



Final Report

Planning and the characteristics of housing supply in Melbourne

authored by

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ACRONYMS

ALP	Australian Labor Party
CAD	Central Activities District
CBD	Central Business District
COAG	Council of Australian Governments
DoI	Department of Infrastructure
DPCD	Department of Planning and Community Development
DPD	Department of Planning and Development
DSE	Department of Sustainability and Environment
DAC	Development Assessment Committees
GAA	Growth Areas Authority
GAIC	Growth Areas Infrastructure Contribution
HIA	Housing Industry Association
LGA	Local Government Areas
LPPF	Local Planning Policy Framework
MMBW	Melbourne and Metropolitan Board of Works
MMPS	Melbourne Metropolitan Planning Scheme
PAC	Principal Activity Centre
PSP	Precinct Structure Plan
RMLPI	Relative Metropolitan Land Price Index
RNLPI	Relative Neighbourhood Land Price Index
SLA	Statistical Local Area
SPPF	State Planning Policy Framework
TCPB	Town and Country Planning Board
UGB	Urban Growth Boundary
VPP	Victoria Planning Provisions

EXECUTIVE SUMMARY

Introduction

This project is concerned with the relationship between planning policy and the characteristics of housing supply. It assesses the effects of planning policy on housing characteristics such as size, type and location. It focuses on a particular time—from 1990 until 2008, and place—the metropolitan area of Melbourne. The project will be of interest to both planning and housing researchers and practitioners. Its approach combines quantitative data analysis and modelling, using sales and valuation data, with qualitative information gained from interviews with a selection of planning managers and land and housing developers to give a more comprehensive understanding of the relationship of government policy to built form outcomes. The characteristics of housing supply that were chosen for investigation through these forms of enquiry were those which the planning regime and planning policies sought to affect. We are thus assessing the effectiveness of policy in achieving its own stated aims.

This report is the second and final product of this research project. The previously published Positioning Paper, *Planning reform, land release and the supply of housing* (Goodman et al. 2010) introduced the issues and set them in context through a substantial discussion of existing literature and research findings. The first paper also outlined in some detail the methodology used in this study. This report presents the research findings, and the two reports should be considered and read together. The key research questions that the project addresses are:

1. Do changes to land use planning policies and mechanisms impact on the types of housing supplied, particularly in new release areas?
2. Are policies designed to bring about urban consolidation affecting the type of housing being built, and if so in what way?
3. Is there a correlation between planning policies and changes in house prices?
4. To what extent and in what way do government policies impact on decisions on housing supply made by the development industry?

Background to the Victorian planning system and policies

The Victorian land use planning system has evolved over the last 50 years as a story of tension between central and local control over planning decisions. These fluctuating trends are most evident in the emphasis on local government control by the Cain Government's *Planning and Environment Act* (1987), and by the Kennett Government's emphasis on central control through the introduction of the *Victoria Planning Provisions* (1996). The Victoria Planning Provisions (VPPs) introduced a range of standardised state-wide provisions which originally comprised state policy, 25 zones, 22 overlays, 31 particular provisions, 31 general provisions and 29 incorporated documents. The government provided six objectives for the VPPs. These were: to facilitate development; reduce local variation; improve strategic planning; reduce the size and complexity of planning schemes; provide greater certainty; and make planning schemes more efficient and less costly to administer. The predominant goals of the VPPs were to provide greater efficiency and less variation in regulation between municipalities. This should mean that observable differences in housing supply that can be attributed to the planning system between municipalities should diminish after the introduction of the new system.

In October 2002, the government released the major metropolitan strategic plan *Melbourne 2030: Planning for sustainable growth*. The plan contained a series of policies grouped around nine directions (DOI 2002). The plan's principal elements were to: concentrate development in mixed use activity centres close to public transport; confine outer urban growth by an urban growth boundary; shift a substantial amount of outer urban development to the existing metropolitan area; substantially increase the proportion of public transport journeys; and make a series of environmental improvements to the metropolitan area. The strategic goals of *Melbourne 2030* have been embedded into all planning schemes to give them some statutory weight, such as the section on Affordable Housing in the State Planning Policy Framework (SPPF) (s.16.5) which has as its objective: 'To deliver more affordable housing closer to jobs, transport and services' (s.16.05-1). 'Housing affordability will be improved by increasing choice in housing type, tenure and cost to meet the needs of households as they move through life cycle changes and to support diverse communities,' (s.16.05-2).

The *Melbourne 2030* goals which affect the characteristics of housing supply therefore include the goals of increasing residential densities; improving housing choice and affordability by providing a greater mix of housing types and sizes; and locating a greater proportion of housing closer to jobs, activity centres and public transport. This planning strategy was introduced in October 2002 and we can reasonably look for the influence of the policy from 2003 onwards.

The *Melbourne 2030* directions are broadly designed to pursue a policy of urban consolidation. Urban consolidation policies have guided the strategic planning frameworks of most Australian states and territories since the 1990s (Yates 2001; Gleeson et al 2004; Buxton & Tieman 2005). Urban consolidation has international equivalents in the Smart Growth and New Urbanism movements in the US and intensification policies in European cities. Within these there is a consensus that the apparently unsustainable car dependent, sprawling morphology of capital cities needs to be changed (Gleeson et al. 2004, p.363).

A key issue in policy debates around urban consolidation is housing affordability. Smart growth and urban containment policies feature prominently within the literature on land use regulation and housing prices, with links claimed between urban containment, land supply, and increased housing costs. The overall findings from this body of research are inconclusive, and few Australian studies exist (Gurran 2008). Nevertheless, there is no lack of literature claiming that strong land use regulations cause supply distortions and therefore increase price. Urban Growth Boundaries (UGBs) are one regulatory impact studied for their impacts on price. Jun (2006, p.239) concluded that 'although the evidence is not overwhelming, there are many empirical studies indicating that UGBs and other means of urban containment lead to higher land prices by limiting the supply of developable land'. In recent years, Australian critics have drawn attention to urban containment and housing affordability (Moran 2006; Birrell et al. 2005; HIA 2008).

Nelson (2000, p.46) and Gurran et al. (2008) contend that, in practice, it is impossible to separate the impact associated with planning regulation from the influence exercised on housing costs by the additional amenity and demand achieved by these initiatives and regulations. Hence urban containment policies need not excessively inflate house prices if supply is deliberately increased in preferred locations, such as around activity centres (Dawkins & Nelson 2002). Perhaps reflecting these different perspectives and pressures, Australian state governments have to varying extents adopted contradictory policy objectives. Strategic plans have commonly adopted containment policies, but have progressively extended their UGBs citing housing

supply concerns. The policy goals embedded in these strategic plans are important aspirations from both a planning and housing policy perspective. They attempt to reconcile the achievement of a more compact, environmentally sustainable city, with housing affordability goals.

Methodology

The methodology adopted for this project uses both quantitative and qualitative approaches. For the quantitative analysis, the project developed a methodology to integrate disparate databases at the level of individual properties and transactions: namely property valuations, property sales records, and VicMap spatial reference data. The database design centres on identifying sales of vacant land, and linking these to property valuation records to identify subsequent construction. The property data is then linked to spatial reference data for geocoding. The merged database was used to identify the characteristics of housing constructed between 1990 and 2008 in Melbourne. Much of the data here is analysed according to area, with the metropolitan area divided into four distinct regions distinguished by groupings of local government areas (LGAs). These are: inner suburbs, middle ring suburbs, outer suburbs which are not designated growth areas, and outer growth areas.

The resultant merged database permits analyses of housing supply, with the analysis segmented by property characteristics (such as size), price, time (of sale and construction), and location. The database is of research value for its ability to integrate disparate datasets at a disaggregate level; and its facilitation of simultaneous analysis of the spatial and time dynamics of land and housing markets. Although similar datasets are in use within government, published research is very limited.

While the database has a high level of coverage, it has limitations. Therefore, the database is approached as a (large) sample rather than as a population. Not all records could be successfully cleaned and joined. As the database emphasises vacant land sales, the coverage level of greenfield areas (growth areas) is highest, whereas there is an expected undercount of properties built in place of existing buildings—particularly small-scale infill in established areas. The level of coverage is nonetheless very high. In comparison to ABS dwelling approval figures for the Melbourne Statistical Division over the study period, the study sample of 444 689 new dwellings appears to undercount by 33 240 or 7 per cent in comparison to the ABS figure of 447 929 (ABS 2010, Cat 8731.0).

The qualitative methods used in this project chiefly involved nine detailed semi-structured interviews with key leaders from private development corporations, local government planning departments and state planning authorities. The purpose of the interviews was to shed more light on the question: *To what extent and in what way do government policies impact on decisions on housing supply made by the development industry?* To ensure anonymity, interviewees are referred to only by an allocated number preceded by either P for planner or D for developer.

Has planning policy in Melbourne been effective in achieving its housing supply goals?

The findings from our analysis of the property database are prefaced by contextual data on the size of Melbourne's dwelling stock and on recent rates of population and household growth, and are presented in four sections, as follows.

1. The basic quantity, rate and distribution (in terms of region, price segment, socio-economic characteristics, and job availability) of new housing over the study period.

2. The more detailed characteristics of new housing in terms of measures of dwelling size, lot size, and housing type.
3. More detailed measures of location in relation to key urban amenities.
4. Measures of time lapse between land purchase and construction.

Context: population and housing growth in Melbourne

As at the most recent Census in 2006, Melbourne was a city of approximately 3.6 million (3 592 766) people. The city's population increased by over half a million (570 327) between 1991 and 2006, with higher growth levels between 1996 and 2006 than in the earlier part of the study period, 1991 to 1996, during which time Melbourne experienced recession conditions.

The number of households increased by 234 252 in the 15 years 1991 to 2006. Households grew at a faster rate, 22 per cent, than did population, 19 per cent, with average household sizes dropping. The majority, 73 per cent, of households in Melbourne in 2006 lived in detached houses, a decrease from 77 per cent in 1991.

Based on the property database, the total existing housing stock in Melbourne as at 2008 consisted of just over 1.5 million dwellings, with the larger share, 42.7 per cent, of these located in the middle ring of the city and around 20 per cent in the growth areas. As the majority, 70 per cent, of dwellings were detached houses, the shares of this dwelling type were similar to the total distribution of dwellings. The distribution of stocks of attached and apartment housing across the city, however, has a different pattern. The inner and middle areas combined contained nearly 90 per cent of the city's 377 176 attached and apartment dwellings as at 2008.

Basic characteristics of housing supply

The quantity, rate, and spatial distribution of new housing over the study period are described. The communities where new housing supply has been concentrated were described in terms of price segment, socio-economic characteristics, and job concentrations.

The data showed that:

- There was a considerable increase in the number of new residential constructions across Melbourne from 1990 until 2003 when the number began to decline.
- The greatest shares of new housing, around 36 per cent, built on vacant land have been in the growth areas since 2000, and that this proportion has not declined since the introduction of *Melbourne 2030 in 2002*.
- Vacant land market activity is shown to be largely concentrated in the outer ring areas.
- Around half of the total dwelling stock in growth areas was constructed over the study period. By contrast, the inner and middle regions contain larger overall stocks of dwellings, but lower proportions of newly constructed housing.
- The location of new housing across Statistical Local Areas (SLAs) was analysed with areas ranked according to median property values, averages, education levels and the local availability of jobs.
- When looking at property values there is no evidence of a particular segment (grouped in quartiles) attracting a disproportionately high or low share of housing supply.

- When ranking SLAs in terms of average taxable incomes, the results show that there has been a slightly greater supply of new housing in low-income communities proportionally over the study period.
- Looking at the location of new housing with regard to areas where the local population had higher than average education levels shows that, over the period 1990-2007, a disproportionately low proportion of new housing has been supplied in such communities, with a correspondingly high share of housing supply flowing into communities with relatively low levels of average educational attainment. It also seems that such communities' share of new housing has risen over the study period.
- A range of policies in Victoria seek to improve the supply of housing in relation to employment opportunities. Looking at the relationship of new housing to jobs within the SLA shows that areas with higher numbers of jobs of the metropolis do attract a disproportionately high share of new housing. However, these proportions seem to be changing over time. There are trends towards an increase in the proportion of new housing going into areas where there are very low levels of jobs.

Detailed housing supply characteristics

The more detailed characteristics of new housing supply attained from the quantitative data analysis are presented under four separate subheadings: housing lot size, house size, proportion of site coverage, and dwelling type. The data shows:

- A steady decline of 14 per cent in median lot sizes in the growth areas, down from 661m² in 1990 to 572m² in 2007.
- A decline in the proportion of larger house lots over 800m² and increase in smaller lots sized 300–500m² but a continued share of the most common category of lots, 500–650m², making up around 40 per cent of total lots in 2007, with no change in the proportion of very small lots of 300m² or less.
- A clear trend in the growth in the median floor size of new housing with an increase in median floor space of 25 per cent, from 132m² in 1990 to 165m² in 2007
- Growth in floor spaces has been most noticeable in the growth areas, which now have the largest median floor space, 192m², by region.
- Median dwelling sizes in all areas have increased, with the exception of the inner area, where median floor spaces have shrunk by 24 per cent.
- Around three quarters (72.2%) of dwellings in the inner city have two or fewer bedrooms, and a third (35.4%) have only one bedroom.
- The vast majority of new dwellings in growth areas have three or more bedrooms (91.1%), and most have four or more (52.4%). There has been a shift from three to four-bedroom dwellings as the normal dwelling size on the fringe.
- A divergent pattern is thus apparent, with increasingly large housing on the fringe in particular, and smaller apartment housing in the inner areas.
- A clear trend upwards in proportion of site coverage from a metropolitan average of 21 per cent in 1991 to 34 per cent in 2007, a 62 per cent increase.
- An increase in attached and other higher density housing. This, however, has not occurred uniformly across all sections of the metropolitan area.
- In the growth areas, detached housing makes up around 90 per cent, of new houses built and the proportions have not changed significantly across the study

period. In contrast, detached housing has been in the minority of new houses built in the inner suburbs for some time.

Location and accessibility of housing

This section focuses on the location (amount and proportion) of new housing in relation to activity centres—which are sites for retailing, jobs, services and transport—and train stations. The goals of increasing housing around designated activity centres and public transport were of central importance to *Melbourne 2030*.

The data on activity centres showed that:

- The amount of new housing constructed within 1km of a principal or major activity centre did not increase following the introduction of *Melbourne 2030* and in fact may have slightly declined.
- Of housing built within 1km of activity centres, there has been an increasing trend of concentration around a few mainly inner city centres. The four activity centres with the highest amount of new housing built since *Melbourne 2030* accounted for over 31 per cent of the total built within the vicinity of Melbourne's 115 activity centres.
- There is a steady decline in the proportion of new housing built within 2 kms of a principal or major activity centre from a high of 59.5 per cent, to a low in 2007 of 48.6 per cent, showing no sign that *Melbourne 2030* increased housing around centres. The findings are, however, subject to caveats on possible undercounting of infill development, as mentioned earlier.

With regard to train stations we found that:

- The proportion of new housing constructed within 1 km of a train station showed a slight overall decline since 1990. Within the study period, the proportions of housing near train stations increased at times, particularly between 1992 and 1997, but declined from 2003 onwards.
- There is an increase in the number of new medium density dwellings within 1 km of a train station in 2003, the year after the introduction of *Melbourne 2030*, but a general decline following this.
- The proportion of housing constructed within 3 kilometres of a station has declined, from around 70 per cent in 1996 to a low of 55.5 per cent of dwellings in 2007.
- The median distance to the nearest train station has increased in all areas in the period since the introduction of *Melbourne 2030*. In the growth areas in 2007, the median distance of new housing to the nearest train station was 3.29 kilometres.

These findings show that planning policies which sought to increase the proportion of new housing built close to designated activity centres and public transport nodes, specifically train stations, appear to have had very little influence. However, in interpreting the findings on accessibility, the caveats on possible undercounts of infill dwellings, and bias toward greenfield areas, should be borne in mind.

Construction time lapses on vacant land sold

This section presents an empirical inquiry into the speed of development on parcels of vacant land sold in the metropolitan area between 1990 and 2004. This methodology focuses on housing development in established areas, and seeks to explore potential indicators of the complexity, uncertainty, and timeliness of housing development. These are factors that planning reforms (the VPPs) have sought to influence.

These measures of construction delay will reflect a number of influences. They include the planning interval—the period of time between land acquisition and

planning approval—as well as the development period—the time elapsing between planning approval and construction completion. It is not possible to separately measure these two important components.

This component of the methodology provides better coverage of existing and infill areas rather than in greenfield or growth areas. Improved land in growth areas is commonly sold to home buyers, who engage builders to construct a home on their plot. Developers in established areas more commonly acquire, improve, and construct on land before selling to home buyers. As a result, our time lapse measure in greenfield areas will commonly pick up the development period, but not the planning interval. On the other hand, our time lapse measure for established areas will pick up both the development period and planning interval.

Two measures of the pace of development are deployed. The first is construction delay, which is measured as the time elapsing between the date of vacant land parcel sale and the date of building construction. The second measure is whether a vacant land parcel has been developed by 2007.

The data shows that:

- The average time that has elapsed between sale of vacant land and subsequent completion of building construction (construction delay) is 1.9 years, or 23 months.
- The rate of development varies across local government boundaries. In some, rates of building completion are around 50 per cent, whereas in other municipalities around 90 per cent of land parcels had been developed by 2007.
- Within the same LGA there can be wide variation in completion times, suggesting that there is a skewed distribution with some parcels taking many years before development.
- The average time elapsed between sale and construction exceeded two years in seven municipalities, and was closer to three years in some municipalities. These statistics indicate that housing supply will be slow to respond when demand surges or contracts.
- Rates of development systematically decline with proximity to activity centres; and on those parcels where residential building has been completed, the delay between acquisition and construction completion is more protracted on parcels closer to activity centres. These supply-side measures have implications for policies to direct housing to activity centres.
- There has been little if any increase in the pace of development since 2000 and despite the introduction of the VPPs in the late 1990s that were intended to produce more uniform planning outcomes, there are greater differences between municipalities in the post-VPP period.
- The proportion of vacant land parcels developed within two years is a little lower in the post-VPP period, but more surprisingly, there is a greater spread across local government boundaries in this measure during the post-reform era, suggesting that the VPPs did not diminish municipal variation.

Why has Melbourne's planning strategy been ineffective in achieving its stated housing supply goals?

The quantitative findings on the scale, location, and characteristics of housing supply are enhanced by interviews conducted with planners and housing developers in Melbourne. These qualitative findings draw out possible explanations for why planning

policy in Melbourne has not been effective in achieving its goals in relation to housing supply.

Interview findings on housing supply characteristics

There was surprisingly little difference in the answers given by planners and developers on factors which determined house type and lot size. Both tended to concur that developers, rather than government policy, determined the form of housing and the mix of housing types. The view expressed most commonly was that developers build what they perceive the market wants, but they are generally conservative and risk averse in their choices, so they tend to build what they know will sell. The interviewees generally felt that housing mix was important—particularly in the provision of smaller housing to cater for greater demographic mix—although this view was put more strongly by planners than by developers. Government planning strategies were thought to have a minor effect by some of the planners and no effect at all by the developers. One developer said that his company did not take government planning strategies into account because ‘they’re so vague. I mean how could they ever influence anything you do? They’re so general’ (D2).

The only effect of the government’s aim to increase density was considered to be the reduction of average lot size. Not all interviewees attributed this trend to government policy directly; some believed that it was simply market forces reacting to the cost of land. Some developers interviewed argued that the planning process, rather than strategy, increased time taken and therefore costs, which might then result in smaller lot sizes. The lot size ‘hasn’t come down because we’ve mandated it, it’s come down because of market pressure’ one planner (P1) indicated. All agreed that decreasing the lot size had not in itself altered the mix of housing types offered as most developers were simply building the same type of housing, or bigger housing, on smaller lots. In explaining the dominance of larger detached housing in growth areas, one planner’s explanation was that:

It’s tried, true, tested... They [the developers] know they can sell the product quickly, with a minimum of fuss, and turn it over. Whereas if they put a medium density terrace on the market its going to take a bit more work, a bit more convincing (P1).

Interview findings on the location and accessibility of housing

Interviewees indicated that decisions regarding the location of new developments were not greatly affected by government policy. Several of them blamed a lack of government investment in transport infrastructure for the difficulty in locating new housing near train stations. One planner, for example, indicated that an entire new suburb had been built which had no public transport services. The subdivision in this area had produced increased densities, but no public transport alternatives existed to car travel.

Consistent with comments about the impact of government policy on the form of housing, most interviewees believed that government policy exerted a minimal influence on the location of housing. One developer (D1) suggested that policy could have some influence: ‘to some extent it’s a bit of policy and opportunism.... If you start to look at all those activity centres you can find ways of assembling land through market mechanisms’. However, he commented that *Melbourne 2030* was ‘policy alone without targeted investment to back it up’.

Interviewees generally indicated that the determinants of location for new housing differed somewhat according to area. For the growth areas most interviewees, particularly the planners, indicated that the location was influenced by the structure

planning process. These plans would determine both the location of housing and also of transport and activity centres. However, several interviewees mentioned the issue of timing with regard to transport and amenities in the growth areas as housing is often built before other services are provided, so although housing may eventually be located near to services, it may not initially be so.

The location of new housing within the existing urban area, in areas other than the growth areas, was generally considered to be determined simply by the availability of suitable land. One developer indicated that land availability at a suitable price was the main determinant of choice of location and that this was not always easy to find. Some planners suggested that developers were reluctant to try new forms of development and, in particular, to embrace the style of medium density housing around transport and activity nodes referred to as transit-oriented development. One planner (P1) noted that while there was plenty of government rhetoric around transit oriented development, there needed to be stronger requirements to ensure that this intention was translated into action. 'I think it needs to be mandated. If you don't mandate it, it won't happen.' Developers were also concerned about housing preferences by the public, and sometimes saw the provision of local transport and amenities as a trade off for house and land size.

Interview findings on planning system effectiveness

Interviewees generally expressed frustrations with varying aspects of the planning system. Planners were aware of their limited ability to enforce strategic policy and bring about changes considered desirable, such as increasing the range of housing types and sizes available. Many of those interviewed from both categories felt that planning strategies were of little influence, and planners generally identified as problematic the vague and general language used in planning policy and regulatory instruments. Most of the planners complained of a lack of coordination when dealing with different agencies within the state government which might have contradictory requirements.

Interview findings on the effect of Melbourne 2030's urban growth boundary

Varying views were expressed between local government planners and between planners and developers on the impact of the urban growth boundary (UGB) on the price of land and type of housing. Planners generally believed that the introduction of the UGB had not unduly affected land price. The most common explanation for land price rises was not a lack of land supply brought about by the UGB, but the control by a relatively few development companies of most land inside the UGB. However, at least one developer blamed increased prices on raised expectations among existing land holders that they could ask greater prices.

