



ESSENTIAL ECONOMICS

# **Viability of High Density Residential Development in Activity Centres**

## **REFRESH**

Prepared for

Department of Environment Land Water and Planning

by

Essential Economics Pty Ltd

**September 2018**

## **Authorship**

<b>Report stage</b>	<b>Author</b>	<b>Date</b>	<b>Review</b>	<b>Date</b>
Draft report	Chris McNeill Rob Weston	5 July 2018	John Henshall	18 July 2018
Final report	Chris McNeill	25 September 2018		

## **Disclaimer**

Every effort has been made to ensure the accuracy of the material and the integrity of the analysis presented in this report. However, Essential Economics Pty Ltd accepts no liability for any actions taken on the basis of report contents.

## **Contact details**

For further details please contact Essential Economics Pty Ltd at one of our offices:

96 Pelham Street

Carlton

Victoria 3053

Australia

PH +61 3 9347 5255

FAX +61 3 9347 5355

Level 26 / 44 Market Street

Sydney

New South Wales 2000

Australia

PH +61 2 9089 8654

EMAIL [mail@essentialeconomics.com](mailto:mail@essentialeconomics.com)

WEB [www.essentialeconomics.com](http://www.essentialeconomics.com)

ABN 92 079 850 427

**Our Reference: 17261**

## Contents

<b>Introduction</b> .....	<b>4</b>
<b>1 Key Findings of the 2007 Report</b> .....	<b>5</b>
1.1 How this analysis approaches the issues .....	5
<b>2 How Has the Melbourne Apartment Market Changed Since 2007?</b> .....	<b>8</b>
2.1 Melbourne is a bigger and more diverse metropolis .....	8
2.2 Scarcity of land is impacting on prices .....	9
2.3 Congestion and big city pressure .....	9
2.4 Apartment Living now more widely accepted .....	9
2.5 Development Approach more sophisticated .....	10
2.6 Tighter Controls on Financing of Construction .....	10
2.7 Structure Planning more sophisticated than in 2007 .....	10
<b>3 Have the Assessment Parameters Changed?</b> .....	<b>11</b>
3.1 Assessment parameters in 2007 Report Assessment .....	11
3.2 Establishing a Contemporary Apartment Benchmark .....	13
<b>4 Updating the Viability Assessment Criteria</b> .....	<b>16</b>
4.1 Establishing a New Benchmark .....	16
4.2 Mapping the New Benchmark Ratio .....	20
<b>5 High-Density Residential Development in the Suburbs</b> .....	<b>22</b>
5.1 Mapping Higher-Density Residential Development .....	22
5.2 Outlier Locations for High Density Residential Development .....	22
<b>6 The Cost of Development</b> .....	<b>25</b>
6.1 Construction Cost .....	25
<b>7 Key Findings</b> .....	<b>29</b>

# INTRODUCTION

---

## Background

The Department of Environment, Land, Water and Planning (DELWP) seeks an assessment of the development viability of higher-density forms of residential development in activity centres. This study is intended to inform DELWP's understanding of the constraints or impediments to such development in activity centres, and the identification of potential responses.

The project represents an update of previous work undertaken by Spade Consultants Pty Ltd, as part of a Priority Development Panel initiative in 2007 (*'An Analysis of the Viability of Residential Development in Activity Centres'*, 2007), known in this report as the '2007 Report'.

Essential Economics was appointed to undertake the update of 2007 Report. The update reviews the 2007 Report and considers the ongoing application of the 'rules of thumb' established in that report, particularly the metrics used to establish whether particular activity centre locations can be seen as viable markets for higher-density residential development.

Included in this report are the following elements:

- An outline of the financial drivers influencing the development of medium and higher-density residential product in Activity Centre locations.
- A series of 'rule of thumb' measures or benchmarks addressing such things as the anticipated sales prices for higher-density residential developments of different scale within different geographic regions of Melbourne.

## Objective

To update the 2007 Report and provide insights and guidance to the DELWP to better understand the market dynamics influencing higher-density forms of residential development in and around activity centres.

# 1 KEY FINDINGS OF THE 2007 REPORT

---

## 1.1 How this analysis approaches the issues

The 2007 Report explored the viability of higher-density forms of residential development in Melbourne's activity centres. The contextual background to the 2007 Report was that, although higher-density forms of residential development were occurring in a number of inner urban activity centres, limited development was occurring in middle and outer suburban activity centres; that is, those located, say, beyond five kilometres and 20 kilometres of Melbourne's Central Business District (CBD).

This was considered perplexing to urban policy practitioners at the time, as Melbourne's then metropolitan strategy – *Melbourne 2030* - sought to encourage increased residential development in Melbourne's established areas, particularly in and around identified activity centres. The activity centres themselves, usually well-established retail and commercial centres, and often anchored by a train station, provided opportunities for more efficient use of established infrastructure along with identifiable redevelopment sites.

The issue however, was a lack of development, particularly beyond the inner ring of suburbs. Within planning circles at the time, the most puzzling area was that of Doncaster where, as well as the Melbourne 2030 Strategy, local policies had also encouraged high-density residential development in the area around Doncaster Hill. Anchored by a major shopping centre and affording generous views, local policy provided support for residential apartments of considerable height. Yet there had been little in the way of actual development at the time, with several proposed developments reaching the sales and registration stage but failing to progress to construction.

It was against this background that the 2007 Report was undertaken.

Informed by consultation with the development industry, the 2007 Report provided contextual background and 'rule of thumb' guidance as to why certain types of higher-density residential development were viable in some locations, but not in others.

The 2007 Report noted that no definitive method exists to establish the economic viability of specific types of development in a given location. Each situation will bring with it its own set of unique circumstances.

Notwithstanding this qualification, the 2007 Report acknowledged the need to provide a measurable assessment to determine or, at least, test the question of viability if only to provide guidance for structure planning and planning policy, and to 'test' development concepts to gauge their potential viability.

The key findings of the September 2007 Report included:

- Many developers approach higher-density forms of development from a "reverse engineering" position. When a land parcel is identified as a potential opportunity they

ask, “what will the market bear in this particular location?”, and then work backwards to determine the appropriate development product for the site.

- Determining what the market will bear in a given location is dependent on both the general location of the site and by the specific site characteristics. Informing the answer will be specific factors including:
  - The desirability of a given location;
  - The median house price of the surrounding area;
  - The physical and urban geography of the local area, including proximity to beach, river or parks, entertainment precincts and shops;
  - Proximity to transport, particularly railway stations and tram routes, but also convenient freeway or arterial road access and bus services; and
  - The potential for attractive views.
- An approach nominated by a number of development industry practitioners was to consider the median house price of the surrounding area. That is to say, in order for higher-density development to be viable the median house price of the surrounding area should be materially higher – between, say, 25% and 40% – than the required sale price of the average unit or apartment.
- The explanation behind this approach was relatively simple. If a two-bedroom unit or apartment is to be put to the market at or around, say, \$450,000, the median house price of the surrounding area will necessarily be in the vicinity of \$600,000 or more. If a new, higher-density dwelling could not be put to the market at a price materially below the median house price of the surrounding area, it was felt the consumer would generally choose the option that provided a land-based component in their purchase (ie. a house). In short, if there is little difference in the purchase price, a house is considered to offer better value for money.
- Where this ‘rule of thumb’ was not met, developers stressed the actual choice confronted by the home buyer. The choice becomes a decision between a new 80 sqm two-bedroom apartment with (most likely) one car park or, for little or no extra outlay, a 15 to 20-year old three-bedroom brick veneer freestanding house on perhaps 700 sqm of land. It was also noted that no GST is payable on an existing dwelling.
- The development industry view was that unless the home buyer has a specific reason for choosing the unit or apartment over the house, the home buyer will generally prefer the traditional home.

