Understanding the property and economic drivers of housing

City of Melbourne January 2013

Independent insight.



In assoctiation with



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KEY FINDINGS

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KEY FINDINGS

Economic drivers challenge established housing policy in the City of Melbourne

The role of the City of Melbourne in the metropolitan economy has been radically redefined over the past 2 decades. It has moved from a position as co-producer of specialised business services, alongside suburbanised employment nodes, to a supra-dominant locus for these activities. The municipality and the inner urban region are now vital exporters of brokerage, design, research, legal, engineering, strategic management, training and other high level problem solving services to Victoria, other parts of Australia and, indeed, the world. It is no exaggeration to say that Central Melbourne has become the engine room of the Victorian economy. It is hungry for knowledge workers and pays a premium to secure their services. The flow through to the housing market is inevitable.

The market pressures which are driving up housing costs and narrowing the scope of the new housing offer in the City of Melbourne (to compact apartments for young singles and couples) are pulling in the opposite direction from the visions incorporated in Council's adopted *Municipal Strategic Statement* and the community's *Future Melbourne*. These emphasise the realisation of a diverse and inclusive community in the City of Melbourne. The requisite diversity could be achieved over a broader inner city geography than the City of Melbourne itself, with the latter fulfilling a more specialised role in the metropolitan economy and community. But this would require a more nuanced interpretation of the objectives in the abovementioned policies, and, in any case, relying on the wider geography would only 'buy more time' in pursuit of the social diversity vision.

The new housing market in the City of Melbourne is overwhelmingly focussed on small 1 and 2 bedroom units. This trend is broadly in line with projected housing demand as inferred from demographic forecasts. This form of housing provision is consistent with the housing requirements of knowledge workers that have accounted for an increasingly sizeable proportion of the City of Melbourne workforce, and the level of supply of new dwellings combined with the capacity for the provision of new development will continue to provide dwelling opportunities for knowledge workers going forward. There is, however, the issue that projected demand in terms of household types is, itself, a reflection of the housing supply trends of the recent past.

Sub-markets

While the City of Melbourne is a geographically discrete entity, the housing market within which the City of Melbourne is situated, is not constrained by municipal boundaries. There are essentially two reasonably distinct housing sub-markets operating within and around the City of Melbourne. These are defined by an aggregate of the density of dwellings and the price of rental accommodation on a suburb by suburb basis. The first of these sub-markets is a core inner municipality area comprised of the suburbs of Melbourne, Docklands and Southbank, where dwelling densities and rental accommodation costs are relatively high. The second is a ring of suburbs which surround the Inner core area, stretching from St Kilda in the South, to Brunswick in the north, and Seddon in the west. Each of the suburbs in the sub-market might be regarded as a substitute location for other suburbs within the respective sub-market.

Investors dictate the profile of new housing

The impetus for the construction of new housing in the City of Melbourne is primarily coming from investors rather than owner occupiers. These are typically small scale rather than institutional investors. However, the developers generating the stock to meet this investor demand now have to be quite large



corporations, capable of taking on projects of \$50 million plus. Bank financing is typically conservative, and with the increased tendency for large scale development to be undertaken by larger corporations, the development that results follows a formula that has been tried and tested in the past. Banks are more likely to lend for housing products which have been shown to be successful and for which there is a relatively larger pool of potential purchasers.

Typically, investors avoid larger units - the price point is too high. Larger units, including accommodation suitable for families, can and will sell but with longer lead times and marketing costs. This makes them a riskier proposition which, in turn, diminishes the potential for developers to attract affordable debt finance.

Arguably, greater involvement from institutional investors may support a more diversified supply of new housing, including larger units, due to other factors - such as longer tenancy durations and subsequently lower vacancy rates. This is not proven though, and some international experience quoted in this paper goes to the opposite extreme of suggesting institutions would be attracted to 'micro apartments'.

Family housing in the City of Melbourne?

There is projected growth in family households in the City of Melbourne. It is unclear where they will live, given current supply side trends. Having said this, the number of new households of this type is less than 200 on an annual basis, suggesting that any policy response does not need to be particularly drastic to have a significant impact on meeting underlying demand. Given the importance ascribed to the level of access to schools on the locational decisions of families with school-aged children, the underlying demand for housing from this household type may be constrained given the limited availability of primary and secondary schools in the City of Melbourne.

Additionally, families with children have historically opted to live in separate houses or a semi-detached dwelling, which does not align with the total dwelling stock mix in the city. Opportunities to increase demand from family households may arise from the provision of housing (in forms that do not accord with the prevailing development trends) in areas identified for renewal such as Arden Macaulay.

The specialised role of the City of Melbourne's rental housing market

Growth in the rental stock in Melbourne has dwarfed that in surrounding municipalities. Inner city tenancies are typically shorter duration than outer areas. Smaller units also have shorter tenancies than larger units, although it is difficult to disentangle the effects of location and unit size on tenancy in these observations. It may be that people are only prepared to rent small units for a short period of time during particular phases of their career, suggesting that the City of Melbourne housing market has a specialised role in the metropolitan economy. In addition to the growth in the rental stock, the rate of growth in the total number of dwellings has been considerably higher since 2006, when compared to the city centres of Sydney, Brisbane and Adelaide.

Key worker housing

The City of Melbourne can be said to have a key worker issue, but only if key workers want to live within the City of Melbourne itself. This is going to become more acute given the strong growth forecast for knowledge workers in the municipality. However, the key worker affordability issue is not pressing, at least at this time, if we consider that key workers can commute to central Melbourne from within a 'reasonable' travel catchment of 56 minutes, the 66th percentile journey to work time for the metro area as a whole. In comparison with other state capitals, the median City of Melbourne rent to state household income ratio is relatively low, meaning that accommodation costs in the municipality are more affordable than they are in Brisbane, Sydney and Adelaide.



Evaporating affordability

The affordability of rental housing in the City of Melbourne has declined. In 2011, there were fewer low rent residential accommodation options available to low income households within the municipality than there were in 2001, and this was reflected in the increase in the proportion of low income households residing in medium rent dwellings. Furthermore, low rent dwellings as a proportion of total dwellings in the City of Melbourne fell from 40 to 13 per cent over the ten year time period.





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1 INTRODUCTION

1.1 Background

Melbourne today is an attractive and liveable place to live and work. It is an international hub for business, retail, education, medicine, arts and industry. As the City of Melbourne attracts more residents, the provision of affordable and high quality housing is essential to ensure the City of Melbourne maintains its high standards of liveability and continues to be welcoming and accessible for people of all walks of life. This is confirmed by *Future Melbourne* (2009), the community plan for the City of Melbourne, which has a vision for a bold, inspirational and sustainable city that creates a city for people.

Since the early 1990s, the residential population in the City of Melbourne has significantly increased. The Central City's revival as a place to live as well as work began with the redevelopment of Southbank and innovative programs such as Postcode 3000 which promoted apartment living in the Hoddle Grid. In the 2000s, the Central City expanded again with the urban renewal of Docklands, providing high density residential development. The residential population in the City of Melbourne has approximately doubled since 2001 to over 100,000 people today.

The population growth is forecast to continue to over 180,000 residents by 2031, requiring in the order of 45,000 new homes in the municipality. The City of Melbourne's Municipal Strategic Statement recognises that housing growth in the Hoddle Grid, Southbank and Docklands will continue, and identifies opportunities for future growth in the new urban renewal areas of City North, Arden-Macaulay and Fishermans Bend.

This growth offers a significant opportunity to deliver affordable, diverse and high quality housing. This paper is one of three supporting papers which will inform the development of a Housing Discussion Paper. Two other supporting papers have been produced on *Understanding the Social Outcomes of Housing* and *Understanding the Quality of Housing Design*. Each supporting paper will investigate the role that the City of Melbourne can have in influencing positive housing outcomes in the municipality.

1.2 Research objectives

The research brief for the 'Property and Economic Analysis' work stream aimed for a shared understanding across policy developers regarding the dynamics of the housing market as it plays out in the City of Melbourne. By calling for a comprehensive review of supply and demand side factors, as well as comparisons with housing outcomes in other cities, the brief sought an appraisal of market efficiency and effectiveness. Put another way, the research focussed on whether the market is working efficiently, whether an efficient market would deliver policy compliant outcomes and, if not, what, in broad terms, can be done about this from the City of Melbourne's perspective?

More specifically, the research brief outlined 10 objectives:

- 1. To understand current and future trends in housing provision in the City of Melbourne including current and future housing outcomes by sector.
- 2. To understand the current and future demographic and socio economic profile of the City of Melbourne.
- 3. To explore the distinction between investors, and owner occupies or renters, and its implications in housing choices and delivery.



- 4. To explore housing outcomes within the City of Melbourne to other cities with respect to housing choices (diversity of types, tenure, size, density, accessibility, affordability and number of bedrooms) and housing preferences.
- 5. To identify and explore economic issues affecting the delivery of housing in the City of Melbourne including project feasibility, land values, project financing, risk tolerance.
- 6. To identify issues affecting the delivery of broader housing choices with respect to types of housing, tenure, size, density, accessibility, affordability and number of bedrooms.
- 7. Investigate the delivery of affordable housing in the City of Melbourne with regard to State and Local Government policy and investigate the economic implications of a 'salt and pepper' (or 'pepper potting') approach to delivering affordable, social housing and private dwellings within the same developments and buildings.
- 8. To identify and explore housing choices and preferences which are not being met by private or social housing sectors.
- 9. To explore the property and economic implications of particular housing choices not being delivered within the City of Melbourne.
- 10. To explore a range of options or models to facilitate the provision of housing in the City of Melbourne.

1.3 Structure of this report

The next section (2) of the report recaps on the City of Melbourne's aspirations for the municipality's social, economic, environmental and cultural advancement, drawing out the implications for housing development over future years. Understanding these aspirations is important as they will set the objectives against which the performance of the housing market in the municipality can be appraised.

Also by way of preparatory discussion, Section 2 identifies the housing sub-markets of relevance to the City of Melbourne. This recognises that the economic and property market forces shaping housing patterns in the municipality are not confined to the administrative boundaries of the municipality. Some household groups will find close substitutes to residency in the City of Melbourne in nearby inner city suburbs.

To provide further context regarding housing market trends in the municipality versus policy aspirations, Section 2 makes a rapid comparison of housing policy aspirations in the City of Melbourne versus those in Singapore, London, New York and Vancouver. These comparator cities were selected because they feature similar institutional arrangements to the City of Melbourne and/or are deemed to be leading cities in the policy domains of relevance to the City of Melbourne. The same section provides a quantitative comparison of the Melbourne housing market with those in a number of Australian cities: Sydney, Adelaide and Brisbane, with Vancouver used as an international comparison.

Sections 3, 4 and 5 then address each of the dimensions of the housing market in turn – demand side factors, supply side factors and the interaction between these to produce housing stock and flow outcomes. The final section (6) of the report addresses the potential gap between City of Melbourne's housing policy ambition and the so called "market reality".







POLICY OBJECTIVES, SUB-MARKETS AND COMPARATOR CITIES

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2 POLICY OBJECTIVES, SUB-MARKETS AND COMPARATOR CITIES

Overview

This Section provides a summary of Council's aspirations for housing outcomes in the City, drawn from its various policies for economic, environmental, social and cultural development. It establishes a wider study area for housing outcomes relevant to the City, by identifying sub-market linkages. A qualitative assessment of housing policies internationally is provided, together with a quantitative comparison of selected indicators for the City of Melbourne housing market against other Australian cities and one international city.

2.1 City of Melbourne's housing policies and aspirations

In August 2012, the City of Melbourne adopted its updated Municipal Strategic Statement (MSS). Once approved by the Minister for Planning, it will play an integral role in defining the city's role and subsequent local planning policies.

Clause 21.03 (Vision) adopts the core principles established in the 2008 "Future Melbourne" community plan. Future Melbourne outlines the community's aspirations for Melbourne's development and growth (City of Melbourne 2009). The major themes in the Future Melbourne vision are centred on the following:

People City

- Develop Melbourne as a healthy place, both physically and socially
- Ensure that Melbourne is a city for people of all ages, abilities and social status
- Provide accessible and affordable housing.

Creative City

- Embrace indigenous history and culture
- Nurture emerging artists, businesses and communities
- Encourage strong links and synergies between the creative arts and the commercial world
- Market Melbourne's creative artists to international audiences
- Recognise the need for risk taking to accommodate activities which may turn out to be unsuccessful or unpopular
- Explore new markets and trends such as sporting events to enhance the city's reputation.

Prosperous City

- Aim for a high standard of living, affordable housing and access to education
- Attract and retain the best workers
- Be a leader in research and technology



- Ensure business and industry adopt a triple bottom line approach
- Establish Melbourne as a financial services hub with access to many elements such as providers, clients and venture capital
- Make collaborative connections between workers, businesses and institutions
- Provide diversity and flexibility in land supply to accommodate future trends
- Attract global investments and compete in world markets
- Capitalise on exposure gained by hosting major national/international events
- Provide high quality markets, retail and entertainment services
- Create a 24 hour city which balances the needs of all city users

Eco-city

- Develop and use technology to preserve resources
- Achieve zero net emissions, manage climate change risks and be a leader in water management
- Create a compact city, with high densities of housing, businesses and cultural uses
- Achieve good air quality, open space and landscapes
- Generate and use renewable energy for feeding into the electricity grid
- Support locally grown and used food, using vertical and horizontal spaces
- Develop the city as an ecosystem.

Connected City

- Enable people to access commerce and services
- Provide an integrated network of public transport, cycling and walking
- Provide safer and more accessible roads for pedestrians and cyclists
- Lift the proportion of people using sustainable modes of transport (non-car) from 72 per cent in 2006 to 90 per cent by 2020
- Improve community and business engagement in transport management.

Knowledge City

- Support the development of a well-resourced education and research system which is among the best in the world
- Allow people of all demographics and skills to access knowledge and education opportunities
- Transform research and ideas into more innovative goods and services
- Encourage informal learning through personal interaction
- Encourage Informal meetings at venues such as museum exhibitions and pubs
- Provide state of the art telecommunications and information technologies to be a leader in online knowledge.

For its part, the MSS includes some specific objectives and commitments on housing outcomes. For example, it states "Social diversity is an important factor in the social health of the city. A diverse population needs a diversity of housing sizes and types. There is also a need to increase the proportion of lower cost accommodation, social housing and housing for people of all abilities". Moreover, Strategy 4.3 commits Council to supporting "the provision of well-designed and managed affordable housing, social housing, crisis accommodation and rooming houses".

Threaded through both Future Melbourne and the MSS is a vision of a genuinely diverse community backed by a suitably diverse housing stock. The MSS does not quantify this vision, but Future Melbourne suggests that 20 per cent of new housing completions in the City should be 'affordable'.

Whilst the City of Melbourne has established its goals for housing, it is clear that the organisation does not operate in a vacuum as far as housing outcomes are concerned. In practical terms, the questions of diversity and retention of workers being canvassed in the abovementioned policy documents will be



resolved over a significantly greater geographic area than the confines of the municipality. In understanding the economics of housing in the municipality, it is vital, firstly, to understand the scope of relevant sub-markets.

2.2 Housing sub-markets

Housing sub-markets should be considered as being relatively homogenous in terms of demand and supply characteristics. This section of the report defines the broader housing sub- markets within the City of Melbourne and attempts to identify areas that could potentially be an alternative or replacement location for housing in the City of Melbourne. These sub-markets form a basic building block of urban housing market analysis. From an urban economic standpoint, Watkins (2008, p 168) argues that:

Sub-markets are deemed to comprise properties (and locations) that are likely to represent relatively close substitutes to consumers searching for dwellings. They have both spatial and structural (dwelling type) dimensions.... In spatial terms, they are likely to comprise several neighbourhoods.

There is considerable variation in the character and development form of residential areas within the City of Melbourne. High rise residential development in the CBD and surrounds contrasts with heritage Victorian residential or Edwardian terrace style dwellings in suburbs such as Carlton and Kensington. New townhouse development in inner city locales including Port Melbourne provide a marked contrast in terms of form and function to the provision of student housing centred on the municipality's tertiary education institutions at the northern edge of the CBD, Carlton and Parkville.

In 2006, there were 41,200 dwellings in the municipality. Of these, most were flats, units or apartments (80 per cent), a higher proportion than in the Inner Region and the Melbourne Statistical Division (MSD). Semi-detached, row or terrace houses and townhouses accounted for 16 per cent of housing within the municipality, a slightly lower proportion than in the Inner Region, but higher than the MSD. The municipality had a smaller share of separate houses than the Inner Region and MSD, with separate dwellings accounting for just over 3 per cent of all dwellings.

The figures included below show areas identified as housing sub-markets of the suburbs of the City of Melbourne. Comparability has been established by the use of two variables – the density of dwellings within the suburb, and the similarity / comparability of rental accommodation costs. An existing or prospective resident of a suburb is not typically bound or constrained by administrative boundaries when making a decision on residential location. There are likely to be several factors which influence a residential location decision – irrespective of whether the decision maker is seeking to rent or to purchase property. These will include access to employment opportunities, access to infrastructure and other factors which influence quality of life. However, the affordability and pricing of accommodation in a location is likely to play the key role in determining residential location, given that it is a constraint factor for most households to a greater extent than it is a choice or preference (households will not reside in locations which are unaffordable to them, and this is not usually something which can be compromised on, unlike for example, proximity to employment). Furthermore, the cost of accommodation can also be seen as a rough proxy for other factors that influence accommodation location decisions. Other factors being equal, better connected locations have higher accommodation costs than poorly connected locations.

However, locations with comparable prices can have varying accommodation offers and may not be directly comparable housing sub-markets. This can be a reflection of the type of dwelling stock available. To account for this, the site density of dwellings within suburbs has been used as a further guide to the



comparability of housing sub-markets¹. The scores shown in the figures are therefore composite figures comprised of the deviation of the log dwelling density and log residential rents from those of the comparator suburbs.

The suburbs most comparable to each of the City of Melbourne suburbs are shown in Figure 1 through to Figure 9. Darker shading indicates greater comparability of housing markets: for example, Melbourne CBD is more comparable to Docklands than it is to North Melbourne or St Kilda.



FIGURE 1. MELBOURNE - HOUSING SUB-MARKETS

Source: SGS Economics & Planning

¹ The scores shown in the figures are composite figures comprised of the aggregate deviation of the log scores of dwelling density and residential rents. A low score indicates that the combined deviation is less and therefore the suburbs are more alike than for a suburb where the score is higher and the aggregate deviation of rents and dwelling density is greater.