Interview findings on the effects of taxes and charges

None of those interviewed expressed a view that charges on development altered the form of housing, although one planner linked the decrease in lot sizes we have observed to the charges developers are obliged to pay. Most of those interviewed considered that charges were generally passed on to the consumer, adding to the cost of housing, but there was a range of differing views about the degree to which this was true or the way in which it was done.

Other issues raised in research: the use of restrictive covenants

The issue of the growing use of restrictive covenants in new housing estates was raised by the first council planner we interviewed. The topic was then followed up in subsequent interviews and it would appear that the use of private covenants is now

becoming widespread. The most common types of covenants are those mandating a minimum floor area and those that prevent any future subdivision. Both of these are designed to reassure prospective buyers that the area they are buying into will not change in future through the addition of smaller houses or multi unit developments, including the building of second houses on existing house blocks—known as dual occupancies. Covenants are attached to the title of the property and prevent future owners from undertaking certain actions. One council planner estimated that in some areas more than 90 per cent of all new houses being built were subject to these legal restrictions. This is an issue that would benefit from future research.

Conclusions, policy implications and areas for future research

The research generally pointed to a limited impact of planning policy on the mix of housing being constructed. Segmented and different housing markets exist between the growth corridors and the inner urban areas catering largely to different demographic groups. Development companies, with some exceptions, generally operate in one of these market types. Change is occurring in that, for example, the size of inner urban apartments is falling and the size of predominantly detached urban corridor dwellings is increasing. However, much change seems not to be strongly driven by government planning policy. The research suggests that governments and market-oriented policies and practices have not satisfactorily addressed many of the emerging pressures on city growth. Developers minimised the impact of government policy on development decisions. At least one stated categorically that *Melbourne 2030* had no impact on development decisions. Some developers stated that they based their planning on strategic market research into demographic trends, consumer preferences, and market opportunities, and that they understood and catered to market preferences.

Planners generally identified the vague and general language used in planning policy as a difficulty. Council planners also argued generally that the planning tools available do not provide them with enough power to force change. Most interviewees suggested that strategic policy needed to be supported by more effective implementation measures. The findings thus point to the role of uncertainty in development regulation. Uncertainty can lead to a concentration of the industry to a small number of large players, and restrict the choice of housing products available to consumers (Evans 2004). There is a tendency for developers to put resources into activities not directly related to the production of housing but adding to its cost. Consistent with this view, planners indicated that the planning framework was not specific enough to require compliance, so that developers constantly use the vague and general provisions to reduce requirements and argue that they are compliant. The experience of regulatory uncertainty and vagueness in planning practice can, however, potentially be mitigated by a policy framework that states its objectives and procedures as clearly and unambiguously as possible, and applies them consistently (Gurran et al. 2008). Government and developer representatives, however, emphasised the importance of flexibility and negotiation to innovation.

This report attempts to contribute to an examination of the type and effectiveness of land use policies as they are applied to housing. It leaves many unanswered questions and suggestions for further research.

1 INTRODUCTION

This project is concerned with the relationship between planning policy and the characteristics of housing supply. It assesses the effects of planning policy on housing characteristics such as size, type and location. It focuses on a particular time—from 1990 until 2008, and place—the metropolitan area of Melbourne. The project will be of interest to both planning and housing researchers and practitioners. Its approach combines quantitative data analysis and modelling, using sales and valuation data, with qualitative information gained from interviews with a selection of planning managers and land and housing developers to give a more comprehensive understanding of the relationship of government policy to built form outcomes. The characteristics of housing supply which were chosen for investigation through these forms of enquiry were those that the planning regime and planning policies sought to affect. We are thus assessing the effectiveness of policy in achieving its own stated aims.

This report is the second and final product of this research project. The previously published Positioning Paper *Planning Reform, Land Release and the Supply of Housing* (Goodman et al. 2010) introduced the issues and set them in context through a substantial discussion of existing literature and research findings. The first paper also outlined in some detail the methodology used in this study. This report presents the research findings, and the two reports should be considered and read together. The key research questions which the project addresses are:

1. Do changes to land use planning policies and mechanisms impact on the types of housing supplied, particularly in new release areas?
2. Are policies designed to bring about urban consolidation affecting the type of housing being built, and if so in what way?
3. Is there a correlation between planning policies and changes in house prices?
4. To what extent and in what way do government policies impact on decisions on housing supply made by the development industry?

The predominant purpose of this report is to present the findings of this project. The report contains four substantive chapters. Following this introduction, chapter two will provide an outline of the current Victorian planning system and its development and evolution over the time period covered by this report. It will also outline the current statutory and policy framework focusing on the aspects that relate to the supply of housing. Chapter three presents a brief outline of the methodology used. A more detailed exposition is presented in the previously published Positioning Paper available on the AHURI website. Chapter four contains quantitative findings on the characteristics of housing supply in Melbourne and the extent to which these have been consistent with planning objectives. Chapter five links these quantitative findings to the qualitative research. Exploring the interview findings, it considers possible explanations for why planning may not have been effective in achieving its housing supply objectives in Melbourne.

2 BACKGROUND TO VICTORIAN PLANNING SYSTEM AND POLICIES

2.1 The evolution of the Victorian planning system

The Victorian land use planning system has evolved over the last 50 years as a story of tension between central and local control over planning decisions. These fluctuating trends are most evident in the emphasis on local government control by the Cain Government's *Planning and Environment Act* (1987), and by the Kennett Government's emphasis on central control through the introduction of the *Victoria Planning Provisions* (1996).

The *Planning and Environment Act* in 1987 changed the direction of over 40 years of planning by repealing the *Town and Country Planning Act* (1944). Amendments in the 1960s introduced important innovations such as Statements of Planning Policy and the capacity to form regional planning authorities. During the progressive development of the planning system in the 1970s and 1980s various elements that are now part of the administration of planning were introduced and refined. These elements included: third party appeal rights, a tribunal for hearing appeals against planning decisions, and independent panels to hear submissions on planning schemes amendments. Other legislation with links to planning dealing with such matters as environmental regulation and the subdivision of land were also enacted.

The *Planning and Environment Act* (1987) was a significant change to the state's planning system in three ways. It required, for the first time, every council in the state to adopt a planning scheme; altered the administration of planning; and changed planning schemes.

Until 1985, responsibility for land use planning in Victoria was divided. One planning authority, the Melbourne and Metropolitan Board of Works (MMBW) was responsible for developing and administering a metropolitan-wide planning scheme, the *Melbourne Metropolitan Planning Scheme* (MMPS). Gradually administration over a range of planning matters was devolved to local councils. A board comprising representatives from every metropolitan council directed the MMBW until, in the early 1980s, it was replaced by a smaller appointed board. In contrast, non-metropolitan councils developed their own planning schemes subject to government approval and the advice of the Town and Country Planning Board (TCPB). In 1981, the TCPB was merged with the Department of Planning. Non-metropolitan councils also administered their own planning schemes.

This administrative arrangement was changed fundamentally on 1 July 1985, when the Cain Labor Government transferred the planning powers of the MMBW to the Minister for Planning and Environment, and merged the MMBW's Planning Branch with the Ministry. This action removed responsibility for metropolitan planning from a centralised independent authority and consolidated control in the state bureaucracy and the political process. The MMBW was an integrated metropolitan planning authority with responsibility for land use planning, water supply, drainage, sewerage and metropolitan parks. The loss of its planning powers separated planning from these other sectors.

In 1988, through the development and implementation of the *Planning and Environment Act*, the government initiated a trend towards more localised development of zone controls. The government discontinued the MMPS and allocated its zones to planning schemes for each metropolitan municipality, in effect developing 52 separate metropolitan planning schemes in a policy neutral manner and using a

standardised format. Metropolitan local councils assumed most of the powers formerly held by the MMBW and gained the same planning powers held by non-metropolitan councils, administered their own planning schemes comprising a state, regional and local section, and were able to develop the direction of local zones subject to government approval. The state government maintained control over state and regional policy, over approval of scheme amendments subject to the advice of independent panels, and general legislative and overall control through the *Planning and Environment Act*.

During the late 1980s and early 1990s, the state government developed planning policy on matters of identified state interest while allowing local variation between planning schemes on matters of local concern. The government addressed metropolitan development in two ways: firstly, by promoting urban consolidation from 1991 through a policy framework, through VicCode 1, by initiating VicCode 2, and by requiring a minimum average residential density of 15 lots per hectare for the South Eastern growth corridor; and secondly through comprehensive strategic plans for future urban development for three growth corridors in the Plenty Valley, Werribee and the South East, while continuing to protect 'green wedges' between urban areas and other environmentally sensitive areas such as the Dandenong Ranges, Upper Yarra Valley, and the Mornington Peninsula. It also developed a substantial body of state policy including state-wide amendments to protect native vegetation, wetlands, and to control rural-residential subdivision.

The election of the Victorian Kennett coalition Liberal-National party Government in 1992 led to a reversal of this trend towards local control over local planning issues. In 1996, the government amended the *Planning and Environment Act* (1987) to introduce the Victoria Planning Provisions (VPPs). These extended the principle of central control, formerly exercised over metropolitan planning by the MMBW, to the state.

2.1.1 The Victoria Planning Provisions

The VPPs comprise a range of standardised state-wide provisions. The standard provisions originally comprised state policy, 25 zones, 22 overlays, 31 particular provisions, 31 general provisions and 29 incorporated documents. The powers of local authorities are limited to developing local policy including a Municipal Strategic Statement, applying the most appropriate zone to particular land, specifying the content of schedules to a number of zones and overlays, and selecting from standard overlay controls. All Victorian municipal councils were required to incorporate the provisions into new format planning schemes. Councils cannot amend the standard provisions and a planning authority cannot in practice devise its own zone provisions, although a trend to cite specific planning amendments in some municipalities is becoming evident.

The Victoria Planning Provisions is primarily a discretionary system. Many zones and overlays allow a large number of uses or developments to be considered and contain a small number of prohibited uses. The new schemes require councils to consider an extensive range of matters for many applications. For the first time each council was required to undertake strategic planning, and to include strategies and implementation processes in its scheme. The principal purpose of Local Planning Policies was to provide guidance to councils in making decisions on applications for discretionary uses (which require a permit) under planning schemes. Local policies are often general, non-prescriptive, omit many important issues and cannot be worded or applied in such a way that they create de facto zone provisions by inserting mandatory provisions. The Local Planning Policy Framework (LPPF) was required to

be consistent with the State Planning Policy Framework (SPPF) and not contradict the SPPF or the zone provisions.

The VPPs were intended to be a comprehensive departure from past systems. The then planning minister, Robert Maclellan (1993, p.11) made this clear in 1993, stating that 'in case anyone still has any doubts, let me assure them that [the new system] is not just a papering over of the cracks [but] a complete reconstruction from the foundation up'. The Kennett Government did not complete the implementation of the changes to the planning system it introduced in late 1992 before it lost office in late 1999. It was left to the Bracks Government, which in opposition had not supported the introduction of the VPPs, to implement the Kennett-Maclellan system.

Radical change to the planning system coincided with a radical restructuring of local government. In 1993, the government commenced the process of replacing all local government councillors in Victoria with appointed commissioners to facilitate council amalgamations. The number of councils in Victoria was reduced from 210 to 78. This introduced considerable change to local government. Minister Maclellan repeatedly criticised local government's planning performance after elections had reinstated Victoria's councils, and warned that planning powers could be redirected from councillors to chief executive officers if councillors 'meddled' with planning issues (Costa 1997). Local government amalgamations and the temporary loss of local democracy made the successful implementation of the government's changes to the planning system more likely (Mowbray 1999).

State government administration was also restructured. Large integrated government departments were created and the number of departments was reduced from twenty-two to thirteen. The Department of Planning was absorbed into the new Department of Infrastructure (DOI), which also included the transport portfolio. The planning division experienced considerable downsizing and the functions carried out by staff were altered.

2.1.2 Performance of the VPPs

The government provided six objectives for the VPPs. These were: to facilitate development; reduce local variation; improve strategic planning; reduce the size and complexity of planning schemes; provide greater certainty; make planning schemes more efficient and less costly to administer. These reasons formed criteria against which the performance of the new system could be assessed. The existing planning system, Planning Minister Maclellan believed, was 'inefficient, costly, complicated and confusing' resulting in increased costs, uncertainty and delays (Maclellan 1998, pp.124–125). It gave 'too much weight to the views of existing residents at a cost to...facilitation of economic development' (Maclellan 1993, p.13; DPD 1993a).

Buxton, Goodman and Budge (2003; 2005) analysed the performance of the VPPs. They found that only one of the six stated objectives had been achieved; an improvement in strategic planning from a low base was achieved, albeit in an inadequate manner. Planning schemes became far larger and more complex than those they replaced. The new format schemes did not reduce the number of zones or simplify zone types or content. Minister Maclellan and his advisory committee on the VPPs, the Perrott Committee, identified that at 1 January 1993 there were a total of 2871 zones across all Victorian planning schemes (DPD 1993a). No investor could maintain a working knowledge of any scheme, they argued (DPD 1993b).

This calculation of the number of zones in the former schemes is misleading. The Perrott Committee counted the increase in the gross number of zones resulting from the localisation of the MMBW metropolitan wide zone controls and totalled similar or identical zone types. Walters (1997) pointed out that 'many of the 2871 zones noted in

1993 were basically the same from one scheme to another, or included only subtle differences'. Between the localisation of planning schemes in 1988 and the application of the VPPs to new format schemes in the late 1990s, metropolitan zones remained very similar to the standard former MMPS zones. For example, Buxton and Tieman (1997) found that the standard MMPS residential C zone existing prior to 1988 and localised residential zone provisions in a sample of metropolitan councils between 1988–93 were almost identical, and that most residential zones in 1993 could be classified into similar zone types with broadly similar content. The new format planning schemes contain an average number of 15 zones chosen from the suite of 25 standardised zones, while the average pre-VPP's planning scheme contained 14 zones (Buxton, Goodman & Budge 2003).

2.1.3 *The 1999 Labor Government*

The Labor Government was elected in Victoria in 1999. Its aims for the planning system were outlined in a Statement by the Planning Minister John Thwaites, *A Sensible Balance*, released in September 1999 (Thwaites 1999). Labor's 1999 election planning policy stated that the planning system had become 'more complex [with] less certainty for all stakeholders and increased delays and costs for residents, councils and developers' (ALP 1999, p.1). This led Labor in opposition to promise in its planning policy to review the VPPs (ALP 1999, p.2). In government, this promise was modified in the *State Planning Agenda* to a policy of 'continuous improvement', and a belief that 'the new schemes are generally working well' (Thwaites 1999, p.5).

The Labor Party criticised a discretionary planning system developed on a philosophy of market liberalisation. Both the 1999 election policy and the *State Planning Agenda* contain many undertakings to adopt more regulatory practices in response to community needs. Labor's 1999 election policy (ALP 1999, p.1, p.5) argued that a market driven approach to planning was 'at the core of Victoria's planning crisis'. It attacked the Kennett Government's 'blind faith in allowing the market to rule at the expense of local amenity and community interests', and claimed that the experiment with deregulation had 'failed miserably', and promised to substitute 'clearer and more prescriptive controls to provide greater certainty...and quicken the decision-making process'. It also argued that the planning system had become 'more complex [with] less certainty for all stakeholders and increased delays and costs for residents, councils and developers'. Labor also made a commitment to increase local control over planning decisions, stating that state-wide zones should be varied where local conditions and needs justified variation (ALP 1999, p.2). The *State Planning Agenda* reinforced this position arguing that the planning system must 'be prescriptive enough to provide certainty and consistency'.

The Labor Party in government has essentially maintained the VPPs and the new format planning schemes, preferring to refine and add to content. The Minister for Planning, Mary Delahunty, released a discussion paper *Better Decisions Faster*, in August 2003, which listed 18 options for improving the planning permit system and amendment process in Victoria (DSE 2003). The government has rewritten state policy to simplify policy without substantially changing the content. In 2003, the government introduced three new rural zones for Melbourne's green wedges, replacing in these areas the original rural VPP zones. In 2006, the government replaced the main permissive rural zone with two new more regulatory zones, providing four rural zones in total.

2.1.4 *Melbourne 2030*

In October 2002, the state government released the first major metropolitan strategic plan since the Cain Labor Government's 1987 *Shaping Melbourne's Future*. Titled

Melbourne 2030: Planning for sustainable growth, the plan contained a series of policies grouped around nine directions (DoI 2002). The plan's principal elements were to: concentrate development in mixed use activity centres close to public transport; confine outer urban growth by an urban growth boundary; shift a substantial amount of outer urban development to the existing metropolitan area; substantially increase the proportion of public transport journeys; and make a series of environmental improvements to the metropolitan area.

The government adopted implementation measures of varying types for these principles. Quantifiable measures were adopted through:

- Legislation to protect a mapped urban growth boundary, requiring the approval of both houses of parliament for amendment.
- Unambiguous policy to protect green wedge zones.
- A proposed reduction in the proportion of greenfield dwellings from 38 to 31 per cent (and an eventual reduction to 22%) and a proposed increase in the proportion of activity centre dwellings from 24 to 41 per cent of the total.
- A target for public transport use of 20 per cent of motorised trips by 2020.
- A list of over 100 principal and major activity centres, recognition of 900 neighbourhood centres and development of six Transit cities.

However, the implementation of all other principles and the policies grouped around nine directions relied on vague or unquantified implementation measures. For example:

- Retail and commercial development could occur away from activity centres (in 'out-of-centre' developments) subject only to general assessment criteria that gave preference to locations 'in or on the border of an existing activity centre' and allowed consideration of development proposals if they were 'of net benefit to the community'.
- Densities in urban growth corridors should aim at densities 'significantly higher than 10 dwellings per hectare, for example, 15 dwellings per hectare'.

A broadly-based reference group, and a Cabinet committee responsible for coordination, were established. However, no detailed implementation plan of actions or method of tracking these or their impacts was adopted. Six implementation plans were prepared to assist implementation around *Melbourne 2030* themes. Ministerial Direction No.9 required planning authorities to have regard to *Melbourne 2030* in preparing planning scheme amendments, and Clause 12 containing a summary of *Melbourne 2030* policies was inserted into the State Planning Policy Framework as state policy. A Growth Areas Authority (GAA) was established to coordinate strategic planning for growth corridors. An Urban Growth Zone replaced the use of a number of other zones and overlays in an attempt to reduce the time taken for outer urban planning approvals, and Precinct Structure Plan Guidelines were adopted. Clause 55 of ResCode was introduced to regulate medium density development and Clause 56 outlined urban design principles for greenfield developments. Structure plans were completed or were underway for 89 of Melbourne's 120 principal and major activity centres by early 2008. Priority Development Panels were established in 2004 to assess rezoning development applications on: matters of state or regional significance; key development sites; major activity centres; transit cities; sites with structure plans; of a substantial scale; or which raise complex issues.

In 2007–08, the government undertook an audit of the progress of *Melbourne 2030* which included the scope to identify policy refinements or implementation initiatives to

achieve the intent of *Melbourne 2030*. The audit consisted of a 2007 *Analysis of Progress and Findings from the 2006 Census*, and the 2008 *Expert Group Report*. The audit process showed that 48.3 per cent of household growth between 2001–2006 occurred on outer urban greenfield sites (up from 38% in 2001), while only a marginal increase in activity centre dwellings was evident. Despite the increase in net densities from 10 to 12.2 dwellings per hectare, the audit noted that there was ‘an urgent need to increase average residential densities in Growth Areas’ through state government mandating increased minimum average lot yields or requiring a fixed proportion of medium density housing. The audit team reaffirmed the value of the urban growth boundary (UGB) as an essential component of a strategy that seeks to increase densities and redirect a proportion of development into activity centres, and stated that its removal would not reduce land prices but reintroduce uncertainty.

The government responded to the audit process with two further reports, *Planning for all of Melbourne, the Victorian Government response to the Melbourne 2030 Audit* in May 2008, and *Melbourne 2030 a planning update, Melbourne @ 5 million* in December 2008. *Planning for all of Melbourne* includes some specific actions such as establishing 3–5 Development Assessment Committees (DACs) comprising two state and two local government representatives and an independent chairperson; an implementation unit in the Department of Planning and Community Development (DPCD); introducing an Activity Centre Zone; providing up to 25 years’ land supply and fast tracking additional residential development in urban corridors; and a restatement of ‘the aim...to achieve a net average of 15 dwellings per hectare’ in growth corridors. Many other suggestions from the audit, such as the need to better connect metropolitan and regional planning, increase residential densities around new outer urban activity centres, and to consider inclusionary zoning, were not adopted.

Melbourne @ 5 million responded to the expectation that Melbourne’s population expected to increase by 1 million by 2022, not 2030. It proposed significant alterations to *Melbourne 2030* although the government states that both strategies should be considered together. *Melbourne @ 5 million* will concentrate development into six new central activities districts (Box Hill, Broadmeadows, Dandenong, Footscray, Frankston and Ringwood), establish three employment corridors, and expand the urban growth boundary by 41 000 hectares to increase planned corridor dwellings from 180 000 in 2004, 225 000 in 2005, to 284 000 new dwellings in 2008 at a low net residential density of 15 dwellings per hectare. A Growth areas Infrastructure Contribution levy has been introduced.

Development Assessment Committees (DACs) are potentially an important means of assessing and promoting development. Their brief is to fast track decisions for 20 principal activity centres, six Central Activities Districts (CADs), the Melbourne CBD, and central Geelong. They are to be used only for permit applications; local councils will process applications, while the DACs will advise the minister on recommended decisions. DACs should implement policy, but some activity centres still have no structure plan, while other structure plans are vague or are based on methodologies inconsistent with each other. The DPCD has also published Activity Centre Guidelines to guide best practice redevelopment of activity centres, a Practice Note for Structure planning for Activity centres that gives direction to councils on the preparation of structure plans, an Activity Centres Toolkit outlines case studies and information, and an Activity Centres Zone to promote development in activity centres. The GAA, the proposed DACs and the Priority Development Panels remove significant power over development in key locations from local government, but are an expression of the government’s decision not to establish a metropolitan planning authority with clearly defined power over metropolitan development. These new institutions therefore

represent another step in the tension between the expression of state government centralised control and local government power.