In established apartment markets, such as the Melbourne CBD and city fringe areas, a comparison with median house prices in nearby areas was considered less relevant.

The 2007 Report noted a number of additional points relating to cost and viability. These included the following:

- The cost of construction does not materially alter according to location. The cost of construction on an equivalent site is essentially the same in Ringwood or Preston as it is in Southbank or Port Melbourne.
- Building regulations and practices dictate that construction costs generally begin to change when a building exceeds four levels and commercial construction rates begin to apply.

Further, the 2007 Report concluded:

- Only a limited number of locations could sustain both the quantity of units or apartments delivered through high-rise projects, along with the price point required to provide a reasonable return. This was generally limited to Melbourne's CBD and city fringe locations such as Docklands, Southbank and St Kilda Road, along with several premium suburban locations such as Port Melbourne, St Kilda, Hawthorn and South Yarra.
- Unlike the broadhectare land market, the cost of land in higher-density development diminishes as a percentage of the unit or apartment price according to the degree to which a higher than expected dwelling yield is obtained from a given property. For example, while the land value per dwelling in a high-density residential development may represent in the range of 5% to 15% of the sales price of apartments, in the broadhectare market land may represent up to 50% of the value of a house and land package.

The key findings and conclusions outlined in the 2007 Report were provided as 'rule of thumb' principles to be used to determine the viability of higher-density forms of development in specific locations.

The 2007 Report carried one important qualification however, noting that exceptions exist for each rule of thumb. It noted that niche developments that did not observe the 'rules of thumb' could be found in locations around Melbourne, although – again importantly – the 2007 Report stressed that one, or even two, high density residential developments in a particular location did not represent evidence that location would sustain an ongoing high-density market.

The 2007 Report emphasised that it is not the first high-density development in a given activity centre that proves there is a market in that location, but rather the second, third and fourth developments that would really establish the depth, and therefore sustainability, of a particular location. In this regard, it was considered that factors such as amenity, location and the macro-economic outlook would determine the depth of a high-density residential development market, once a threshold test against median house price was close to being met.

Following the release of the 2007 Report, the '\$600,000 test' became well-established as a 'rule of thumb' benchmark to establish the likelihood of a viable high-density residential market around activity centres. That is, if the median house price of the surrounding area was at or above \$600,000, the activity centre was considered to be in the mix as a viable location for high-density forms of residential development.

## **2 HOW HAS THE MELBOURNE APARTMENT MARKET CHANGED SINCE 2007?**

---

Since the 2007 Report, high-density residential development – in the form of medium and high-rise apartment buildings – has spread in geographical terms from inner urban Melbourne to middle suburbia and, in certain locations, outer suburbia. The extent to which this has occurred and the metrics that explain this evolution in Melbourne’s urban form are explained in more detail in the next chapter.

This chapter considers the key influences that have driven this change.

### **2.1 Melbourne is a bigger and more diverse metropolis**

Between 2006 and 2016, Greater Melbourne’s population increased by 965,000 persons, or 96,500 persons per annum. In 2006, Greater Melbourne’s population was 3.76 million persons. By 2016, it has increased to 4.73 million persons. A population increase of this magnitude resulted in more than 360,000 additional households and an even greater number of new dwellings over the ten-year period.

Presently, Greater Melbourne is one of the fastest growing metropolitan areas in the so-called western world. In the most recent year (2016-17) for which population growth is reported by the Australian Bureau of Statistics, it is estimated Greater Melbourne added a further 125,500 persons, a growth rate of 2.7% over the previous year. In mid to late 2018, the population of Greater Melbourne is expected to pass 5 million persons.

A city of 5 million persons is different from one of 3.7 million persons. The dynamics of land use are different; traffic congestion – in all its forms – is different, and the city looks and feels different in the eyes of long-term residents. Although the city’s ‘DNA’ – in terms of its physical geography and key landmarks - may feel much the same, several noticeable differences have emerged from the city of a decade earlier. These include the following:

- The Central Business District skyline looks noticeably bigger, in terms of its density and, even more so, its geographic spread
- Key inner urban centres such as South Yarra (Forest Hill) and Footscray are evolving as high-rise clusters in their own right, with many new buildings (mainly residential) of 10 or more levels
- Other inner urban areas, particularly along established linear shopping strips (eg High Street, Northcote through to Preston) have emerged as medium-rise linear clusters with many new buildings of 3 to 10 levels
- Some middle suburban centres (eg. Box Hill, Moonee Ponds, Heidelberg) have emerged as medium and/or rise clusters with many new buildings of 4 or more levels

- Some outer suburban centres (eg Caroline Springs, Williams Landing) have emerged where medium rise (up to 10 levels) residential and commercial buildings are clustered around a retail hub or train station.

Another noticeable change over the 10-year period to 2016 is the extent to which Greater Melbourne's growth has been reliant on overseas migration. In 2006, 64.5% of Greater Melbourne's population was born in Australia. By 2016, this figure had decreased to 59.8%. The most noticeable increases came from persons born in China and India (the number of which both tripled over the 10-year period).

## **2.2 Scarcity of land is impacting on prices**

As Greater Melbourne has increasingly taken on the appearance of a 'big city', the underlying value of land has increased in highly sought after areas with the result that median house prices (where the property value has a land-based component) have increased at a greater rate than median apartment prices (where there is no land-based component tied directly to the property asset). This issue is explored in more detail in the Chapter 3.

## **2.3 Congestion and big city pressure**

With traffic congestion noticeably increasing, another noticeable shift has been the greater value attached to proximity to fixed rail infrastructure, particularly train stations, but also along light rail or tram corridors.

In this regard, it is unsurprising that high-density residential development has been particularly successful in activity centres anchored by a train station, and along tram corridors.

## **2.4 Apartment Living now more widely accepted**

Since the 2007 Report was undertaken, it is observed that apartment living is now more widely accepted. This is borne out in Census data, where the proportion of households in Greater Melbourne living in a flat or apartment of 4 levels or more has increased from 3.2% of total households to 6.4%.

In the City of Melbourne – which includes the Central Business District, Southbank, Docklands, as well as Carlton and Parkville – the proportion of persons living in flats or apartments of four or more levels increased from 58.8% in 2006, to 72.5% in 2016. Of the 28,000 additional households over the 10-year period, 91% were provided in apartment developments of four levels or more.