FIGURE 2. DOCKLANDS - HOUSING SUB-MARKETS

Source: SGS Economics & Planning









Source: SGS Economics & Planning

FIGURE 5. EAST MELBOURNE - HOUSING SUB-MARKETS







FIGURE 6. NORTH MELBOURNE - HOUSING SUB-MARKETS

Source: SGS Economics & Planning

FIGURE 7. SOUTH YARRA WEST - HOUSING SUB-MARKETS







FIGURE 8. PARKVILLE - HOUSING SUB-MARKETS

Source: SGS Economics & Planning

FIGURE 9. KENSINGTON - HOUSING SUB-MARKETS





The analysis of housing sub markets in the City of Melbourne has identified that there are essentially two broad housing market locations for the municipality. There is a core city centre type housing market, comprising the suburbs of Melbourne, Southbank and Docklands, and a broader outer ring of inner Melbourne suburbs extending from St Kilda in the South East to Brunswick in the North, and which could possibly include some inner Western region suburbs such as Footscray, Seddon and Kingsville. While the housing location decision making process will vary from individual to individual, these areas provide a broad indication of the potential alternative locations for people seeking to locate in the City of Melbourne. These broader substitute housing markets are shown in Figure 10.





Source: SGS Economics & Planning

2.3 Housing policies of comparator cities

The international context for the housing policy of the City of Melbourne is provided through a brief description of the policies and strategies of comparator cities. Attention is focused on the policies that pertain to increasing the provision of housing, or improving the affordability of housing to lower income groups.

Adelaide

The City of Adelaide has adopted a 'Residential Growth Strategy' (June 2012)² targetting 3 outcomes:

- an adequate supply of affordable housing in the City;
- establishment of the central city as a residential location of choice; and
- genuinely diverse residential development accommodating a range of households.

Unlike Melbourne, the City of Adelaide faces the challenge of building up underlying demand for central city living. As the Council states in its policy *"apartments are only attractive to a small part of the market, whereas townhouses and detached dwellings have a broader appeal. There is a need for a 'cultural shift' to generate demand for an urban lifestyle of which apartment living is part. Market research shows that those considering city living need some convincing"*. In a move reminiscent of Melbourne's Postcode 3000 policies, the City of Adelaide has established a website *'alreadyhome.com.au'* to promote the virtues of downtown living. This sits alongside a range of other promotional measures to galvanise developer and buyer interest in central city housing.

There is a strong focus on social diversity as an underpinning element in the Residential Growth Strategy. Council believes that "diverse communities are more sustainable because they are able to maintain a range of services and facilities appropriate to all age groups. A residential population that is diverse in its composition and lifestyle helps to generate the vitality and creativity to create and sustain enviable city lifestyles. Implicitly, Council sees city lifestyles and therefore diversity as important to the economic success of Adelaide.

The Council has long been involved in the direct creation of affordable housing opportunities in the City. As well as advocacy for action in affordable housing from State and Commonwealth Government agencies, the Council has used its land portfolio in partnership with the private sector to generate housing opportunities for low and moderate income earners. More recently, Council has taken these innovations into the provision of shared equity housing. A current project which demonstrates each of these elements is situated in Sturt Street a couple of blocks south of the Adelaide Central Market. With a private developer (Hindmarsh Property) about 180 apartments will appear on the site over the next few years. Stage 1 is being developed by Council with 72 designated affordable dwellings (one and two bedrooms), 20 supported by NRAS³ and 52 as affordable sale (shared equity).

Sydney

In 2008, the Sustainable Sydney 2030 plan was adopted by Council to guide housing (and other) policy over the next few decades. It was heavily focused on providing affordable and social housing for the local community.

Sustainable Sydney establishes an aspiration that by 2030, 15 per cent of all dwellings in the city will be social or affordable housing (7.5 per cent each) provided by not for profit NGOs (non-government organisations), government and community providers. This is likely to comprise approximately 8,000 new homes for key workers and social housing tenants.

Achievement of the objective will entail, amongst other things, the City selling prime real estate to allow for affordable housing units to be developed on inner city land. Where appropriate, site specific planning controls have been established to facilitate development.



² http://www.adelaidecitycouncil.com/assets/acc/Council/policies/docs/Residential_Growth_Strategy_FINAL.pdf

³ NRAS is the National Rental Affordability Scheme. It provides mainly Commonwealth funded (annual) subsidies to developers willing to provide rental housing at affordable prices to low and moderate income groups for a period of 10 years.

London

The City of Westminster is located in Central London covering an area similar to the Melbourne CBD and surrounds. The Westminster Housing Strategy 2007-2012 (City of Westminster 2006) laid out a number of strategic priorities and an action plan.

Increasing the supply of homes

There was a stated need to increase housing supply by heavily focusing on the redevelopment of infill sites. Council noted that, to achieve this, it would be heavily reliant on the private sector to deliver a target of 680 new dwellings per year for the next ten years (2007 to 2017), with some guidance from a set of robust planning regulations. Council is actively seeking new opportunities to develop more housing on existing residential estates.

Tackling high demand and improving housing advice

Council identified a need to manage expectations for housing demand in the inner city. This relates to the fact that many people who would like to live in the City of Westminster, do not actually *need* to. Hence Council believes it has a role to help those people explore and become aware of other housing opportunities and options such as London's Growth Areas. Council feels this will help to tackle homelessness and overcrowding by managing overall housing demand.

Developing role as a strategic housing authority

Council has stated that developing relationships with key private landlords is an important strategy which will enable the City of Westminster to play a role which transcends the narrow confines of being a provider of social housing.

This includes holding annual meetings with over 100 landlords in the area to discuss policies and standards, consult on changes and exchange information on emerging issues in housing in the local area. This partnership approach is seen as a means for ongoing research as well as a way to lobby for change.

Other government bodies in London have specific policies targeted towards increasing inner city housing supply.

- The Borough of Richmond has a scheme whereby empty (non-utilised) properties are brought into use. The Borough encourages local residents to help identify underutilised land (City of Richmond 2012). Action is then taken by the Borough to encourage residential use of these properties.
- Transport for London, which run the London Underground rail network and buses in the city, also let vacant properties where they become available (Transport for London 2012).
- Key Worker Living is a government funded rent scheme to provide affordable housing to key workers who work in the city (Affinity Sutton 2012).

Singapore

The city-state of Singapore has gone through a number of phases of well publicised housing policies in the post-war era. Central government has played an active role in shaping housing markets whilst also directly providing housing projects. Each set of housing policies implemented in the post war era was characterised by a dominant issue which triggered a response that was firmly rooted in the philosophy of housing welfare. These sets of responses are summarised below (Phang 2001, 2007).

Housing Shortage

Rent control was introduced in the late 1940s as a response to chronic housing shortages. By pegging back rents to pre-1939 levels, tenants were protected from skyrocketing accommodation costs which



had the potential to drive them into homelessness. This short to medium term measure was followed by the extensive construction of public housing to fix the underlying shortage problem.

A publicly funded Housing Development Board (HDB) was established in the 1960s to construct housing for sale to residents (on a 99 year lease basis). This provided a constant flow of housing supply into the market, with units and flats being priced at below market rates. The purchases of these homes were governed by strict eligibility policies and tests. This pricing was possible as the dwellings were constructed on state-owned land, much of which had been acquired through compulsory acquisition. As a result of these policies, home ownership rates in Singapore rose from 29 to 92 percent between 1970 and 2000.

Easing of Housing Shortage

As housing shortages eased throughout the 1980s and early 1990s, regulations surrounding the secondary market (resale) of HDB homes were also relaxed. A five percent levy was applied to secondary housing transactions to mitigate windfall profits to original purchasers. Households need to have occupied a home for five years before resale is possible.

House Price Inflation

The HDB also provides loans and financing schemes for households seeking to buy the secondary homes so that housing ownership rates continue to improve. This may have partly contributed to soaring house prices (in conjunction with market speculation and other forms of financial liberalisation in the late 1980s). This forced the Central Government to introduce a range of anti-speculation measures in 1996 including capital gains taxes, stamp duty and limitations to home loans.

New York

New York City has an extremely tight housing market. This not only affects lower income earners, but also middle-income households. The City is currently experimenting with a wide range of housing policies to prevent middle class workers from leaving the city as residents.

The City's Department of City Planning and Department of Housing Preservation and Development are currently investigating the merits of introducing planning legislation which would allow for the development of micro dwellings. Apartments as small as 30 square metres are considered as a possible means of housing an increasing number of single and two person households in the city centre.

The Department of Housing Preservation and Development is also working with other government agencies to identify under-utilised or disused publicly owned sites which may be redeveloped for housing purposes.

2.4 Housing indicators of comparator cities

This sub section highlights demographic and household data impacting on housing supply and affordability in Melbourne and selected comparator cities.

Table 1 focuses on state-wide income to CBD rent ratios across cities and states as an indicator of housing affordability. It shows that of the four Australian cities analysed, the housing market in Melbourne's inner city is the most affordable to workers of its respective state (Victoria). Sydney's rental market emerges as the least affordable for those people working in New South Wales. Vancouver's housing income to rent ratio compares very favourably with the Australian examples.

	Melbourne	Sydney	Adelaide	Brisbane	Vancouver
Median Weekly CBD Rent (\$)	450	650	420	620	332
Median State Gross Weekly Household Income (\$)	1216	1237	1044	1235	1062
Income – Rent ratio	2.70	1.90	2.49	1.99	3.20

TABLE 1. MEDIAN RENTS AND INCOMES – SELECTED CENTRAL CITY AREAS (A\$)

Sources: ABS Census 2011, Property Observer, Metro Vancouver

Figures 11 to 14 compare household income profiles across the major Australian city centres against their respective state medians. All four sets of data are similar in the sense that in the major capitals, there are proportionately fewer households in the middle income brackets and there is a relatively greater proportion of households on either very high incomes or little to no income. In Melbourne and Adelaide, there are particularly large proportions of residents on Nil Income, perhaps reflecting the high student populations in those cities.



FIGURE 11.GROSS WEEKLY HOUSEHOLD INCOME PROFILE - MELBOURNE & VICTORIA

Source: ABS Census 2011





FIGURE 12.GROSS WEEKLY HOUSEHOLD INCOME PROFILE – SYDNEY & NEW SOUTH WALES

FIGURE 13.GROSS WEEKLY HOUSEHOLD INCOME PROFILE – ADELAIDE & SOUTH AUSTRALIA







FIGURE 14. GROSS WEEKLY HOUSEHOLD INCOME PROFILE - BRISBANE & QUEENSLAND

Source: ABS Census 2011

Figures 15 to 18 compare residents' age profiles across the major Australian city centres against their respective state averages. In all major capitals, residents in the 20 to 34 age category have a substantially higher representation. Once again though, Melbourne and Adelaide have a slightly higher proportion of 20 to 24 year olds, whereas in Sydney and Brisbane, 25 to 29 year olds form the most significant age category. The most likely cause once again would be the higher number of students residing in the central core of Melbourne and Adelaide.





FIGURE 15.AGE PROFILE - MELBOURNE & VICTORIA

Source: ABS Census 2011



FIGURE 16.AGE PROFILE - SYDNEY & NEW SOUTH WALES

Source: ABS Census 2011





FIGURE 17. AGE PROFILE - ADELAIDE & SOUTH AUSTRALIA

Source: ABS Census 2011



FIGURE 18.AGE PROFILE - BRISBANE & QUEENSLAND

Source: ABS Census 2011

Table 2 below compares the percentage of the inner city resident workforce who work in the inner city. Sydney has the highest rate of self-containment, with Brisbane the lowest. However, overall the figures



are broadly comparable. There are a range of factors which influence the proportion of residents that both live and work in the inner city, including the provision and efficiency of transport infrastructure, the distribution of employment opportunities outside the inner city area and the relative attraction and levels of amenity of potential residential locations for employees in the inner city area.

TABLE 2. PERCENTAGE OF RESIDENT WORKERS WHO WORK IN THE INNER CITY

	City of Sydney	City of Melbourne	City of Adelaide	Brisbane Inner
Local Workers	62%	59%	57%	55%

Source: ABS Census 2011

Tables 3 and 4 focus on the overall number of dwellings available in the city centres. The geographies are broadly comparable in terms of areal extent. Whilst Sydney possesses the highest number of dwellings overall, dwelling growth in the City of Melbourne since 2006 is outpacing that of the other city centres.

TABLE 3. NUMBER OF DWELLING UNITS IN 2011

	City of Sydney	City of Melbourne	City of Adelaide	Brisbane Inner
Total	94,785	53,429	10,861	31,051

Source: ABS Census 2011

TABLE 4. GROWTH IN NUMBER OF DWELLING UNITS 2006 TO 2011

	City of Sydney	City of Melbourne	City of Adelaide	Brisbane Inner
Total	8,269	12,189	1,840	510
% Growth 06 - 11	10%	30%	20%	2%

Source: ABS Census 2011

Tables 5 and 6 record the size distribution of housing stock in the city centres. There are greater proportions of one bedroom dwellings in Sydney and Melbourne, whereas larger dwellings with more bedrooms are more common in Adelaide and Brisbane.

In Sydney, Melbourne and Adelaide, there has been a significant increase in new one bedroom dwellings being constructed. Overall, dwellings are reducing in size, with Brisbane being the exception.

Number of bedrooms	City of Sydney	% of stock 4	City of Melbourne	% of stock	City of Adelaide	% of stock	Brisbane Inner	% of stock
None or 1	27,260	37%	13,235	32%	1,847	22%	6,114	25%
2	30,877	42%	18,853	46%	4,118	49%	10,487	43%
3	11,941	16%	7,473	18%	1,897	23%	5,531	23%
4+	3,589	5%	1,823	4%	525	6%	2,159	9%
Not stated / NA	21,118		12,045		2,474		6,760	
Total	94,785		53,429		10,861		31,051	

 TABLE 5.
 SIZE AND DISTRIBUTION OF HOUSING STOCK 2011

Source: ABS Census 2011

⁴ Dwellings where the number of bedrooms is 'not stated' are excluded from the total for the purpose of calculating the proportion of stock accounted for by dwellings by size.



Number of bedrooms	City of Sydney	% of stock 5	City of Melbourne	% of stock	City of Adelaide	% of stock	Brisbane Inner	% of stock
None or 1	6,191	43%	4,227	39%	596	37%	631	24%
2	5,657	40%	4,499	42%	654	40%	1,074	41%
3	1,822	13%	1,631	15%	263	16%	514	20%
4+	596	4%	466	4%	104	6%	383	15%
Not stated / NA	-5,997		1,366		223		-2,092	
Total	8,269		12,189		1,840		510	



Source: ABS Census 2011

2.5 Conclusions

There are two broad housing markets for the City. If they are seeking a comparable dwelling type within a particular price range, people wanting to locate in Docklands, Southbank or the CBD are relatively constrained in their choice of alternative locations. The types of dwellings in these markets are likely to be high rise apartment developments. People seeking to locate in an inner suburb, outside of the CBD and featuring lower density development forms, such as medium to low rise apartments dwellings, townhouse dwellings or older terraced housing have a considerably larger sub-market in which they might find accommodation.

The City of Melbourne's household and demographic trends are generally similar to those of Sydney, Adelaide and Brisbane. The main difference is that housing stock in the City of Melbourne has been growing at a much faster rate since 2006 compared to the other city centres. There are also some small differences in affordability, income profile and age distribution. However, a theme common to the comparator cities appears to be the increase in the proportion of developed stock of a smaller size – of one bedroom or studio apartment development. Although the Census data contain a high proportion of uncertainty (due to the lack of classification by size of a high proportion of dwellings), the data suggest that the proportion of new dwellings that are studio/one bedroom is higher than the proportion of existing stock accounted for by dwellings of a comparable size. (Brisbane is the exception, although the lack of data on the size of almost half of the increase in dwellings from 2006 to 2011 is a major limitation of the data). This would suggest that the comparator cities are all facing a similar situation: that is, that the supply of new dwellings is being concentrated into providing smaller stock. The reasons for this are discussed in detail in Section 4.3. The provision of smaller dwellings may act as a constraint on the diversity of households that are able to live in the inner areas of the comparator cities.

The City of Melbourne shares common aspirations with the international comparator cities identified. The aspirations centre around making the municipality an attractive place to live and work that can attract jobs in a competitive international environment. Education and knowledge are seen as both attractors in their own right and as drivers of economic growth through business innovation. Sustainability, partly achieved by reductions in demands on energy usage through improved building design, better transport connectivity and reductions in travel demands, and partly achieved by supporting green initiatives such as improving air quality and open spaces is a key tenet of the City of Melbourne's vision. The housing aspirations of the City of Melbourne are encapsulated within a number of the broader themes. For example, the aim for a high standard of living and a liveable city requires that a component of housing be 'affordable', and the aspiration to create a sustainable city through the



⁵ Dwellings where the number of bedrooms is 'not stated' are excluded from the total for the purpose of calculating the proportion of additional stock accounted for by dwellings by size.
reduction in travel requirements will necessitate higher housing densities; both of which are affected by the economic and industry environment in which housing is developed, bought and sold.

The affordability of accommodation is an issue common to the comparator cities. The issue of affordability is related to the level of demand and supply and the cities adopt a range of methods to overcome the problem. While increasing the level of supply through the easing of planning restrictions and increasing the amount of land available for development is common to all cities, the City of Westminster has a strategy to manage the level of demand in the central area by promoting housing opportunities elsewhere within the broader metropolitan area. The provision of affordable housing - whether to key workers or to lower / middle income groups - is also cited as a policy of the cities examined in the report.





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Overview

This Section posits that the future demand for housing in the City of Melbourne and relevant inner city sub-markets will be strongly influenced by the jobs profile of the municipality. It discusses how the evolving role of the City of Melbourne as knowledge industry hub in the metropolitan, State and national economies is bringing about a particular employment base in the municipality. The implications for the types of households wanting to take up residency in the City of Melbourne or nearby are drawn out, including commentary on housing preferences. This discussion also addresses the types of households likely to be squeezed out of housing in the City of Melbourne, because of competition from high end knowledge workers. The Section places a particular focus on sectors known to have specific demands for housing in or close to the City of Melbourne, for example, the Universities.

3.1 Who's looking for housing in the City of Melbourne?

Housing preferences in the City of Melbourne

Knowledge workers are likely to be a dominant group seeking housing in the City of Melbourne in the future, given the municipality's large cluster of employment in this industry and the associated high wages on offer. Students will similarly figure prominently given the concentration of leading universities in the City. There is also likely to be significant demand from 'key workers', both those typically operating at the lower end of the income spectrum (such as hospitality service workers) and those employed in essential services such as health, education and policing. The factors driving preferences and options before these groups are explored in more detail later in this section. However, we begin with a broader appraisal of housing preferences.

A key group of the population with particular housing preferences comprises older people at retirement age. Various studies have detailed the links between the residential location of older people and fiscal variables, amenities, social and economic characteristics and residential patterns. The key factors included sunny climates, coastal access, bodies of water and areas with high public spending on police and parks and recreation and existing high concentrations of older people. The factors that were likely to detract from the locational choices of older people included high taxes, high spending on public welfare and education, humid or cold climates and high levels of crime (Duncombe, W. Robbins, M. 1999).

A notable study conducted in 1999 used a multinomial logit model to determine the location choices of people aged 65 to 74 from among more than 3,000 counties in the US. This quantitative analysis found that on average older people in the 65 to 74 age bracket choose to avoid high taxes and housing prices, while they are drawn to areas with relatively high spending on such services as fire, policy and recreation. Amenities such as coastline and warm weather are also valued (Duncombe, W. Robbins, M. Wolf, D. 1999).