2.2 Melbourne's current Planning Policy Framework: Housing supply policies

Melbourne 2030 is based around nine key strategic directions, from each of which come a number of more specific policies. The directions and policies that are most relevant to the characteristics of housing supply investigated in this report are as follows:

1. Direction 1—A more compact city.
 - Policy 1.1—Build up activity centres as a focus for high quality development, activity and living for the whole community.
 - Policy 1.3—Locate a substantial proportion of new housing in or close to activity centres or other strategic redevelopment sites that offer good access to services and transport.
2. Direction 2—Better management of metropolitan growth.
 - Policy 2.1—Establish an urban growth boundary to set clear limits to metropolitan Melbourne's outward development.
 - Policy 2.2—Concentrate urban expansion into growth areas that are served by high-capacity public transport.
3. Direction 6—A fairer city.
 - Policy 6.1—Increase the supply of well-located affordable housing.
 - Policy 6.3—Improve the coordination and timing of the installation of services and infrastructure in new development areas.
4. Direction 8—Better transport links.
 - Policy 8.3—Plan urban development to make jobs and community services more accessible (DoI 2002, pp.13–16).

The strategic goals of *Melbourne 2030* have been embedded into all planning schemes to give them some statutory weight. This is primarily done either in the state policy section known as State Planning Policy Framework (SPPF) or through the specific section on residential development (Clauses 54–56). The most important sections of state policy relevant to the various characteristics of housing investigated here are identified in the following clauses.

The SPPF has a section on Housing, Clause 16, which includes in its objectives:

'To encourage:

- subdivisions in locations with access to physical and community infrastructure and providing a range of lot sizes ...
- residential development that is cost-effective in infrastructure provision and use ... and encourages public transport use
- opportunities for increased residential densities to help consolidate urban areas.' (s.16.01–1)

Increased densities are recommended in terms of the number of lots per hectare. While not directly stated in the SPPF, the policy in *Melbourne 2030* states that:

'The main requirements for development in growth areas will include specifying that structure plans, including those that have been prepared but not exhibited before the release of *Melbourne 2030*, should aim to achieve increases in average housing density significantly higher than 10 dwellings per hectare, for example, 15 dwellings per hectare.' (DoI 2002, p.63)

There is a section in the SPPF on Affordable Housing (s.16.5) which has as its objective: 'To deliver more affordable housing closer to jobs, transport and services'. (s.16.05–1). 'Housing affordability will be improved by increasing choice in housing type, tenure and cost to meet the needs of households as they move through life cycle changes and to support diverse communities.' (s.16.05–2)

The SPPF has a section on Activity Centres, Clause 12, which has as its objective:

'to facilitate sustainable development that takes full advantage of existing settlement patterns, and investment in transport and communication, water and sewerage and social facilities.' (12.01–1)

The strategies for achieving this objective include:

'Locate a substantial proportion of new housing in or close to activity centres and other strategic redevelopment sites that offer good access to services and transport by:

- increasing the proportion of housing to be developed with the established urban area, particularly at activity centres and other strategic sites, and reduce the share of new dwellings in greenfield and dispersed development areas
- encouraging higher density housing development on sites that are well located in relation to activity centres and public transport'
- 'ensuring planning for growth area provides for a mix of housing types and higher housing densities around activity centres'.

It also indicates that Principal and Major Activity Centres should 'have the potential to grow and support intensive housing developments without conflicting with surrounding land-uses' (12.01–2). These sections of state policy are essentially aspirational rather than compelling in nature. The language used is of encouragement rather than requirement for desired goals, yet the intention of the policies are clear.

It is clear from the discussion above that the predominant goals of the planning system, the VPPs, introduced in 1996, were to provide greater efficiency and less variation in regulation between municipalities. This should mean that observable differences in housing supply that can be attributed to the planning system between municipalities should diminish after the introduction of the new system. The VPPs, took some time to be incorporated into planning schemes from their introduction in 1996. In developing new format planning schemes, each municipality was required to devise a Municipal Strategic Statement and local policies, select appropriate zones and overlays, determining where best to apply them, and develop schedules to certain provisions such as zones. Most municipalities had adopted new format schemes by 1998 with the last few as late as 2000. We could therefore look for the impact of the new planning system on the supply of housing in the years from 1998 onwards. If the VPPs were to achieve the aims of increased efficiency and decreased differences between local government areas, results might be apparent through a decreased time between the sale of vacant land and the construction of dwellings, and in differences in this time span between municipalities. This will be explored in section 4.5.

The *Melbourne 2030* goals which affect the characteristics of housing supply were identified above as including the goals of increasing residential densities; improving

housing choice and affordability; and locating a greater proportion of housing closer to jobs, activity centres and public transport. This planning strategy was introduced in October 2002 and we can therefore look for the impact of the policy from 2003 onwards. The influence of *Melbourne 2030* on characteristics of housing supply which it intended to affect will be assessed in sections 4.2, 4.3 and 4.4 below.

2.3 Melbourne's Planning Policy Framework: International context and debate

The Melbourne 2030 strategic directions are modelled on principles of urban consolidation—a widely adopted tool to alter the form of housing and urban form generally. Urban consolidation may involve increasing urban densities generally, or intensifying development in specified locations in a metropolitan area, such as inner and outer urban areas, or mixed use activity centres. In Australia, urban consolidation policies have guided the strategic planning frameworks of most states and territories since the 1990s (Yates 2001; Gleeson et al. 2004; Buxton & Tieman 2005). Urban consolidation has international equivalents in, for example, the Smart Growth and New Urbanism movements in the US and intensification policies in European cities.

Policies seeking a diversity of built form are underpinned by attempts to reduce energy consumption through smaller house sizes and the design of less car dependent suburbs. There is a consensus that the apparently unsustainable car dependent, 'sprawling' morphology of capital cities requires redress by directing activities and investment into regional centres, increasing densities, improving alternatives to the motor car, providing open space and protecting natural resources (Gleeson et al. 2004, p.363). The legitimacy of urban consolidation as an urban management tool continues to be debated in Australia. These arguments are explored for example by Yates (2001), and in detail in the positioning paper to this report (Goodman et al. 2010).

A key issue in urban consolidation policy debate is housing affordability. The relationships between land use regulation, housing type, land and housing supply, and land and housing price, have been studied extensively in the international literature. Smart growth and urban containment policies feature prominently within this literature, with links claimed between urban containment, to land supply, and increased housing costs. The overall findings from this body of research are inconclusive, and few Australian studies exist (Gurran 2008). Nevertheless, there is no lack of literature claiming that strong land use regulations reduce land supply and the capacity for new housing construction, and therefore increase price.

Urban Growth Boundaries (UGBs) are one regulatory impact studied for their impacts on price. If containment programs, such as UGBs, limit the supply of developable land then they might be expected to affect land prices (Dawkins & Nelson 2002; Jun 2006). Jun (2006, p.239) concluded that 'although the evidence is not overwhelming, there are many empirical studies indicating that UGBs and other means of urban containment lead to higher land prices by limiting the supply of developable land'. Grimes and Liang (2009) claim that considerable evidence exists in the United States that UGBs can have major effects on the patterns and dynamics of new housing supply and on land prices. In recent years Australian critics have drawn attention to urban containment and housing affordability. Moran (2006), Birrell and Healy (2003), Birrell et al. (2005), and the Housing Industry Association (HIA) (2008), have argued that urban containment measures have driven up land and housing prices. Some have claimed a causal connection between regulatory planning systems, government induced land shortages, and land price increases (Moran, 2006).

The impact of UGBs on housing prices is, however, one of a number of issues that remains contested (Nelson et al. 2007; Buxton & Scheurer 2007). In their review of the price impacts of UGBs, Nelson et al. (2007, p.93) conclude that urban containment does not limit land supply 'in the large majority of situations where urban containment is applied', reinforcing findings by Nelson and Dawkins (2004) and Pendall (2000). There are also proponents of the view that urban consolidation enhances affordability, expressed for example in the National Housing Strategy of the Hawke-Keating Government (NHS 1991) and in Forster (1999). These proponents point to the savings in land and infrastructure costs associated with dwellings on smaller lots and in more compact settlement patterns. They also argue that urban consolidation enables older householders to vacate low-density family homes that are too large for their needs, and lowers the threshold for young households to enter the property market (Yates 2001). Importantly, if there are effects from urban containment policies these may be as a result of both supply and demand factors. Nelson (2000, p.46) summarises the potential effects of containment policies as follows:

Urban containment policies change housing costs for two reasons. First, land prices change when land supply is altered. Second, if urban containment increases the value of the amenity package associated with a house, then that, too, will cause a change in house prices.

This is the case both in central and peripheral locations. Amenity gains in central locations through planning interventions include easy accessibility to urban facilities and services, while amenity gains in peripheral locations include proximity to protected natural and rural environments. The price impact from these planning objectives can be mitigated, however, if such amenity gains are broadly replicated across a regional market (Gurran et al. 2008), a view also supported by Yates (2001). This perspective suggests that urban containment policies, such as growth management and/or urban consolidation around activity centres, need not excessively inflate house prices if supply is deliberately increased in such preferred locations (Dawkins & Nelson 2002).

Perhaps reflecting these different perspectives and pressures, Australian state governments have to varying extents adopted contradictory policy objectives. Strategic plans have commonly adopted containment policies, including the use of UGBs, although only Victoria has legislated its boundary. Governments, including in Victoria, have progressively extended their UGBs citing housing supply concerns. The policy goals embedded in these strategic plans are important aspirations from both a planning and housing policy perspective. They attempt to reconcile the achievement of a more compact, environmentally sustainable city, with housing affordability goals.

3 METHODOLOGY

The methodology adopted for this project uses both quantitative and qualitative approaches. For the quantitative analysis, the project developed a methodology to integrate disparate databases at the level of individual properties and transactions: namely property valuations, property sales records, and VicMap spatial reference data. The resultant merged database permits analyses of housing supply, with the analysis segmented by property characteristics (such as size), price, time (of sale and construction), and location. The database development process involved integrating two main input datasets using a common identifier. These datasets comprise:

1. Property valuation data, collected by local government areas (LGAs) and audited by the Valuer-General.
2. Property sales data, collected by the Valuer-General.

The database development process joined the two data sources together, and identified the geographic location of each property record (with this process known as geocoding) to create a spatially-integrated merged database. The database design centres on identifying sales of vacant land, and linking these to property valuation records to identify subsequent construction. The property data is then linked to location data used for geocoding, held in VicMap spatial reference datasets of Property and Address information.

The database design is of research value for four main reasons:

1. For its ability to integrate disparate datasets at a disaggregate level (i.e. parcel). The merged database design joins sales information, which records what has been sold and where, with valuation information that records details of properties through a unique identifier.
2. The spatially integrated aspect of the core database that enables spatial queries to be conducted. Both data sources enable identification of the specific geographic location of the property, and so it is possible to undertake sophisticated spatial analyses
3. This database design allows simultaneous analysis of the spatial and time dynamics of land and property markets. Spatial-temporal database queries can be undertaken for more complex inquiries.
4. Similar datasets are in use within government, published research using disaggregated property data is very limited.

The merged database was used to identify what housing has been constructed between 1990 and 2008 in Melbourne. Sale and construction year information is used to identify what has been built and where, in combination with the property valuation information on dwelling type.

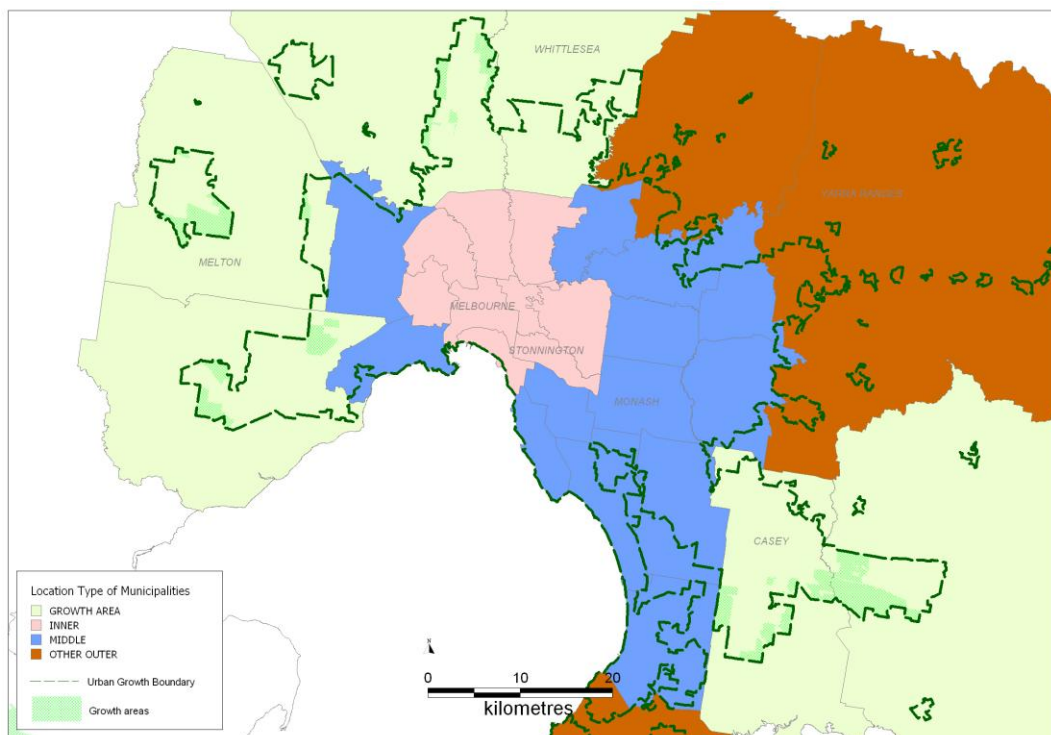
Combining the large datasets presented data processing challenges. The datasets are large (millions of records) and contain great variation in data formats, including incomplete property identification data. While the database has a high level of coverage, it also has limitations. Therefore, it is important to approach the database as a (large) sample rather than as a population. Not all records could be successfully cleaned and joined, and there may be issues of bias in the types of records not successfully integrated.

The database has been constructed by identifying vacant land parcels that have been purchased since 1990, and matching these parcels to the residential buildings that were constructed on the parcels by 2008. The database design thus emphasises

vacant land sales. As a result, there is a higher level of coverage of greenfield areas (growth areas), where properties are typically sold as vacant land prior to construction. Correspondingly, there is an expected undercount of properties built after the demolition of an existing building—particularly small-scale infill development. The level of coverage is nonetheless very high. In comparison to ABS dwelling approval figures for the Melbourne Statistical Division over the study period, the study sample of 444 689 new dwellings appears to undercount the number of new dwellings by 33 240 or 7 per cent in comparison to the ABS figure of 447 929 (ABS 2010, Cat 8731.0).

Much of the data here is analysed according to area with the metropolitan area divided into four distinct regions distinguished by groupings of local government areas (LGAs). These are inner suburbs, middle ring suburbs, outer suburbs which are not designated growth areas and outer growth areas. The goal with the grouping of regions in this report was to enable simple comparison of regions of Melbourne in a way that relates to planning objectives and to patterns of urban development. This delineation of areas is broadly similar to other approaches (Buxton & Tieman 2005; DPCD 2008), but is not identical and there are alternative spatial groupings that may be used.

Figure 1: Map of metropolitan areas within Melbourne with UGB



The qualitative methods used in this project chiefly involved nine detailed semi-structured interviews with key leaders from private development corporations, local government planning departments and state planning authorities. The purpose of the interviews was to shed more light on the question: *To what extent and in what way do government policies impact on decisions on housing supply made by the development industry?* The interviews added depth to our understanding and enabled a more coherent and nuanced explanation of the data analysis findings. The relevant sections of the interviews will be reported on here. To ensure anonymity interviewees are referred to only by an allocated number preceded by either P for planner or D for developer.

4 HAS PLANNING IN MELBOURNE BEEN EFFECTIVE IN ACHIEVING ITS HOUSING SUPPLY GOALS?

The findings from our analysis of the property database are presented here in four sections. The findings are prefaced by contextual data on the size of Melbourne's dwelling stock and on recent rates of population and household growth in the city.

In the first set of findings the basic scale and distribution of housing supply over the study period is presented, in terms of:

- quantity and rate of new housing supply
- the spatial distribution of new housing and of vacant land sales.

In this section, the communities where new housing supply has been concentrated are also explored in terms of price segments, socio-economic characteristics, and job accessibility. These points are explored with reference to objectives of the *Melbourne 2030* strategy concerning the strategic location and accessibility of housing. We seek to identify whether new housing supply is:

- reaching the more affordable submarkets of the metropolitan area
- being supplied in job rich parts of Melbourne.

In the next section of findings, the database is analysed in terms of the more detailed characteristics of new dwelling supply, comprising:

- dwelling size (floor area and number of bedrooms)
- lot size
- housing type.

These characteristics are explored with reference to *Melbourne 2030* and SPPF goals concerning housing density, lot size and housing type diversity, housing choice and affordability. In the third section of the chapter, the quantitative data is analysed in terms of more detailed measures of location, comprising the location of new housing in relation to key urban amenities. Finally, the chapter looks at measures of time lapse between land purchase and dwelling construction. This methodology focuses on housing development in established areas, and seeks to explore potential indicators of the complexity, uncertainty, and timeliness of housing development. These are factors that the VPPs have sought to influence.

4.1 Context: Population and housing in Melbourne

4.1.1 Growth in population and households

This section briefly places the issue of housing supply into the context of Melbourne's overall size and recent growth. Table 1 shows the total population, and total number of households in occupied private dwellings (broken down by those in detached houses and other dwelling types), in the Melbourne Statistical Division as at each of the Censuses over the study period (1991, 1996, 2001 and 2006). Table 2 shows changes in population and households between each of the Census points.

As at the most recent Census in 2006, Melbourne was a city of approximately 3.6 million (3 592 766) people. The city's population increased by over half a million (570 327) between 1991 and 2006, with higher growth levels between 1996 and 2006 than in the earlier part of the study period, 1991 to 1996, during which time Melbourne experienced recession conditions.

The Census count of households in occupied private dwellings in Melbourne as at 2006 was just over 1.2 million (1 283 299). The number of households increased by 234 252 in the 15 years 1991 to 2006. The majority (937 620, or 73%) of households in Melbourne in 2006 lived in detached houses, a decrease from 77 per cent in 1991. Between 1991 and 2006, the number of detached houses in Melbourne increased by 130 225. The increase in other dwelling types over the same period was lower, at 104 027, but was higher in percentage terms (43% compared to 16%). Based on Census figures, there was an increase of approximately 0.41 new households per additional head of population over the period 1991 to 2006. Households grew at a faster rate (22%) than did population (19%).

Table 1: Census data: Total population, households in private dwellings, 1991–2006

	<i>1991</i>	<i>1996</i>	<i>2001</i>	<i>2006</i>
Total population	3,022,439	3,138,147	3,366,542	3,592,766
Households in private dwellings	1,049,047	1,110,297	1,196,144	1,283,299
<i>In detached houses</i>	807,395	837,850	896,564	937,620
<i>In other dwelling types</i>	241,652	272,447	299,580	345,679

Source: ABS Cat. 2003.0, Time Series Community Profiles

Table 2: Census data: Population and household growth, 1991–2006

	<i>Change 1991–1996</i>	<i>Change 1996–2001</i>	<i>Change 2001–2006</i>	<i>Change 1991–2006</i>
Total Population	115,708	228,395	226,224	570,327
Households in private dwellings	61,250	85,847	87,155	234,252
<i>In detached houses</i>	30,455	58,714	41,056	130,225
<i>In other dwelling types</i>	30,795	27,133	46,099	104,027
New OPDs to population growth	0.53	0.38	0.39	0.41

Source: ABS Cat. 2003.0, Time Series Community Profiles

4.1.2 Location of existing housing stock

Drawing on the property valuations database, Table 3 shows that the total existing housing stock in Melbourne as at 2008 consisted of just over 1.5 million (1 507 521) dwellings.¹ Of the total Melbourne housing stock in 2008, the larger share, 42.7 per cent, of dwellings were located in the middle ring of the city. Just below 20 per cent (19.4%) of dwellings were in the growth area municipalities; and 415 804 or 27.6 per cent were in the inner municipalities. The remainder were located in other outer (non growth area) parts of the city.

¹ Differences between this figure and the Census figure on households in private dwellings from 2006 include the coverage of all dwellings—a larger figure than occupied private dwellings in the Census, and including vacant and non-private dwellings—and the later year of the valuations data (2008 compared to 2006).

As the majority, 70 per cent, of dwellings were detached houses, the shares of this dwelling type were similar to the total distribution of dwellings. The distribution of stocks of attached and apartment housing across the city, however, shows a different pattern. While over 22 per cent of detached houses were located in the growth area municipalities, these areas contained only 6 per cent of Melbourne's attached and apartment dwellings in 2008. The inner and middle areas combined contained nearly 90 per cent of the of the city's 377 176 attached and apartment dwellings.

Table 3: Melbourne context: Total dwellings by region, 2008

	<i>Detached Houses</i>	<i>Share Detached Houses (%)</i>	<i>Attached/ Apartments</i>	<i>Share Attached/ Apartments (%)</i>	<i>Total dwellings (2008)</i>	<i>Share Total (%)</i>
Growth Areas	231,470	22.0%	22,575	6.0%	291,904	19.4%
Inner	242,035	23.0%	168,146	44.6%	415,804	27.6%
Middle	456,963	43.5%	170,593	45.2%	642,984	42.7%
Other Outer	120,945	11.5%	15,862	4.2%	156,829	10.4%
Total Melbourne	1,051,413	100.0%	377,176	100.0%	1,507,521	100%

Note: 'Total' includes rural residential and 'other' dwellings

4.2 Basic characteristics of housing supply

4.2.1 Level of new housing supply

Figure 2 below presents a graph of the number of new residential dwellings that were constructed and completed over the years 1990 to 2007, based on the property database. It is important to bear in mind that this is a description of a sample rather than of a population (refer to the discussion in Chapter 3). It can be seen from the graph that there was a considerable increase in the number of new residential constructions across Melbourne from the start of the sample period until year 2003, with approximately 8.2 per cent (around 36 500) of all new dwellings developed in year 2003. In the period since 2003 the data suggests a relative decline in the rate of new residential constructions through to the end of the sample period, where figures for year 2007 generate just over 22 200 new dwellings. Contextually, important points in the study period included a recession over 1989–90 to 1992–1993; a boom in housing prices, particularly over 1996 to 2001; the introduction of the GST in 2001; and generally sustained boom conditions over the 2000s which began to plateau in 2007–2008. As discussed, Melbourne's population increased by around half a million people over the study period. The database results indicate a rate of new dwelling supply of around 0.78 dwellings per additional head of population.