One of the more successful apartment markets to have emerged since the 2007 Report is in Box Hill, where a cluster of high and medium-rise towers now rises on the landscape. It is possible that cultural factors have played a part in the emergence of the Box Hill market. The area is popular with the Chinese community, with the proportion of Box Hill residents born in China increasing from 14.3% in 2006, to 27.6% in 2016. Similarly, the proportion of Box Hill residents of Chinese ancestry has increase from 27.3% in 2006, to 41.2% in 2016. In the Box Hill residential apartment market it is noticeable that most apartment developments are

marketed quite specifically to potential buyers of Chinese background. Marketing based on cultural backgrounds is also common in other parts of Melbourne.

It is possible the apartment market in certain areas, such as Box Hill, have been directly influenced by cultural factors.

## **2.5 Development Approach more sophisticated**

Since the 2007 Report, high-density residential development has become more sophisticated, with a great many more active developers, and a more sophisticated approach to development. Whereas in 2007 it was possible to clearly identify dominant developers, today a much greater number of players are active in the market.

Apartment developments are now more specifically tailored to specific markets. For example:

- Amenities such as swimming pools, gymnasiums and shared rooftop decks are often incorporated into major apartment developments, where liveability is regarded as paramount in the product offering.
- Edgy design features and sustainability initiatives are frequently incorporated into apartment developments in areas such as Fitzroy, Northcote and Brunswick where alternative culture is valued and celebrated.
- Cultural elements such as specific exterior or interior colourings and design features are included in developments where the marketing pitch is towards buyers of particular cultural backgrounds.
- More conservative design elements (both interior and exterior) are incorporated in certain areas, particularly where a development is pitched at an older demographic.

## **2.6 Tighter Controls on Financing of Construction**

Another element of apartment development that has changed since the 2007 Report is the need for a significantly higher percentage of sales to be secured prior to construction commencing. These measures – a consequence of the Global Financial Crisis – typically require pre-sales in the order of 90% before construction finance is provided. At the time of the 2007 Report, this threshold was generally around the 70% mark.

## **2.7 Structure Planning more sophisticated than in 2007**

Another key area of difference is that the structure plans applicable to many activity centres are considered more realistic in terms of market viability than they were in 2007. This is not to say that applicable planning controls are considered as a positive in each and every situation. That is not the case. It is however realistic to suggest that some structure plans and planning frameworks are considered to be more economically driven than those that applied when the 2007 Report was undertaken.

### **3 HAVE THE ASSESSMENT PARAMETERS CHANGED?**

---

In this Chapter the assessment parameters established in the 2007 Report are reviewed and updated to reflect the high-density residential development market in 2018.

#### **3.1 Assessment parameters in 2007 Report Assessment**

As outlined in Chapter 1 of this report, the 2007 Report established a high level metric on which the viability of higher-density residential development in certain locations, could be assessed.

In 2007, the median house price in Greater Melbourne was \$345,000. As has always been the case, the median house price varied from suburb to suburb. For example, the median house price in middle suburban locations such as Doncaster and Oakleigh was \$475,000 and \$430,500 respectively.

At that time, a basic two-bedroom apartment could be put to the market for as little \$350,000 in a middle to outer suburban location. Apartments of reasonable quality and scale in inner to middle suburban areas however, were generally more in the range of \$400,000 to \$450,000 with the higher end of the price range representing a high-end two-bedroom apartment in a relatively sought-after location.

Based on the metric that the purchase price of a new two-bedroom apartment product would need to be between 60% to 75% of the median house price of the surrounding area, a default position of \$600,000 (as the median house price) became the accepted test scenario to establish viability. This essentially provided for a position where a two-bedroom apartment price of between \$390,000 (being 65% of \$600,000) and \$450,000 (being 75% of \$600,000) established the rule of thumb benchmark adopted in the 2007 Report.

It is possible to map at a suburb level, those areas of Melbourne where the median house price in 2007 was at or above \$600,000. This is provided at Figure 3.1.

Figure 3.1: Median House Price of \$600,000 or more (2007) (Source: Valuer-General Victoria)

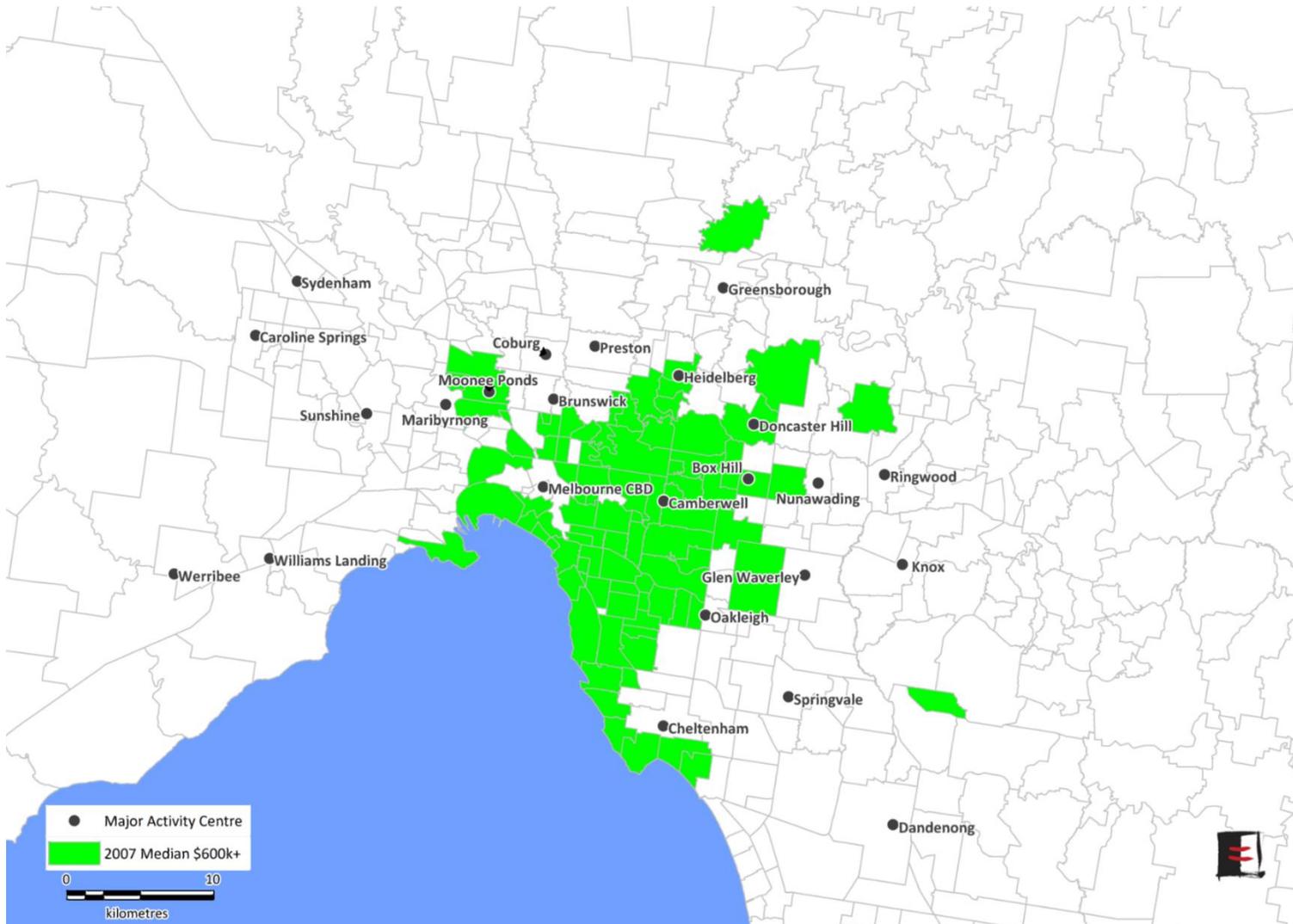


Figure 3.1 highlights the extent of geographic coverage where the median house price exceeded \$600,000 in 2007. It is noticeable that:

- Melbourne CBD and areas such as St Kilda road are not identified for the simple reason there is an insufficient stock of dwellings classified as houses
- Inner areas – particularly those located to the east and south-east of Melbourne’s CBD out to around Box Hill, Malvern East and along the bay to around Black Rock – are within the \$600,000 median price coverage area
- Notably, the median house price in Doncaster in 2007 had just reached \$600,000. Other middle suburban areas that are now regarded as solid or emerging high-density residential apartment markets – such as Glen Waverley (\$580,500), Heidelberg (\$600,000), Moonee Ponds (\$620,000), Preston (\$459,500) – were either well short of the \$600,000 benchmark or had only just reached the threshold level.

Figure 3.1 clearly illustrates the relatively limited coverage of the \$600,000 median house price benchmark area in 2007. Moreover, the geographic coverage broadly aligns with the economic reality of higher density residential development in 2007 where that market was largely restricted to the inner city, along with a number of inner suburban areas mainly to Melbourne’s east and south-east.

### **3.2 Establishing a Contemporary Apartment Benchmark**

Although the high-density residential market now comprises a vast range of different sub-markets with one, two, three and even four-bedroom medium and higher-density product available at a range of quality standards and with various levels of amenity, it is necessary to select a standard apartment offering to maintain to ensure a relevant longitudinal assessment can be undertaken.

Accordingly, the higher-density comparison selected to establish a contemporary benchmark remains a two-bedroom apartment. To reflect contemporary standards and established development typologies, the updated benchmark apartment is defined as a two-bedroom, two-bathroom, one car park apartment in a (typically) 4 to 10 level apartment building of medium to medium-high standard with around 75 sqm to 80 sqm of interior floorspace.

To establish the retail price of a typical product of this type, a review has been carried out of current developments, and specifically the asking price within those developments for new apartment stock consistent with the benchmark apartment outlined above. .

The analysis takes into account various urban corridors (usually aligned to a rail or tram corridor) where there is an established or emerging high-density apartment market. The analysis has focussed on activity centres that can be regarded as being middle suburban in character.

For the reasons set out in Section 3.1, inner suburban markets have not been assessed in detail as these areas are well-established high-density residential markets, and median house prices are at levels well above the \$1.0 million mark. Accordingly, apartments are generally

developed in inner-urban areas that reflect the high value buyers are willing to pay for these locations. Typically, for example, the sale price of a two-bedroom apartment in higher-end inner urban markets may be \$700,000 or higher.

In short, it is no longer considered necessary to establish the viability of high-density residential development in areas such as South Yarra, Hawthorn, Elsternwick, Footscray or Elsternwick.

Tables 3.1 and 3.2 provide an overview of the sales price of apartments, consistent with the two bedroom/two bathroom apartment benchmark. As is evident in both tables, apartment prices of comparable product generally decrease the greater the distance from Melbourne’s CBD. There will be exceptions to this trend but, overall, the trend is observable and consistent.

In the eastern and south-eastern corridors (Table 3.1), apartment prices tend to be marginally higher than those in the northern and western corridors (Table 3.2). Again, this is consistent with Greater Melbourne’s overall housing market which, from a price perspective, is skewed towards the east and south-east.

With reference to Tables 3.1 and 3.2, it is considered that an sales price of around \$550,000 reflects a typical middle-suburban two-bedroom, two-bathroom apartment. Accordingly, \$550,000 is adopted in this report for the purposes of benchmarking against median house prices.

**Table 3.1 New Two-Bedroom Apartment Prices: Eastern and South-Eastern Corridor**

Suburb	Indicative Apartment Price (\$)	Suburb	Indicative Apartment Price (\$)
Malvern East	610,000	Mont Albert	700,000
Malvern East	679,500	Box Hill	640,000
Malvern East	649,000	Box Hill	611,000
Chadstone	550,000	Box Hill	599,000
Bentleigh East	560,000	Doncaster	645,000
Bentleigh East	545,000	Doncaster	655,000
Oakleigh	725,000	Doncaster	560,000
Oakleigh	575,000	Doncaster	540,000
Clayton	550,000	Donvale	530,000
Clayton South (Jacksons Green development)	499,000	Vermont South	742,000
		Wantirna South	500,000
		Wantirna South	565,000

Source: realestate.com.au

**Table 3.2 New Two-Bedroom Apartment Prices: Northern and Western Corridors**

<b>Suburb</b>	<b>Indicative Apartment Price (\$)</b>	<b>Suburb</b>	<b>Indicative Apartment Price (\$)</b>
Brunswick	549,000	Moonee Ponds	785,000
Brunswick	540,000	Moonee Ponds*	617,500
Brunswick	595,000	Pascoe Vale*	522,500
Heidelberg	595,000	Pascoe Vale*	645,000
Heidelberg	648,000	Pascoe vale	488,500
Preston	517,500	Essendon	485,000
Preston	518,000	Essendon	565,000
Preston	532,000	Essendon	585,000
Preston	613,000	Essendon	515,000
Preston	555,000	Strathmore	630,000
Preston	605,500	Maribyrnong	595,000
Bundoora	530,000	Maribyrnong	573,000
Bundoora	595,000	Maribyrnong	735,000
Epping	455,000	Maribyrnong	519,000
Epping	479,000	Werribee*	445,000
Epping*	389,000		

Source: realestate.com.au

\*One bathroom apartment, significantly smaller than 70 sqm

## 4 UPDATING THE VIABILITY ASSESSMENT CRITERIA

---

Chapter 4 provides an analysis based on benchmarking the viability of high density residential development against median house prices.

### 4.1 Establishing a New Benchmark

In Tables 4.1 and 4.2, analysis is undertaken of selected activity centres across middle suburban and middle-outer suburban activity centres.

Table 4.1 contains a number of selected middle suburban activity centres where high density residential development was relatively limited in 2007, but which now appear to represent relatively strong higher density residential markets.

In contrast, Table 4.2 includes selected activity centres in middle and outer suburban locations where a higher-density residential market is emerging, or where proposals for apartment buildings are yet to progress to construction. For the analysis, a benchmark ratio of 65% (median new two-bedroom apartment price/median house price) is considered as the threshold ratio to indicate that a sustainable higher-density residential apartment market may be viable.