Given the characteristics of the City of Melbourne, and the findings from these studies, it is unlikely that there will be significant demand for housing from older aged people. However, there may be some demand from retirees going against the trend, looking for an urban lifestyle with a high amenity offer.

The housing preferences of families are different again to those of knowledge workers and older people. Pioneering work done by Rossi (1955), which examined the link between residential mobility and the



life-cycle of individuals, highlighted potentially dramatic shifts in preferences as households mature. During the family phase of the lifecycle, there is various evidence to suggest that access to schools has the greatest impact on residential location decisions (Bayoh, Irwin & Haab 2006; Jae Hong Kim, Pagliara & Preston 2005; Morrow-Jones, Irwin & Roe 2004; Vogt & Marans 2004). However, the importance of education is more relevant to families with school-aged children. A study by Myers and Gearin (2001) found that the importance of school quality in location decisions reduced with the age of those surveyed.

Given the current limited availability of primary and secondary schools in the City of Melbourne, housing demand from families with children is not expected to be strong. Historical ABS census data shows that average household size is larger in the middle and outer suburbs of Melbourne. Additionally, families with children have historically opted to live in separate houses or semi-detached dwellings, which does not align with the total dwelling stock mix in the city. Increased school provision could result in increased demand for housing from families if appropriate housing stock is available.

Population migration and the City of Melbourne

The municipality's population is relatively transient compared to other local government areas in Victoria. The proportion of the population who were resident in the City of Melbourne in 2011 and were also resident in the municipality in 2006 was lower than in any other LGA: just 30 per cent of the City of Melbourne's 2011 population had been resident in the municipality five years earlier. This compares to a state-wide figure of 80 per cent of residents who in 2011 lived in the same LGA as they did five years previously. In part this is explained by the rapid residential growth of the City of Melbourne.

20 per cent of City Melbourne residents in 2011 had moved to the municipality from elsewhere in Victoria. A significant proportion - almost 50 per cent – had moved from outside of Victoria, either from elsewhere in Australia or from overseas.

Other than those residents who were already resident in the City of Melbourne in 2006, the lion's share of 2011 residents in the municipality who had moved from elsewhere in Victoria originated in the LGAs of Yarra, Moreland, Port Phillip and Stonnington. In 2011, 14 per cent of the population of the municipality who had moved to Melbourne from within Victoria had moved from one of these LGAs in the period since 2006.

3.2 Housing demand generated by the economic role of the City of Melbourne

Trends in the City of Melbourne's job stock

Historical trends

Inner Melbourne's economy has changed significantly over the past couple of decades. A crucial set of global events in the 1980s and 1990s led to a renewal process that resulted in dramatic employment growth within inner Melbourne. These flowed from the increased exposure of the Australian economy to global trade conditions, and were prompted by a number of federal government initiatives, including the deregulation of the Australian banking and finance industry, the tariff reforms that began in the 1970s and accelerated through the 1980s, and, the floatation of the Australian dollar in 1983.

After thirty years of stagnation, the total number of jobs within the City of Melbourne alone increased by more than 120,000 in the ten years between 1990 and 2000. Between 2001 and 2011 a further 150,000 jobs were added. Figure 19 presents the level of employment within the City of Melbourne and CBD between 1961 and 2011, illustrating this surge in employment in recent decades.





FIGURE 19.TOTAL EMPLOYMENT WITHIN THE CITY OF MELBOURNE & CBD (1961 – 2011)

Source: SGS Economics & Planning based on CLUE data, ABS Census data, ABS Labour Force Survey and data from the 1985 City of Melbourne Strategy Plan, and 1954 Melbourne Metropolitan Planning Scheme

Drivers

Figure 20 presents the three key drivers of employment change within the central city, with each of the drivers described in more detail below. The combination of structural macroeconomic changes, investment in key projects and improved access to a skilled workforce all contributed to increased levels of economic activity in inner Melbourne.

The first driver of employment change within inner Melbourne included **structural economic changes** such as the opening up of trade barriers, floating of the currency and deregulation of industrial relations. This growth in employment largely occurred within the knowledge intensive service sector (property and business services, finance and insurance etc). This sector demands a concentration of higher order complementary services in highly accessible clusters, characteristic of the central city. These locational requirements of high technology service sector firms have driven the strong employment growth within those industries in Central Melbourne. Having the large agglomeration of high technology service sector jobs boosts the productivity of these service sector firms by an amount that more than compensate for the higher costs of central city location. As a consequence there has been a strong drift of this professional employment into central Melbourne. This gravitational pull is unlikely to be reversed any time soon.

The second driver of employment in this location was **investment in key projects, improvements in access to the central city and increased amenity**. The City of Melbourne's Postcode 3000 initiative contributed to this. This program included a marketing campaign and review of building regulations to support residential development in the municipality. Other significant initiatives and investments that occurred post 1980 included; the opening of the city loop rail; the redevelopment of Docklands with associated urban renewal and public transport infrastructure investments; further development and intensification within the Central Business District; Southbank; and more recently, South Wharf.



The construction of the City Link and Western Ring Roads in the early 2000s both improved access to the municipality and strengthened the links between the west of Melbourne and the central core. This allowed for the relocation of industrial, warehouse and logistics type firms to the west freeing up valuable floor space in inner Melbourne for service based jobs.

The increased amenity of the central city also contributed to employment growth in retail trade and accommodation and food services as the City of Melbourne became a more desirable place for recreational pursuits. This would also have increased tourism to inner Melbourne, boosting employment growth in services to tourism.

The third driver of employment change in the central city was improved access to a **skilled workforce**. Efficient access to a skilled workforce, through ongoing improvements to transport links, boosted business formation in the central city. With the increase in demand for knowledge intensive services there was also an increase in supply of skilled workers to fill these jobs. Increases in the number of people graduating with bachelor and higher university degrees and the movement of more highly skilled people to inner Melbourne are both signs of this occurring.

FIGURE 20. DRIVERS OF EMPLOYMENT CHANGE WITHIN THE CENTRAL CITY



The availability of competitively priced office space has also played a big role in the growth of the knowledge economy in the central city. Since the 1970s, prime office rents within Melbourne's Central Business District (CBD) have remained competitive. Figure 21 shows that since the early 1990s, the rental cost of office floor space has been at least \$100 per square metre lower than equivalent space in Sydney.





FIGURE 21. PRIME AND SECONDARY NET OFFICE RENTS PER SQUARE METRE

A key factor in keeping Melbourne's office rents relatively low was the opening up of Docklands. This kept a lid on office rents throughout the metropolitan area, whilst retaining sufficient buoyancy to propel new office construction. The scale of additional floor space provided in recent years indicates that the City of Melbourne is also considered an attractive area for such activity.

Significant structural economic change has occurred, which has affected the spatial distribution of economic activity and employment across metropolitan Melbourne. In inner Melbourne, it has led to the increased prominence of the CBD and strong employment growth. It is anticipated that the trends which have contributed to this will continue in the future.

Comparing Effective Job Density (EJD) in Melbourne and Sydney

EJD for a given location is given by the job number in that location (a proxy for the concentration of firms or economic activity) plus all the jobs that can be reached in other locations divided by the time or cost in reaching them. In Melbourne, other things being equal, a doubling of EJD boosts productivity by some 8 per cent. EJD can be used as a measure of economic agglomeration. Comparing EJD in Sydney and Melbourne gives some insights into these cities' potential as long term platforms for sustaining an agglomeration advantage.

Melbourne has a significant economic mass within a 5 kilometre radius of the core, with consistently high EJD 10 kilometres from the CBD. However Sydney has a lower 'economic mass' at the core.

In terms of land availability, Melbourne has much larger stocks of strategically located and readily available employment land. This gives the city a crucial advantage in the knowledge economy and helps explain the revival of the metropolis's fortunes over the past 15 years or so. Sydney's prospects in the knowledge economy may be being strangled by capacity constraints and difficulties in identifying and releasing strategically located land.



Source: Knight Frank Melbourne and Sydney office market overviews, 2012

So while Sydney retains an overall productivity advantage at this point, this may be reflective of historic infrastructure provision and, without investments to improve capacity and connectivity within the metropolis, is likely to be eroding. Figure 21 illustrating the price of prime and secondary office rents in Sydney and Melbourne provides evidence that the cost of prime office space is considerably lower in Melbourne than Sydney. More importantly, these figures show that Melbourne can offer agglomeration economies to knowledge intensive service businesses at a significantly lower unit cost than Sydney. Projects like Fishermans Bend and E-Gate will cement this advantage into the future.



FIGURE 22.COMPARING EFFECTIVE DENSITY AND URBAN FORM

Ongoing potential of the central city knowledge economy

The inner city (City of Melbourne, Yarra, Stonnington and Port Phillip) currently provides a significant proportion of metropolitan Melbourne's employment - 33.7 per cent in 2011. This is projected to continue: Inner Melbourne's share of total employment is likely to increase slightly over the next thirty years to around 34.1 per cent by 2031, equivalent to 1,012,500 jobs. Table 7 presents estimates of total historical, current and projected employment (in 1996, 2011 and 2031) for the City of Melbourne, inner Melbourne, the Melbourne Statistical Division (MSD) and Victoria.

TABLE 7. MELBOURNE EMPLOYMENT GROWTH

Total Employment	1996	2011	2031	Historical Growth (AAGR 1996-2011)	Projected Growth (AAGR 2011-2031)
City of Melbourne	296,500	488,700	693,000	3.4%	1.8%
Share of MSD	19.0%	22.5%	23.4%	31.2%	25.8%
Inner Melbourne	481,000	733,900	1,012,500	2.9%	1.6%
Share of MSD	30.8%	33.7%	34.1%	41.1%	35.2%
MSD	1,560,400	2,176,200	2,966,800	2.2%	1.6%
Share of Victoria	75.3%	76.1%	77.3%	78.3%	80.9%
Victoria	2,072,800	2,859,600	3,836,700	2.2%	1.5%

Source: SGS Economics & Planning



Projected growth by industry within inner Melbourne highlights that the Advanced Business Services⁶ sector will continue to provide the greatest number of jobs within inner Melbourne, predicted to grow from 250,600 jobs in 2011 to 400,600 jobs by 2031. Other major employment industries include Health Care (133,200 jobs by 2031), Government & Business Services (109,500 jobs by 2031) and Cultural Services⁷ (102,400 jobs by 2031). Figure 23 presents the estimates of inner Melbourne industry employment in 1996, 2011 and 2031.





Source: SGS Economics & Planning

A number of key trends are at play in these industry projections, coming from historical trends and the current economic environment in Melbourne. These are outlined below. Figure 24 shows the projected industry contribution to growth to 2031, comparing the City of Melbourne, Inner Melbourne and the MSD overall. The contribution to growth is defined as the share of total employment growth within a region that is attributable to a specific industry. The Advanced Business Services and Health Care industries contribute the greatest amount to projected employment growth in all three comparator regions.

Employment related to Manufacturing is very likely to decrease in Melbourne driven by two key factors. Automation of core functions within the industry will continue to grow and therefore the industry will be less reliant on labour as it strives to become more internationally competitive. Secondly, some segments of Manufacturing will not be able to adapt to changing technologies and employment will contract significantly in the face of international competition.

Population driven jobs⁸ will continue to grow at just below population growth rates (as they become more productive). The exception is Health Care which will grow faster as a result of the ageing population.



⁶ Advanced Business Services includes Professional, Scientific & Technical Services, Financial & Insurance Services and Information Media & Telecommunications

⁷ Cultural services includes Accommodation & Food Services and Arts & Recreation Services

⁸ Construction, Retail Trade, Accommodation & food services Rental, hiring & real estate services, Public administration & safety, Education & training, Health care & social assistance, Arts & recreation and other services

For Melbourne, the ongoing shift in global trade is likely to mean continued growth of the knowledge intensive and Advanced Business Service sector. This is one key area in which Melbourne is internationally competitive. These industries include finance and professional services.

As clients for these services will include those based internationally or interstate, the employment growth rate for these sectors is faster than population growth. While there is a current global slowdown, it is expected that this will lift. Given Melbourne is a location with high liveability and a highly skilled work force, it is very likely it will continue to be an attractive location for such firms in the long term, provided, of course, the city can maintain the competitive strengths inherent in its urban quality and functionality.

Areas where Melbourne has clear advantages over other locations include:

- Provision of services for the mining sector; head offices (for example BHP Billiton) and supporting
 professional advice will continue to generate employment as activity takes places elsewhere in
 Australia.
- Accommodation of the local superannuation industry; the decision of the Future Fund to locate its
 operations in Melbourne rather than Sydney highlights the strength in this growth industry.
- Critical mass as an ICT and advanced-technology hub; companies including Telstra, Primus Telecom, Ericson, NBN Co, CSL and Biota all have a strong presence in Melbourne, not to mention the heavy concentration of publically funded research bodies.

The diversified and nimble nature of the economy of inner Melbourne should enable it to take advantage of emerging opportunities which the future may hold. The central city and other inner areas will attract significant housing growth driven by their amenity and access to employment opportunities. Population in these areas will continue to generate demand for a range of supporting services (and hence jobs) in retail, cafes, etc. The amenity that this creates will also attract some firms e.g. creative / architecture / IT / start up firms into the surrounding areas.



FIGURE 24. PROJECTED INDUSTRY CONTRIBUTION TO GROWTH, 2011 TO 2031



Source: SGS Economics & Planning

Impact of congestion and telecommunications

Other likely trends include reduced transport congestion from efficient land use development in the future, and an increase in people working from home. What is uncertain in the future is the impact of improved technology, such as the National Broadband Network (NBN) on the spatial distribution of employment.

The past decades have seen a rapid increase in people travelling to inner Melbourne by public transport, in particular, to the central city. This has resulted in significant congestion on the public transport and road networks. Partly in response to this congestion, there has been a switch to higher density living in areas which offer the ability to avoid journey to work delays. As a result, the population in the City of Melbourne, Port Phillip, Stonington and Yarra has increased by 83,700 people over the past decade. This is slightly higher than the City of Wyndham (81,400), which was the fastest growing Local Government Area (LGA) in Australia, over the same period.

Current population projections would suggest that by 2046 the inner Melbourne LGAs will attract an additional 268,000 residents, of which around 210,000 are likely to be in the labour force. This shift towards inner city living is likely to continue. It will also provide the economy of inner Melbourne with easy access to a vast pool of labour, relatively free from congestion, to aid in employment growth.

The proportion of people who work from home has remained at around 10 per cent over the last decade. There are two groups who work from home, the first are people who work sporadically from home (for personal reasons), and secondly those who choose to operate a business from their place of residence permanently. Both these practices are likely to continue, particularly given ongoing improvements in technology and communication such as the NBN which could allow people to work remotely from any location within Australia. This is sometimes held out as having the potential to reshape the economic geography of our cities and regions. However, the impact of this trend on the spatial location of employment is unlikely to be significant, at least insofar as the City of Melbourne is concerned.

The past fifteen years, since the emergence of a range of information & communications technologies (ICT), including the internet, email, personal computers, laptops, mobile phones, smart phones, have seen dramatic changes in the way business is conducted. All of the ICT platforms could have allowed jobs to disperse more widely across cities and regions. However, Melbourne and other major cities have experienced an *increase* in the concentration of employment within the central core.

It would appear that ICT has heightened the strength of agglomeration economies rather than diluted them. Further advances such as the NBN are unlikely to alter the clustering we see in the central City of Melbourne. We expect that jobs will continue to agglomerate and ICT will be used to service more remote areas.

Income profile of City jobs versus the rest of Melbourne

The level of weekly income earned by workers varies depending on their industry of employment and their occupation. This industry income profile also varies between inner Melbourne and other locations in more outer and regional areas. Figure 25 presents the share of workers in each income bracket by industry for inner Melbourne as compared to the MSD. Income brackets are defined as follows:





Income range	Income category	
Negative & nil income	Low	
\$1-\$149	Low	
\$150-\$249	Low	
\$250-\$399	Low-Medium	
\$400-\$599	Low-Medium	
\$600-\$799	Low-Medium	
\$800-\$999	Medium	
\$1,000-\$1,299	Medium	
\$1,300-\$1,599	Medium	
\$1,600-\$1,999	High	
\$2,000 or more	High	

TABLE 8. INCOME RANGE CLASSIFICATION

Source: SGS Economics & Planning

Overall a greater share of workers is in the higher income brackets in inner Melbourne across all industries. This is most pronounced in the Manufacturing & Construction industries where 69 per cent earned a medium or high income in the inner region compared to a 52 per cent MSD average. This is likely due to the nature of the jobs in inner Melbourne being oriented to white collar, office based, employment compared to elsewhere.



FIGURE 25.INCOME PROFILE OF WORKERS IN INNER MELBOURNE VS MSD BY INDUSTRY, 2006

Source: ABS Census 2006

SGS has produced income projections for both workers and residents of the City of Melbourne by industry for 2031. This was completed using the total income generated by each LGA and industry in Melbourne in 2011 and projected to 2031. This was then combined with the total number of jobs and hours worked by each employee to estimate an average income per worker in 2031. An origin destination matrix was generated from the 2006 ABS Census showing the distribution of workers and residents across LGAs in Melbourne. This was used to convert the workers income projections to resident income projections.



Figure 26 presents the projections of average annual income per job by industry for both residents and workers in the City of Melbourne LGA. Overall, workers in the municipality are projected to have higher wages than residents. This was particularly evident in the knowledge intensive and business service industries such as Finance and Insurance, Rental Hiring and Real Estate. The anticipated disparity between the incomes of workers compared to residents may be a reflection of the life stages of residents employed in these industries and the level of seniority or career progression within their industry. For example, a graduate employed in the financial services sector will almost certainly have different lifestyle aspirations and accommodation requirements than a senior manager who has been employed in the City of Melbourne to take advantage of the social and cultural amenity available. The senior manager may opt to live outside of the municipality for access to a greater range of housing types that suit his or her personal circumstances.



FIGURE 26.AVERAGE ANNUAL GROSS INCOME PER EMPLOYEE PROJECTIONS, 2031 (\$2031)

Source: SGS Economics & Planning

The housing requirements of knowledge workers - international evidence

A variety of studies have been conducted examining the locational preferences of knowledge workers worldwide. However, the findings are not consistent across countries. For example, in the US, evidence showed that high-technology workers chose to reside in outer suburban locations in large houses (Felsenstein, 2002), whilst in Europe in the Randstad region they preferred to reside in proximity to city centres due to cultural amenities (van Oort et al., 2003). Research undertaken in Taiwan found that home ownership, housing quality, real-estate as an investment opportunity, urban amenities and education facilities, job opportunities and accessibility were important in the locational choices made by knowledge-workers (Chang et al, 2010).

One study conducted by researchers in Israel focused on providing hard quantitative data regarding the underlying residential location determinants of knowledge-workers (Bendit, Frenkel, Kaplan, 2012). The study used a multinomial logit and a nested logit model to conduct a regression analysis on eight groups of explanatory variables. These variable groups included city scale, land use structure, socio-economic



status, housing affordability, accessibility measures, mobility indicators, revealed housing preferences and lifestyle factors. The authors hypothesized these variables would be most likely to influence the probability of a knowledge worker choosing to locate in a particular municipality within metropolitan Tel Aviv. The data was collected by a web-based survey across 833 observations of those who work and reside within the metropolitan region.