Figure 3 presents a pie chart that illustrates the share of new residential dwellings constructed in the inner, middle, growth and other outer regions of Melbourne over the years 1990 to 2007 by region type. It can be seen from Figure 3 that the largest percentage of new dwellings (around 34%) were constructed in Melbourne's 'middle' region, followed by the growth areas (around 33%). The proportion of new housing constructed in the four areas of metropolitan Melbourne over time is shown in Figure 4. This illustrates that the greatest amount of new housing built on vacant land has been built in the growth areas since 2000, and that this proportion has not declined since the introduction of *Melbourne 2030* in 2002. The share of new housing in the middle and other outer areas have continued to decline while the inner city has remained relatively stable since growth in the early 1990s.

Figure 2: New residential construction from 1990–2007

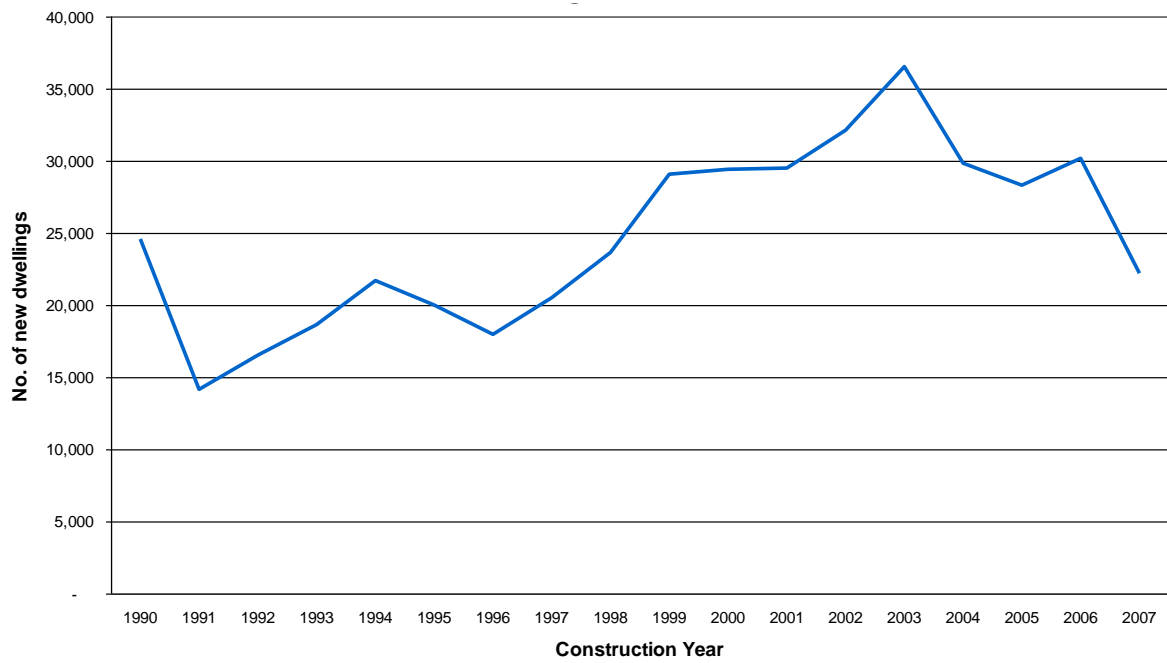


Figure 3: New housing constructions by region, 1990–2007

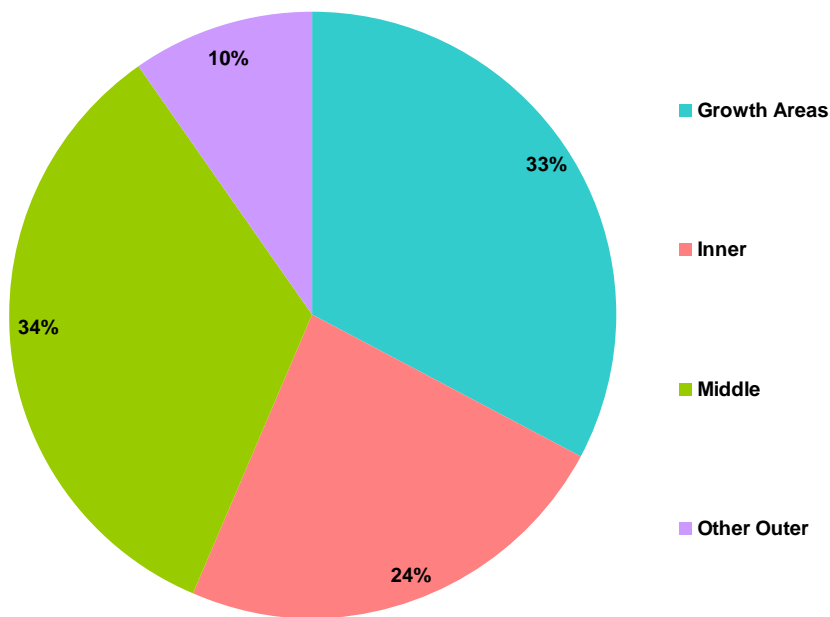
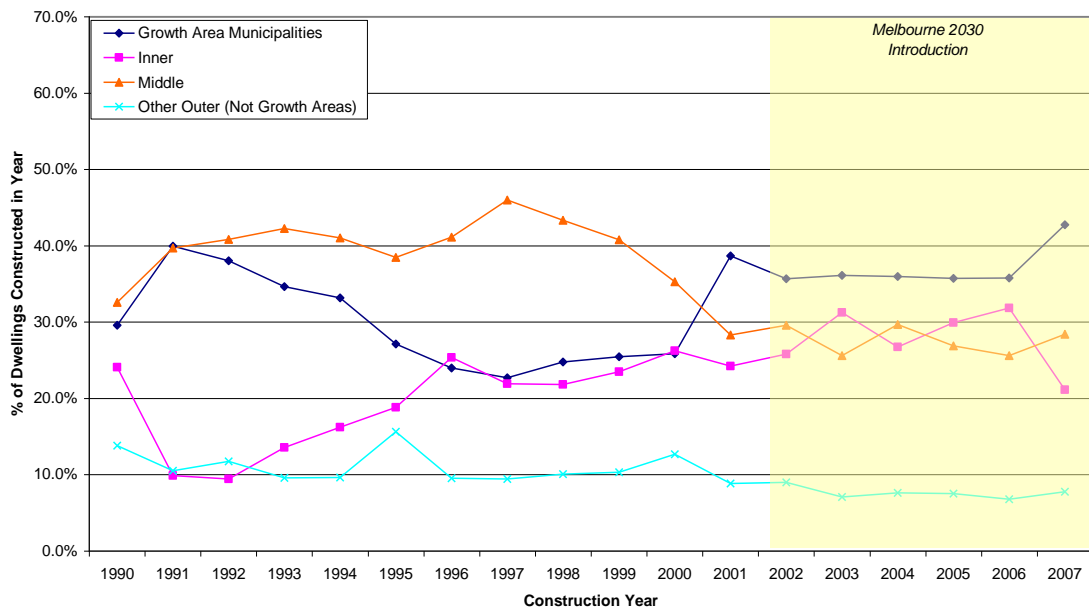


Figure 4: New residential housing proportions by year and region, 1990–2007



4.2.2 Land supply

Figure 5 presents a thematic map that identifies areas where land sales have been concentrated. It gives a picture of the uneven supply, and availability, of such land across the metropolitan area.² The darker shade on the map shows the areas where market activity has been buoyant and vacant land sales have been abundant, while the lighter shades depict low levels of market activity, and limited supply of vacant land. Land market activity is shown to be largely concentrated in the outer ring areas. Growth areas, as is expected from Figures 3 and 4 above, account for large amounts of land market activity. Areas of high activity include: Mornington, Berwick, Pakenham, Rowville, South Morang, Mill Park, Craigieburn, Sunbury, Hillside, Taylors Lakes, Caroline Springs, Hoppers Crossing, Point Cook and Werribee. Also evident is a very low level of land market activity in the inner and middle ring of suburbs, though there are a few isolated pockets around the Docklands and Williamstown.

This distribution of land sales and new housing supply can also be considered with reference to the total existing stock of dwellings in each region. As shown in Table 4, around half (49.7%) of the total dwelling stock in the growth areas (291 904) in 2008 comprised dwellings constructed over the study period 1990–2007. By contrast, the inner and middle regions of Melbourne contain much larger existing numbers of dwellings. Of the total dwelling stock of 415 804 in inner regions in 2008, around a quarter (25.2%) were built over 1990–2007. In middle regions, the total number of dwellings was the largest, with 642 984 dwellings, of which the proportion consisting of new stock built over the study period was comparatively low (23.6%). Thus, the rate of new land and housing supply is stronger in the undeveloped growth areas. By contrast, the inner and middle regions are already more developed. This is unsurprising in some ways. The context, however, of existing urban fabric and land availability is important when accounting for the effects of planning policies that seek to influence patterns of supply.

² The amount of land purchased over the study period has been aggregated at a suburb level. Land parcels that could not be geocoded, or land parcels where the size of land was not available were excluded.

Figure 5: Different levels of land sold

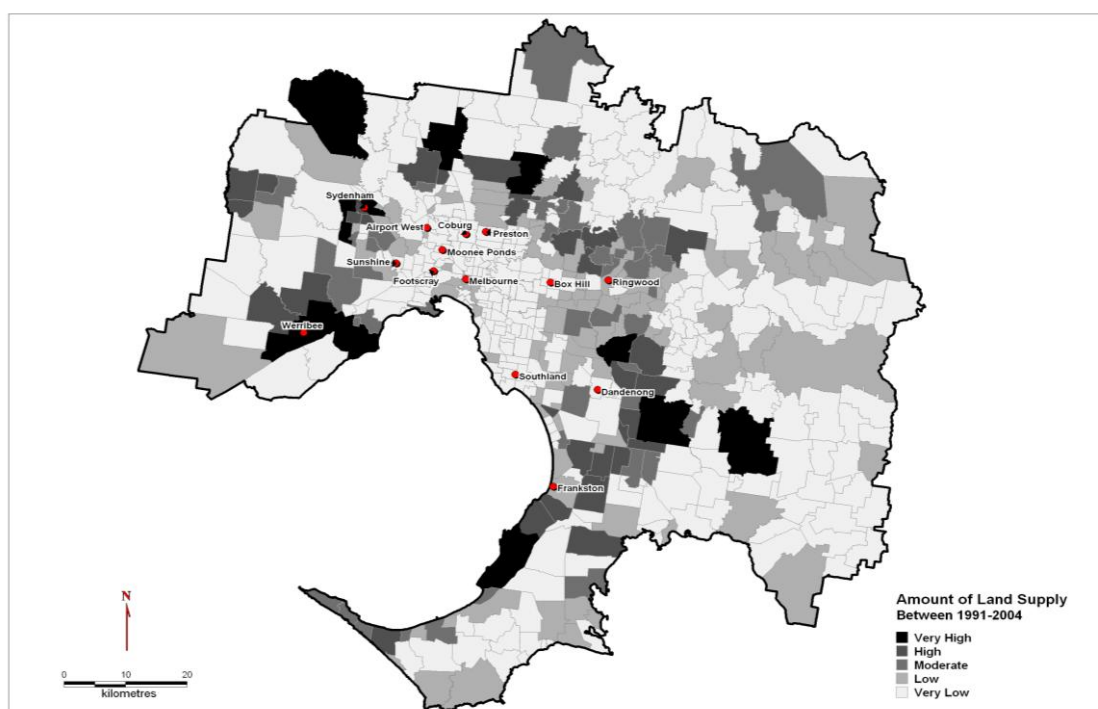


Table 4: New dwellings as percentage of total housing stock, by region

	<i>Number Built 1990–2007</i>	<i>Share (%)</i>	<i>Total Dwellings in 2008</i>	<i>% Built 1990– 2007</i>
Growth Areas	145,210	33%	291,904	49.7%
Inner	104,956	24%	415,804	25.2%
Middle	151,727	34%	642,984	23.6%
Other Outer	42,796	10%	156,829	27.3%
Total Melbourne	444,689	100.0%	1,507,521	29.5%

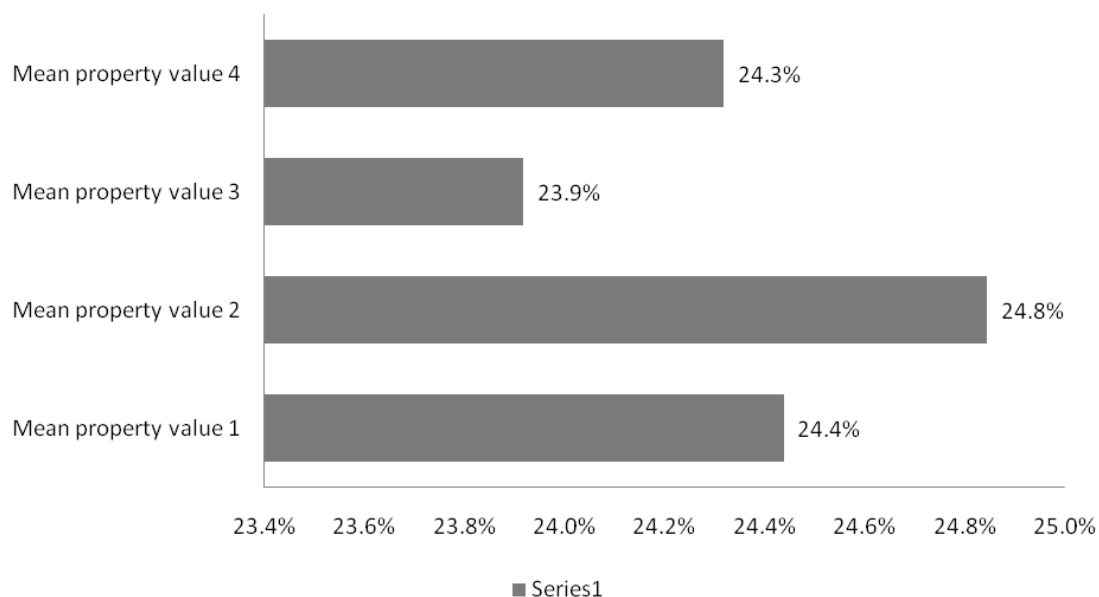
4.2.3 New housing construction by value segment and suburb income

The following sections explore the kind of suburbs and communities which are the recipients of new housing constructed on vacant land. These patterns of housing supply are explored with reference to the objectives of *Melbourne 2030* concerning the strategic location and accessibility of housing. The aim is to identify whether new housing is reaching the more affordable submarket of the metropolitan area; and being supplied in areas within Melbourne where higher numbers of people are employed. Policy 8.3 and direction 6 of *Melbourne 2030* is intended to improve the location of housing (especially affordable housing) in relation to services, jobs, and transport. The SPPF also seeks to ‘deliver more affordable housing closer to jobs, transport and services’ (s.16.05-2).

The median house price (in each year of the time interval 1990–2007) has been computed for each Statistical Local Area (SLA) using the Valuer-General records of all residential property sales. These values are then used to rank each SLA by price, enabling an assessment of whether developer decisions are resulting in housing supply that is targeted on particular value segments of the housing market.

Figure 6 presents the percentage of new residential constructions in SLAs that have been grouped into property value quartiles. In this case, quartile 1 is comprised of the 25 per cent of SLAs with the lowest mean property values, while quartile 4 represents the 25 per cent of SLAs with the highest mean property values. If housing were evenly supplied across high, middle and low-priced regions, each property value quartile should account for 25 per cent of all new housing. Figure 6 depicts an evenly distributed housing supply. There is no evidence of a particular value segment attracting a disproportionately high or low share of housing supply.

Figure 6: Share (%) of new housing in SLA by dwelling value quartile

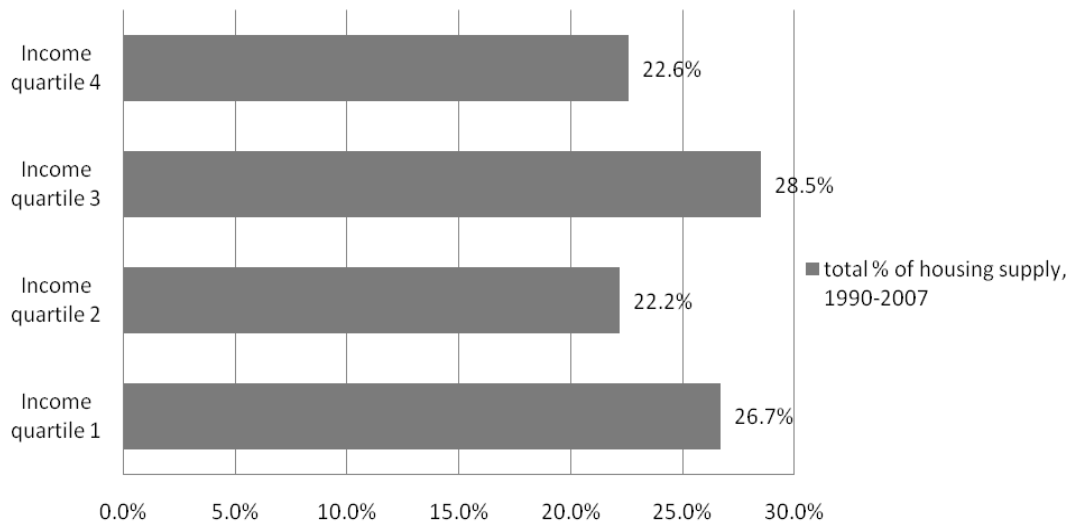


A similar exercise (but for 2007 values only) to the above is conducted with respect to the mean taxable personal incomes of residents in each SLA. These values are then used to rank each SLA by income. This helps to gauge whether developer decisions are resulting in housing supply that is in suburbs populated by particular income groups.

Figure 7 presents the percentage of new residential constructions in SLAs that have been grouped into income quartiles. Income quartile 1 consists of the 25 per cent of SLAs with the lowest mean incomes; on the other hand, quartile 4 contains the 25 per cent of SLAs with the highest mean incomes. The income data used to construct the income quartiles was extracted from the Bureau of Infrastructure, Transport and Regional Economics' regional economic growth database which contains data on the mean taxable income of residents by SLA for the year 2006–2007, based on postcode level data from the Australian Taxation Office (BITRE 2008).

Over the time period 1990–2007, there has been a small but still disproportionately greater supply of new housing in low-income communities. There are mixed findings in the two middle-income suburb groupings and a disproportionately smaller share in the highest-income suburbs. There are some signs that the share of new housing supplied within low-income communities has been falling, while that in the highest-income communities shows signs of increasing, but these are weak trends. There is, however, clear evidence that new housing has been supplied to all communities across the spatial income distribution.

Figure 7: Percentage of new residential construction in low/high income areas, 1990–2007



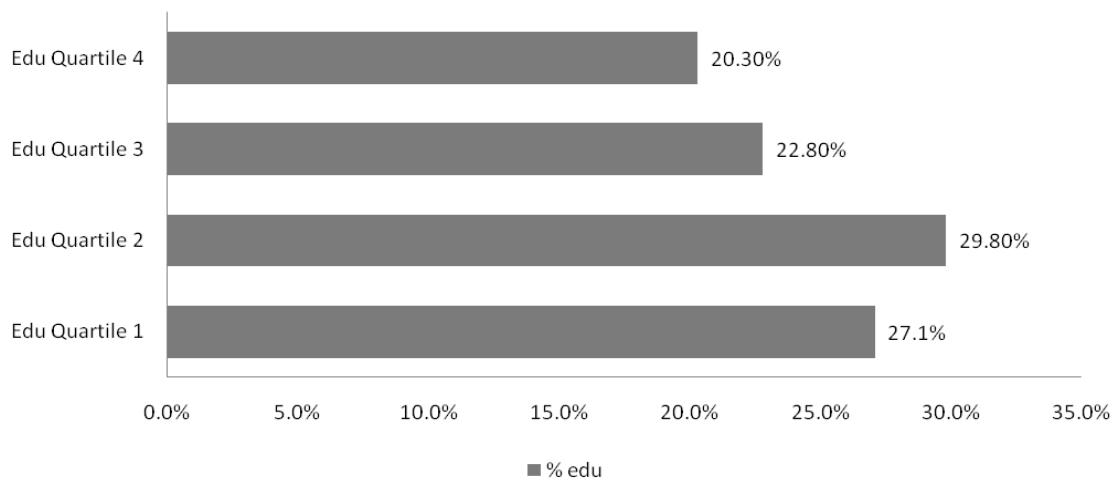
4.2.4 New housing construction by education and job profiles of suburbs

Next the pattern of housing supply is related to local levels of educational attainment. Each SLA is ranked according to the number of residents with a bachelor degree or higher. The SLAs are then grouped into quartiles; the 25 per cent of SLAs with the lowest number of tertiary-educated residents are grouped in quartile 1, and the 25 per cent of SLAs with the highest number of tertiary-educated residents are grouped in quartile 4.

Figure 8 shows that over the study period a disproportionately low proportion of new housing has been supplied in communities with high education levels. There is a correspondingly high share of housing supply in communities with relatively low education levels and the share of new housing supplied in these communities has risen over the study period. While down at around one-fifth in the early 1990s, the share lifted to around one-third in the new millennium.

These relationships could reflect the changing residential location patterns of skilled and unskilled workers. If 'old industry' jobs are displaced to the outer suburbs, while skilled jobs in information intensive 'new industries' concentrate in and around the CBD, these relationships might be observed. Skilled workers compete for housing in the inner suburbs where there is more limited scope for new housing on vacant land parcels.

Figure 8: Total percentage of new housing by education level, 1990–2007



The question of whether housing supply gravitates toward parts of the metropolitan area with high levels of jobs was also investigated. The efficiency of labour markets is improved if there is such a close match. Employers will find it easier to fill vacancies because there is ready access to housing in the vicinity of workplaces. There may also be benefits in terms of lower commuting times, reduced congestion and amelioration of the negative environmental effects that accompany long and time consuming commutes. A range of policies in Victoria seek to improve the supply of housing in relation to employment opportunities.

For this analysis, each SLA is ranked in terms of the total number of jobs in workplaces within its boundaries. The SLAs are then grouped into quartiles; the 25 per cent of SLAs with the lowest number of jobs are grouped in quartile 1, and the 25 per cent of SLAs with the highest number of jobs are grouped in quartile 4. Figure 9 presents estimates of the percentage of new housing supply by total number of jobs by SLA.

The results are consistent with policy objectives in that the most job rich areas of Melbourne, quartile 4, attract a disproportionately high share of new housing. There is however, a trend evident from the annual shares listed in Table 5 showing that in the 1990s the job poor suburbs (Quartile 1) received between 14 per cent and 20 per cent of annual housing totals, but that in the 2000s this range shifted up to between 14 per cent and 23 per cent, and was above 20 per cent in most of the new millennium. There also appears to be some polarisation as the share of housing supplied to the very job rich areas (quartile 4) has also increased. In the early 1990s the annual shares generally hovered around 20 per cent, but the share of job rich areas lifted and ranged between 27 per cent and 37 per cent in the 2000s. The implication is that although new housing is occurring in areas with high numbers of jobs, it is also increasingly occurring in areas with very low numbers of jobs.