Both tables include columns with the same data sets as follows (from left to right):

- Column 1 provides the name of the suburb (as defined by the Australian Bureau of Statistics) containing an activity centre of the same name
- Column 2 provides the median house price in 2007
- Column 3 provides the median house price in 2017
- Column 4 identifies the growth (expressed in percentage terms) in median house price between 2007 and 2017
- Column 5 provides the median unit/apartment price in 2007. It should be noted that median unit/apartment prices shown in Columns 5 and 6 are used as a reference point only. The median unit/apartment price includes old and ageing stock and is therefore not fully comparable with the indicative sales price of a new apartment, which is the actual purpose of the analysis (see Columns 9 and 10)
- Column 6 provides the median unit/apartment price in 2017
- Column 7 identifies the growth (expressed in percentage terms) in median unit/apartment price between 2007 and 2017
- Column 8 provides a ratio of the median unit/apartment price to median house price in 2017

- Column 9 provides a ratio of the benchmark new apartment price (\$550,000) to median house price in 2017. As noted, a figure of \$550,000 is selected (with reference to Tables 3.1 and 3.2) as representative of a good quality new two-bedroom, two-bathroom, one car space apartment of around 75sqm to 80 sqm interior floorspace.
- Column 10 provides a sensitivity test by applying different apartment prices (\$600,000 in Table 4.1, and \$500,000 in Table 4.2) to median house price in 2017. The two different scenarios provide a sensitivity test against the relative markets in the activity centres contained in the Tables 4.1 and 4.2.

A number of clear trends are evident in the analysis undertaken in Tables 4.1 and 4.2 and include the following:

- In every case, the growth of the median house price between 2007 and 2017 is considerably higher than the growth in the median unit/apartment price (noting the median unit/apartment price includes both new and older dwelling stock). This provides strong supporting evidence for the geographic expansion of areas where sustainable higher-density residential development markets are viable
- In all suburban locations presented in Table 4.1, the apartment/house price ratio for new apartments (at both \$550,000 and at a slightly higher \$600,000) is less than 0.65, and in most cases is less than 0.5 (suggesting higher prices apartments could be put to the market in these locations and still prove viable). This suggests all activity centres in Table 4.1 should, on face value, be regarded as areas where a sustainable higher-density residential development market is viable
- The suburban locations assessment in Table 4.2 have generally seen less higher-density residential development. With the exception of Clayton which now sits comfortably under the 0.65 benchmark ratio, the benchmark ratios established in Column 9 provide a rationale for why this may be the case.

**Table 4.1 New Benchmark Ratios – Selected Middle Suburban Activity Centres**

Suburb	Median House Price			Median Unit/Apartment Price			Ratio of Unit/House Price (2017)		
	1	2	3	4	5	6	7	8	9
	2007	2017	% (2007-17)	2007	2017	% (2007-17)	Median Price	\$550k	\$600k
Box Hill	683,000	1,760,000	157.7%	246,000	485,000	97.2%	0.28	0.31	0.34
Carnegie	725,500	1,502,500	107.1%	324,000	603,000	86.1%	0.40	0.37	0.40
Doncaster	600,000	1,386,500	131.1%	450,000	580,500	29.0%	0.42	0.40	0.43
Glen Waverley	580,500	1,335,000	130.0%	412,500	795,000	92.7%	0.60	0.41	0.45
Heidelberg	600,000	1,275,000	112.5%	361,000	600,000	66.2%	0.47	0.43	0.47
Moonee Ponds	620,000	1,310,000	111.3%	342,500	520,000	51.8%	0.40	0.42	0.46
Oakleigh	557,500	1,210,000	117.0%	375,000	419,000	11.7%	0.35	0.45	0.50
Preston	459,500	990,000	115.5%	331,500	450,000	35.7%	0.45	0.56	0.61
Greater Melbourne	372,000	720,000	93.5%	340,000	530,000	55.9%	0.74	0.76	0.83

Source: Pricfinder; realestate.com.au; *A Guide to Property Values* (Victorian Valuer General); Essential Economics

**Table 4.2 New Benchmark Ratios – Selected Middle to Outer Suburban Activity Centres**

Suburb	Median House Price			Median Unit/Apartment Price			Ratio of Unit/House Price (2017)		
	1	2	3	4	5	6	7	8	9
	2007	2017	% (2007-17)	2007	2017	% (2007-17)	Median Price	\$550k	\$500k
Bundoora	360,000	752,500	109.0%	301,000	428,500	42.4%	0.57	0.73	0.66
Clayton	438,500	1,277,500	191.3%	337,000	600,000	78.0%	0.47	0.43	0.39
Dandenong	290,000	620,000	113.8%	206,500	350,000	69.5%	0.56	0.89	0.81
Epping	285,000	565,000	98.2%	253,000	379,000	49.8%	0.67	0.97	0.88
Frankston	280,000	600,000	114.3%	217,000	390,000	79.7%	0.65	0.92	0.83
Springvale	303,000	780,000	157.4%	238,000	510,000	114.3%	0.65	0.71	0.64
Sunshine	302,500	763,000	152.2%	176,000	374,500	112.8%	0.49	0.72	0.66
Werribee	220,000	478,500	117.5%	210,000	345,000	64.3%	0.72	1.15	1.04

Source: Pricfinder; realestate.com.au; *A Guide to Property Values* (Victorian Valuer General); Essential Economics

As noted in the 2007 Report, and again emphasised in this report, the benchmark ratios should be considered to be a guide rather than a definitive assessment. Each of the activity centres identified in Table 4.2 contains some existing high-density residential development or is seen as an emerging location with a number of approved apartment buildings. Each centre however, has also arguably under-delivered against expectations or aspirations. Each centre also has attributes that could act to accelerate higher-density residential development in advance of the benchmark ratios being met.

These attributes include the following:

- **Bundoora:** Although the benchmark ratio (0.73) does not support high-density residential development, areas along Plenty Road are proximate to Latrobe University, served directly by a tram line, and are located at a high point in Melbourne's landscape affording expansive views. A higher-density residential market appears to be establishing along the tram corridor.
- **Clayton:** The benchmark ratio (0.43) indicates strong support for higher-density residential development in Clayton. Clayton Activity Centre is proximate to Monash Medical Centre and Monash University, and located on the upgraded Caulfield-Dandenong railway line.
- **Dandenong:** The benchmark ratio (0.89) does not indicate a market where high-density residential development would be sustainable. However, Dandenong represents a major commercial centre of metropolitan significance, and there is evidence of a slowly emerging high-density residential market within the core part of the activity centre.
- **Epping:** The benchmark ratio (0.97) does not indicate support for a higher-density residential market at this point of time. However, proximity to a major shopping centre (Epping Plaza) and major health facility (The Northern Hospital) appear to have provided impetus for several pioneer developments that tested the market.
- **Frankston:** The benchmark ratio (0.92) does not indicate support for a higher-density residential market at this point of time. However, Frankston's role as a major commercial and retail centre, and its physical location adjacent to Port Phillip Bay, provides opportunity for a market to develop despite the benchmark ratio not currently supporting such development. House prices in Mount Eliza, located immediately south of Frankston, are significantly higher than Frankston. A number of medium and high-rise development proposals are currently at sales and registration.
- **Springvale:** Springvale's benchmark ratio (0.71) reflects an area on the verge of sustaining a high-density residential apartment market. New rail infrastructure and Springvale's established role as a retail centre provide additional support for an emerging market in the future. Several pioneer developments have been completed, and a number of high-density proposals have received planning approval.
- **Sunshine:** Like Springvale, Sunshine's benchmark ratio (0.72) suggests a centre on the verge of supporting a high-density residential apartment market. One high rise development (Foundry Towers) has completed stage one of its development, but stage two appears to have stalled. New rail infrastructure, Sunshine's established role as a retail centre and emerging role as a commercial centre should provide additional impetus for high-density residential development in the future. A number of high-density residential development have received planning approval.
- **Werribee:** Werribee's benchmark ratio (1.15) does not indicate support for high-density residential development at this point in time. Werribee, however, appears likely to be an outlier in terms of the benchmark ratio. The town centre's location on the Werribee River and its role as a key retail and commercial centre appear to be attracting