The statistical findings of the study for each of the variables, as they related to knowledge-workers' locational choice included:

- Total built area and residential population density was positively related
- Land use dedicated to culture and education facilities was positively related
- Socioeconomic index of the municipality was positively related
- Average housing price per square meter was negatively related
- Morning peak-hour commuting time by car to the workplace is negatively related
- Preference to reside on the metropolitan fringe increases when the spouse's workplace is located there
- Morning peak-hour commuting time by car to the metropolitan core is negatively related
- Car ownership was not significantly related; however, if a company car was provided commute travel times were significantly longer
- Knowledge workers who frequently engage in cultural and sporting activities prefer to reside in the metropolitan core and inner ring.

These results confirmed the research hypotheses and revealed that knowledge-workers prefer dense urban environments and large cities, reside in well-established knowledge communities and seek cultural and education opportunities as well as affordable housing. They choose to reside in locations that are compatible with their housing preferences, workplace location and leisure activity pattern.

The researchers suggest that budget constraints were still a consideration for knowledge-workers who have high skill and income levels. They are concerned about housing affordability, the opportunity to be homeowners and the possibility to reside in a single detached house or a large apartment. Knowledge workers tend to maximize their utility by minimizing the commuting time to their workplace (Bendit, Frenkel, and Kaplan).

Knowledge workers do make trade-offs in terms of commuting times, wages and residential location. A particularly relevant study on this issue was conducted in the US by So, Orazem, Otto (1998) using 1990 Census data to examine how wages, housing prices and commuting time affect the joint decisions of where to live and where to work. A multinomial logit framework was applied to a sample of 9,438 working age residents in central Iowa. The results yielded plausible estimates of the negative influence of housing price levels and positive influence of wage levels on the probability of residing in a particular area.

Key trade-offs that were identified from this study were:

- Commuters have higher wages than non-commuters, as implied by the utility maximisation theory
- Housing costs are lower in nonmetropolitan areas
- Metropolitan residents were more educated, had higher non-labour income and typically had smaller families
- Commuters were younger and more educated
- Commuters require higher wages to leave a worker better off than working in their community of residence
- Areas with higher housing costs required higher wages to meet a worker's opportunity utility at other residential locations.

The study calculated elasticities from the regression results and found that a 10 percent increase in expected metropolitan wage raises incentives to reside in the same area by 6 per cent, and increases incentives to commute from elsewhere by 7.6 per cent. This implies that wages influence commuting



decisions more than residential decisions because the fixed costs of commuting are lower than that of moving house.

3.3 The housing requirements of key workers

Discussion on the provision of housing frequently refers to the issue of 'key worker housing'. There is a concern – when housing and accommodation costs are seen to be growing at a faster rate than are the incomes of key workers – that industries dependent on key worker employees will be unable to meet their labour requirements. The wages provided in the industry of employment may not be high enough for employees in that industry to afford housing within a reasonable distance of their place of employment. Put another way, the higher travel costs incurred by employees - who live in a location where their income allows them to meet the cost of housing - would not be compensated by the wages received. Travel costs may be actual financial costs or they may be costs in terms of time taken to commute.

Without a supply of labour that can afford to either live in the area or live within a distance from which they can commute without incurring excessive financial or time costs, the industry will face additional costs in remunerating employees (to the extent that they can afford to incur additional costs). Or, as is the case in a number of public sector industries where salary arrangements are determined at a state level, an institution operating in that sector may face staff shortages and a resulting reduced capacity to provide services to the local population.

A further qualification is that the employees in the key worker sector are not usually so poorly remunerated that they are entitled to low income housing assistance. In summary, the concern is that key workers cannot afford to live in or near their place of employment; they face additional costs to commute to their place of work and, as such, are likely to seek either employment in a different location closer to where they can afford to live or seek employment in a different sector. Both of these have the same consequence for the key worker sector in that location.

An added complication in quantifying the key worker housing requirement in Melbourne are the 'nonstandard' hours (i.e. non 9-5 shifts) that may be worked by key workers in the municipality. While 'nonstandard hours' worked are likely to vary according to the category of key workers – nurses are more likely to work non-standard hours than teachers for example - the 'non-standard' hours are likely to be a key feature of many key worker occupations as they are defined in the section that follows. 'Nonstandard' hours may make public transport as a mode of commuter travel less practicable, while private motor vehicle usage is likely to increase the potential area from which the City of Melbourne's key workers may be drawn owing to the reduced travel times of private motor vehicle commuters travelling equivalent distances.

Key worker definitions

This issue is still further complicated by the lack of a universally accepted definition of what constitutes a 'key worker'. Definitions range from the very broad to the very specific as is shown in the examples provided here.

A Queensland Department of Housing report cited by AHURI provides the following text to describe key workers: "The term broadly implies occupations necessary to the efficient functioning of a community particularly service industries"⁹.



⁹ Yates J, Randolph B, Holloway D, and Murray D. (2005) *Housing Affordability, occupation and location in Australian cities and regions*. AHURI Positioning Paper No 84, AHURI

The case study of the City of Perth (below) also takes a broad approach to defining key workers. In this instance, the criteria are that incomes are within specified limits, and the place of employment is within a defined geographic location i.e. the City of Perth.

In a housing development at Riverbank, Caboolture (Qld), key worker housing discounts are offered to owner developers to purchase lots within a master planned development. The definition of key workers in this context is, again, rather broad; encompassing "..anyone working in essential services that help support our economic growth and quality of life (that includes employees in health, education, social and emergency services, as well as other occupations that deliver key services to the public)."¹⁰ Developers in Victoria offer similar key worker discounts: in 2010 the Point Cook Alamanda development offered discounts to purchasers who worked within an 8km radius of the development.

In the UK, key worker housing schemes are available to the following groups of workers¹¹:

- NHS staff (excluding doctors, dentists and administrative staff)
- Teachers with Qualified Teacher Status or Further Education Teachers' Qualifications (in schools, further education and sixth form colleges)
- Police officers and some civilian staff in certain police forces
- Prison service and probation service staff;
- Ministry of Defence staff
- Local Authority workers such as social workers, educational psychologists, planners (in London), occupational therapists, and others
- Members of the fire and rescue service.

A more specific (restrictive?) definition is provided in the 2011 Bankwest key worker housing affordability report. This report looks at the affordability of housing across Australia at local Government area level. Key workers in the Bankwest report are defined as: nurses, police officers, ambulance workers, fire fighters and teachers. Across Australia these occupations account for 480,000 people¹². The Bankwest report appears particularly restrictive in its classification; other work on the links between labour and housing markets has suggested that retail and hospitality workers be included in the key worker classification. This discussion paper does not purport to provide a comprehensive discussion of the key worker question and, therefore, the definition adopted by Bankwest with the addition of retail and hospitality workers is adopted for the purpose of analysis. Key workers are as follows:

- Emergency services (police, fire fighters, ambulance workers)
- Teachers
- Nurses
- Retail and hospitality workers

Solutions to key worker housing affordability

There are a number of ways in which the lot of the key worker – and consequently the lot of the sector in which the key worker operates – could be improved. These are:

- Reduced cost of housing
- Reduced cost of transportation / commuting
- Increased incomes in key worker sectors / capital city salary loading.



¹⁰ http://www.riverbankliving.com.au/Riverbank/Riverbank%20HAF.aspx

¹¹ First Steps Options – Key Worker Housing Eligibility Criteria, http://www.firststepslondon.org/eligibility.asp

¹² Bankwest '3rd Key Worker Housing Affordability Report' Bankwest Financial Indicator Series, March 2011

Reducing the cost of housing is the traditional approach to maintaining residential affordability for key workers. Key worker housing schemes have been implemented in Australia - see the example below from the City of Perth - and internationally. Shared equity schemes, where a purchaser buys part of a property and pays rent on the remainder, gradually increasing their ownership stake, intermediate renting (or affordable rental where rents charged are 80 per cent of market rents) are frequently adopted means of reducing accommodation costs for key workers.

Affordable housing in the City of Perth

The City of Perth has initiated a Key City Worker Development. This is expected to provide people on low to moderate incomes who work in the city with affordable rental accommodation near the heart of the city. The project consists of 48 apartments in a three storey "walk up" development. Twenty-six of the apartments are two-bedroom units; while the rest are one-bedroom units.

Construction commenced in October 2011 and is expected to be completed by April 2013. The construction site is 2 kilometres from the CBD.

The vision of the City of Perth is to be a vibrant cosmopolitan community with a diverse residential population. In line with this objective the City of Perth is striving to have housing affordable and available to a range of people with varying income levels, recognising housing costs in the City have grown faster than incomes in industries important to the 'liveability of the City – such as hospitality, retailing, cleaning and community services. There are claims made by the City of Perth as to the savings made in carbon emissions through the reduced requirement of workers to buy motor vehicles to commute. Skills shortages encountered by city based employers will also be addressed by increasing the attractiveness (or reducing the disincentives /costs) of inner city living.

Eligibility requirements for tenancy in the development are based around income, cash asset limits and existing property ownership limits. Tenancy is also restricted to those who work within the City of Perth. Income limits on tenants are equivalent to those defined in by the Commonwealth Government National Rental Affordability Scheme (NRAS). Duration of tenancy is to be restricted to three years and tenancies will be ended at any point in the three year period should upper income limits be exceeded.

We now turn to an analysis of the extent of the key worker issue in the City of Melbourne.

Quantifying the key worker housing issue in the City of Melbourne

Using a variety of data sources and evidence based assumptions a method has been developed to quantify the extent of the key worker housing issue in the City of Melbourne. This method and the findings are outlined in the following section.

Figure 27 shows the proportion of people who travel at varying times in the AM peak using public transport across metropolitan Melbourne. For example, 95 per cent of workers travel in excess of 20 minutes to get from their residential location to their place of work; 50 per cent of workers travel less than 48 minutes; and very few (approximately 7 per cent) travel more than 80 minutes. This travel time represents the full journey from door to door for a person travelling by public transport. That is, it includes walk times to and from public transport stops. The travel time incurred by a person resident at the centroid of each suburb is taken to represent the travel times incurred by all residents of the suburbs in question.

For the purpose of the analysis in this report, it has been assumed that the maximum time travelled by two thirds (66th percentile) of the metropolitan population represents a 'reasonable' catchment for key workers. That is, a key worker who is expected to travel more than 56 minutes via public transport to their place of work could be considered to be carrying an undue burden in terms of the cost and time of their journey. It is assumed that they would avoid making such a journey unless fairly extreme



circumstances apply. By this logic, the outer limit of the housing stock reasonably available to key workers is given by the 56 minute travel contour.

The mid-point travel time for those workers travelling less than the 66th percentile of the population is 38 minutes. The analysis set out below assumes that key workers travelling in excess of this median time up to the 'outer limit' of 56 minutes will regard this additional time and cost as an identifiable and compensatable expense. This cost may be in terms of extra time spent travelling or may be the out of pocket costs involved. In other words, a key worker travelling more than 38 minutes might see the cost of this additional travel (in time and out of pocket expenses) as a direct loading on their rent.



FIGURE 27. TRAVEL TIME DEMAND CURVE

Source: SGS Economics & Planning

Using these two assumptions an effective cost of housing (ECH) has been estimated for four key worker groups. This ECH equates to the cash rental plus the cost of additional time spent travelling to work above the median time plus the out of pocket cost of this additional time, if any. The median rent per week by suburb taken from the 2011 ABS Census has been used as the cash rental amount. For Melbourne CBD this was \$415 per week, compared to \$243 per week in Dandenong (in 2011 dollars).

The cost of the additional time spent travelling to work above the median time has been estimated using the key worker's average wage. The out of pocket cost has been assumed to be negligible in this analysis given the flat rate fee structure of public transport within Zone 1 in Melbourne.

The four key workers used in this analysis align with the definition provided above, and include an emergency worker (such as a paramedic or fireman), a barista or bar manager, a registered nurse and a school teacher. The average hourly and weekly incomes for these occupations have been sourced from the ABS publication Employee Earnings and Hours, which provides an estimate for all of Victoria. The 30 per cent (of gross earnings) rule has been applied to determine the income that is available to each key worker to spend on housing. These estimates are presented in Table 9, showing the Nurse category earns the highest wage of the four, and the Barista the lowest. Variations in the hours worked and overtime mean that key worker occupations with comparable hourly earnings have different gross weekly incomes.



	Emergency Worker	Barista	Nurse	Teacher
Hourly Income	\$38	\$22	\$38	\$36
Total gross weekly	\$1,438	\$849	\$1,511	\$1,355
income				
30% to spend on	\$431	\$255	\$453	\$406
housing				
Remaining income	\$1,006	\$595	\$1,058	\$948

TABLE 9. KEY WORKER GROSS INCOME (2011 DOLLARS)

Source: ABS Employee Earnings and Hours cat. no. 6306.0, May 2010

To determine whether there is a key worker housing issue in the City of Melbourne the amount of housing which is affordable to each of the four categories of key workers has been estimated using their ECH instead of the pure rental amount. Data from the 2011 ABS Census on the number of dwellings in each rental bracket for different housing types has been used. Table 10 presents the results of this analysis.

Using the 56 minute travel time to the City of Melbourne as the maximum travel time catchment, in 2011 there were 186,050 dwellings across all types (bedroom numbers) within this area. Of these dwellings there were only 35,000 one bedroom dwellings and 144,920 with two or more bedrooms. The maps presented in Figure 28 through to Figure 32 show the spatial distribution of these dwellings across metropolitan Melbourne at the suburb level (defined as the ABS geography Statistical Area 2). This highlights the dominance of one bedroom dwellings in the City of Melbourne and inner region, compared to the concentration of larger dwellings in more outer areas.

	All Dwellings	1 Bedroom Dwellings	2+ Bedroom Dwellings	Workers employed in the City of Melbourne
Total Dwellings within Catchment	186,050	35,000	144,920	
Emergency Worker	133,060	32,450	95,970	420
Share of total	72%	93%	66%	23%
Barista	33,290	13,490	16,800	2,390
Share of total	18%	39%	12%	29%
Nurse	145,370	33,550	107,130	6,130
Share of total	78%	96%	74%	17%
Teacher	122,760	31,680	86,490	300
Share of total	66%	91%	60%	1%

TABLE 10. KEY WORKER HOUSING ANALYSIS

Source: SGS Economics & Planning

Looking first at the emergency workers in Table 10, given their estimated ECH there were approximately 133,060 dwellings affordable to them within the maximum travel time catchment. This represented 72 per cent of all dwellings in the catchment. A greater share of one bedroom dwellings were affordable to them (93 per cent) given they are comparatively lower in rent and more are located in the catchment area. Some 66 per cent of two or more bedroom dwellings were affordable to this key worker category. The maps shown in Figure 33, Figure 34 and Figure 35 illustrate the distribution of the dwellings affordable to these workers/

Baristas and bar managers who have a significantly lower average income consequently have a smaller amount of dwellings affordable to them that are within the maximum travel time catchment. For all household types this was only 33,290 dwellings, which represented 18 per cent of all dwellings in the catchment (see Table 10). However, a comparatively larger share of one bedroom dwellings was



affordable to them (39 per cent) in inner city locations. The maps shown in Figure 36, Figure 37 and Figure 38 illustrate the distribution of the dwellings affordable to baristas and bar managers.

Registered nurses, who have the largest income of the four key worker categories, have the largest amount of dwellings affordable to them that are within the maximum travel time catchment. For all household types this equated to 145,370 dwellings, which represented 78 per cent of all dwellings in the catchment. Of the two or more bedroom dwellings, 74 per cent of those within the catchment were affordable to nurses. The maps shown in Figure 39, Figure 40 and Figure 41 illustrate the distribution of the dwellings affordable to nurses.

Finally teachers are able to afford 66 per cent (122,760 dwellings) of total dwellings that are within the maximum travel time catchment. For one bedroom household types this equated to 31,680 dwellings, which represented 91 per cent of all dwellings in the catchment. Of the two or more bedroom dwellings, over half of those within the catchment were affordable to teachers. The maps shown in Figure 42, Figure 43 and Figure 44 illustrate the distribution of the dwellings affordable to teachers.

Also shown in Table 10 is the number of workers employed in the City of Melbourne in each of the four key worker occupations in 2011. There were very approximately 420 emergency workers employed in the City of Melbourne, equivalent to 23 per cent of total emergency workers across metropolitan Melbourne. There were large numbers of baristas (29 per cent of metropolitan Melbourne total) and Nurses (17 per cent of metropolitan Melbourne total) and very few teachers (1 per cent of metropolitan Melbourne total). Given these estimates, and the amount of housing that is available and affordable to key workers within the travel time catchment it can be determined that there is currently no *immediate* key worker housing issue for the City of Melbourne.





Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 29. MAP OF 1 BEDROOM DWELLINGS

Source: ABS 2011 Census and SGS Economics & Planning

FIGURE 30.ZOOMED MAP OF 1 BEDROOM DWELLINGS



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 31.MAP OF 2+ BEDROOM DWELLINGS

Source: ABS 2011 Census and SGS Economics & Planning FIGURE 32.ZOOMED MAP OF 2+ BEDROOM DWELLINGS



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 33.AFFORDABILITY DISTRIBUTION FOR EMERGENCY WORKERS

Source: ABS 2011 Census and SGS Economics & Planning



FIGURE 34.AFFORDABILITY DISTRIBUTION FOR EMERGENCY WORKERS, 1 BEDROOM

Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 35.AFFORDABILITY DISTRIBUTION FOR EMERGENCY WORKERS, 2+ BEDROOMS

Source: ABS 2011 Census and SGS Economics & Planning

FIGURE 36.AFFORDABILITY DISTRIBUTION FOR BARISTAS



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 37.AFFORDABILITY DISTRIBUTION FOR BARISTAS, 1 BEDROOM

Source: ABS 2011 Census and SGS Economics & Planning

FIGURE 38.AFFORDABILITY DISTRIBUTION FOR BARISTAS, 2+ BEDROOMS



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 39. AFFORDABILITY DISTRIBUTION FOR NURSES

Source: ABS 2011 Census and SGS Economics & Planning

FIGURE 40.AFFORDABILITY DISTRIBUTION FOR NURSES, 1 BEDROOM



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 41.AFFORDABILITY DISTRIBUTION FOR NURSES, 2+ BEDROOMS

Source: ABS 2011 Census and SGS Economics & Planning

FIGURE 42. AFFORDABILITY DISTRIBUTION FOR TEACHERS



Source: ABS 2011 Census and SGS Economics & Planning





FIGURE 43.AFFORDABILITY DISTRIBUTION FOR TEACHERS, 1 BEDROOM

Source: ABS 2011 Census and SGS Economics & Planning



FIGURE 44.AFFORDABILITY DISTRIBUTION FOR TEACHERS, 2+ BEDROOMS

Source: ABS 2011 Census and SGS Economics & Planning



3.4 Housing demand generated by particular sectors

Student accommodation

The large number of student enrolments in the City of Melbourne and surrounding inner region creates significant demand for housing close to the major campuses. The demand for housing will be different for domestic and international students, as shown in the following figures. In 2010 there were approximately 64,700 domestic students and 30,500 international students enrolled in the City of Melbourne.