Figure 9: Total share (%) of housing supply by number of jobs, 1990–2007

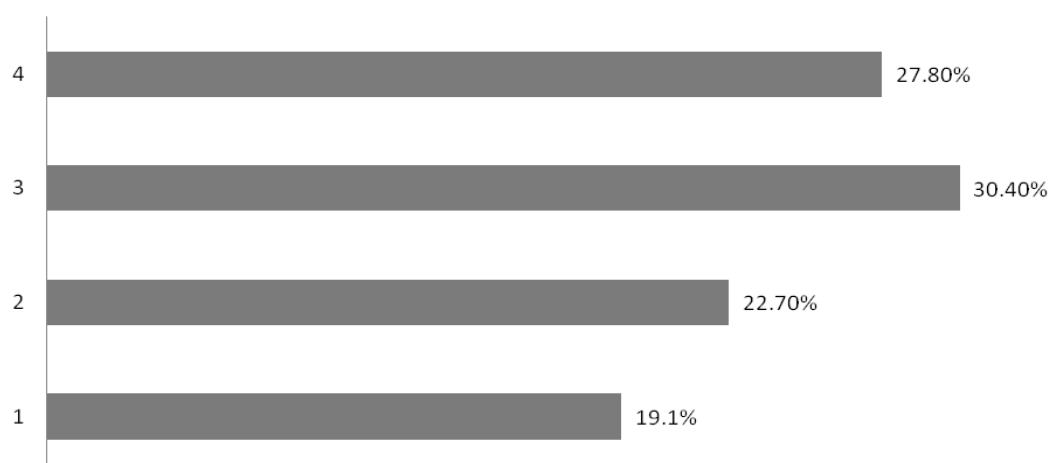


Table 5: Total housing supply by job quartiles and year, 1990–2007

	<i>Quartile 1 (Lowest 25% of jobs)—% of housing</i>	<i>Quartile 2 %</i>	<i>Quartile 3 %</i>	<i>Quartile 4 (Highest 25% of jobs)—% of housing</i>
1990	13.90%	30.70%	26.70%	28.80%
1991	19.50%	28.00%	30.40%	22.10%
1992	20.20%	25.40%	34.20%	20.20%
1993	17.60%	24.90%	36.90%	20.60%
1994	17.20%	25.40%	38.00%	19.40%
1995	18.60%	21.60%	37.70%	22.10%
1996	15.00%	22.50%	37.70%	24.80%
1997	16.00%	20.10%	39.10%	24.80%
1998	16.10%	19.90%	39.00%	25.10%
1999	17.70%	20.30%	33.40%	28.50%
2000	14.00%	24.30%	35.50%	26.20%
2001	22.90%	20.70%	30.40%	26.10%
2002	20.10%	21.40%	29.80%	28.70%
2003	22.60%	18.90%	21.90%	36.50%
2004	19.90%	22.20%	27.10%	30.80%
2005	23.20%	21.40%	20.70%	34.70%
2006	22.10%	20.70%	20.80%	36.40%
2007	22.30%	28.00%	22.80%	26.80%

4.3 Detailed housing supply characteristics

The more detailed characteristics of new housing supply attained from the quantitative data analysis are presented in the following section under four main subheadings, beginning with trends in housing lot size. Characteristics of lot and dwelling size and housing type are relevant to *Melbourne 2030* and SPPF planning policy goals seeking to increase housing density, provide a more diverse mix of lot sizes and housing types, and to improved housing choice and affordability.

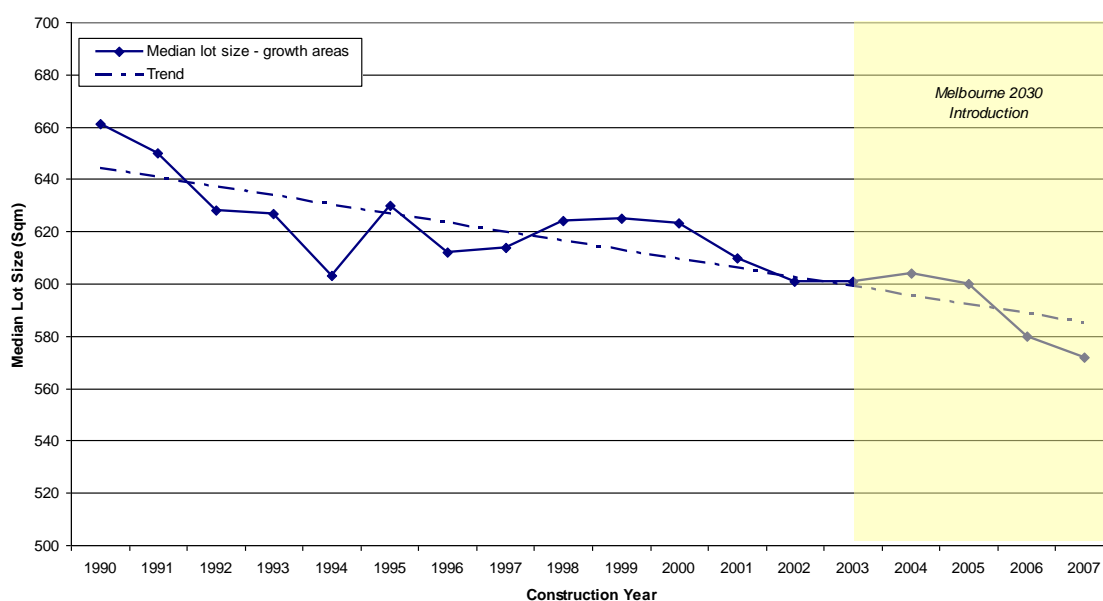
4.3.1 Lot size

The data presented here concerning the size of new building lots is focused on the growth areas, on the urban fringe where the vast majority (90%) of new house lots are

created. While data on the size of house lots on which new houses are built have been reviewed for the other three areas of inner, middle and outer non-growth areas, the lots will predominantly not be newly created and are limited by small sample numbers.

The data in Figure 10 below indicates that there has been a steady decline of 14 per cent in median residential lot sizes in the growth areas, down from 661m² in 1990 to 572m² in 2007. The figure shows a decline from 1990 to 1994, a slight increase the following year, and then a period of little change between 1995 and 1999, until 2000 when a decline begins. Overall the trend in lot sizes is downwards, which means that houses on the urban fringe are being built on smaller blocks of land. There is no immediate change during the period of *Melbourne 2030*'s introduction, but a drop in the most recent years of 2005 and 2006 might be considered to be the lagged effect of *Melbourne 2030*.

Figure 10: Growth area municipalities: median lot size of new dwellings

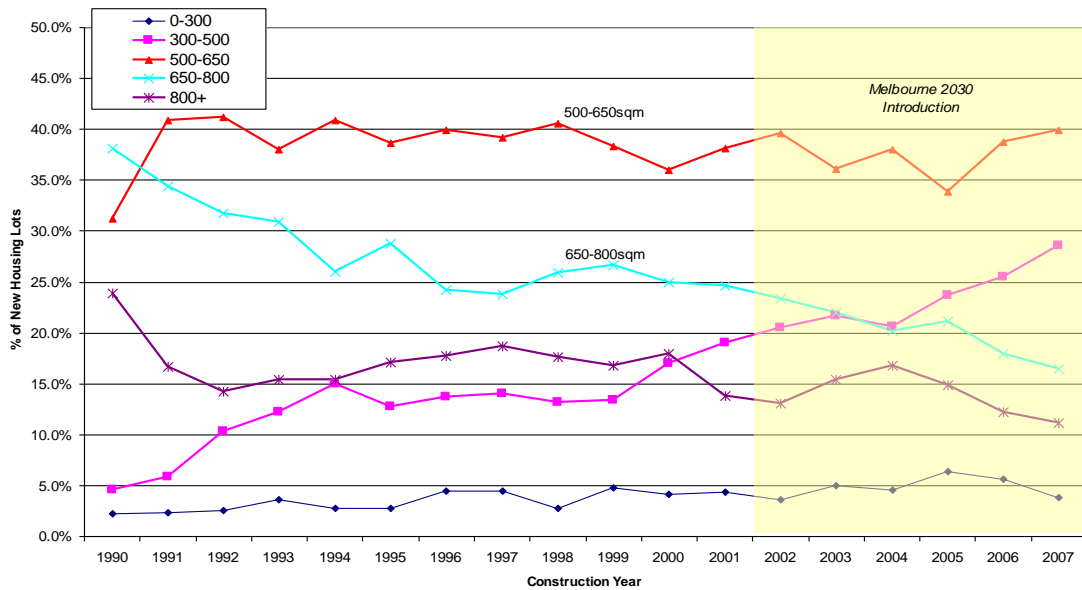


As well as increased densities, the planning framework seeks to improve the mix of lot sizes. Looking at the trends of the differing sized blocks³ of new housing in the growth areas, in Figure 11 we can see that a steady decline in the proportion of larger house lots (over 650m²) has occurred, with the category 650–800m² falling from 38.1 per cent of all lots in 1990 to 16.4 per cent in 2007. The largest category of size, lots greater than 800m², has also declined over the period, showing a sharp fall from 23.9 per cent in 1990 to 14.2 per cent in 1992 and then remaining fairly constant for a decade with a slight recent decline to 11.2 per cent in 2007.

The most common lot size is the category of lots between 500–650m² and the proportion of this group has not changed significantly over the study period, making up 40 per cent of total lots in 2007. The category which has increased markedly since 1990 are the relatively small lots of 300–500m² which show steady increase from 4.5 per cent of the market in 1990 to about 28.6 per cent in 2007. The very smallest category of lots less than 300m² shows no significant change with a very small percentage point increase of just 1.6 from 1990–2007. This category has seldom made up more than 5 per cent of the total market over the study period.

³ These block size categories are based on the state government's Urban Development Program publications for Melbourne.

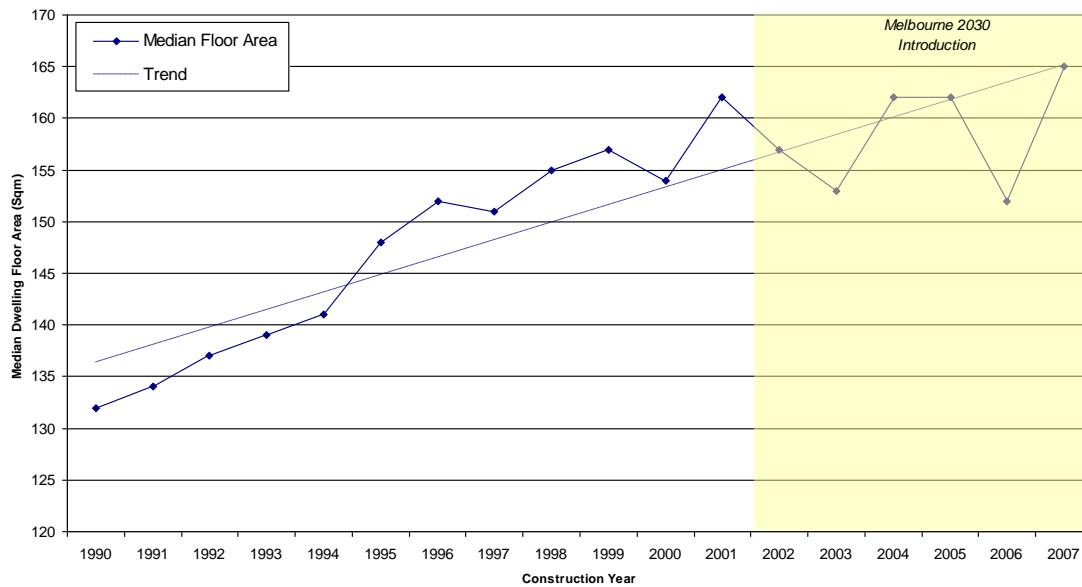
Figure 11: New residential in growth area municipalities: residential lot sizes by groups



4.3.2 House size: floor space

A clear trend shown by the data is growth in the median floor size of new housing across Melbourne. Figure 12 shows an increase in median floor space of 25 per cent over the study period, from 132m² in 1990 to 165m² in 2007.

Figure 12: Median dwelling floor area of new construction (all Melbourne)



Median dwelling sizes in all areas have increased (see Figure 13) with the exception of the inner area, where median floor spaces have shrunk from 107m² in 1990 to 81m² in 2007, a 24 per cent reduction. This can be attributed to the growth in production of apartments, particularly single-bedroom units and student accommodation, and smaller attached houses in the inner area, along with the smaller size of many apartments. The increase in average floor space has been modest in the middle municipalities, from 135m² to 159m², (18%), and slight in the outer non-growth areas, from 162m² to 176m², (9%), but is most noticeable in the growth areas that now have the largest median floor spaces by region. The growth there has been from

138m² to 192m², an increase of 39 per cent. A divergent pattern is thus apparent, with increasingly large housing on the fringe in particular, and smaller apartment housing in the inner areas. Growth in sizes on the urban fringe was strongest between 2001 and 2005, before slowing. As Figure 13 shows, the divergence in floor space across the different regions, particular between the inner and growth areas, appears to have increased particularly in the years following the introduction of *Melbourne 2030*.

Figure 13: New residential construction: median dwelling floor area by location and construction year

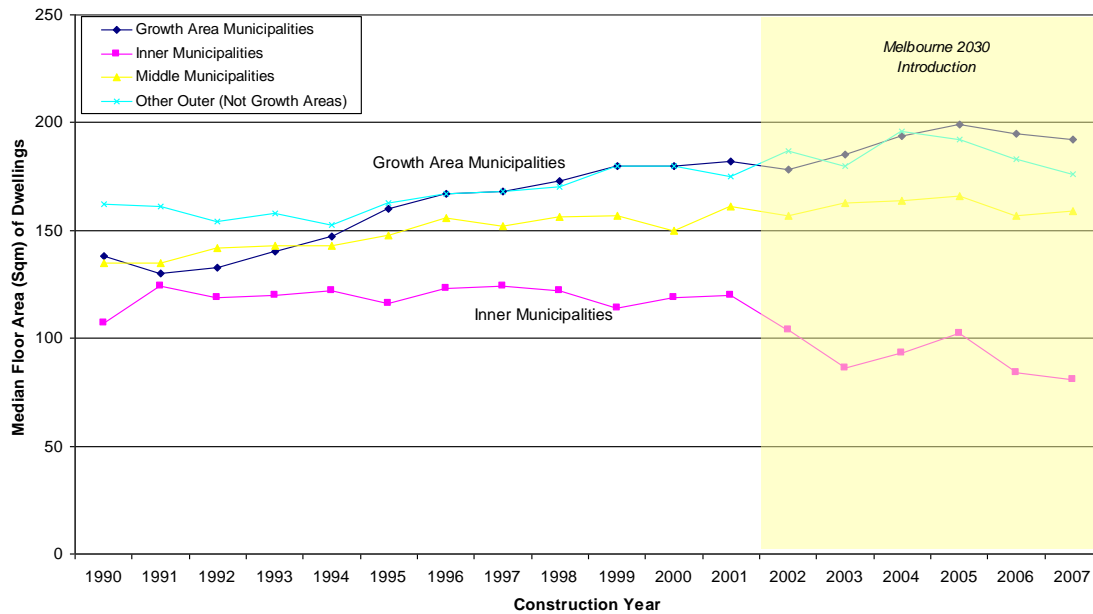
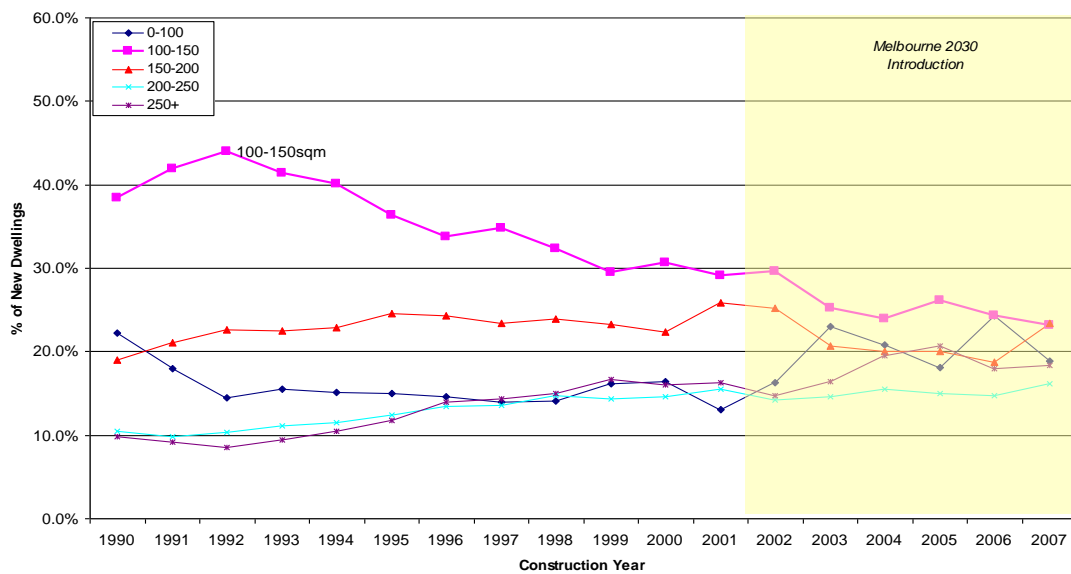


Figure 14 shows the proportions of new dwellings built in metropolitan Melbourne in each category of size of floor space, increasing at 50m² intervals. In 1990, the most common size of new dwellings built in the metropolitan area was 100–150m², accounting for 38.5 per cent of new housing. The next most common size was the smallest category of less than 100m² at 22.2 per cent followed very closely by the group of 150–200m² at 19.1 per cent. The bigger sized houses of 200m² and larger accounted for around 20 per cent of the total new housing in 1990.

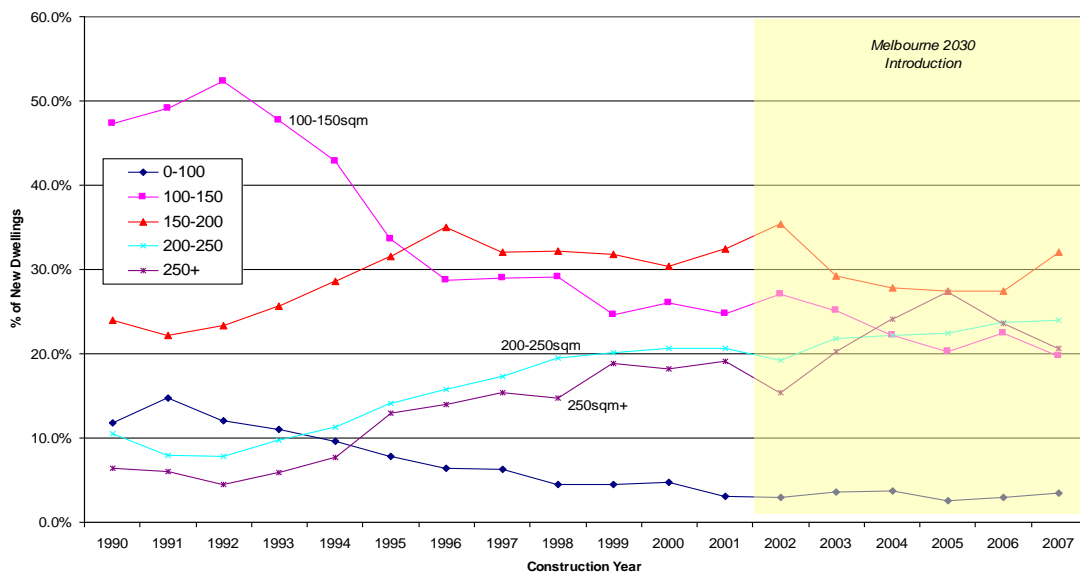
Figure 14 clearly shows the groups converging over time. This has occurred due to a decline in the proportion of second smallest, and previously most common category, 100–150m² housing, from 39 per cent to 23.2 per cent in 2007, and an increase in the largest category. The medium-sized dwellings of 100–150m² and 150–200m² are still a common size being constructed, accounting for 31.4 per cent and 22.4 per cent of the market respectively. The largest floor space category, houses of 200m² and above, has increased in share from 20.3 per cent to 34.5 per cent over the study period. The proportion of the category of small dwellings has not significantly altered, showing a small decline from 22.2 per cent to 18.9 per cent, and neither has the category 150–200m² showing a small increase from 19.1 per cent to 23.4 per cent. The findings thus show an increasing mix of floor sizes, with comparatively larger and smaller dwellings both increasing in their share of new housing supply.

Figure 14: Melbourne: dwelling floor size by size groups (m²)



These trends are shown for growth areas only in Figure 15 below. In the growth areas, the size category of 100–150m², which accounted for nearly half (47.3%) of new houses in 1990, had fallen to 19.7 per cent by 2007. The most commonly built house size in growth areas between 1996 and 2002 was the category of 150–200m² which in 2007 accounted for 32 per cent of all new dwellings. Since 2002, the most commonly built house size in the growth areas has been the larger category of 200m² and higher, accounting for 44.7 per cent of the market in 2007, up significantly from 16.9 per cent in 1990. The smallest category of houses, while never accounting for a large proportion of new dwellings in the growth areas, has further decreased its share, from 11.8 per cent to only 3.5 per cent in 2007. The findings thus show that in the growth areas, the mix of housing sizes has improved only in the sense of a greater share of larger dwellings being built.