considerable interest from developers with a number of projects now at sales registration stage, planning approval and, in one case, construction.

## **4.2 Mapping the New Benchmark Ratio**

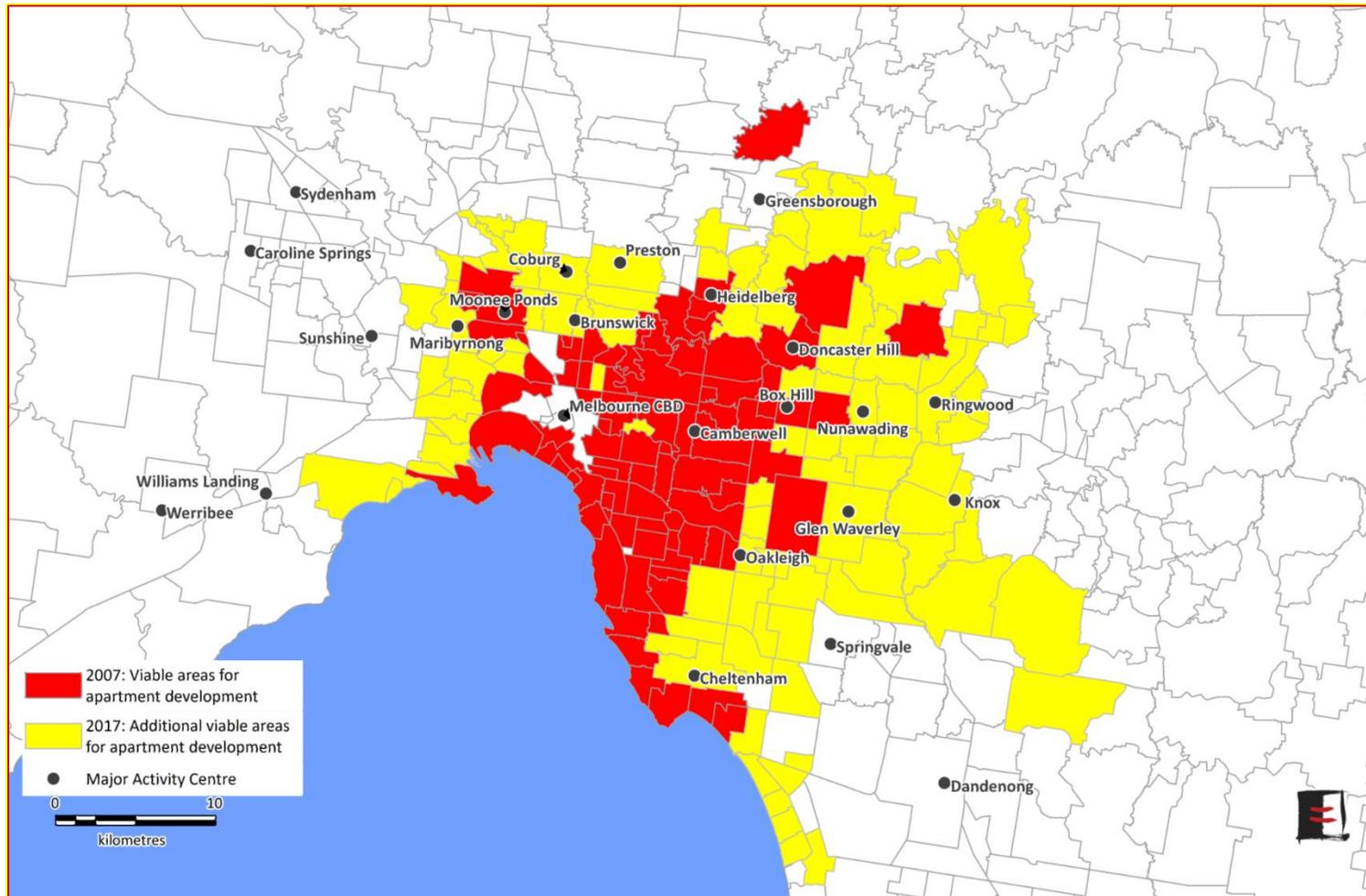
Figure 4.1 updates Figure 3.1 to a contemporary scenario.

Whereas the map at Figure 3.1 highlights those suburbs of Melbourne where the median house price matched or exceeded \$600,000 in 2007, the map at Figure 4.1 highlights those suburbs of Melbourne where the median house price in 2017 was \$850,000 or greater.

In the 2007 Report, a median house price of around \$600,000 was established as the benchmark figure for which a sustainable higher density market was likely, in 2017 the figure is established at around \$850,000 (noting that the benchmark new apartment price of \$550,000 (refer Column 9 definition on page 16) represents approximately 65% of \$850,000).

In Figure 4.1 it is evident that the area where higher-density residential development is likely to be viable has significantly expanded and now includes areas such as Maribyrnong, Brunswick, Preston, Nunawading, Ringwood, Oakleigh, Knox and Cheltenham. Suburbs that appear in Figure 4.1, but not in Figure 3.1 are identified with a black diagonal hatching.

**Figure 4.1: Median House Price of \$850,000 or more (2017) (Source: Valuer-General Victoria)**



## **5 HIGH-DENSITY RESIDENTIAL DEVELOPMENT IN THE SUBURBS**

---

This Chapter provides an overview of how residential development in buildings of four or more levels has actually occurred over recent years.

### **5.1 Mapping Higher-Density Residential Development**

Figure 5.1 identifies the geographic spread of apartments in buildings of 4 or more levels over the period 2011 to 2018 based on building approvals. In this regard, it provides a way of testing or validating the model developed in section 4 of this report.

Specific activity centres are highlighted in Figure 5.1. These typically represent a range of middle suburban activity centres that have experienced considerable activity over the period, as well as select outer suburban activity centres where an emerging market may be developing.

Strong apartment market locations such as South Yarra, St Kilda, Port Melbourne and Footscray are not identified as these markets are well-established high-density residential markets, and proximate to Melbourne's CBD. Similarly, expensive inner south-eastern markets such as Elsternwick, Kew Hawthorn and Fitzroy are not identified on the map as it is considered a high-density market in such areas is sustainable to the extent planning controls accommodate such development.