The number of domestic student enrolments across Victoria increased by 27,500 between 2002 and 2010. Just under half of this growth (44 per cent) can be attributed to enrolment growth in the City of Melbourne. An additional 12,200 students were enrolled within the municipality and another 16,500 across metropolitan Melbourne between 2002 and 2010. The number of students enrolled in regional Victorian institutions fell over the same time period. Figure 45 presents the number of total Victorian domestic student enrolments and the split between the City of Melbourne, metropolitan Melbourne and Regional Victoria. Growth was relatively flat between 2002 and 2006. However, it has since picked up since 2007.



FIGURE 45. DOMESTIC STUDENT ENROLMENTS

Source: City of Melbourne, Knowledge Melbourne International Student Strategy, September 2012

A greater share of international student enrolments were within the City of Melbourne (41 per cent) compared to domestic student enrolments (31 per cent). Additionally, annual growth in international student enrolments was much stronger compared to that in domestic student enrolments in the City of Melbourne. Average annual growth between 2002 and 2010 for international students was 6.8 per cent per annum compared to 2.7 per cent p.a. for domestic students. Figure 46 presents annual estimates of international student enrolments and the number of students either living and/or studying in the City of Melbourne.

The number of students living and/or studying in the City of Melbourne represents those who either live and study in the municipality or only study in the municipality or only live in the municipality and study elsewhere. This number is greater than the aggregate number of international student enrolments in the



City of Melbourne. This suggests that a greater number of international students are choosing to live in the City of Melbourne even if they do not attend an institution in the municipality. It is likely that demand for international student housing in the future will be greater than the number of enrolments.



FIGURE 46.INTERNATIONAL STUDENT NUMBERS, CITY OF MELBOURNE

Source: City of Melbourne, Knowledge Melbourne International Student Strategy, September 2012

Table 11 shows that approximately 13,950 international students both live and study in the City of Melbourne, equivalent to 41 per cent of all international students living or studying in the municipality. This was much larger than the proportion of domestic students who both live and study in the City of Melbourne.

TABLE 11. DOMESTIC & INTERNATIONAL STUDENT NUMBERS

	Domestic Students			International Students			Total Students	
	Number	Share		Number	Share		Number	Share
Live and study in Melbourne LGA	8,88	30	13%	13,94	7	41%	22,827	23%
Live in Melbourne LGA, study elsewhere	4,78	36	7%	4,85	57	14%	9,643	3 10%
Study in Melbourne LGA, live elsewhere	52,90)8	79%	15,14	7	45%	68,055	68%
(in Victoria)								
Total	66,57	74	100%	33,95	51 1	00%	100,525	5 100%

Source: City of Melbourne, Knowledge Melbourne International Student Strategy, September 2012

The number of student apartments in the City of Melbourne has more than doubled since 2002 in response to this strong demand. In 2010 there were approximately 4,800 dwellings designated as student accommodation. Figure 47 presents the number of student apartment dwellings in the municipality from 2002 to 2010. There is also another 1,580 dwellings under construction or planned for construction over the next five years (see Table 12). These are spread across the suburbs of Carlton, Parkville, North Melbourne and the CBD, with the majority occurring in the CBD.



FIGURE 47.STUDENT APARTMENTS IN CITY OF MELBOURNE (DWELLINGS)

Source: City of Melbourne, Census of Land Use and Employment, 2010

TABLE 12. FUTURE STUDENT APARTMENT CONSTRUCTION IN CITY OF MELBOURNE (DWELLINGS)

	Under Construction	Construction in 0-2 Years	Construction in 3-5 Years	Total	
Carlton	()	0	428	428
CBD	279)	56	502	837
North Melbourne	246	5	26	0	272
Parkville	43	3	0	0	43
Total City of	568	3	82	930	1,580
Melbourne					

Source: City of Melbourne, Census of Land Use and Employment, 2010

Health sector

The cluster of workers in health care services and research and development institutions in Parkville can be expected to generate significant demand for housing in surrounding locations. Table 13 presents estimates from the 2006 ABS Census on the place of work SLAs for residents of inner Melbourne by broad occupation type.

In the Community & Personal Service Workers occupation group, 75 per cent of inner Melbourne residents also worked within the same region, with the largest proportion working in the CBD and surrounding areas. This was also the case for Managers, Professionals and Sales Workers which had between 73 per cent and 75 per cent of residents working in the same region. Clerical & Administrative Workers had the highest degree of self-containment in the inner Melbourne region, with 81 per cent of residents also working in inner Melbourne.



	Managers	Professionals	Community & Personal Service Workers	Clerical & Administrative Workers	Sales Workers
Melbourne - Inner	5,154	13,870	1,865	6,230	2,564
Melbourne - Remainder	2,884	9,656	1,427	2,962	974
Melbourne - S'bank-	1,300	2,914	972	1,113	485
D'lands					
Stonnington - Prahran	1,453	2,406	853	822	1,131
Port Phillip - West	2,357	4,315	824	1,993	1,007
Port Phillip - St Kilda	1,093	2,319	804	823	680
Yarra - North	1,279	3,153	761	899	677
Yarra - Richmond	1,096	2,254	448	827	869
Inner Melbourne	16,616	40,887	7,954	15,669	8,387
Workers					
Share	74%	75%	75%	81%	73%
Inner Melbourne Residents	22,533	54,875	10,624	19,389	11,454

TABLE 13. PLACE OF WORK FOR INNER MELBOURNE RESIDENTS, 2006

Source: ABS Census 2006

3.5 Housing affordability in the City of Melbourne

This section discusses the affordability of housing in the City of Melbourne. Affordability in this context is discussed in the context of rental affordability, recognising that rents are a better indicator of the cost of accommodation than sale prices of housing which may be distorted by factors unrelated to the physical provision of accommodation including - but not limited to - strategic investment decisions.

Nevertheless, it is noteworthy that home ownership rates have remained quite stable in the City of Melbourne, even through the recent rapid expansion in housing stock. Table 14 shows that households which either own their homes outright or are in the process of purchasing them accounted for some 31% of all households in the municipality in 2011, compared to 30% in 1996. This robust home ownership rate (which is nonetheless much lower than for the State as a whole) could reflect the transition of older rental stock into owner occupancy in neighbourhoods like Carlton, North Melbourne and Kensington.

It is unclear whether home ownership rates will hold up into the future and whether, if they do, only high income households will be able to purchase in the City. Table N2 indicates that the median price for separate (Torrens Title) houses in the City of Melbourne is much higher than the median for the metropolitan area, when expressed as a multiple of income. Moreover, it has grown much more rapidly over the past 15 years. However, home purchase opportunities in the apartment sector within the City compare somewhat more favourably to the metropolitan median.

It is possible that current investor targeted stock in the City will provide a pool of relatively affordable purchase opportunities for owner occupiers in the future, in the same way that rent focussed '6 pack' unit developments of the 60s and 70s are doing today.

See Section 4.2 for more discussion on trends in housing purchase prices in the City.



Tenure	19	996	20	01	20	06	20	11
	#	%	#	%	#	%	#	%
Outright owner	3,120	19%	4,404	18%	4,593	13%	6,564	14%
Purchasing	1,729	11%	2,730	11%	5,109	14%	7,798	17%
Private rental	4,963	31%	6,977	29%	14,513	40%	18,696	40%
Government or community rental	1,902	12%	1,915	8%	1,913	5%	2,924	6%
Other Rental Tenure	2,829	18%	4,661	19%	4,145	12%	5,032	11%
Other Tenure Type	1,523	9%	3,261	14%	5,573	16%	5,745	12%
Total households	16,066	100%	23,948	100%	35,846	100%	46,759	100%

TABLE 14. HOUSEHOLDS IN THE CITY OF MELBOURNE BY HOUSING TENURE

Source: ABS Census 2011

TABLE 15. HOUSING PRICES VERSUS INCOMES – CITY OF MELBOURNE AND METROPOLITAN MELBOURNE

 Median ho	ouse price as a mu	ultiple of individual	Median unit price as	a multiple of individual
median an	nual income for V	victoria (employed	annual income for	^r Victoria (employed
	persons)	persons)		
	Professiona	als	Sales	Workers
City of Me	lbourne Melt	oourne Metro	City of Melbourne	Melbourne Metro
1996	10.8	8.7	13.	6 7.6
2001	17.3	11.4	16.	3 11.6
2006	22.2	14.6	14.	8 12.8
2011	25.3	16.8	15.	5 14.5

Source: ABS, Valuer General

Affordable housing

The affordability of housing cannot be identified by a standalone measure. It must be defined in the context of the incomes of those occupying or seeking to occupy the dwellings. A commonly used definition is that housing is affordable if it accounts for less than 30 per cent of a household's gross income¹³. This is an approximate measure which is used to identify housing stress. However, a household spending more than 30 per cent of income on housing costs is not necessarily experiencing housing stress. For example, a household with a weekly income of \$1000 spending \$300 on accommodation costs will have \$700 remaining for non-housing items. A household with a weekly income of \$250 spending an equivalent proportion of income on housing costs will only have \$175 to provide for non-housing items.

¹³ Formulas are sometimes used to describe housing affordability. For example, it is often stated that housing is affordable if it costs no more than 30% of a household's gross income. But while this figure provides a useful benchmark of housing stress, the reality is that the definition of affordability varies according to a household's individual circumstances.



The demands on the same gross income may differ significantly - childcare may be provided free of charge by family members, a household may be dealing with health problems which require significant financial outlay, a household member may have significant work-related travel costs - all these factors affect how much a household can afford to pay towards rent or mortgage. (Housing NSW)

The distribution of rents across the City of Melbourne is shown in Figure 48. The rental range in which the greatest number of private dwellings lies within is from \$350 to \$449 per week. Thirty four per cent of rents are below the \$350 - \$449 range.



FIGURE 48.CITY OF MELBOURNE RENTAL RANGE DISTRIBUTION 2011

Source: ABS, 2011

The income distribution of households renting in the City of Melbourne is shown in Figure 49 below. Other than those households with declared negative or no income, the greatest number of households earn over \$1,500 per week. Households in these categories account for 36 per cent of households in rented dwellings in the City of Melbourne.




FIGURE 49.DISTRIBUTION OF HOUSEHOLDS IN RENTED ACCOMMODATION BY WEEKLY INCOME RANGE

Source: ABS, 2011

The high proportion of negative / nil incomes stated, and the relatively high number of partial incomes or not stated incomes complicates the assessment of housing affordability in the City of Melbourne. In theory, all housing would be unaffordable to households with a negative / nil income, yet these households are living somewhere, and paying rent. These households may not have an income but may be able to draw on capital resources for recurrent expenses. People in dwellings with a claimed nil income are unlikely to be the 'poor' who are suffering from housing affordability related stress.

A clearer picture of rental housing affordability in the City of Melbourne is provided by an analysis of rental housing stock and the incomes of renters in the municipality. Using the 30 per cent of income measure we are able to see the proportion of rental housing stock that is affordable to the renting population. (Negative / nil income, income not stated, and partial income stated responses are excluded from the analysis). Mid points of rental and income ranges have been used.

The data are shown in Figure 50 below. Dwellings in the lower rental range of \$0-74 are affordable to around 95 per cent of households renting in Melbourne, using a 30 per cent of income/ affordability threshold. However, these dwellings account for only 4 per cent of the rental dwelling stock in the municipality. At the other end of the scale are the dwellings that are rented for \$650 per week or more. These dwellings account for around 10 per cent of the rented dwelling stock, and are theoretically affordable to 34 per cent of renters in the municipality.





FIGURE 50. RENTAL AFFORDABILITY IN THE CITY OF MELBOURNE, 2011

Source: ABS 2011

Low income households

Lower income households are the first cohort to experience housing related financial stress as a result of housing costs. This is shown in the charts from Figure 51 through to Figure 53. There were relatively small numbers of low income households in high rent dwellings in 2001. Most low income households - 64 per cent - were in low rent dwellings. Medium income households occupied medium rent dwellings, while high income households tended to occupy dwellings with medium to high rents.

By 2006, the greater proportion of low income households - 49 per cent - were still residing in low rent dwellings. However, by 2011, the proportion of lower income households renting low rent dwellings had fallen further to 40 per cent. In summary, the opportunities for lower income households to occupy low rent dwellings declined over the period 2001 to 2011.

42 per cent of low income households were in medium rent dwellings, while the proportion of low income households in high rent dwellings had increased from just 3 per cent in 2001 to over 18 per cent by 2011.





FIGURE 51.2001 RENT AND INCOME RANGES IN THE CITY OF MELBOURNE

Source: SGS, derived From ABS Census of Population and Housing, 2011



FIGURE 52.2006 RENT AND INCOME RANGES IN THE CITY OF MELBOURNE

Source: SGS, derived From ABS Census of Population and Housing, 2011





FIGURE 53.2011 RENT AND INCOME RANGES IN THE CITY OF MELBOURNE

Source: SGS, derived From ABS Census of Population and Housing, 2011

Not all accommodation with the lowest rents is occupied by those with the lowest incomes, and similarly not all of the dwellings in the highest rent ranges are occupied by the highest income earning households. For example, in 2011, 13 per cent of low rent dwellings were rented by high income households. However, the proportion of low rent dwellings occupied by lower income households increased – albeit marginally - from 60 per cent to 62 per cent of stock between 2001 and 2011 as shown in Figure 54.

The caveat to this is the overall decline in the number of low rent dwellings rented in the City of Melbourne: in 2001 low rent dwellings accounted for 39 per cent of total rental dwellings; by 2011 this proportion had fallen to just 13 per cent as shown in Figure 54. The rental costs that are classed as low, medium and high do not change over the time period shown in the chart, and therefore do not take into account inflation of residential rents over the time period. The rent range and income range classifications are provided in Table 16.



Rent Range	Classification	Income Range	Classification
\$0 -74	Low	\$1-\$199	Low Income
\$75 -99	Low	\$200-\$299	Low Income
\$100 - 149	Low	\$300-\$399	Low Income
\$150 - 199	Low	\$400-\$599	Low Income
\$200-224	Medium	\$600-\$799	Medium Income
\$225 - 274	Medium	\$800-\$999	Medium Income
\$275 - 349	Medium	\$1,000-\$1,249	Medium Income
\$350 -449	Medium	\$1,250-\$1,499	Medium Income
\$450 - 549	High	\$1,500-\$1,999	High Income
\$550 -649	High	\$2,000-\$2,499	High Income
\$650 or more	High	\$2,500-\$2,999	High Income
	-	\$3,000 or more	High Income



Source: SGS, 2012





Source: SGS, derived from ABS Census of Population and Housing, 2011

Housing stress

Analysis of rents and incomes can give a guide to the extent of the housing affordability issue in the City of Melbourne. Using data from the 2011 census, and the 30 per cent of household income available for housing costs measure, Figure 55 shows the number of households in each income and rent range that would be experiencing housing affordability issues.







FIGURE 55. HOUSEHOLDS BY INCOME RANGE EXPERIENCING HOUSING STRESS, 2011

Source: SGS, derived from ABS Census of Population and Housing, 2011

Households with the lowest weekly incomes are experiencing housing affordability issues across all rent ranges. For the purpose of this exercise, the income and rent figures have been assumed to be at the mid-point of the range; a weekly rent of \$100-149 would be assumed to be \$125). A household with a weekly income of \$1-\$199 would have a housing budget of \$30 before housing was deemed unaffordable. Therefore, private rented dwelling options are particularly limited for low income households.

Households with higher incomes – those above \$2,000 per week – do not experience housing affordability issues for the rental ranges recorded in the census. The weekly dwelling budget for these households is over \$600.

The income and rental profile of residents in the City of Melbourne will also vary for different occupations. Figure 56 presents the share of people in each income classification by the main occupation types in the City of Melbourne. The higher skilled and knowledge based occupations such as business professionals, managers and health professionals have a greater proportion of high income earners. On the other end of the spectrum the lower skilled, service based occupations such as sales assistants and hospitality workers have a larger share of low income earners. Therefore these occupation types, as well as artists and some education professionals are likely to be experiencing the greatest levels of housing stress as they fall into the lower income groups.





FIGURE 56.INCOME PROFILE BY OCCUPATIONS OF CITY OF MELBOURNE RESIDENTS, 2011

Source: SGS, derived From ABS Census of Population and Housing, 2011 Note: Table 30 in the appendix contains a list of the detailed occupations in each of these broad categories

The following three figures examine housing stress in 2011 in more detail for three main occupations relevant to City of Melbourne residents. These are hospitality workers (Figure 57), health professionals (Figure 58) and specialist managers (Figure 59). These figures show the number of residents for each occupation category that have low, medium and high incomes, and are paying low, medium and high rents. For example in Figure 57, of the low income hospitality workers living in the City of Melbourne just over 600 were paying high rental costs, whilst 460 were paying medium rental amounts and very few (82) were paying low rental amounts. There were no hospitality workers living in the City of Melbourne that fell into the high income category. Based on Figure 55 above, which showed that the low income households paying high rents were the most likely to be in experiencing housing stress, it is likely these residents will contain hospitality workers.

Looking at the health professionals in Figure 58 the majority of residents in this occupation were in the medium income group, and paying medium and high rental amounts. Just over half of the high income earners were paying high rents, with the remainder paying medium rents. Of the very few low income health professionals most were paying medium to high rental costs. This indicates health professionals do not generally experience significant housing stress in the current market.

The majority of specialist managers resident in the City of Melbourne in 2011 were high income earners, and very few were low income earners. Of the high income group over half were paying high rental costs with the remainder paying medium rents and very few paying low rents. This suggests that specialist managers and similar occupation types such as business professionals are not experiencing housing stress currently in the City of Melbourne.





FIGURE 57.2011 RENTS AND INCOME FOR HOSPITALITY WORKERS RESIDENT IN THE CITY OF MELBOURNE

Source: SGS, derived From ABS Census of Population and Housing, 2011





Source: SGS, derived From ABS Census of Population and Housing, 2011





FIGURE 59.2011 RENTS AND INCOME FOR SPECIALIST MANAGERS RESIDENT IN THE CITY OF MELBOURNE

Source: SGS, derived From ABS Census of Population and Housing, 2011

3.6 Conclusions

This section has provided an overview of factors that affect demand for housing in the City of Melbourne. The drivers of residential growth in the municipality have been explored and have been seen to be related to the rejuvenation of the core CBD area, which has seen strong employment growth during the 1990s and 2000s. Despite strong employment growth, office rents have been kept low relative to other cities due to the opening up of Docklands. Employment growth has gone hand in hand with increases in the amenity of the municipality, which has benefitted from programs such as Postcode 3000. Employment growth over the next 20 years is projected to remain strong, which will continue to drive demand for housing in the City of Melbourne. Employment growth will continue to be oriented towards knowledge intensive sectors. The central city and other inner areas will attract significant housing growth driven by their amenity and access to employment opportunities. A review of literature relating to the housing preferences of knowledge workers identified that knowledge workers prefer urban environments, typically reside in well-established 'knowledge communities', and seek cultural and education opportunities as well as seeking affordable housing.