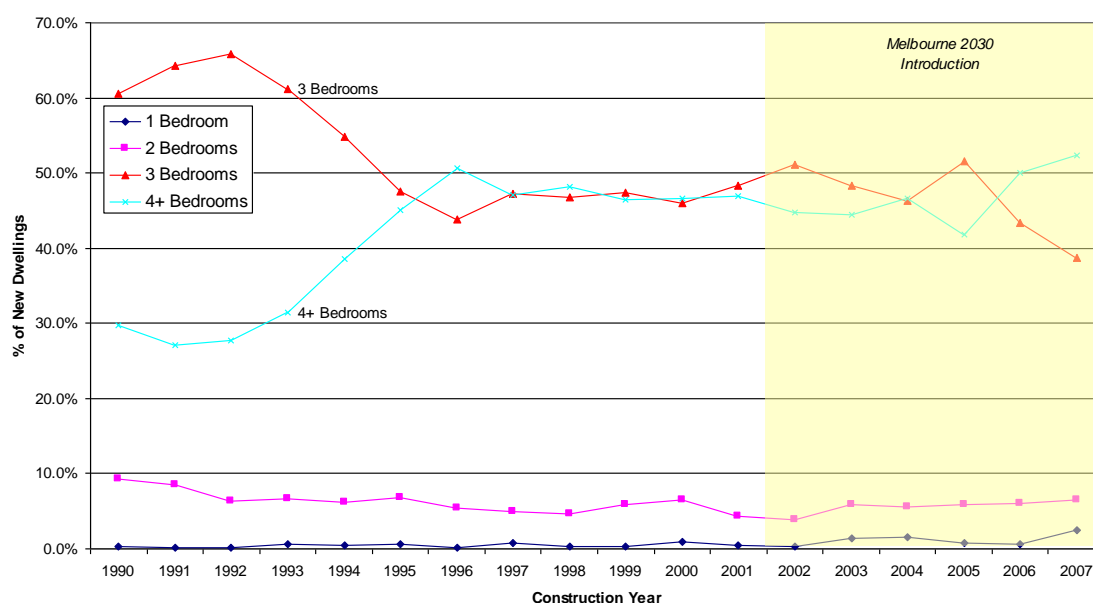
Figure 15: Growth area municipalities: dwelling floor size by groups (m²)



4.3.3 House size: number of bedrooms

An analysis of the number of bedrooms in new dwellings in the growth areas reinforces the above findings. Figure 16 shows that the number of two-bedroom dwellings being built has declined from 9.4 per cent in 1990 to 6.4 per cent in 2007. One-bedroom units make up a tiny proportion of the market, accounting for only 2.5 per cent of the total new housing supply in 2007. The vast majority of new dwellings (91.1%) have three or more bedrooms, with those with four or more bedrooms now the most common, making up 52.4 per cent of the total. Three-bedroom homes have declined in popularity from occupying 60.6 per cent of the share in 1990 to 38.7 per cent in 2007. Thus, there has been a shift from three to four-bedroom dwellings as the normal dwelling size, and a decrease in the proportion of one and two-bedroom dwellings.

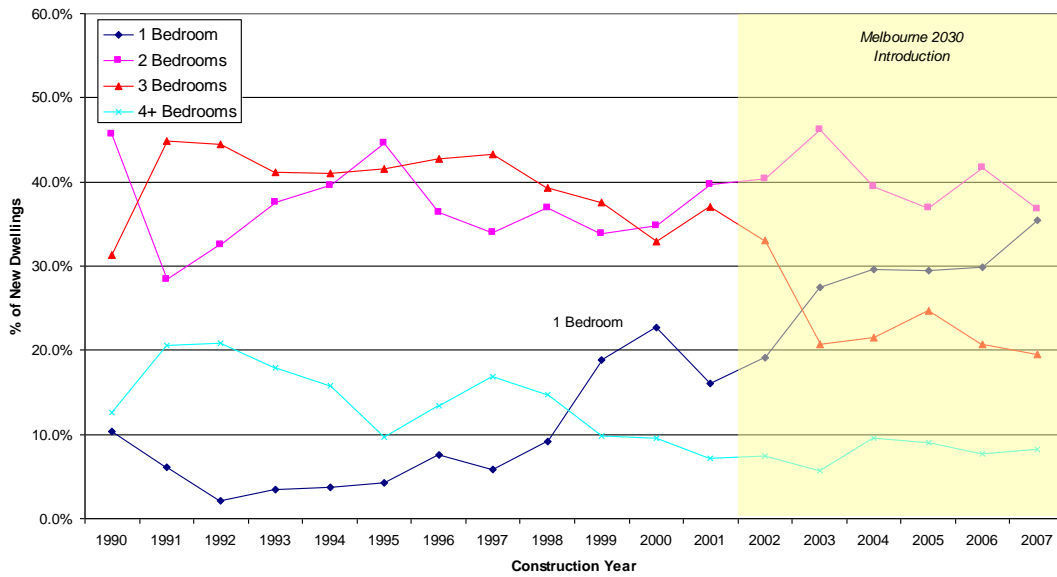
Figure 16: Growth area municipalities: bedroom size of new dwellings



The pattern of change of dwelling size by number of bedrooms in the growth areas is in contrast to the pattern in the inner city. As shown in Figure 17, the biggest change from 1990 to 2007 in the inner city was in the growth in one-bedroom dwellings, up from 10.4 per cent to 35.4 per cent in 2007, an increase of nearly 2.5 times. All other categories have shown declines in inner areas, with the greatest decrease in the category of three-bedroom homes.

These trends in the growth areas toward larger houses with more bedrooms are in contrast to the figures on population and household growth over the period, which indicate that average household sizes in Melbourne have decreased. This trend is consistent with increasing incomes. In terms of the planning framework in Victoria, the shift toward larger dwellings and the shrinkage of the amount of smaller dwellings supplied is inconsistent with housing mix, housing choice and affordability goals. The data does show, however, a converse increase in smaller dwellings in the inner region. There is thus a mix of housing sizes across Melbourne, but not within the regions of Melbourne. The smaller housing is occurring in the inner areas which are generally more expensive than the outer growth areas where cheaper land is offset by larger, and therefore more expensive, housing.

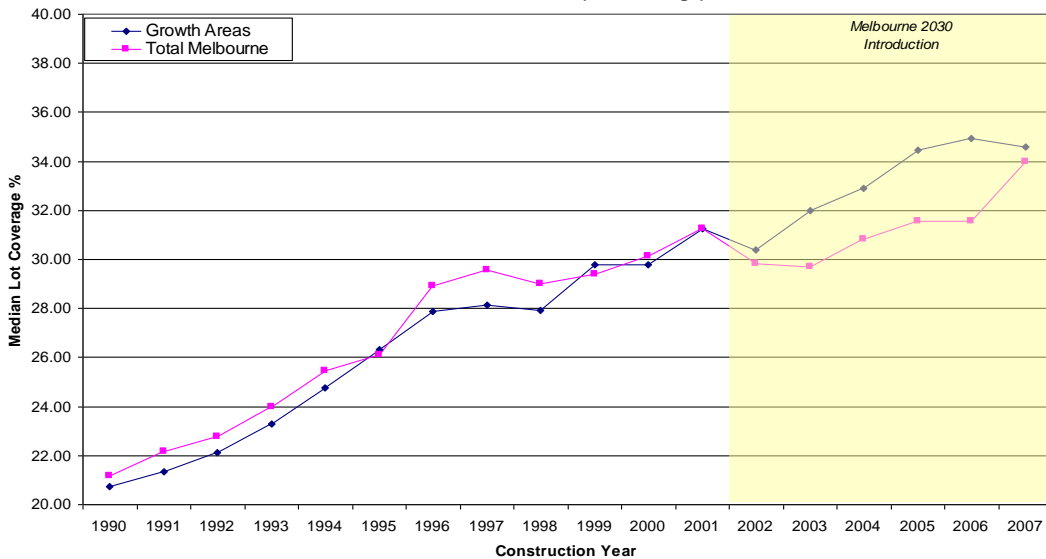
Figure 17: Inner municipalities: bedroom size of new dwellings



4.3.4 Site coverage

The trends thus far have indicated that in the growth areas where the largest proportion of Melbourne’s new housing is being constructed, lot sizes are becoming smaller while house sizes are increasing. We would expect therefore to see an increase in the proportion of each site that is covered by its house, and that is in fact what is shown in Figure 18. It illustrates a clear trend upwards from a metropolitan average of 21 per cent in 1991 to 34 per cent in 2007, a 62 per cent increase. The breakdown of these figures across areas indicates that the trend line in the growth areas follows closely that of the city as a whole, while remaining above it with slightly greater average areas of lot coverage.

Figure 18: New residential construction (with lot size information): floor size as % of lot size (lot coverage)

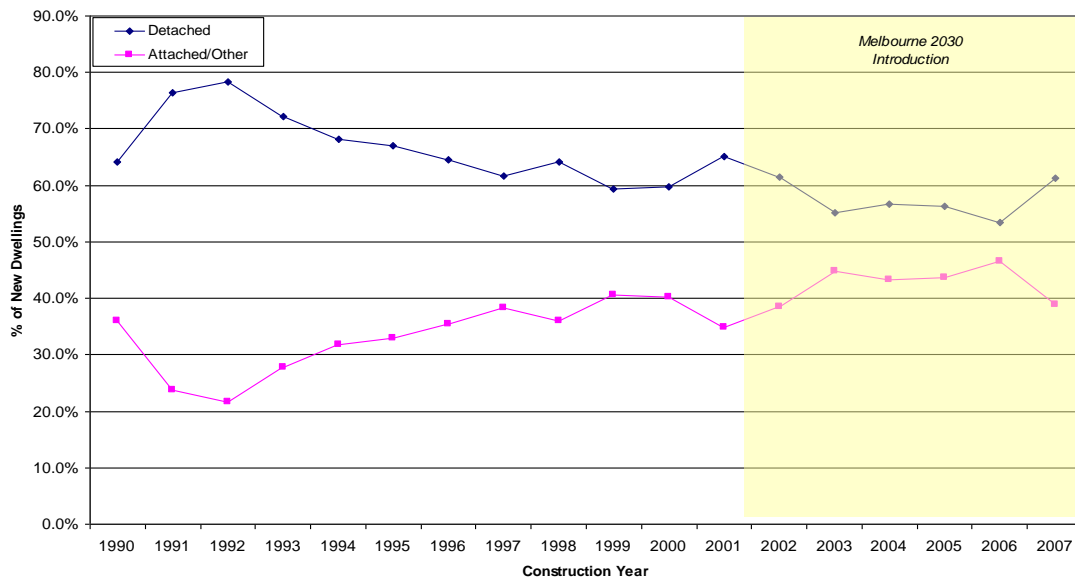


4.3.5 Housing type

The forms of housing supply have been divided into two basic categories—that of detached houses and all other types. The latter category includes attached houses, units, townhouses and apartments. This category has not been further broken down as variations in the data suggest that the categorisation between municipalities is inconsistent. We have therefore amalgamated all the forms of medium and high density development together, similarly to the ABS Dwelling Approvals categories.

Figure 19 shows that there has been a slight decline in the proportion of detached houses over the study period overall, although the figures for 1990, 64.1 per cent, and 2007, 61.2 per cent, are actually quite close. The peak year of difference was 1992, when nearly 80 per cent of new housing was detached houses. Likewise, there has been a general trend upwards for all forms of medium and higher density housing, particularly between 1992 and 2003, from just over 20 per cent of all new housing to over 40 per cent.

Figure 19: Housing type mix—total Melbourne



A change in the proportions of attached and detached and other higher density housing has not occurred uniformly across all sections of the metropolitan area. Figure 20 shows the house type for the growth areas, where the largest proportion of all new housing is occurring. In these areas detached housing makes up the vast bulk, around 90 per cent, of new houses built and the proportions have not changed across the study period. The changes to the overall proportion of different house types being built are occurring predominantly in the inner area where for some time detached housing has been in the minority of new houses built (see Figure 21).

Figure 20: Housing type mix—growth areas

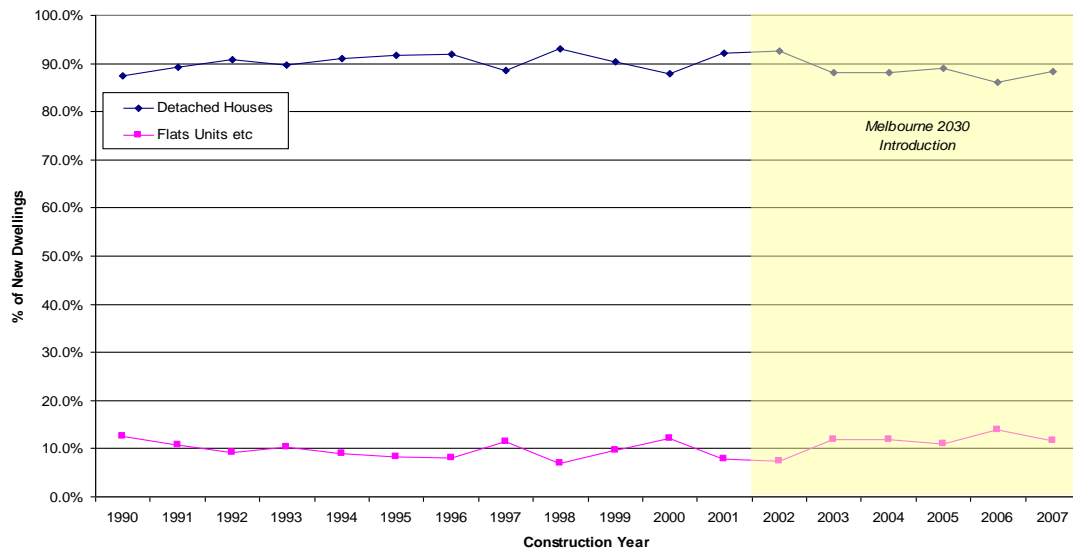
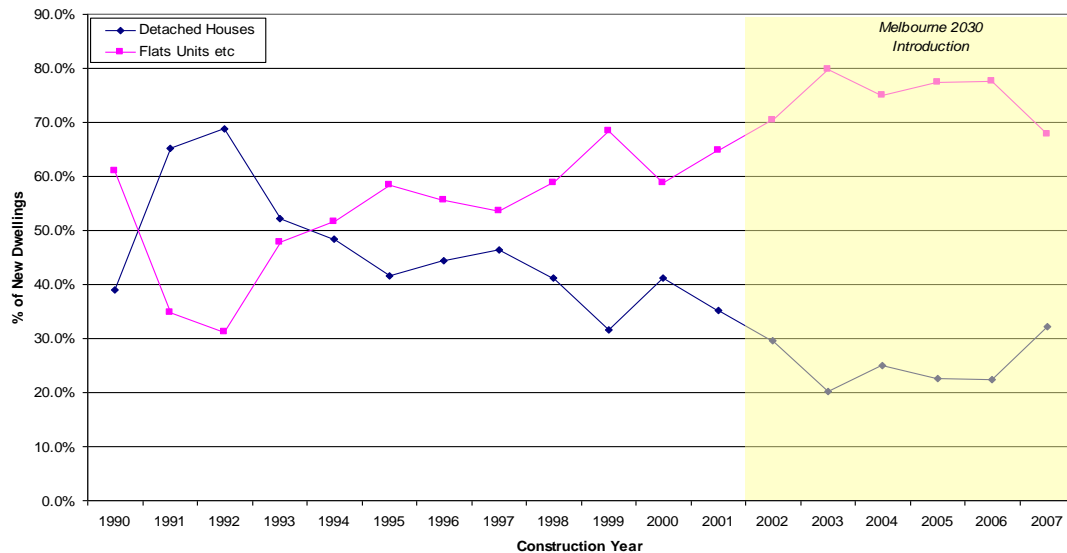


Figure 21: Dwelling types—inner municipalities



The results drawn from the property transactions and valuations database illustrate some key trends over the study period, as follows:

- A trend toward smaller lot sizes for new housing, particularly on the urban fringe where most new housing (and detached housing in particular) is constructed.
- A trend toward larger dwellings: larger floor spaces and more housing of four or more bedrooms, across the metropolitan area overall, but predominantly in the growth areas.
- A divergent trend of smaller, higher density, one-bedroom housing in the inner areas.
- Limited variation in the type and size of housing built on the urban fringe.
- An increasingly segmented housing supply, with larger dwellings on the fringe and smaller apartments in the inner city.

We note again here that the property database is a large sample, which will have some bias toward better coverage of trends in greenfield areas where properties are more likely to have been built on vacant land.

4.4 Location and accessibility of housing

This section focuses on the location (amount and proportion) of new housing in relation to activity centres—which are sites for retailing, jobs, services and transport—and train stations. The goals of increasing housing around designated activity centres and public transport were of central importance to *Melbourne 2030*. Here the data is analysed in terms of more detailed measures of location in relation to key urban amenities.

4.4.1 Housing around activity centres

The following graphs are concerned with the proportion and type of new housing constructed within one or two kilometres of a designated Principal or Major activity centre. The distance from an activity centre is calculated from a point in the middle of the centre so that this will not actually mean that it is one kilometre to the edge of the centre. The methodology has the advantage of simplicity but obviously loses some degree of accuracy as a one kilometre radius from large centres will actually include less of the surrounding area than that of small centres. There are also difficulties in that not all centres are round—some in fact are linear in nature. The results of this data analysis represented in the following four tables should therefore be regarded as indicative rather than exact. However, the trends over time should be accurately reflected as the shape and size of the activity centres will not normally alter rapidly over time.

Figure 22 shows the percentage of new housing constructed within one kilometre of the 115 principal or major activity centres named in *Melbourne 2030*. The proportion of new housing built within one kilometre of designated activity centres was 21.7 per cent on average over the period 1990–2007. This varied between a low of 14.3 per cent in 1992 and a high of 25.1 per cent in 1997. Between 1996 and 2004 the proportion stayed fairly steady, ranging between 21 and 25 per cent. During and after the introduction of *Melbourne 2030* in late 2002 there is a general trend downwards, although it shows considerable variation.

Figure 22: Percentage of new dwelling construction within 1km of a principal or major activity centre

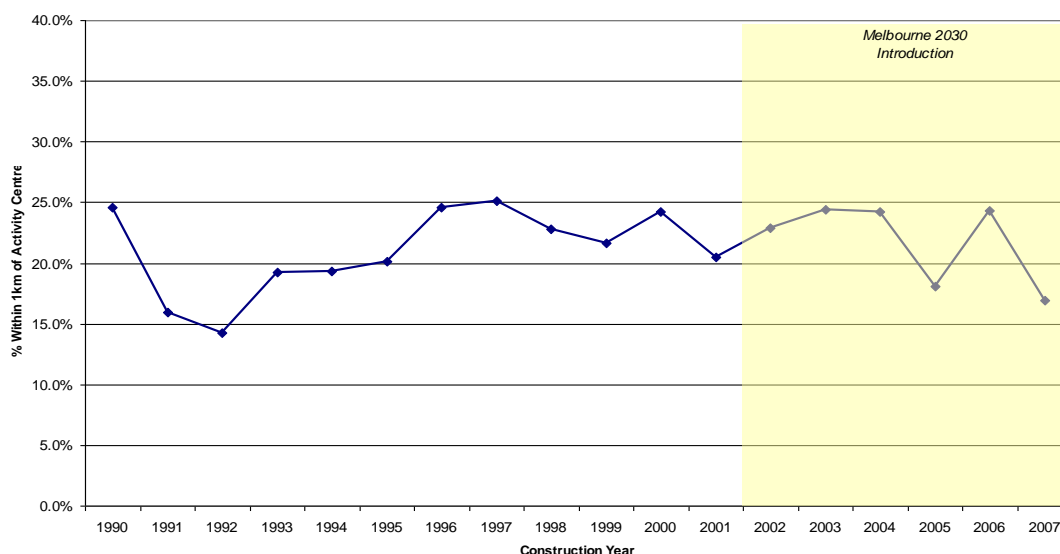


Figure 23 separates new housing into detached housing and all other types, including apartments, town houses, etc, which can generally be referred to as medium density housing. Until 1994, the greater share of new housing built within one kilometre of a designated activity centre comprised detached housing. From 1995, the number of medium and higher density dwellings being built near activity centres increased strongly, to a high of 6 776 or 76 per cent in 2003, the year after *Melbourne 2030* was introduced. The trend since that time has been sporadic but generally declining. The number of detached houses constructed in these locations has not altered significantly although there is a gradual decline since 2000.

Figure 23: New dwelling construction within 1km of a principal or major activity centre: type

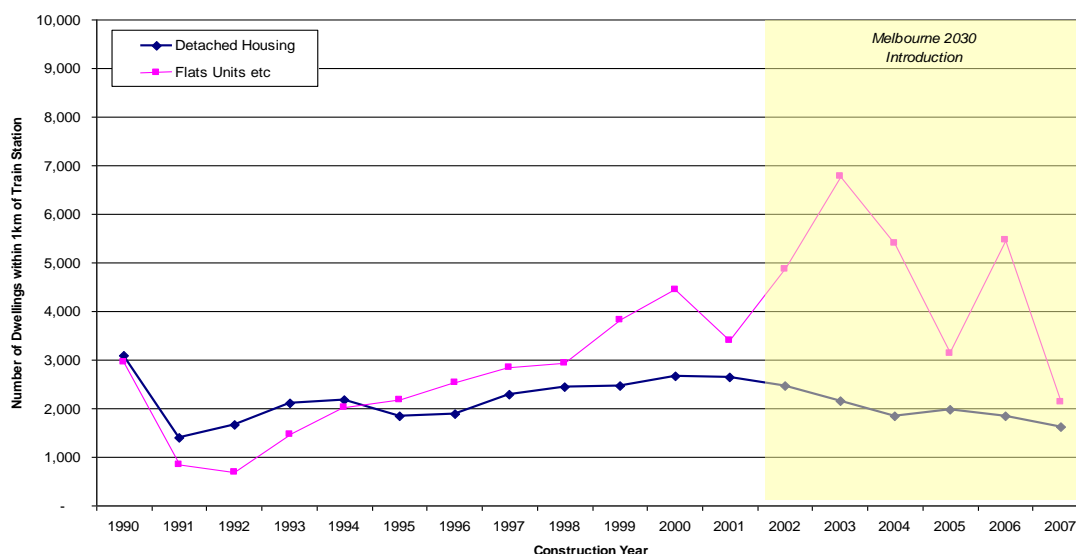


Table 6: New housing within 1km of activity centres: top 20 activity centre shares

Rank	Name	Area type	Number	%
1	South Melbourne	Inner	8,052	8.3%
2	Melbourne CBD	Inner	6,655	6.9%
3	Carlton, Lygon Street	Inner	3,606	3.7%
4	Port Melbourne, Bay Street	Inner	3,575	3.7%
5	Berwick	Growth	2,451	2.5%
6	Prahran, South Yarra	Inner	2,402	2.5%
7	Altona	Middle	2,381	2.5%
8	Sydenham	Growth	2,201	2.3%
9	Casey Central	Growth	2,083	2.2%
10	Flemington, Racecourse Road	Inner	1,748	1.8%
11	South Morang	Growth	1,628	1.7%
12	St Kilda	Inner	1,577	1.6%
13	Roxburgh Park	Growth	1,338	1.4%
14	Brunswick	Inner	1,163	1.2%
15	Clayton	Middle	1,124	1.2%
16	Maribyrnong, Highpoint	Inner	1,100	1.1%
17	Richmond, Swan Street	Inner	1,071	1.1%
18	Glenhuntly	Middle	1,009	1.0%
19	Glen Waverley	Middle	1,001	1.0%
20	Richmond, Bridge Road	Inner	962	1.0%

Table 6 lists the twenty activity centres that received the greatest number of new dwelling constructions within a radius of one kilometre over the whole period 1990 to 2007. These top 20 (17% of the total number of principal and major centres) accounted for just under half (48.7%) of the total new housing within a kilometre of the 115 designated activity centres. The table shows the concentration of new housing around a few centres with the top five centres accounted for 25 per cent and the top ten 36.4 per cent of the total. The activity centres with the greatest dwelling construction numbers were mainly inner city centres: South Melbourne, the CBD, Carlton and Port Melbourne being the top four. These centres were affected by the rapid growth in high rise apartments on Southbank and the Docklands areas adjacent to the CBD, in addition to in the CBD itself. Other activity centres with over 1000 dwellings constructed near them include a number of growth area centres such as Berwick, Sydenham, Casey Central, South Morang, and Roxburgh Park. However, noting issues with the database sampling, the results may include undercounts of smaller infill developments not built on vacant land sales. These may influence the results, particularly for activity centres in established suburban areas.

