Annual Change in the Number of Families by Type, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Couple families with dependents	24	-5	34	53
Couples without dependents	28	11	23	62
Group households	2	0	2	4
Lone person households	36	10	22	68
One parent family	12	-1	11	22
Other families	1	0	1	2
Total Families	103	15	94	212

id Forecast

Forecast Average Annual Percentage Change in the Number of Families by Type, 2016 to 2041

	Bacchus Marsh	Darley	Maddingley	Study Area
Couple families with dependents	2.5%	-0.4%	4.4%	1.8%
Couples without dependents	2.7%	1.2%	4.7%	2.5%
Group households	2.1%	0.0%	4.4%	2.0%
Lone person households	2.8%	1.7%	4.6%	2.9%
One parent family	2.6%	-0.3%	4.3%	2.0%
Other families	2.3%	-0.3%	3.8%	1.4%
Total Families	2.7%	0.4%	4.5%	2.3%

id Forecast



10.4 Residential Dwelling Sales Value

Residential Sales Value

	Bacchus Marsh	Darley	Maddingley	Study Area
Median House Price 2014	\$347,500	\$360,500	\$320,000	\$342,700
Median Unit Price 2014	\$296,500	n.a.	\$205,000	\$250,750
Median Vacant Land Price 2014	\$150,000	\$150,000	\$149,000	\$149,700
House Price Growth 2004 to 2014	3.8% p.a.	4.8% p.a.	4.7% p.a.	4.4% p.a.
Unit Price Growth 2004 to 2014	3.6% p.a.	n.a.	3.7% p.a.	3.6% p.a.
Land Price Growth 2004 to 2014	5.5% p.a.	4.3% p.a.	6.3% p.a.	5.4% p.a.

Valuer General

10.5 Housing Affordability – Low Income Households

Housing Affordability - Low Income Households

	Bacchus Marsh	Darley	Maddingley	Study Area
Mortgage Stress - No. of Households	228	363	110	701
Mortgage Stress - % of Households	8.7%	13.7%	12.0%	11.3%
Rental Stress - No. of Households	268	124	78	470
Rental Stress - % of Households	10.2%	4.7%	8.5%	7.6%

Spatial Economics

10.6 Urban Footprint

Urban Footprint - Total Area (ha)

	Bacchus Marsh	Darley	Maddingley	Study Area
<1940	39	2	5	47
1940 to 1960	54	4	9	68
1960 to 1980	97	37	21	155
1980 to 1990	141	119	36	296
1990 to 2000	189	222	52	463
2000 to 2010	218	308	69	595
2010 to 2015	282	436	166	885

Spatial Economics



10.7 Housing Density

Housing Density - % distribution (sqm), 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
Less than 300 sqm	19%	8%	7%	13%
300 to 499 sqm	10%	6%	22%	11%
500 to 599 sqm	8%	1%	21%	8%
600 to 799 sqm	39%	49%	34%	42%
800 to 999 sqm	24%	36%	16%	27%
1,000 + sqm	16%	58%	25%	33%
Study Area	100%	100%	100%	100%

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10.8 Housing Stock - Typologies

Housing Stock Typologies - % distribution, 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
Medium Density	16%	5%	6%	10%
Compact Suburban	9%	3%	18%	8%
Suburban	61%	55%	57%	58%
Low Density Suburban	14%	31%	18%	22%
Rural Residential	0%	6%	1%	3%
Farm	0%	0%	1%	0%
Study Area	100%	100%	100%	100%

Spatial Economics

10.9 Residential Lot Construction - Supply Type

Residential Lot Construction by Supply Type, 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
Aged Care	47			47
Broadhectare	502	681	412	1595
Dispersed Infill	63	96	41	200
Rural Residential	4	13		17
Study Area	616	790	453	1859

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10.10 Residential Lot Construction – Time Series

Residential Lot Construction, 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
2008-09	27	56	7	90
2009-10	311	185	100	596
2010-11	50	236	93	379
2011-12	84	95	2	181
2012-13	53	91	168	312
2013-14	67	96	77	240
2014-15¹	24	31	6	61

1: To September 2015

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10.11 Dispersed Infill Construction – Pre & Post Dwelling Densities

Dispersed Infill Lot Construction - Pre & Post Density (sqm), 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
Pre-Density (sqm)	811	1182	1103	933
Post Density (sqm)	359	368	358	360

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10.12 Dispersed Infill Construction – Project Yield

Dispersed Infill Construction - Number of Projects by Project Yield Range, 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
1 Dwelling	14	4	4	22
2 Dwellings	13	6	2	21
3 Dwellings	3	3	5	11
4 Dwellings	1	3	2	6
5 Dwellings		2	1	3
6 to 9 Dwellings		2	1	3
10 to 20 Dwellings	1	3		4
Study Area	32	23	15	70

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10.13 Dispersed Infill Construction – Number of Projects by Parent Lot Size
Dispersed Infill Construction - Number of Projects by Parent Lot Size (pre-development), 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
500 to 800sqm	16	6	1	23
800 to 1,200 sqm	11	6	7	24
1,200 to 2,000 sqm	3	2	4	9
2,000 to 5,000sqm	2	7	3	12
5,000 to 10,000 sqm		1		1
10,000 sqm+		1		1
Study Area	32	23	15	70

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10.14 Broadhectare Lot Construction – Size Distribution
Broadhectare Lot Construction Size Distribution, 2008 to 2015

	Bacchus Marsh	Darley	Maddingley	Study Area
Less Than 300 sqm	209	19	1	229
300 to 499 sqm	112	50	153	315
500 to 599 sqm	100	30	157	287
600 to 799 sqm	62	247	88	397
800 to 999 sqm	6	251	7	264
1000+ sqm	13	84	6	103
Study Area	502	681	412	1595

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10.15 Residential Land Supply Stocks
Residential Land Supply Stocks (lots), 2015

	Bacchus Marsh	Darley	Maddingley	Pentland Hills	Study Area
Broadhectare (zoned)	1202	650	2251	900	5003
Potential Residential (unzoned)			150		150
Vacant 'Urban' Lots	299	290	57		646
Rural Residential	3	26			29
Total Lots (Study Area)	1504	966	2458	900	5828

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