The issue of affordable housing is important for the City of Melbourne. As well as attracting knowledge workers to the municipality, affordable housing is also required to accommodate 'key workers'. This section provided a summary of key worker housing affordability issues and the approaches adopted in different locations to address the issue. SGS took the approach that workers would seek to find housing within an acceptable travel time from their place of work. Any commuting time in excess of the median of the 'acceptable' Melbourne commute by public transport was deemed to be a cost to the key worker, and added to their accommodation cost. The analysis found little evidence of a major key worker housing affordability problem for workers in the City of Melbourne, at least at this time. While not all areas of metropolitan Melbourne are affordable to key workers, there were shown to be significant accommodation options and affordable housing opportunities within acceptable commuting distance of the City of Melbourne that could be afforded by key worker groups. These key worker groups included baristas, nurses, teachers and emergency workers.



The section also examined the broader issue of housing affordability within the City of Melbourne. The analysis found that within the City of Melbourne itself, lower income groups have increasingly encountered housing affordability stress, and that lower income households were being priced out of accommodation in the municipality. A significant finding was that the number of dwellings available to lower income groups had declined over the period since 2001.



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Overview

This Section addresses housing production in the City of Melbourne. It commences with an assessment of available land for housing projects broken down by large scale, small scale and dispersed redevelopment sites. Attention is then turned to the profile of housing developers active in the City of Melbourne; that is, who is building, and investing in residential projects in the municipality, what markets are they pitching at and what are the key economic, financial and taxation factors driving the behaviour of these actors in the market. The Section also touches on costs of housing production in the municipality, covering land cost, materials, labour and services.

4.1 Land for housing development in the City of Melbourne

Housing capacity analysis

In 2009 a team led by SGS was commissioned by DPCD to undertake an assessment of the capacity of Melbourne to accommodate the likely demand for housing projected over the period to 2031. The method employed for the Housing Capacity Analysis (HCA) project relied on detailed empirical analysis of development activity in Melbourne's existing urban areas. "Housing Capacity" is defined as an estimate of the maximum amount of housing allowable under existing statutory planning conditions. "Housing Take-Up" estimates the amount of Housing Capacity that is likely to be developed within a given period. The Housing Take-Up findings estimate housing supply in five-yearly increments from 2011 to 2026 taking into consideration the commercial feasibility of development and the distribution of metropolitan demand.

The data used in the HCA project included:

- Housing Development Data (2004–08)
- Urban Development Program (UDP) (2010)
- planning schemes (to January 2010)
- Victorian Heritage Register (to January 2010)
- extracts from council rates databases (January 2010).

The key findings of the work regarding the City of Melbourne were:

Housing Capacity:

- There are 290 hectares of Available Land¹⁴ in the municipality which provides Housing Capacity for 46,150 additional dwellings
- There is Housing Capacity for 4,540 additional dwellings in Residential Areas (Urban), 18,710 dwellings in UDP Sites and 22,900 dwellings in Mixed Use Areas
- The highest levels of Housing Capacity are in the CBD
- The highest potential development densities are in the CBD and Southbank

land where current zoning permits housing (as at 1 January 2010);



¹⁴ Land with the potential to accommodate additional housing, under planning controls from 1 January 2010. Determination as Available Land does not imply that development of the land is likely to be permitted or proceed. Available land is:

land with an existing dwelling, (identified by the Housing Development Data 2008); or

land identified as a major redevelopment site (by Urban Development Program 2010).

- Potential development densities in Residential Areas (Urban) range between 75 and 340 dwellings per hectare, in UDP Sites they range between 75 and 1645 dwellings per hectare and in Mixed Use Areas they range from 60 to 470 dwellings per hectare
- There is Housing Capacity for an additional 44,920 dwellings in Principal Public Transport Network (PPTN) catchments and 22,130 dwellings in activity centre catchments.

The work also examined recent and projected housing development trends. The key findings of the analysis were:

- In 2008 there were 48,130 dwellings in the City of Melbourne. This is projected to increase by 38,790 dwellings to 2026.
- Over the 2004-08 period, dwelling stock grew by 5.5 per cent per annum. To 2026, average annual growth is expected to moderate to 3.3 per cent annual growth, reflecting the expanding housing stock.
- Areas around the CBD, Southbank, Carlton, North Melbourne and West Melbourne are expected to have the highest Projected Housing Development.
- Relative feasibility is highest in the suburbs of Melbourne and Southbank.
- An additional 22,100 dwellings are projected to be developed in and around activity centres and 37,550 dwellings in proximity to the Principal Public Transport Network (PPTN) to 2026.

The City of Melbourne also undertook a piece of work to establish the capacity for residential development in the City. The process was comparable to though more detailed than that completed by the SGS consortium. A number of steps were undertaken to identify the most likely parcels of land to be redeveloped. These included the removal of parkland, heritage lots, recent development, Premium and A grade stock and recently refurbished stock. The capacity to accommodate housing in the CBD was calculated using the average height limits of the CLUE blocks as a guide to the number of storeys with an allowance made for a proportion of site area to be set aside for amenity. Allowances were made for redevelopment provision for alternative and supporting land uses including commercial and retail premises. The process identified that there was capacity in the CBD to accommodate 4,600 dwellings in the form of apartments with an average size of 80 sqm and 30 per cent of floor area in developments allocated to circulation space.

The findings of both pieces of work should be interpreted in the context of the planning scheme existing when they were undertaken. More recent applications for planning scheme amendments are likely to signify a marked increase in the capacity of the City of Melbourne to accommodate residential developments. The Arden Macaulay Structure Plan (February 2012) envisages an additional 17,000 residents over the period to 2041, with draft structure plans for Southbank and City North also prepared. The City North Structure plan envisages population growth within the area of around 10,000 residents. However, the most significant growth is expected in Southbank, which in the 2010 draft structure plan was projected to see the resident population grow from just over 10,000 up to 74,000 by 2041. Further development is likely to occur in the Fishermans Bend area with the capacity to accommodate in the region of 50,000 residents. These additional projections which were not considered in the earlier work of the capacity of the City of Melbourne suggest that the initial dwelling capacity figure could be boosted by around 70-80,000 dwellings.

The Urban Development Program in the City of Melbourne

Figure 60 shows the distribution of sites identified in the Urban Development Program (UDP) of 2010 for the City of Melbourne. The program aims to identify the supply of residential and industrial land in metropolitan Melbourne. The Urban Development Program (UDP) identifies dwelling yield for UDP sites and the timing at which these sites might be developed for residential purposes. Estimates from the 2009 UDP (DPCD, 2010) are used to identify Housing Capacity for UDP locations. Sites identified in the UDP are reported by councils on an annual basis and include developments of 10 or more dwellings that



are anticipated in the next 10 years. Data from the UDP are included here to demonstrate recent supply and the supply pipeline of development land in the municipality.



FIGURE 60. URBAN DEVELOPMENT PROGRAM 2010

Source: Urban Development Program 2010

Table 17 shows the UDP data for the City of Melbourne to 2010. This indicates that at 2010 there were 39 development projects under construction identified by the UDP anticipated to deliver 7,100 dwellings. The anticipated construction pipeline over the period to 2021 equates to over 18,000 dwellings. The UDP provides an indication of the potential dwelling development over the period, and should not be considered as a forecast but rather a guide to the potential of a location to attract and accommodate development



Status	Count	Total Dwellings	Total Area (HA)	
Completed		67	7,212	13.83
Under Construction		39	7,099	24.3
Construction 0-2 years		51	8,108	30.29
Construction 3-5 years		27	5,736	9.37
Possible construction 6-10 years		23	4,491	17.65

TABLE 17. CITY OF MELBOURNE UDP STATUS 2010

Source: Urban Development Program 2010

Figure 61 shows the UDP data over the period to 2021 in the City of Melbourne by suburb. Recent construction and the short term outlook suggest that the neighbourhood likely to see the highest number of units developed is Melbourne. Southbank and Docklands are also expected to experience a significant proportion of the municipality's development. These figures should be treated with caution, particularly at the latter end of the forecast, where the numbers are indicative of the potential development outcome rather than the actual development pipeline.



FIGURE 61.UDP BY SUBURB

Source: Urban Development Program 2010

It should also be noted that there are major redevelopment sites (industrial and commercial zoned land) that in the future will contribute significantly to housing supply, but which are not included in the above findings. If these sites are not nominated within the UDP 2009 or cannot support housing development according to the provisions of the local planning scheme, they are not identified as Available Land.

The City of Melbourne produces a Development Activity Monitor (DAM). This contains information on new residential dwellings, student apartments, student beds, institutional accommodation beds, hotel rooms, serviced apartments, hostel rooms, office, retail, industrial, storage, educational, hospital/clinic, entertainment/indoor recreational, public display and community use floor space (net lettable sq m), recently completed and planned within the City of Melbourne local government area. The output of the project informs short term development forecasts for the City of Melbourne suburbs.



For residential and student housing, the DAM focuses on developments that contain 10 or more dwellings or student apartments / beds. We reference data from the DAM in Section 4.3.

Housing Development Data

Analysis of Housing Development Data from 2004 to 2009¹⁵ shows that 4.3 per cent of dwellings developed over the period in the City of Melbourne occurred in developments that delivered 1-10 units as shown in Table 18. The same analysis showed that the majority of dwellings were provided in developments delivering over 200 net additional dwellings.

Development Size Band	Number of Developments	Net Additional Dwellings		Proportion of Total Net Additional Dwellings	
1		297	297	,	3.2%
2-10		21	106	j	1.1%
10-20		13	196	j	2.1%
20-50		3	72		0.8%
50-100		48	2,534		27.3%
100-150		6	758	}	8.2%
150-200		1	189	1	2.0%
200+		14	5,126	i	55.3%
Total		403	9,278		100%

TABLE 18.	CITY OF	MELBOURNE	RESIDENTIAL	DEVELOPMENT	2004-2009
	0111 01		11201021111/12		2001 2005

Source: SGS estimates based on Housing Development Data, prepared by Spatial Economics for DPCD [2010]

Stock turnover – flow of housing

House sales volumes in the City of Melbourne have declined steadily since the late 1990s when they peaked in 1997 at 735 sales over the year. The average annual number of house sales over the period from 1985 to 2011 was 508 as shown in Figure 62. The ten year average was lower at 488, while the average annual volume of house sales over the most recent five year period fell further to 432.

¹⁵ The Housing Development Data (HDD) provides lot-by-lot data on all residential dwelling stock, vacant residential allotments and residential development activity throughout Metropolitan Melbourne. The HDD has been prepared since 2004 by Spatial Economics for DPCD. The data includes private dwellings regardless of zone and dwelling type, but generally excludes older-style (pre-1970s) shop-top dwellings and non-private residential housing including supported care retirement villages, student halls of residence, serviced apartments, hotels/motels and hospitals. It also excludes temporary structures such as caravans, prisons, tents, humpies, houseboats and improvised dwellings.





FIGURE 62.CITY OF MELBOURNE HOUSING FLOW

Unit and apartment sales in the City of Melbourne exceed the volume of house sales. This is particularly evident since the early 1990s. From 1985 to 1990, volumes of unit sales exceeded those of houses sales by 29 per cent. Since 1990, unit sales volumes have exceeded those of houses by 543 per cent. Sales of units peaked prior to the Global Financial Crisis (GFC) in 2007. Although sales volumes recovered briefly in 2009, 2010 and 2011 saw sales volumes fall, with the volume of sales recorded in 2011 at the lowest level since 1997.

There were 28,332 rental properties within the City of Melbourne as of March 2012. The volume of rental stock increased by 6.7 per cent over the previous year and by 40.2 per cent over the previous five years¹⁶. The median tenancy duration for dwellings in metropolitan Melbourne is shown in Table 19. These indicate that smaller dwellings have shorter tenancy periods across metropolitan Melbourne. The first quarter Rental Market report from DHS indicates that in the first three months of the year there were 11,707 new lettings in the Inner Melbourne statistical region, an increase of 8.2 per cent over the same period the previous year.

	Metropolitan Melbourne	Re	Regional Victoria	
	Median Duration	Turnover	Median Duration	Turnover
1 bedroom	13	14.3%	13	11.0%
2 bedrooms	18	9.5%	14	10.7%
3 bedrooms	18	8.8%	15	10.6%
4+ bedrooms	15	9.3%	14	11.8%
All Properties	16	9.9%	14	10.8%

TABLE 19. MEDIAN TENANCY DURATION

Source: DHS Rental Report, March 2012



¹⁶ Rental Report DHS, Q1 2012,

The City of Melbourne has seen considerable growth in the private rented sector since 2001. Figure 63 shows the active bonds in the City of Melbourne as well as in other inner Melbourne LGAs. The City of Melbourne has seen bonds increase by an average of around 9 per cent, compared to average annual growth rates of 2.7, 2.3 and 1.1 per cent in the LGAs of Stonnington, Yarra and Port Phillip respectively.



FIGURE 63. ACTIVE BONDS BY LOCAL GOVERNMENT AREA

Source: DHS Rental Report, March 2012

4.2 Price distribution of housing in the City of Melbourne

Figure 64 shows the median prices of houses, units and apartments and vacant house blocks in the City of Melbourne from 1985 to 2012. Median house prices have increased at an average annual rate of 8.9 per cent from 1985 to 2011 while the median price for units and apartments increased by 6.6 per cent and the median price of vacant house blocks by 7.4 per cent. The graph shows that while prices have increased at an increasing rate since 1985 to 2010, from 2010 to 2012 prices have fallen significantly from their peak.





FIGURE 64. RESIDENTIAL PRICE STATISTICS 1985 TO 2012 - CITY OF MELBOURNE

Source: Valuer General, 2011.

Table 20 shows the median mortgage repayment ranges for the respective suburbs within the City of Melbourne. Dockland had one of the lowest median mortgage repayment ranges in 2001 but one of the highest ranges in 2011. By taking the midpoint of the ranges Docklands was found to have increased its median mortgage repayments by approximately 9.8 per cent. Kensington experienced the second highest growth in mortgage repayments of 7.7 per cent.

Suburb	2001	2006	2011	Change
Carlton	\$1,200 to \$1,399	\$2,000 to \$2,399	\$2,000 to \$2,199	4.91%
Carlton North – Princes Hill	\$1,200 to \$1,399	\$1,600 to \$1,999	\$2,400 to \$2,599	6.76%
Docklands	\$1,000 to \$1,199	\$2,000 to \$2,399	\$2,600 to \$2,999	9.80%
East Melbourne	\$1,600 to \$1,799	\$2,000 to \$2,399	\$2,600 to \$2,999	5.12%
Kensington	\$1,000 to \$1,199	\$1,600 to \$1,999	\$2,200 to \$2,399	7.66%
Melbourne	\$1,200 to \$1,399	\$1,600 to \$1,999	\$2,000 to \$2,199	4.91%
North Melbourne	\$1,000 to \$1,195	\$1,600 to \$1,999	\$2,000 to \$2,199	6.70%
Parkville	\$1,200 to \$1,399	\$1,600 to \$1,999	\$2,200 to \$2,399	5.87%
South Melbourne	\$1,400 to \$1,599	\$2,000 to \$2,399	\$2,600 to \$2,999	6.44%
South Wharf				
South Yarra – West	\$1,200 to \$1,399	\$2,000 to \$2,399	\$2,400 to \$2,599	6.76%
Southbank	\$1,400 to \$1,599	\$1,600 to \$1,999	\$2,200 to \$2,399	4.37%
West Melbourne				
South Yarra – East	\$1,400 to \$1,599	\$2,000 to \$2,399	\$2,400 to \$2,599	5.24%

TABLE 20. MEDIAN MORTGAGE REPAYMENTS

Source: Australian Bureau of Statistics, 2011

Table 21 shows the median rental payments for the respective suburbs within the City of Melbourne. North Melbourne's median rental payments grew by 8.3 per cent over the period from 2001 to 2011



while Kensington experienced growth of 7.6 per cent and East Melbourne 7.3 per cent. Melbourne experienced the lowest rate of growth at 1.7 per cent.

Suburb	2001	2006	2011	Change
Carlton	\$200 to \$249	\$275 to \$299	\$350 to \$374	4.89%
Carlton North – Princes Hill	\$250 to \$299	\$300 to \$349	\$425 to \$449	4.76%
Docklands	\$300 to \$349	\$350 to \$449	\$450 to \$549	4.41%
East Melbourne	\$200 to \$249	\$300 to \$349	\$450 to \$549	7.31%
Kensington	\$150 to \$199	\$250 to \$274	\$350 to \$374	7.57%
Melbourne	\$250 to \$299	\$300 to \$349	\$425 to \$449	1.69%
North Melbourne	\$150 to \$199	\$250 to \$274	\$375 to \$399	8.29%
Parkville	\$200 to \$249	\$275 to \$299	\$400 to \$424	6.26%
South Melbourne	\$200 to \$249	\$300 to \$349	\$425 to \$449	6.89%
South Wharf				
South Yarra – West	\$200 to \$249	\$250 to \$274	\$400 to \$424	6.26%
Southbank	\$300 to \$349	\$350 to \$449	\$450 to \$549	4.41%
West Melbourne				
South Yarra – East	\$250 to \$249	\$250 to \$274	\$375 to \$399	4.49%

TABLE 21. MEDIAN RENTAL PAYMENTS

Source: Australian Bureau of Statistics, 2011

Table 22 shows the median house prices for the respective suburbs. West Melbourne experienced the highest growth of 11 per cent followed by Carlton 10 per cent and East Melbourne 10 per cent. Parkville experienced the lowest growth of 6 per cent.

TABLE 22. MEDIAN HOUSE PRICES

Suburb	2001	2006	2011	2001 to 2011 AAGR
Carlton	\$417,000	\$493,000	\$1,050,000	10%
Carlton North	\$410,000	\$597,000	\$830,000	7%
Docklands				
East Melbourne	\$640,000	\$1,150,000	\$1,720,000	10%
Kensington	\$301,000	\$435,000	\$645,000	8%
Melbourne				
North Melbourne	\$342,000	\$503,000	\$742,500	8%
Parkville	\$620,000	\$842,500	\$1,100,000	6%
South Melbourne	\$439,000	\$604,000	\$955,000	8%
South Wharf				
South Yarra	\$530,000	\$835,000	\$1,041,000	7%
Southbank				
West Melbourne	\$336,500	\$518,000	\$917,500	11%

Source: Australian Bureau of Statistics, 2011

Table 23 shows the median apartment prices from 2001 to 2011. The table shows that Parkville experienced the highest growth in median apartment prices at 7 per cent followed by Carlton North at 6 per cent. Notably Carlton experienced growth of only 1 per cent while Melbourne and North Melbourne experienced growth of 3 per cent respectively.