Table 7: New housing within 1km of activity centres: top 20 activity centre shares 'pre' (1990–2002)

<i>Rank</i>	<i>Name</i>	<i>Area Type</i>	<i>Number 1990-2002</i>	<i>% of Total within 1km of Centres 1990–2002</i>
1	South Melbourne	Inner	3,288	5.8%
2	Melbourne CBD	Inner	2,348	4.1%
3	Altona	Middle	2,005	3.5%
4	Berwick	Growth	1,961	3.5%
5	Carlton, Lygon Street	Inner	1,944	3.4%
6	Port Melbourne, Bay Street	Inner	1,850	3.3%
7	Prahran, South Yarra	Inner	1,634	2.9%
8	Sydenham	Growth	1,577	2.8%
9	Roxburgh Park	Growth	1,296	2.3%
10	Casey Central	Growth	1,181	2.1%
11	Flemington, Racecourse Road	Inner	1,122	2.0%
12	Werribee Plaza	Growth	883	1.6%
13	Hampton Park	Growth	741	1.3%
14	St Kilda	Inner	717	1.3%
15	Brunswick	Middle	711	1.3%
16	South Morang	Growth	695	1.2%
17	Melton, Woodgrove & Coburns	Growth	687	1.2%
18	Glenhuntly	Middle	668	1.2%
19	Clayton	Middle	658	1.2%
20	Richmond, Bridge Road	Inner	650	1.1%

Table 7 shows the construction of dwellings in the vicinity of activity centres before the introduction of *Melbourne 2030*, from 1990–2002. Table 8 refers to the period 2002–2007 after the strategy's introduction. The most striking difference between the two periods is the greater level of concentration of new dwelling construction around the top few centres in the 'post' period, mostly in the inner city. The top four centres in Table 8—South Melbourne, Melbourne CBD, Port Melbourne, and Carlton—are all inner city activity centres, and together accounted for over 31 per cent of the total.

Table 8: New housing within 1km of activity centres: top 20 activity centre shares 'post' (2002–2007)

<i>Rank</i>	<i>Name</i>	<i>Area type</i>	<i>Number 2002–2007</i>	<i>% of Total within 1km of Centres 2002–2007</i>
1	South Melbourne	Inner	4,764	12.0%
2	Melbourne CBD	Inner	4,307	10.8%
3	Port Melbourne, Bay Street	Inner	1,725	4.3%
4	Carlton, Lygon Street	Inner	1,662	4.2%
5	South Morang	Growth	933	2.3%
6	Casey Central	Growth	902	2.3%
7	Caroline Springs	Growth	899	2.3%
8	St Kilda	Inner	860	2.2%
9	Manor Lakes	Growth	835	2.1%
10	Prahran, South Yarra	Inner	768	1.9%
11	Flemington, Racecourse	Inner	626	1.6%
12	Sydenham	Growth	624	1.6%
13	Hawthorn, Glenferrie Road	Middle	563	1.4%
14	Maribyrnong, Highpoint	Middle	542	1.4%
15	Pakenham	Growth	530	1.3%
16	Berwick	Growth	490	1.2%
17	Clayton	Middle	466	1.2%
18	Brunswick	Middle	452	1.1%
19	Richmond, Swan Street	Inner	435	1.1%
20	Balaclava	Inner	407	1.0%

The maps at Figures 24 and 25 also show the distribution, across activity centres, of the shares of new housing built within one kilometre of an activity centre, for the periods before the introduction of *Melbourne 2030* (Figure 24) and after its introduction (Figure 25). The distribution of activity centre housing appears to become more centralised after the policy's introduction, reflecting the great proportion of new medium density housing in and around the central city.

The final graph focusing on housing around activity centres, Figure 26, shows the trend over time if the catchment area is expanded to a two-kilometre radius from the middle of the centres. Applying this wider definition to define the vicinity of activity centres gives an average of 55 per cent of new housing constructed between 1990 and 2007 near one of the designated centres. This proportion has decreased fairly steadily since 1997, with a high of 59.5 per cent, to a low in 2007 of 48.6 per cent, showing no sign that *Melbourne 2030* has increased the share of housing around centres. The findings are again subject to the caveats on possible undercounting, as mentioned.

Figure 24: New dwelling construction within 1km of a principal or major activity centre: by centre 'Before'

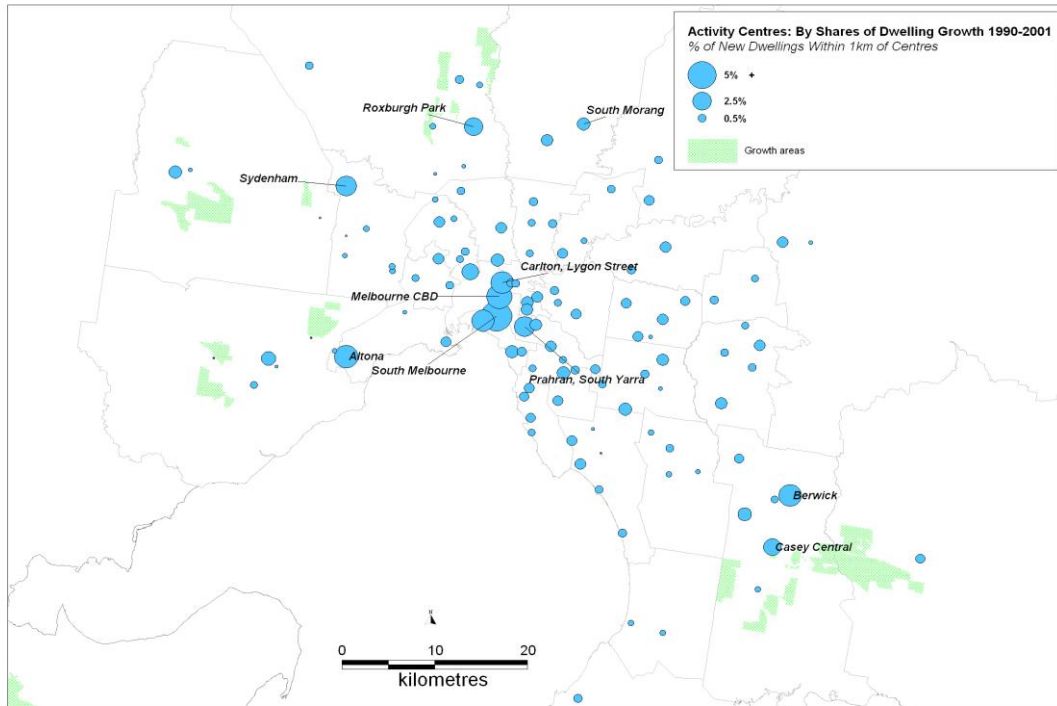


Figure 25: New dwelling construction within 1km of a principal or major activity centre: by centre 'After'

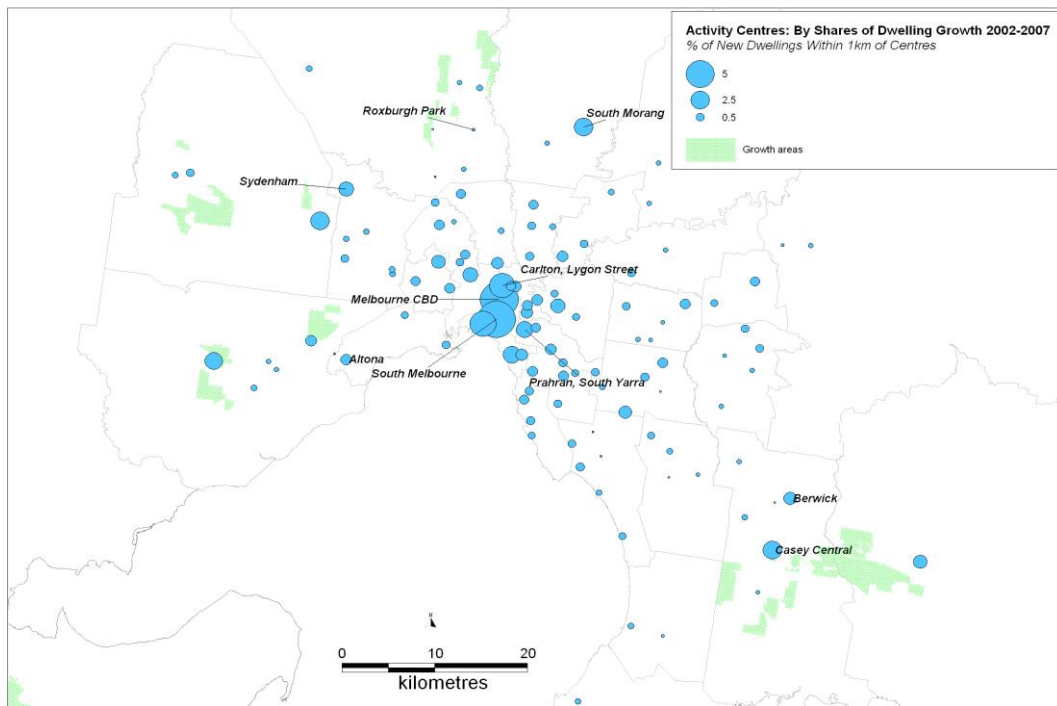
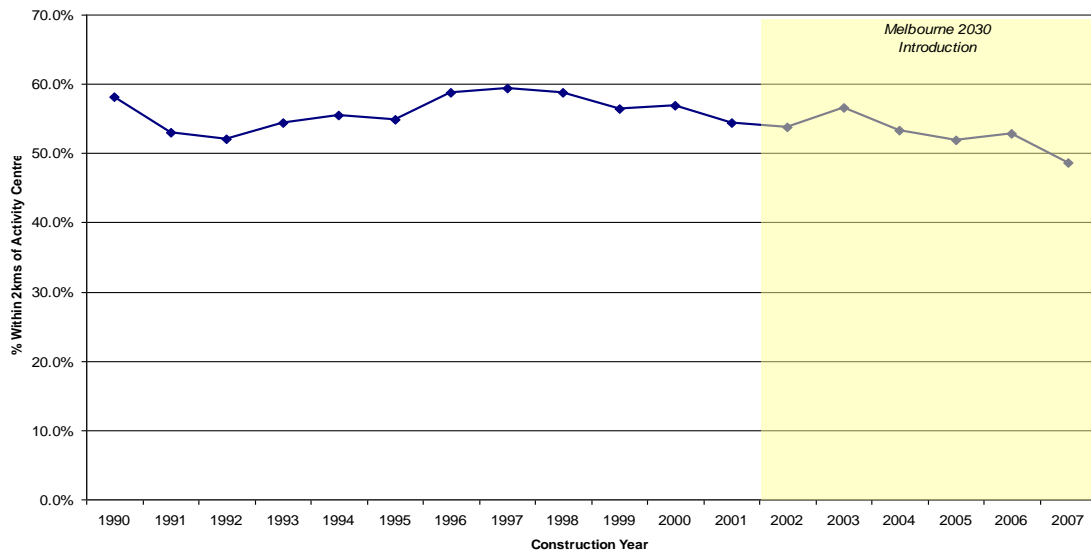


Figure 26: Percentage of new dwelling construction within 2kms of a principal or major activity centre



4.4.2 Housing around train stations

Next the analysis considers housing built in the vicinity of train stations, another indicator of whether the accessibility of housing is improving. The proportion of new housing constructed within one kilometre of a train station does not appear to have altered a great deal over the entire study period (see Figure 27). After increases between 1992 and 1997, the next discernable trend appears to have been a slight decline since the introduction of *Melbourne 2030*. The highest proportion of new dwellings constructed within one kilometre of a train station occurred in 2003, not long after the release of *Melbourne 2030* in October 2002. Given the short time span, it seems unlikely that this peak can be attributed to the policy, and since that time the proportion has declined to just over 20 per cent in 2007. A similar trend appears to be evident if we focus on the proportion of new housing within three kilometres of a station (see Figure 28). Here we see that the lowest proportion of new housing since 1990 was reached during the most recent year of 2007. In that year just over half, 55.5 per cent, of all new dwellings were within three kilometres of a station, well beyond what most would think of as walking distance, and only 20.9 per cent within one kilometre of a station.

Figure 27: New dwellings: % within 1km of a train station

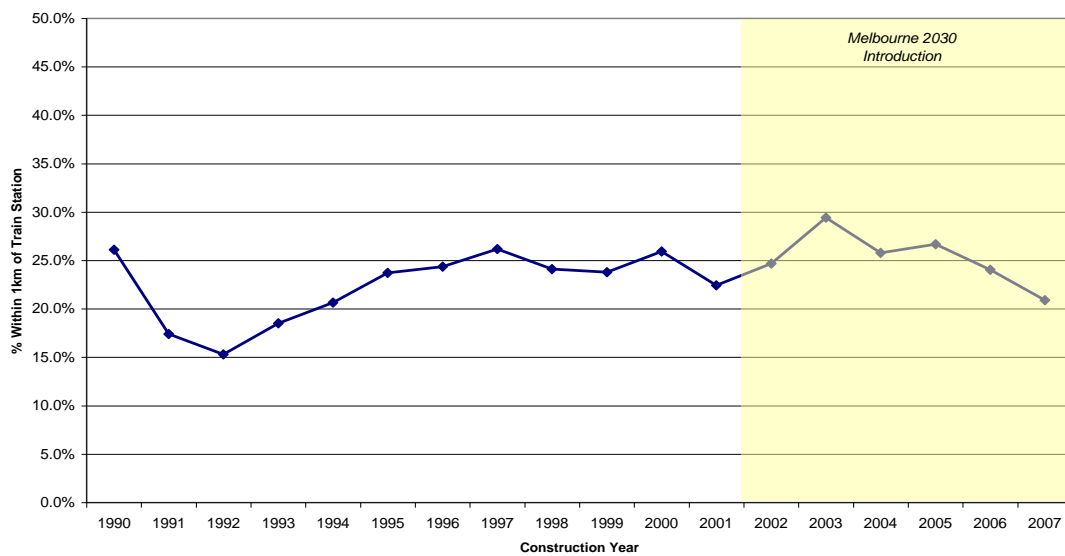


Figure 28: New dwellings: % within 3kms of a train station

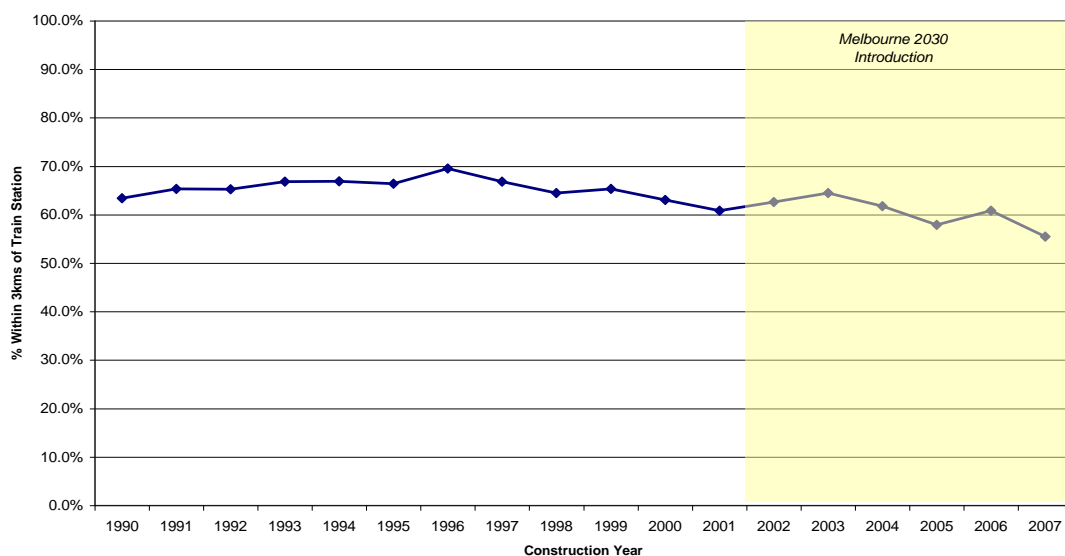


Figure 29 breaks down the total new dwellings constructed within one kilometre of a train station into detached and other types of dwellings. The latter category includes apartments and various forms of attached housing generally described as medium density. There is a clear spike in the number of new medium density dwellings constructed within one kilometre of a train station in the year after the introduction of *Melbourne 2030*, but a general decline following this. However, the policy does not appear to have had a clear positive influence on the number of detached houses constructed within one kilometre of stations.

The trends are similar for types of dwellings constructed within three kilometres of a station, with a peak in 2003. Again, here (Figure 30) there is a clear decline in the numbers of new detached houses built within three kilometres of a train station. Another observation that can be made from this data is that the construction of new medium density housing was more prevalent than that of the more traditional detached housing within three kilometres of a train station from the period after the

introduction of *Melbourne 2030* until the last year recorded here of 2007 when they were constructed in almost equal numbers.

Figure 29: New dwellings: type constructed within 1km of a train station

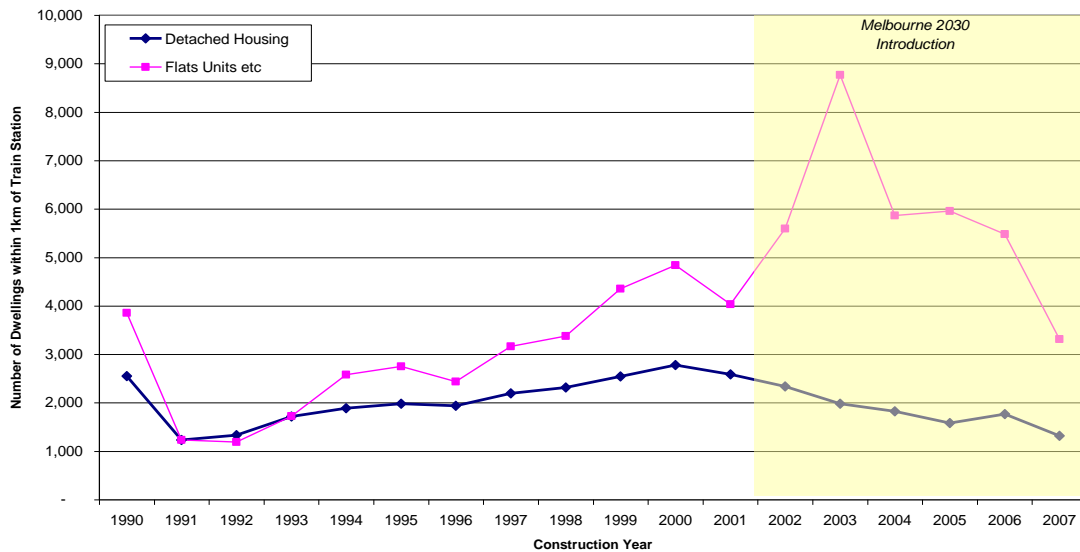
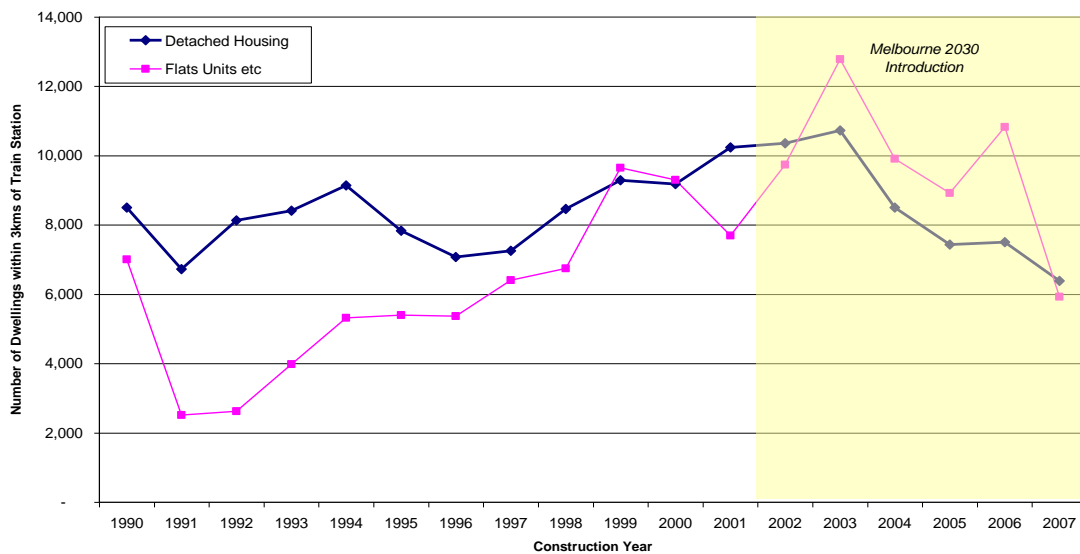


Figure 30: New dwellings: type constructed within 3kms of a train station



The median distance to the nearest train station has increased across Melbourne in the period since the introduction of *Melbourne 2030* as Figure 31 below illustrates. In the growth areas, where the largest proportion of new housing is occurring, the median distance to the nearest train station has continued to increase since the early 1990s, reflecting the general paucity of public transport in those areas. The median distance to the nearest train station for new housing in growth areas in 2007 was 3.29 kilometres. However, the picture in the remainder of the metropolitan area is somewhat different, with a general trend of reduction in the distance to the nearest station up until 2003. This trend applies to all types of dwellings as Figure 32 shows, with the median distance of detached, attached, and all new dwellings to the nearest train station either level or increasing since 2003. These results and the activity centre findings suggest that *Melbourne 2030's* goals of increasing the proportions of new housing that are accessible to transport and services have not had a positive imprint

on patterns of housing supply. However, in interpreting the findings on accessibility, the caveats on possible undercounts of infill dwellings should be borne in mind.