Figure 5.1 identifies new dwellings by suburb (as defined by the Australian Bureau of Statistics). 'Suburb' areas vary in size, and do not always align perfectly to an area around a key activity centre. Even so, it is possible to observe that the increase in apartments located in buildings of 4 or more levels generally align to:

- The inner urban area around Melbourne's CBD;
- A significant number of inner to middle areas ranging from Maribyrnong in the west, to Brunswick in the north, Camberwell in the east, and Oakleigh in the south-east;
- Middle to outer suburban locations such as Doncaster, Ringwood and Knox; and
- Outlier locations such as Caroline Springs.

### **5.2 Outlier Locations for High Density Residential Development**

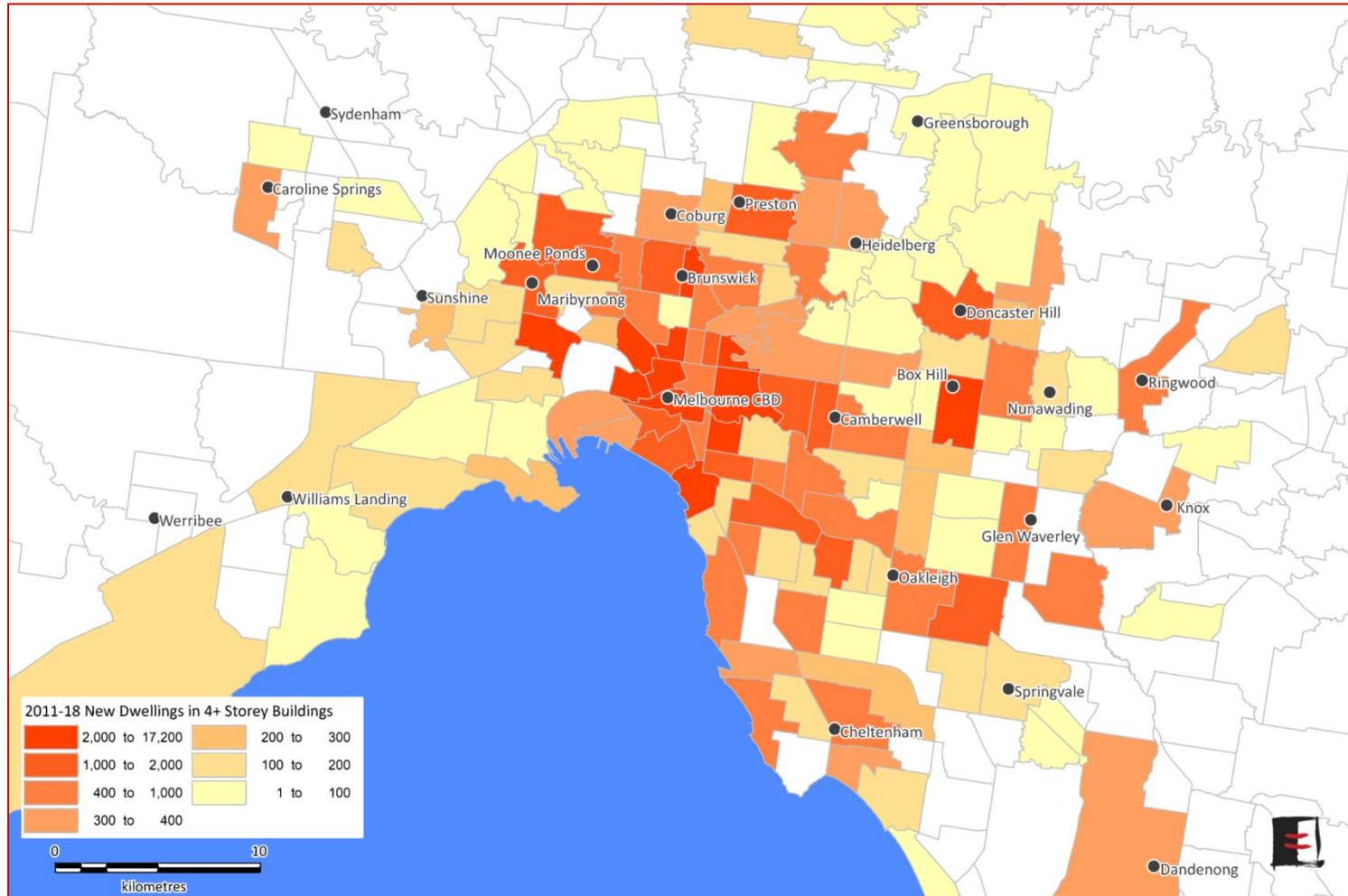
There is an increasing trend for some outlier locations to emerge as a focus of higher-density residential development.

As is evident in Figure 5.1, Caroline Springs has emerged as a location for higher-density residential development with a number of apartment buildings in the 4 to 6 level range. The success of such development in an outer suburban location (albeit a major masterplanned

estate) is largely due to the strength of place-making by the developer, planning controls that support or encourage such outcomes, and the popularity of the estate in its local and regional context.

Similarly, an emerging higher-density residential market is evident at Williams Landing, the masterplanned mixed-use development located directly west of Laverton in Melbourne's west. Anchored by a train station, retail centre and an emerging commercial hub, Williams Landing now also incorporates an emerging higher-density residential market based largely on its infrastructure attributes.

**Figure 5.1: New dwellings in Buildings of 4 storeys or more (2011-2018) (Source: Australian Bureau of Statistics)**



## 6 THE COST OF DEVELOPMENT

---

Chapter 6 provides an overview of how development costs have changed and evolved since the 2007 Report.

### 6.1 Construction Cost

Since the 2007 Report, development fundamentals have not significantly changed. Knowledge of the particular market (for example, Springvale is not the same as, say, South Yarra) determines the nature and scale of the development.

It is noticeable that in some areas (eg Heidelberg), basement parking – a relatively costly parking solution - is now a given, whereas 10 years ago basement parking in all but the most expensive locations - was considered a marginal proposition. Even so, the provision of basement parking is still considered to be cost prohibitive in various outer suburban markets.

#### ***Construction Costs***

As highlighted in the 2007 Report, construction costs vary based on the physical geography (eg. gradient and soil conditions), urban context (eg. adjacent buildings, scale of site, access to site) and the scale and type of development itself (eg. quality of fittings and build, height, scale of the overall development and the capacity for economies of scale in construction).

Table 6.1 provides an overview of how the cost of construction has between 2008 and 2017, representing a close comparison of the time the 2007 Report was undertaken and the contemporary environment. Table 6.1 provides an overview as follows:

- Apartment construction costs for a 2 to 3 level apartment building on a per square metre basis for a one or two-bedroom apartment at a low and high range in 2008 and 2017.
- Apartment construction costs for a 4+ level apartment building on a per square metre basis at a low and high range in 2008 and 2017. Note: the high range cost is not for a prestige level build.
- Car parking construction costs for multi-level and basement car parking on a per square metre basis in 2008 and 2017.