Suburb	2001	2006	2011	2001 to 2011 AAGR
Carlton	\$259,800	\$268,000	\$300,000	1%
Carlton North	\$263,000	\$331,000	\$466,500	6%
Docklands				
East Melbourne	\$315,000	\$374,500	\$525,000	5%
Kensington	\$265,000	\$315,000	\$425,000	5%
Melbourne	\$301,700	\$325,000	\$416,000	3%
North Melbourne	\$272,800	\$320,000	\$364,000	3%
Parkville	\$269,000	\$347,500	\$525,000	7%
South Melbourne	\$342,500	\$390,000	\$544,000	5%
South Wharf				
South Yarra	\$315,000	\$370,000	\$512,500	5%
Southbank	\$395,000	\$423,000	\$560,000	4%
West Melbourne	\$295,000	\$397,500	\$500,000	5%

TABLE 23. MEDIAN APARTMENT PRICES

Source: Australian Bureau of Statistics, 2011

4.3 Who's developing housing in Melbourne?

Typology of housing developers

Larger scale 'corporate' developers appear to be assuming ever growing prominence in housing supply within the City of Melbourne. Figure 65 shows the number of developments according to the number of dwellings completed or under construction in the development (figures for 2012 contain both completed developments and developments under construction to be completed in 2012). The chart shows that the larger developments have in recent years comprised a higher proportion of total development sites in the City of Melbourne. Looking ahead, at developments under construction, the larger developments are projected to account for the majority of new supply.





FIGURE 65. RESIDENTIAL DEVELOPMENTS BY DEVELOPMENT SIZE

Figure 66 presents the same data as Figure 65 though shows the number of dwellings completed or under construction in those developments by development size. As a consequence this gives a better indication of the delivery of apartments by dwelling size in the City of Melbourne over recent years. It clearly shows the dominance of larger scale developments in providing housing in the City of Melbourne. For example in 2012, developments of over 200 dwellings are expected to account for 85 per cent of new dwellings constructed in the City of Melbourne. Such projects are likely to require development budgets of between \$50 million and \$100 million, generally putting them beyond the scope of the part-time developers that dominate housing development elsewhere in the metropolitan area. Part-time developers comprise novice development or real estate. Development undertaken by part-time developers is typically at a relatively small scale, consisting of a single lot subdivision.

Over the ten years to 2012, developments over 200 dwellings have accounted for 63 per cent of new dwellings construction in the City of Melbourne. This figure varies considerably by suburb within the City of Melbourne as shown in Table 24. While West Melbourne, Parkville and North Melbourne saw no dwellings provided in large scale developments of more than 200 dwellings, the CBD saw nearly 75 per cent of all newly constructed dwellings provided in large scale developments while the proportion provided in Southbank exceeds 84 per cent.



Suburb	Per cent of total dwellings provided in 200+ dwelling developments	Total Dwellings developed
Carlton	39.8%	5 1,597
Docklands	64.9%	5 4,971
East Melbourne	53.8%	5 795
Kensington	47.4%	5 2,322
Melbourne (CBD)	73.8%	9,309
Melbourne (Remainder)	94.6%	5 317
North Melbourne	0.0%	5 1,367
Parkville	0.0%	592
Port Melbourne	0.0%	5 1
South Yarra	0.0%	5 24
Southbank	84.1%	28,085
West Melbourne (Res)	0.0%	584
West Melbourne (Ind)	n/a	a 0
Total	63.3%	28,085

TABLE 24. DWELLINGS PROVIDED IN LARGE SCALE DEVELOPMENTS 2002-2012

Source: City Of Melbourne Development Activity Monitor, 2012

FIGURE 66.RESIDENTIAL DWELLINGS COMPLETED / UNDER CONSTRUCTION BY DEVELOPMENT SIZE



While the data varies considerably from year to year, a clear trend towards the dominance of larger developments is emerging going forward. To an extent this can be explained by the fact that longer construction times are required for larger developments and, therefore, there is a reduced likelihood that smaller developments would already be under construction in the statistics. Nevertheless, it does appear as if the trend towards the concentration of newly constructed dwellings in larger scale developments is unlikely to abate in the near future.



Key influences on developer behaviour

Interest rates and financial market distress, partly as a result of the global financial crisis, but also as a result of changes in lending practices have a major influence on property development. All property development sectors are affected, including residential. The GFC prompted banks to reassess risks of lending. The principal outcome of this was a reduction in the proportion of project value which banks are prepared to finance.

Pre GFC, some banks were providing up to 100 per cent of development finance; current bank finance is up to 70 per cent of finance. Furthermore, lending conditions have been tightened. Pre-sales requirements are higher, and there are additional restrictions to be met, including a limit on allowable non-domestic pre-sales. Banks have imposed restrictions on the number of off-shore pre-sales, reducing the proportion from 30 - 40 per cent to 10 - 20 per cent. There are further restrictions imposed, including increases in the minimum size of units in projects that banks are prepared to finance, in addition to limits on the price of units within developments on which loans would be provided.

Restrictions on lending (proportion of development costs provided) are higher on development sites without development approvals already in place. Lenders are typically unwilling to provide more than 40 per cent of the cost of projects without development approval.

A report for the National Housing Supply Council on National Dwelling Costs in 2010 compared the changes in finance available to developers in the pre GFC period and post GFC. The table summarising the findings is reproduced in Figure 67.

Such developments are further narrowing the field of potential players in housing supply in the City of Melbourne.

TABLE 2 WHAT IS ACHIEVING FINANCE?						
	PRE-GFC	LATE 2009	LATE 2010			
LOAN SIZE	 No Maximum with clubbing and syndication readily available 	• \$75m - \$150m dependent on sponsor	 Major banks: No maximum with clubbing possible Non-majors: Up to \$50m 			
LOCATION	 Banks and developers were actively seeking exposure to the majority of markets 	 National companies favourably considering developments in States other then Queensland due to the perception of more efficient approval processes 	 National companies continue to favour other States for the same reasons Lenders remain cautious about demand for end product in Gold Coast, Sunshine Coast & Cairns areas 			
CONDITIONS PRECEDENT	 Pre-sales of 80% to 100% of debt Loan to value ratios [LVRs]: 70-80% of end value or up to 100% of costs Construction risk acceptable in certain circumstances 	 Pre-sales of 80% to 100% of debt LVRs: 65% of end value or up to 80% of costs Construction risk fully mitigated 	 Pre-sales of 80% to 100% of debt LVRs: 65% to 70% of end value or up to 80% of costs Construction risk fully mitigated for most clients 			
CREDIT MARGINS	 1.5% to 2.5% above bank swap rate 	 3% to 4.5% above bank swap rate 	 2.5% to 4.0% above bank swap rate 			

FIGURE 67. CHANGING FINANCE CONDITIONS

Source: URBIS, National Dwelling Costs Study Report, prepared for the National Housing Supply Council, January, 2010 Source: National Dwellings Costs Study Report, NHSC, January 2010



Residential development characteristics

A feature of current development typologies in the City of Melbourne is the relative uniformity of development. The majority of developments are provided in the form of multi-storey apartment developments comprised of more than 200 dwellings. Apartments provided within these developments are typically studio units, and one bedroom or two bedroom apartments. Apartment sizes are small, and getting smaller; research by Oliver Hume (2010) showed that the size of newly constructed two bedroom apartments in metropolitan Melbourne developments had fallen by around 10 square metres (sqm) over a two year period from 2008 as shown in Table 25 below.

	TABLE 25.	APARTMENT	DEVELOPMENTS:	APARTMENT	SIZES	2008-2010
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	Jan 2008 – June 2008	Jan 2010 – June 2010
Median entry size: 1 bedroom	52 sqm	44 sqm
Median entry size: 2 bedroom	77 sqm	67 sqm
Source: Oliver Hume Pesegreh 2010		

Analysis by Melbourne City Research (2012) reinforces the findings of the aforementioned research: "Another important trend is the changing size of dwellings produced over the past six years. The dwelling stock within the municipality has been shifting towards smaller dwellings with 1 or 2 bedrooms. Over the past six years nearly 121,352 new dwellings have been built with two or less bedrooms. This compared to 1,178 new dwellings with three or more dwellings." The research also finds that the number of smaller dwellings has increased significantly, while there has been limited growth in the number of larger units.

Dwelling target market

Newly constructed apartments in the City of Melbourne are generally targeted to investors rather than owner occupiers. Investors may be small scale operators, looking for an alternative investment asset class, seeking to take advantage of income and capital return, and using advantageous taxation to negatively gear investments and minimise individual investor tax liability. The disadvantage of the relative illiquidity of a residential property investment is partially offset by reduced risk, expectation of capital gain and the relative transparency of the investment product. As initial entry costs are high in comparison with other asset classes, prices for product are kept low to maximise entry opportunities into the investment market.

The targeting of investors for newly constructed residential dwellings is evident from the tenure profile of the City of Melbourne and constituent suburbs. In total, 43 per cent of dwellings in the municipality are privately rented, compared to metropolitan and state averages of 21 and 14 per cent respectively. The private rented sector is most concentrated in central Melbourne, where 49 per cent of dwellings are privately rented and least concentrated in Kensington where owner occupation forms the predominant tenure type. Even in Kensington, the proportion of owner occupied dwellings is considerably lower than in the MSD or the rest of Victoria. The proportion of tenure types by suburb (SA2) are shown in Table 26.



	Owned / Buying	Private rented	Public rented C)ther rented I	Not stated / Not applicable
Kensington	42%	32%	11%	1%	42%
North Melbourne	26%	38%	12%	2%	26%
Parkville	32%	а́ 40%	4%	3%	32%
South Yarra - West	33%	40%	0%	2%	33%
Docklands	24%	41%	2%	2%	24%
East Melbourne	33%	41%	1%	1%	33%
Southbank	29%	а́ 44%	0%	2%	29%
Flemington Racecourse	36%	44%	0%	8%	36%
Carlton	17%	46%	14%	4%	17%
Melbourne	24%	а́ 49%	1%	2%	24%
City of Melbourne	27%	43 %	5%	2%	23%
Total					
MSD	60.3%	21.0%	2.7%	1.7%	14.3%
Rest of Victoria	59.6%	14.4%	3.1%	2.5%	20.3%

TABLE 26. TENURE TYPE AT SA2 - CITY OF MELBOURNE, 2011¹⁷

Source: 2011 Census of Population and Housing

Negative Gearing

Property investments – as with other investment asset types - can be geared. Money is borrowed to finance investment that otherwise would require capital and therefore be out of reach of many potential investors, whether they be investing in shares or property.

Negative gearing occurs when the costs of keeping an asset - i.e. interest repayments on the money borrowed, the cost of upkeep and the depreciation of the asset – exceed the income return from the asset.

The investor therefore makes a loss when a property is negatively geared. However, the investment may still occur in the expectation that capital gain will offset the loss over the lifetime of the investment. Furthermore, the loss incurred in maintaining the investment can be offset against other income (from whatever source) thus reducing the total income tax liability.

Many observers believe that negative gearing 'distorts' the behaviour of smaller investors in favour of rental housing, causing a bidding up of prices versus those seeking to purchase housing for owner occupancy. Against this is the observation that negative gearing benefits are not confined to housing investment and their arbitrary removal may see a flight of capital from the private rented sector.

Institutional investment in the Australian residential sector

Detailed data on the extent of institutional investment in the residential sector in Australia is not provided here.



¹⁷ Public rented includes dwellings rented from state housing authority or from a housing cooperative, community or church group. West Melbourne excluded - insufficient data

In many European cities, between 10 and 15 per cent of housing stock is owned by institutions. There are a number of barriers or hurdles to be overcome to spur institutional investment in the residential sector in Australia. Nationwide, the private rented sector accounts for a considerably smaller proportion of dwellings than it does in European countries, although as shown in Table 26 above, there is a large private rented sector in the City of Melbourne. In theory, residential investment should be popular with institutions. According to a Knight Frank Research report¹⁸, income returns from residential property are likely to track household earnings growth while remaining largely uncorrelated to other asset classes. This would provide portfolio diversification advantages. In addition, the likely preference of an institution to control stock *en masse* rather than spread their investment over a wide area is suited to the profile of apartment development in the municipality over recent years. Institutions are likely to be unwilling to invest in residential stock dispersed through a city but are likely to prefer taking control of an entire building where rents and operating costs can be more tightly managed.

4.4 The cost of building housing in Melbourne

The major cost component of residential development is construction. Construction costs for high rise dwellings were estimated to account for between 45 to 60 per cent of total infill development costs.¹⁹ Government taxes and charges represent the next highest proportion of development costs at between 14 - 16 per cent, followed by land costs (6 - 14 per cent) and development costs (professional fees, marketing costs, due diligence) and interest (9-11 per cent). Land costs as a proportion of total development cost in Melbourne were considerably lower than in other state capitals. In Melbourne land accounts for 6 per cent of the total cost to purchaser, compared to a figure of 14 per cent for Sydney.

Comparative labour costs

Labour costs are significantly higher for high rise development than they are for low and medium density residential development. There are increased requirements for safety measures in high rise construction, and unionised labour plays a role in ensuring safety standards are upheld on large construction projects. While there is debate over the extent to which additional safety measures account for the additional cost of unionised labour in construction, these requirements undoubtedly contribute to the additional development cost of high rise development and add to the overall cost of development in the City of Melbourne.

Other development inputs

Additional costs in the development equation arise from the statutory planning process. Planning issues and delays in the planning process add to the cost of development. The uncertainty and perceived lack of clarity in the planning process add to the cost of development due to the increased risk borne by the developer which is incorporated into the development costs using an increased discount rate in the development feasibility assessment process.

4.5 Conclusions

This section has provided a summary of supply side issues for the City of Melbourne housing market. The first issue identified is that housing capacity assessments completed for the City of Melbourne are either out of date and do not take into account planning scheme amendments which have been considered in the intervening period, or do not provide the capacity for the entire City of Melbourne but restrict the analysis to the CBD. Preliminary analysis incorporating additional structure planning estimates suggest that the capacity for 48,000 dwellings over the period to 2026 could be augmented by 70-80,000 dwellings over the period to 2040, giving an indicative capacity figure of around 120,000 – 130,000 dwellings to 2040. The UDP 2010 identified the supply pipeline over the ten year period to 2021 to be



¹⁸ Knight Frank 2012 Residential Investment Overview

¹⁹ Urbis 2011 National Dwelling Cost Study

around 18,000 dwellings, while the Housing Development Data (HDD) showed that residential development within the municipality equated to around 1,800 net additional dwellings annually over the period 2004-2009. The period since then has seen a marked increase in residential construction activity which is expected to continue to drive supply above historical levels for the next two to three years.

The trend that has emerged over recent years is the clear preference for development of high rise residential buildings in the City of Melbourne. These account for the majority of dwellings delivered to the market over recent years. While this varies from suburb to suburb, across the municipality, nearly two thirds of newly constructed dwellings over the ten years to 2012 were in developments of over 200 dwellings. Dwellings within these developments are typically small - studio, one bedroom and two bedroom – while evidence suggests that the floorspace of new dwellings has declined in recent years. The strong demand for apartment dwellings in the municipality is confirmed by the data presented for sales volumes of dwellings by type. These indicate that the volume of house sales has been steadily declining since the late 1990s while apartment sales volumes – although showing significant fluctuations - have increased as a proportion of the total residential stock sold.

The emergence of high rise residential as the predominant development type in the City of Melbourne limits the number of operators in the development market. Access to finance is tight, and a proven track record is required to access capital, which, in the case of high rise development, is required upfront and cannot be staged to the same extent as it can for individual house development. Dwellings are typically targeted at investors rather than owner occupiers. Consequently dwelling sizes are smaller to keep entry costs down and boost asset class liquidity.



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5 PROJECTED HOUSING OUTCOMES

Overview

This Section provides projections of housing stock numbers and composition for the City of Melbourne, based on an appreciation of housing market dynamics as explored earlier in the report. These outcomes are discussed in the context of available population projections for the municipality and the likely future profile of housing in terms of affordability for different income groups. Comment is made on the implications for social mix.

5.1 Population and household projections

Housing stock versus population projections

The City of Melbourne forecasts indicate that total households could reach 90,727 by 2031 which represents a growth of almost 45,000 additional households from 2011 or an average annual increase of 3.3 per cent. Couples without dependents are expected to grow by 12,000 households and lone person households by 17,000.

	2005	2014	2016		2026		AAGR
	2006	2011	2016	2021	2026	2031	2006 to 2031
Couples without dependents	9,699	12,274	15,426	18,294	21,256	24,391	3.5%
Couple families with dependents	3,538	4,313	5,240	6,080	7,006	7,966	3.1%
One parent family	1,647	1,947	2,314	2,600	3,046	3,520	3.0%
Other families	2,602	2,984	3,786	4,288	4,959	5,666	3.3%
Lone person households	15,118	18,750	23,680	27,289	31,320	35,682	3.3%
Group households	6,088	7,196	9,088	10,323	11,883	13,502	3.2%
Total households	38,692	47,464	59,534	68,874	79,470	90,727	3.3%

TABLE 27. HOUSEHOLDS - CITY OF MELBOURNE

Source: i.d. consulting, 2011

Couples without dependents are forecast to account for 27 per cent of all households in the City of Melbourne in 2031, up from 26 per cent in 2011. Couple families with dependents are expected to fall as a percentage of the population from 9.1 per cent of all households in 2011 to 8.8 per cent in 2031. The proportion of group households and one parent families as a proportion of the population are also forecast to fall from 15.2 per cent to 14.9 per cent and 4.1 per cent to 3.9 per cent respectively while Lone person households and other families are expected to remain relatively constant. The two groups that these data indicate will show the largest increases in absolute size - Couples without dependents, and Lone person households - are the household types which can be accommodated in dwellings with one bedroom.





FIGURE 68. HOUSEHOLDS - CITY OF MELBOURNE

The Melbourne CBD will accommodate 28 per cent of the additional households by 2031 while Southbank, North Melbourne, Carlton and Docklands will accommodate 15 per cent, 15 per cent, 13 per cent and 12 per cent respectively.

FIGURE 69. PROPORTION OF ADDITIONAL HOUSEHOLDS - 2006 TO 2031



Understanding the property and economic drivers of housing 90

Source: Id Consulting 2012

Docklands will experience the highest rate in growth of households from 2011 to 2031 and, as such, its share of total households of the City of Melbourne will increase from 2 per cent to 4 per cent The Melbourne CBD will increase its share of households by 9 per cent to 12 per cent while North Melbourne, Southbank and West Melbourne will also increase their shares. Parkville, South Yarra, Kensington, Carlton and East Melbourne will see their share of households decline as a proportion of the City total.



FIGURE 70. CHANGE IN PROPORTION OF HOUSEHOLDS - 2006 COMPARED TO 2031

Population

The City of Melbourne population is expected to grow by 3.1 per cent AAGR from 98,000 to 181,000 over the period from 2011 to 2031. The Melbourne CBD accounted for the highest proportion of the population in 2011 at 21.5 per cent and this is expected to increase to 22.5 per cent in 2031. Docklands is expected to increase its share of the population significantly from 4.8 per cent to 8.7 per cent. Southbank and West Melbourne are also expected to increase their respective shares of the population. East Melbourne, Kensington and Parkville are all expected to experience a significant decrease in their share of the total population. These figures underscore the scale of the challenge before the City of Melbourne as it strives to achieve socio-demographic diversity across all of its neighbourhoods.