Notably, compared to the increase in median house prices, increases in construction costs have been relatively constrained over the nine-year period, ranging from between 7% (Basement Parking) and 17% (Construction Costs 4+ level building).

**Table 6.1 Comparison of Construction Costs (2008 and 2017)**

	2008	2017	% Change
	\$/m2	\$/m2	
<u>Apartment Construction Cost</u>			
3 level building			
Lower end	1,580	1,800	14%
Upper end	1,890	2,150	14%
<u>4+ level building</u>			
Lower end	1,820	2,100	15%
Upper end	2,650	3,100	17%
<u>Car Parking</u>			
Multi-Level			
Lower end	680	775	14%
Upper end	750	850	13%
Basement			
Lower end	1,500	1,600	7%
Upper end	1,650	1,800	9%

Source: Discussions with developers along with reference to Rawlinson Construction Handbook (2008 and 2017 Editions)

### ***Cost of land***

Applying a consistent methodology to both the 2008 and 2017 models, and assuming a median house price of around \$600,000 continued to be the benchmark in 2008 for high density residential viability as it was in 2007, a figure for \$390,000 represents 65% of \$600,00, as \$550,000 represents around 65% of today's median house price benchmark of \$850,000.

A figure of \$550,000 for the 'average' new suburban apartment (two-bedroom, two-bathroom, one car space) therefore represents a 41% increase on the comparable figure in 2007. By comparison, the construction costs outlined in Table 6.1, have increased by a substantially lesser amount. Assuming development margins and financing costs have remained relatively consistent over the period, the difference comprises the significant increase in the cost (value) of land.

This effectively supports the overall analysis undertaken in Chapters 4 and 5 and the use of median house price as a guide to high-density residential development viability. Median house prices are, after all, primarily a reflection of underlying land value.

## **Height**

Whereas in the 2007 Report, height was a vexed issue with few areas outside the inner-city area (and locations such as Port Melbourne and South Yarra) supporting development of more than four levels. As highlighted at Figure 5.1, the market for multi-level residential development has experienced considerable change since the 2007 Report.

A significant number of urban centres now support development of significant vertical scale with some (eg. Box Hill) emerging as concentrated high-rise development hubs. As in the 2007 Report, it is evident that in moving from a three level construction model to a 4+ level construction model, the cost of construction on a per square metre basis increases by 50% or more (see Table 6.1).

As in the 2007 Report, it is necessary for planners and councils to be cognisant of the consequences of the impact of changes in height on construction costs. As noted in 2007, a height limit of five or six levels may have a minimal impact on development outcomes in areas where there is a high median house price in the surrounding area. In these cases, the impact of the jump to a higher construction rate can be absorbed as the apartment development can be taken 'up market' with buyers willing to absorb the price impact to purchase within their area of choice.

In areas which are more marginal however, the result may be that the development is parked, or stalls, or is stripped back to a three level configuration to ensure the construction rate remains lower. This may result in less than desirable outcomes in terms of apartment quality or result in an under-development of strategic sites in activity centres.

To explore this issue further, one of the observations in the 2007 Report was that three to four level developments often became the default template for development; effectively to avoid the shift to commercial construction rates. There then appeared to be a 'dead zone' between six to 10 levels where the yield from a typical site could not offset the marginal increase in construction costs. Accordingly, developments often remained at three to four levels, or required, say, ten levels or more to 'bridge' the incremental increase in the cost of construction/m<sup>2</sup>.

It is suggested that this issue still exists to an extent, but has been largely offset by the increase in median house prices (refer Chapters 4 and 5). In certain areas (for example, Riversdale Road, Hawthorn) the three to four level style development remains dominant but this is more a function of planning controls than of economics. Additional height would be provided if it were permitted. This is now the case for much of middle Melbourne.

The 'dead zone' of six to 10 levels explored in the 2007 Report is now largely an issue confined to those activity centres located significantly further from Melbourne's CBD that remain marginal prospects for higher density development. In effect, the substantial increase in median house prices across much of middle Melbourne between 2007 and 2017, has swept

away some of the cost issues explored in the 2007 Report. In 2018, height related issues across much of middle Melbourne and more likely to be a function of relevant planning controls, and the extent to which a developer seeks to maximise yield.

### ***Land Assembly***

Land assembly remains challenging in 2018 as it did in 2017. The key difference in 2018, is that in areas where there has been an appreciable increase in land values, the scale of development sites has decreased. In some locations (eg Heidelberg, Brunswick, Northcote) medium-rise development of, say, 4-8 levels is now undertaken on considerably smaller sites than was the case in 2007. Basement parking (and in some cases stacked parking) is now undertaken on smaller sites too, a proposition that was not considered viable in 2007.

## 7 KEY FINDINGS

---

This report updates a similar report undertaken for the Priority Development Panel in 2007 that looked at the viability of higher density forms of residential development in Melbourne's activity centres.

The 2007 Report established that in the prevailing economic environment of the time, many forms of higher density residential development were unlikely to prove commercially viable outside key inner city locations where the high underlying value of land produced a situation where apartments could be put to the market at prices that were materially less than the median house price of the surrounding area. It was established that, typically, the asking price of an apartment needed to be no more than 75% that of the median house price in the same area, and preferably lower at around 65% to ensure an ongoing high-density residential market could be sustained.

The 2007 Report stressed however that such benchmarks provided 'rule of thumb' measures only, and every potential development location has its own unique elements. These include:

- Proximity to key attractors such as entertainment precincts, educational or health facilities, or popular retail and commercial strips
- Proximity to public transport infrastructure and access to key roads
- Proximity to water (beach and rivers) and popular parks or conservation areas
- Opportunities for a view

This report, or 'Refresh' is based on engagement with a number of developers and development industry practitioners, as well as independent research. It finds that:

- The general approach and methodology employed in the 2007 Report continues to provide relevant 'rule of thumb' benchmarks.
- Whereas, the 2007 Report established that, in 2007, a median house price of around \$600,000 was required to support a viable high density residential market, in 2018 the figure has increased to approximately \$850,000.
- In 2018, the area of Greater Melbourne in which the median house price is at or greater than \$850,000 is considerably more expansive than the \$600,000 median price area was in 2007, and now includes activity centres such as Cheltenham, Glen Waverley, Knox, Ringwood, Preston and Brunswick. Many of these centres were not considered high-density residential markets in 2007.
- The realisation of residential developments of four or more levels between 2011 and 2017 largely supports the modelling undertaken in the report. In short, a considerably greater geographical area of Greater Melbourne is now commercially viable for higher density residential development than was the case in 2007.

- The reason for this change is largely driven by increases in the underlying value of land. This is largely reflected in increases in the median house price, where the rate of increase has been greater than the rate of increase in the asking price of a standard new apartment. In other words, the increase in the value of land has been greater than the increase in the cost of construction.
- Otherwise, the challenges and dynamics of undertaking higher density residential development, such as land assembly, negotiating height outcomes, and 'fitting the development product' with the expectations of the local market, remain similar in 2018 to what they were in 2007.