	2006	2011	2016	2021	2026	2031	2011 to 2031 (AAGR)
Carlton	12,879	14,646	19,320	21,957	23,771	26,785	3.1%
Docklands	4,218	6,133	9,595	12,523	14,205	15,791	4.8%
East Melbourne	4,675	5,162	5,344	5,565	5,772	5,977	0.7%
Kensington	9,161	10,459	10,926	12,077	13,230	14,688	1.7%
Melbourne - St Kilda Road	950	1,631	1,954	2,004	2,064	2,134	1.4%
Melbourne CBD	15,406	21,079	26,737	29,856	35,265	40,717	3.3%
North Melbourne	10,562	11,648	13,812	17,890	22,346	26,437	4.2%
Parkville	5,205	5,773	5,876	5,831	5,825	5,827	0.0%
South Yarra	4,698	4,702	4,721	4,717	4,723	4,732	0.0%
Southbank - South Wharf	9,942	13,108	19,023	21,084	23,281	25,644	3.4%
West Melbourne	3,293	3,823	4,201	6,013	9,400	12,593	6.1%
City of Melbourne	80,987	98,164	121,507	139,519	159,882	181,325	3.1%

FIGURE 71. POPULATION GROWTH 2006 TO 2031

Source: Id Consulting 2012

Figure 72 shows that within the City of Melbourne the various sub areas have distinctly different age profiles. In particular the Melbourne – St Kilda Road area has only 13 per cent of its population aged 0 to 24 compared to the wider municipality which has 34 per cent of its population in the same category. The City of Melbourne has 85 per cent of its population aged 15 to 65 and 6 per cent of its population aged 65 years and older as compared to the Melbourne – St Kilda Road area which has 51 per cent and 46 per cent respectively.



FIGURE 72.CITY OF MELBOURNE AGE PROFILE, 2006-2031

The City of Melbourne is expected to experience a decrease in the proportion of individuals aged 15 to 24 over the 2011 to 2031 period. This age group will decrease as a proportion of the total population from 28 per cent to 26 per cent. The 35 to 49 year age group will increase from 17 per cent to 19 per



cent, while the proportional share of other age cohorts will remain relatively constant over the period to 2031.

Implications for social mix / income diversity

Table 28 shows the weekly median income range and the weekly median rental ranges for each of the respective suburbs within the City of Melbourne. The table also shows how much the rental ranges are as a proportion of income. This measure is used as an indicator of affordability. While the table below shows the median ranges the distribution of ranges are shown in the appendices to this report. The distribution is important when identifying the range of income groups which are catered for within a suburb.

Suburb	Median Income Range (\$ Per Week)	Median Rental Range	Rent payed as a % of income (average of ranges)	
Carlton	\$600 to \$799	\$325 to \$349	48%	
North Carlton	\$1,500 to \$1,999	\$425 to \$449	25%	
Docklands	\$1,500 to \$1,999	\$450 to \$549	29%	
East Melbourne	\$1,500 to \$1,999	\$400 to \$424	24%	
Melbourne	\$1,000 to \$1,249	\$400 to \$424	37%	
North Melbourne	\$1,250 to \$1,499	\$325 to \$349	25%	
Parkville	\$1,500 to \$1,999	\$350 to \$374	21%	
West Melbourne	\$1,500 to \$1,999	\$450 to \$549	29%	
South Melbourne	\$1,500 to \$1,999	\$425 to \$449	25%	
Southbank	\$1,500 to \$1,999	\$450 to \$549	29%	
South Yarra	\$1,500 to \$1,999	\$350 to \$374	21%	
South Wharf	\$2,500 to \$2,999	\$650 and over	26%	
Kensington	\$1,500 to \$1,999	\$350 to \$374	21%	
Total	\$1,250 to \$1,499	\$400 to \$424	30%	

TABLE 28. MEDIAN INCOME TO MEDIAN RENT

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011

Carlton has the lowest median income range at \$600 to \$799 and also the lowest median rental range at \$325 to \$349. Carlton has the highest percentage of income paid as rent at 48 per cent of income indicating that while rents are low the median income is relatively lower and therefore households are required to pay a higher proportion of their income towards rent. Carlton therefore can be seen as the least affordable suburb relative to the income of residents.

Carlton's income distribution – shown in Figure 73 - indicates that the suburb has a high proportion of households that lie within the nil income range. Other households are distributed relatively evenly over the other income ranges. This may reflect the large number of students or the large number of affordable housing residents. Compared to this the majority of households are paying rent in the higher ranges.

Melbourne has the second highest proportion of median income paid as rent at 37 per cent followed by Docklands (29 per cent), West Melbourne (29 per cent), Southbank (29 per cent) and South Wharf (26 per cent).

South Wharf is the suburb with the highest median income range of \$2,500 to \$2,999 and a median rental range of \$650 and over.

It is notable that while Parkville has the highest percentage of full time students as a proportion of its population this is not reflected in its income profile. Parkville has a very small proportion of its population earning nil or relatively low income. This result may arise due to the large number of college students and the manner in which the census results are collected within a college. For instance while



the number of college students may have been identified the income which they earn may not have been if an administrator for the college had completed the census form.

Figure 73 shows the household income ranges for each suburb. The figures below, and those included in the appendices to this report show that of the City of Melbourne suburbs, Carlton has the most even distribution of household incomes across the four income bands, followed by North Melbourne and Melbourne. Conversely, South Wharf, East Melbourne and Docklands have the most unequal distributions of incomes, with 71 per cent, 50 per cent and 49 per cent of households respectively in the high income bracket.



FIGURE 73. HOUSEHOLD INCOME RANGES - 2011

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011

5.2 Conclusions

The eleven areas of the City of Melbourne identified in the above analysis are distinctly different in terms of the age profile of their population, their household composition and the proportion and number of resident students. These differences are likely to continue to become more marked over the period 2011 to 2031.

The majority of household growth is projected to occur in household types consisting of lone person households or couples without dependents. While these household types may choose to live in larger dwellings with more bedrooms than are needed on a day to day basis, these household types are the most suited to occupy smaller dwellings - whether these be studio apartments or one bedroom apartments. This type of demand is consistent with the type of supply that has tended to dominate the residential development pipeline since the late 1990s.

While couple families with dependents will still see strong annual rates of growth of around 3 per cent, the absolute growth numbers are low in comparison with the household growth forecasts for lone person and couple without dependents households. The increase in households of this type over the period to 2031 is expected to be around 3,650 - equivalent to an additional 180 households per year.



The City of Melbourne forecasts indicate that total households may reach 91,000 by 2031 which represents a growth of around 45,000 additional households from 2011. The delivery of dwellings and housing options to accommodate these additional households will need to be designed at a finer grained level than that of the City of Melbourne as a whole.

The majority of growth in households is expected to occur in the CBD, which is projected to account for 28 per cent of additional households in the City of Melbourne over the forecast period. Other suburbs projected to see strong rates of household growth are North Melbourne, Southbank, Carlton and Docklands. These areas will account for between 12 and 15 per cent of additional households in the municipality. Given the dwelling typology of the CBD and areas such as Docklands it is probable that these suburbs will account for much of the growth in lone person households and couples without dependents households.


BRIDGING THE GAP: MARKET OUTCOMES VERSUS POLICY

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BRIDGING THE GAP: MARKET OUTCOMES VERSUS POLICY

Overview

This Section returns to the City of Melbourne's housing aspirations as set out in Section 2 and appraises the prospects of any gap between this policy ambition and market outcomes. The Section also considers the extent to which the City of Melbourne can make a difference through its own interventions.

The message from the analysis in this report is quite clear. The supply of affordable housing is drying up under the pressure of Melbourne's generally buoyant economy.

The role of the municipality in the metropolitan economy has been radically redefined over the past two decades. It has moved from a position as co-producer of specialised business services, alongside suburbanised employment nodes, to a supra-dominant locus for these activities. The City of Melbourne and the inner urban region are now vital exporters of brokerage, design, research, legal, engineering, strategic management, training and other high level problem solving services to Victoria, other parts of Australia and, indeed, the world. It is no exaggeration to say that Central Melbourne has become the engine room of the Victorian economy. It is hungry for knowledge workers and pays a premium to secure their services. The flow through to the housing market is inevitable, as shown in Section 5.

From an economic development point of view, these pressures have not yet reached the point where 'key workers' – both those moderately paid (for example, nurses, police officers, emergency service workers) and those on low incomes (retail and hospitality staff) - are no longer readily accessible to employers in the City of Melbourne. Though not definitive at this point, the research in this report suggests that the substantial pool of housing available within a reasonable public transport travel distance of central Melbourne is likely to offer sufficient accommodation opportunities for these workers. But, on the broader trends described in the report, it is only a matter of time before a key worker squeeze affects Melbourne in the same way as it has affected other large, knowledge based, cities such as London, New York and, to a lesser extent, Sydney.

More generally, the market pressures which are driving up housing costs and narrowing the scope of the new housing offer in the City (to compact apartments for young singles and couples) are pulling in the opposite direction from the MSS and Future Melbourne visions for a diverse and inclusive community. As with the key worker issue, the requisite diversity could be achieved over a broader inner city geography than the City of Melbourne itself, with the latter fulfilling a more specialised role in the metropolitan economy and community. But this would require a more nuanced interpretation of the objectives in the abovementioned policies, and, in any case, reliance on the wider geography would only 'buy more time' in pursuit of the social diversity vision.

What can be done to bridge the emerging yawning gap between policy aspiration and market outcomes? On the face of it, marginal adjustments to current policy settings are not likely to make a significant difference. At the same time, the range of interventions open to the Council, given its subsidiarity mandate in the planning and development control system in Victoria, is quite limited. For example, Future Melbourne calls for 20 per cent of all new housing to be 'affordable' but there is, as yet, no explicit mechanism in the Victoria Planning Provisions (VPP) to enforce this. Previous attempts by the



inner city Councils to frame a sub-regional approach in amending the VPP to support Inclusionary Zoning (under the IMAP process) did not gain traction with the State Government. It may be that a fresh conversation with State Government on this issue is warranted given the evidence gathered in the current study.

In any case, while the planning system may have a legitimate part to play it would be unwise to look to cost boosting regulatory initiatives as a panacea. Melbourne's success as a knowledge city is, in part, attributable to its capacity to offer new housing and office accommodation at prices which are *relatively* affordable to knowledge based businesses and workers alike. Interventions which threaten this competitive advantage need to be treated with due caution.

First and foremost, any move to mandate inclusion of affordable housing in new developments should be well telegraphed to the development industry. This would allow these requirements to be factored into project feasibilities, thereby boosting the potential for the implied costs to be passed backwards to land sellers rather than forward to end users.

Other accompanying reforms would also be vital, for example:

- A careful audit of development approval processes to optimise code assessment of proposals and limit third party notifications and appeals in respect of proposals which are not anticipated by the planning scheme
- A program of co-ordinated marketing of 'surplus' Council owned land and air-rights to increase the volume of development opportunities available within the City of Melbourne.

Furthermore, existing policy aspirations regarding the goals of diversity and community inclusiveness in the City of Melbourne are open to interpretation. Clarification of what exactly these goals seek to achieve, and why they are desired, should be a priority before any substantive market interventions are attempted.

Equally important is that the State Government plays its part in securing a reasonable permanent stock of affordable housing in the central city. Traditionally, it has achieved this through public housing investment, but now has the added option of capital injections into Housing Associations. These can leverage other resources to generate innovative projects offering affordable housing opportunities.

The regeneration of the Ultimo Pyrmont, a neighbourhood in inner Sydney, provides a useful example of this blending of planning controls and government investment to achieve social diversity objectives in high land value locations.



Case study - Ultimo Pyrmont



The Commonwealth contributed \$50m in 1992 under the then Building Better Cities Program. The NSW Government contributes 4 per cent of local public land sales (\$7m). Developer contributions are generated from a levy on all commercial and residential schemes in the area under a local planning policy. These can be in cash or housing, but tend to be in cash. Some \$14m had been collected in assets by 2003. There is no on-going government subsidy for affordable rental accommodation. Rents set at between 25 per cent and 30 per cent of household income. 450 units produced in area with an end target of 600. The funds generated through the Commonwealth investment, State Government land sales and development contributions are channelled through a Housing Association – 'City West'. Tenants must live or work in designated areas and earn between \$29,094 and \$80,180 household income.

Source Gilmour (2010)



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APPENDICES

Weekly income and rent ranges by suburb

FIGURE 74. HOUSEHOLD WEEKLY INCOMES RANGES - CARLTON



FIGURE 75. HOUSEHOLD WEEKLY RENTAL RANGES - CARLTON





FIGURE 76. HOUSEHOLD WEEKLY INCOME - CARLTON NORTH

FIGURE 77. HOUSEHOLD WEEKLY RENTAL RANGES - CARLTON NORTH





FIGURE 78. HOUSEHOLD WEEKLY INCOME - DOCKLANDS

FIGURE 79. HOUSEHOLD WEEKLY RENTAL RANGES - DOCKLANDS





FIGURE 80. HOUSEHOLD WEEKLY INCOME - EAST MELBOURNE



FIGURE 81. HOUSEHOLD WEEKLY RENTAL RANGES - EAST MELBOURNE



FIGURE 82. HOUSEHOLD WEEKLY INCOME - MELBOURNE

FIGURE 83. HOUSEHOLD WEEKLY RENTAL RANGES - MELBOURNE





FIGURE 84. HOUSEHOLD WEEKLY INCOME - NORTH MELBOURNE

FIGURE 85.HOUSEHOLD WEEKLY RENTAL RANGES - NORTH MELBOURNE





FIGURE 86. HOUSEHOLD WEEKLY INCOME - PARKVILLE

FIGURE 87. HOUSEHOLD WEEKLY RENTAL RANGES - PARKVILLE





FIGURE 88. HOUSEHOLD WEEKLY INCOME - WEST MELBOURNE

FIGURE 89. HOUSEHOLD WEEKLY RENTAL RANGES - WEST MELBOURNE





FIGURE 90. HOUSEHOLD WEEKLY INCOME - SOUTH MELBOURNE

FIGURE 91. HOUSEHOLD WEEKLY RENTAL RANGES - SOUTH MELBOURNE





FIGURE 92.HOUSEHOLD WEEKLY INCOME - SOUTHBANK

FIGURE 93. HOUSEHOLD WEEKLY RENTAL RANGES - SOUTHBANK





FIGURE 94. HOUSEHOLD WEEKLY INCOME - SOUTH YARRA

FIGURE 95. HOUSEHOLD WEEKLY RENTAL RANGES - SOUTH YARRA





FIGURE 96.HOUSEHOLD WEEKLY INCOME - SOUTH WHARF

FIGURE 97. HOUSEHOLD WEEKLY RENTAL RANGES - SOUTH WHARF





FIGURE 98. HOUSEHOLD WEEKLY INCOME - KENSINGTON

FIGURE 99. HOUSEHOLD WEEKLY RENTAL RANGES - KENSINGTON



Source	Title	Catalogue Number	Release Year
ABS Census	Place of Usual Residence	2003.0	2012
ABS Census	Place of Work	2006.0	2012
ABS	Employee Earnings and Hours	6306.0	2010
ABS	Wage Price Index	6345.0	2012
Vic Dept of Transport	Melbourne Integrated Transport Model	Travel Time Matrices	2011
ABS	Labour Force Survey	6291.0.55.001	2012
City of Melbourne	Census of Land Use and Employment		2010
City of Melbourne	Knowledge Melbourne International Student 2012 Strategy		2012
Knight Frank	Melbourne and Sydney Office Market20Overviews20		2012
City of Melbourne	1985 Strategy Plan		1985
Vic State Govt	1954 Melbourne Metropolitan Planning 1954 Scheme		1954

TABLE 29. DATA SOURCES USED IN MODELLING

TABLE 30. BROAD OCCUPATION CATEGORIES DESCRIPTION

Occupation Group	Detailed Occupations
ICT Professionals	Business and Systems Analysts, and Programmers
ICT Professionals	Database and Systems Administrators, and ICT Security Specialists
ICT Professionals	ICT Network and Support Professionals
Specialist Managers	Advertising, Public Relations and Sales Managers
Specialist Managers	Business Administration Managers
Specialist Managers	Construction, Distribution and Production Managers
Specialist Managers	Education, Health and Welfare Services Managers
Specialist Managers	ICT Managers
Specialist Managers	Miscellaneous Specialist Managers
Business, HR & Marketing Prof	Accountants, Auditors and Company Secretaries
Business, HR & Marketing Prof	Financial Brokers and Dealers, and Investment Advisers
Business, HR & Marketing Prof	Human Resource and Training Professionals
Business, HR & Marketing Prof	Information and Organisation Professionals
Business, HR & Marketing Prof	Sales, Marketing and Public Relations Professionals
Health Prof	Health Diagnostic and Promotion Professionals
Health Prof	Health Therapy Professionals
Health Prof	Medical Practitioners
Health Prof	Midwifery and Nursing Professionals
Legal, Social & Welfare Prof	Legal Professionals
Legal, Social & Welfare Prof	Social and Welfare Professionals
Engineering, ICT & Science Tech	Air and Marine Transport Professionals
Engineering, ICT & Science Tech	Architects, Designers, Planners and Surveyors
Engineering, ICT & Science Tech	Engineering Professionals
Engineering, ICT & Science Tech	Natural and Physical Science Professionals
Hospitality, Retail & Service	Accommodation and Hospitality Managers

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Managers	
Hospitality, Retail & Service Managers	Retail Managers
Hospitality, Retail & Service Managers	Miscellaneous Hospitality, Retail and Service Managers
Media Professions	Artistic Directors, and Media Producers and Presenters
Media Professions	Authors, and Book and Script Editors
Media Professions	Film, Television, Radio and Stage Directors
Media Professions	Journalists and Other Writers
Education Professionals	School Teachers
Education Professionals	Tertiary Education Teachers
Education Professionals	Miscellaneous Education Professionals
Artists	Actors, Dancers and Other Entertainers
Artists	Music Professionals
Artists	Photographers
Artists	Visual Arts and Crafts Professionals
Sales Assistants	Sales Assistants (General)
Sales Assistants	ICT Sales Assistants
Sales Assistants	Motor Vehicle and Vehicle Parts Salespersons
Sales Assistants	Pharmacy Sales Assistants
Sales Assistants	Retail Supervisors
Sales Assistants	Service Station Attendants
Sales Assistants	Street Vendors and Related Salespersons
Sales Assistants	Other Sales Assistants and Salespersons
Hospitality Workers	Bar Attendants and Baristas
Hospitality Workers	Cafe Workers
Hospitality Workers	Gaming Workers
Hospitality Workers	Hotel Service Managers
Hospitality Workers	Waiters
Hospitality Workers	Other Hospitality Workers

Source: ABS ANZSCO Cat. No. 1220.0

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