Figure 31: New dwellings: median distance to nearest train station, by location

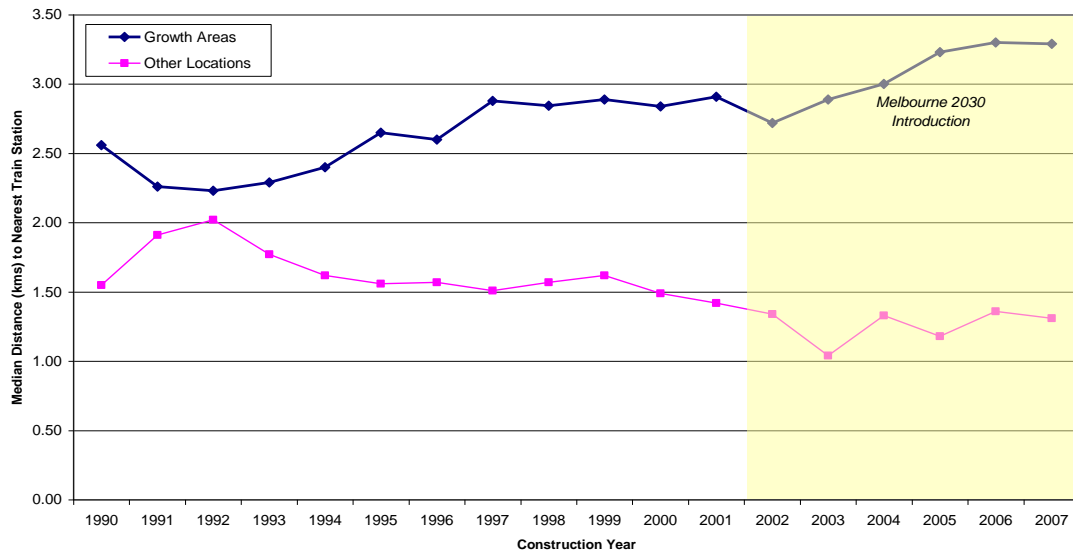
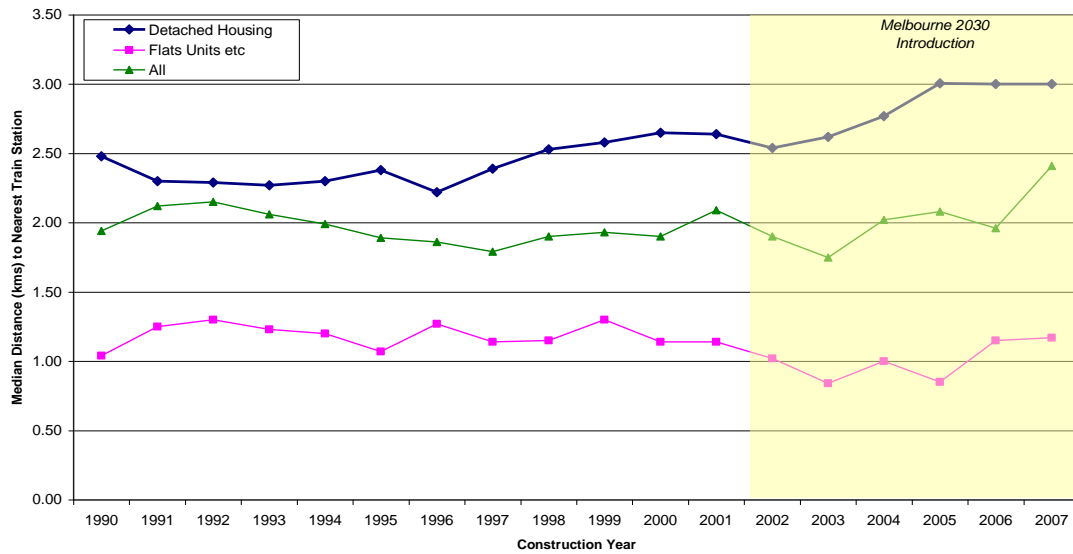


Figure 32: New dwellings: median distance to nearest train station, by type



4.5 Time lapse between sale and building

Some commentators blame housing supply shortages and spiralling house prices and rents on cumbersome planning procedures that prevent land becoming available for residential development, and cause delays in development (e.g. Moran 2006). This view suggests that planning requirements are a potential cause of inefficiency in housing markets as they impede the smooth adjustment of housing supply to changes in market conditions. The Commonwealth Government has responded to these concerns with the introduction of the Housing Affordability Fund, which offers financial incentives to 'reward' speedier approval of residential development plans. The awareness in policy circles of planning issues around housing supply and urban governance more generally is highlighted by the recently released draft report of the Victorian Competition and Efficiency Commission (2010), the National Housing Supply Council's most recent annual report and COAG's interest in the issue.

There are, however, contrasting opinions on this topic. Planners have drawn attention to the argument that developers might themselves contribute to delay by land banking, that is, strategically retaining parcels of developable land until land and house prices have increased in value. Withholding land from the market may cause artificial land shortages and further increase land price. While some planning interventions may cause delay, this may be justified in that they are designed to ensure an orderly process of urban growth that increases urban amenity and decreases negative externalities. The introduction of the VPPs to Victoria in 1996 was explicitly intended to facilitate development, reduce bureaucratic requirements and speed up the planning process, as outlined previously. If the VPPs achieved these goals, a reduction in construction delay might be expected to be evident from about 1998 onwards.

This section presents an empirical inquiry into the speed of development on parcels of vacant land sold in the metropolitan area between 1990 and 2004. This methodology focuses on housing development in established areas, and seeks to explore potential indicators of the complexity, uncertainty, and timeliness of housing development. These are factors that the VPPs have sought to influence.

Two measures of the pace of development are deployed. The first is construction delay, which is measured as the time elapsing between the date of vacant land parcel sale and the date of building construction completion. The vacant land parcel sale date has been recorded precisely in terms of month and year, but only the year of construction completion is recorded in the dataset. The month of completion has been set to June in all records for the purposes of estimating a construction delay measure in months. Provided dwelling completion rates are spread reasonably evenly throughout the year and this is uniform across the metropolitan area, measurement error should not result in biased estimates.⁴ The second measure is whether a vacant land parcel has been developed by 2007.⁵ This is subject to the same reservations as construction delay.

These measures of construction delay will reflect a number of influences. They include the planning interval—the period of time between land acquisition and planning approval—as well as the development period—the time elapsing between planning approval and construction completion. It is not possible to separately measure these two important components. There is a further complication that is particularly evident in greenfield areas. It is common for developers on the urban fringe to sell improved subdivided land to private households, who in turn engage builders to construct a house on their plot of land. It is typically the case that in middle and inner ring suburbs developers will acquire land, install improvements and construct houses before selling to home buyers. Our database measures time lapse from the last land sale to construction completion date. As a consequence, our time lapse measure in greenfield areas will commonly pick up the development period, but not the planning interval. On the other hand, our time lapse measure for established areas will pick up both the development period and the planning interval. We address these issues in ways that are described below.

The analysis begins with descriptive statistics that compare the speed of residential development across local government boundaries; and across different areas in relation to key urban amenities (public transport, activity centres and schools). There

⁴ Under these circumstances and with the large sample sizes employed below, measurement errors should cancel out in summary measures such as means and medians.

⁵ A variant of this measure is whether construction was completed within two years of acquisition. This variable is used in the modelling reported below and is discussed further in the context of that modelling approach.

is considerable variation and there are systematic differences that might suggest that housing supply is more prone to bottlenecks that impede responsiveness in locations that offer access to key urban amenities.

Table 9 describes spatial patterns with respect to the speed of residential development. The analysis was initially based on a quarter of a million (255 656) land parcels sold between 1990 and 2004 in the Melbourne metropolitan area. To report consistent measures of time lapse, the descriptive statistics are listed for the non-growth areas by omitting the urban fringe areas, because new housing supply in these inner and middle ring suburbs is largely constructed by developers themselves (see above). The rate of development varied across local government boundaries. In municipalities such as Glen Eira and Boroondara, development is much slower with rates of building completion (by 2007) that are typically around 50 per cent. On the other hand, in municipalities such as Hobsons Bay, Knox and Manningham, around nine in every ten vacant land parcels had been developed by 2007.

On those land parcels where residential development occurred, the average time that elapsed between sale of vacant land and subsequent completion of building construction (time lapse) is 1.94 years, or 23.3 months.⁶ In seven local government areas, the average time lapse exceeds two years. In Manningham and Moonee Valley the average lapse is close to three years. These statistics indicate that housing supply is typically slow to respond when demand surges or contracts in these areas.

Table 9: The pace of residential development across local government boundaries: vacant land parcels acquired 1990–2004

<i>Local Government Area</i>	<i>Time lapse</i>		<i>Construction delay; Standard Deviation in LGA</i>	<i>Vacant land parcels developed by 2007</i>
	Mean (years)	Median (years)	Years	%
Banyule	1.74	1.25	1.74	83%
Bayside	1.82	1.33	1.69	68%
Boroondara	1.75	1.16	1.72	54%
Brimbank	2.01	1.33	2.03	88%
Darebin	1.90	1.41	1.74	78%
Frankston	1.49	1.00	1.57	86%
Glen Eira	1.83	1.08	2.12	49%
Greater	1.73	1.16	1.82	81%
Hobsons Bay	2.15	1.41	2.14	91%
Kingston	1.80	1.33	1.65	86%
Knox	1.51	1.00	1.63	91%
Manningham	2.93	1.75	2.91	90%
Maribyrnong	2.56	2.16	1.78	69%
Maroondah	1.86	1.16	2.03	86%
Melbourne	1.97	1.75	1.48	85%

⁶ It is important to note that this is a biased estimate of average construction delay because of censoring. The data base cannot record the eventual delay on developments completed after 2007 (right censored) but where the vacant land plot was sold between 1990 and 2004. Furthermore, vacant land plots sold before 1990, but developed between 1990 and 2007, are left censored because land sales from 1990 onwards are recorded. Provided left and right censoring is evenly experienced across local government areas, measures of delay will yield a reliable estimate of spatial variation. The longer is the 'window' of measurement, the less problematic is censoring because more information is collected on completed developments.

Monash	1.83	1.25	1.87	88%
Moonee Valley	2.81	2.08	2.39	68%
Moreland	1.50	1.08	1.47	75%
Mornington	2.30	1.41	2.48	82%
Nillumbik	2.17	1.50	2.15	93%
Port Phillip	1.82	1.33	1.82	54%
Stonnington	1.78	1.25	1.74	51%
Whitehorse	1.64	1.16	1.73	79%
Yarra	1.80	1.58	1.30	54%
Yarra Ranges	1.79	.91	2.29	78%
Total	1.94	1.35	1.89	0.76

Even within the same LGA there can be wide variation in completion times. In Manningham, for example, the standard deviation of construction delay is almost three years, and in Mornington it is 2.5 years. These measures of dispersion exceed median time lapses—at 1.8 years and 1.4 years respectively—which suggests that there is a skewed distribution with some parcels taking many years before development. On the other hand, in some LGAs construction delays are relatively tightly clustered around measures of central tendency, for instance, in Melbourne and Yarra, where standard deviations of 1.5 years and 1.3 years are less than median delays at 1.8 years and 1.6 years respectively.

Table 10 offers a different interpretation of the pace of development in different parts of the city. It shows the extent to which development proceeds more rapidly if the residential land parcel is in close proximity to urban amenities or to activity centres. Rates of development systematically decline with proximity to activity centres; and on those parcels where residential building has been completed, the delay between acquisition and construction completion is more protracted on parcels closer to activity centres. The picture with respect to other urban amenities such as train stations and schools is not so clear cut.

Table 10: The pace of residential development by distance from key urban amenities

<i>Key urban amenities</i>	<i>Number of parcels</i>	<i>Construction delay</i>		<i>Construction delay; Standard Deviation</i>	<i>Vacant land parcels developed by 2007</i>
		<i>Mean (years)</i>	<i>Median (years)</i>		
				<i>years</i>	<i>%</i>
Metro train					
Less than 1km	17,180	1.82	1.16	1.88	84.50
1 to 3km	93,643	1.66	1.08	1.80	93.20
Greater than 3km	91,797	1.78	1.16	1.84	92.10
Activity Centres					
Less than 1km	2,889	2.11	1.50	2.12	84.30
1 to 3km	23,368	1.97	1.25	1.93	89.40
Greater than 3km	176,363	1.69	1.08	1.79	92.40
Schools					
Less than 1km	38,965	1.78	1.08	1.94	90.50
1 to 3km	109,865	1.68	1.08	1.75	93.60
Greater than 3km	53,791	1.79	1.16	1.93	89.70

Table 11 compares vacant land parcels according to whether they were acquired before or after the introduction of the new format planning schemes in the late 1990s. It seems that there has been little if any increase in the pace of development since the introduction of these reforms. In addition, the reforms were intended to produce more uniform planning outcomes. However the table shows that there has been greater dispersion in the post-reform period. The proportion of vacant land parcels developed within two years has been computed within each LGA, and across the two policy regimes. The average (across local governments) proportion developed within two years is slightly lower in the post-reform period, but more surprisingly, there is a greater spread across local government boundaries in this measure during the post-reform era. This suggests that the VPPs did not diminish municipal variation.

Table 11: Proportion of land developed within two years before and after the VPPs

<i>Parcels developed within two years</i>		
<i>Policy Shifts</i>	<i>Mean</i>	<i>Standard Deviation</i>
After	68.3	10.5
Before	69.6	9.5
Total	69.0	9.9

4.5.1 Modelling results

In order to conduct a modelling exercise, the data set of vacant land parcels purchased between 1990 and 2004 were first coded according to their completion status. If a vacant land parcel was successfully developed such that construction was completed within two years of purchase, a value 1 is assigned, zero otherwise. This completion status variable is the critical phenomenon that we aim to explain, but conventional estimation by ordinary least squares is not appropriate because of the zero-one nature of the variable. We need an alternative estimation technique that is suitable for analysing data where the dependent variable is binary, and the effects of independent variables on the chances of some event occurring need to be ascertained while controlling for a variety of different influences. A logistic regression model is therefore estimated to analyse the probability of development within two years on vacant parcels of land purchased between 1990 and 2004.⁷ The model produces a set of coefficients that allow us to predict a *logit transformation* of the probability that a vacant parcel of land is developed within two years. The model is specified as

$$\text{logit}(p) = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + \dots + b_k X_k \quad (1)$$

where p is the probability that a vacant parcel is developed within two years of purchase. The coefficients b_1, b_2, \dots, b_k are estimated using a maximum likelihood procedure and a large sample of 202 160 vacant parcels that were purchased between 1990 and 2004 and where completion of construction is observed up to 2007. Four groups of variables representing policy influences, accessibility to urban amenities, housing market conditions and history of development are added to the right hand side of equation (1).

⁷ There are a number of caveats that should be kept in mind at this point. This dependent variable is unsatisfactory to the extent that it will treat two vacant land parcels where development was completed within two years as equivalent, even though one might have completed within a year and the other took two years. Similarly, it will treat intervals substantially in excess of two years as equivalent to those finished in just over two years. A future research agenda would prioritise estimation of alternative models such as hazard models that are more appropriate given the nature of the data.

The policy variables include a policy regime variable that discriminates between land parcels acquired before and after the introduction of the VPP—changes that were intended to produce a greater uniformity of outcome. As the policy had a staged introduction across local governments, each local government's land parcels are classified as before or after the policy reform conditional on a local government specific year of 'regime change'. Any effects that overlays have on the tempo of development will be detected by an overlay variable that identifies whether each land parcel intersects with an overlay. Finally, an indicator variable identifying location in a growth corridor completes the vector of policy variables. Land in growth corridors is earmarked for residential development, and so we might expect more rapid progress to completion in these areas.

The pattern of new residential development ideally provides easy access to urban amenities, but this is less likely to eventuate if development is more difficult to progress in these areas. Accessibility to schools (both primary and secondary), train stations, principal activity centres and the Melbourne CBD are included in model specifications to get a sense of whether parcels closer to these nodes will be more speedily developed. In view of the strategic aims of *Melbourne 2030*, these are key variables that help us to understand whether patterns of housing supply are fulfilling these goals, *once we have controlled for other factors*. The distance from CBD variable has a particular importance, as it will capture the distortion in time lapse measures that arises because of differing degrees of vertical integration in the development industry that are correlated with presence or otherwise on the urban fringe (see above).

One potentially important control is tight housing market conditions that are typically accompanied by high land prices. Developers find that the opportunity costs of holding undeveloped land escalate as land prices rise and these cost pressures should motivate development. An efficient land market will (in the absence of externalities) require such adjustments. But supply responses could be impeded by 'insider' objections to planning permits that are likely to be more stringent in expensive areas where resident responses might be affected by their perceptions of amenity and property values. The strength of such market adjustment processes is scrutinised by the addition of two variables—a relative metropolitan land price index (RMLPI) where values in excess of one indicate that the land parcel is expensive relative to the metropolitan wide average (in the same year), and a relative neighbourhood land price index (RNLPI) that serves the same purpose, but at the neighbourhood level.

The density of existing residential development is likely to be an important influence on construction delay, as higher densities mean that more people are potentially affected by new building that can be viewed as detrimental from the perspective of existing residents. Objections to planning permits are then more likely and could help steer new housing supply to greenbelt areas where the planning process is less affected by planning amenity provisions. The addition of a dwelling density variable is intended to capture this influence. Table 12 below lists detailed definitions of each of the variables.

Table 12: List of variables and measurements

<i>Dimensions</i>	<i>Variables</i>	<i>Measures</i>
Policy	Policy regime (Categorical)	A policy shift reflecting a policy change under the Kennett Reform (Before = 0 and After = 1)
	Overlay	Number of overlays
	Location (Categorical)	Whether or not a parcel is in a growth corridor area (1, growth area; 0 if not)
Accessibility	Schools (Categorical)	Distance from the closest school (categorical variables representing < 1 km, 1 to 3 km and > 3 km; > 3km is reference)
	Melbourne CBD (Categorical)	Distance from the Melbourne CBD (categorical variables representing < 5km, 5 to 10 km,,10 to 15 km and > 15 km→ 15 km reference category)
	Train Station (Categorical)	Distance from the closest train station (categorical variables representing < 1 km, 1 to 3 km and > 3 km is reference category)
	Principal Activity Centres (PAC) (Categorical)	Distance from the closest PAC (categorical variables representing < 1 km, 1 to 3 km and > 3 km > 3 km is reference category)
Housing market	Relative metropolitan land price index (Continuous)	RMLP index is computed for each parcel as the ratio between land price (per square metre) and the median land price (per square metre) for the year of sale in the Melbourne metropolitan area.
	Relative neighbourhood land price index (RNLP Index) (Continuous)	RNLP index is computed for each parcel as the ratio between land price (per square metre) and the median land price (per square metre) for the neighbourhood (defined here as a Local Government Area)
History	Dwelling density 1991 (Continuous)	The number of dwellings per square kilometre by Statistical Local Areas for 1991

In Table 13 the key estimates are listed. In column 1 coefficient estimates are presented; a positive value indicates that the variable increases the *logit transformation* of the probability that a vacant parcel of land is developed within two years. This has no easy interpretation, but fortunately the coefficients in column 1 can be transformed into the odds ratio. For a dichotomous variable such as location in a growth corridor, this is the ratio of odds occurrence in two groups—the odds for the group identified when the predictor is one (e.g. location in a growth corridor), and another for the group identified when the predictor is zero (outside growth corridors). Suppose, in the growth corridor example, the estimated odds ratio is 2.5, then the estimated odds of development within two years are two-and-one-half times as high for these land parcels in comparison to land parcels elsewhere.

Table 13: Results of Logistic Regression analysis

<i>Model variables</i>	<i>Estimated Coefficient B (1) (t-value)</i>	<i>Standard Error S.E. (2)</i>	<i>Sig. (3)</i>	<i>Odds Ratio (4)</i>
Constant	1.257 (66.15)	.019	.000	3.516
Planning shift (before and after)	-.226 (-16.14)	.014	.000	.798
Relative neighbourhood land price	-.002 (-2.0)	.001	.170	.998
Dwelling density 1991	.000 (0.0)	.000	.000	1.000
Relative Metropolitan land price index	.000 (0.0)	.001	.001	1.000
Overlay	-.193 (-21.44)	.009	.000	.824
Accessibility to the closest train			.000	
<i>Within 1 km</i>	.153 (4.93)	.031	.000	1.165
<i>Between 1 and 3 km</i>	.160 (10)	.016	.000	1.174
Accessibility to the closest school			.000	
<i>Within 1 km</i>	.092 (4.18)	.022	.000	1.096
<i>Between 1 and 3 km</i>	.020 (1.25)	.016	2.02	1.021
Accessibility to the CBD			.000	
<i>Within 5 km</i>	-.047 (-.505)	.093	.612	.954
<i>Between 5 and 10 km</i>	-.600 (.983)	.061	.000	.549
<i>Between 10 and 15 km</i>	-.340 (-9.44)	.036	.000	.712
Location (Growth area, Others)	-.203 (-11.2)	.018	.000	.816
Accessibility to Principal Activity			.000	
<i>Within 1 km (1)</i>	-.632 (-10.5)	.060	.000	.532
<i>Between 1 and 3 km (2)</i>	-.382 (-15.9)	.024	.000	.683

Chi-square Statistic = 2023.52 d.f. = 15 -2 Log Likelihood = 135935.71 Cox & Snell R² = 0.17 Nagelkerke R² = .025 and Hosmer and Lemeshow Chi-square = 265.907 at 0.000 level of significance.

A consideration of the policy variable coefficient estimates in Table 13 shows that vacant land subject to one or more overlays has odds of development within two years that are 82 per cent of those 'free' of overlays. It is puzzling to find that the late 1990 reforms to the planning system are associated with a slower pace of development; one might have expected the centralisation of strategic planning powers, and the emphasis on uniformity in processes would cut residential construction times. While these reforms coincide with a surge in demand for housing and greater pressures on land and housing markets, we might expect our control variables to capture these effects. Also perplexing is the finding that location in growth areas is associated with more lengthy construction times; it should be kept in mind that we are controlling for other location characteristics, distance from CBD in particular.

The accessibility variables uncover mixed results. Residential development tends to be much more protracted in areas that are within walking distance of principal activity centres. The odds of development are nearly as low as one half of those in locations three or more kilometres from centres. The chances of development are still substantially lower at distances between one and three kilometres from centres. A strategic emphasis on development in and around principal activity centres could be frustrated if the supply side of the housing market is very sluggish in these areas.⁸ On

⁸ Future research might extend this to all activity centres, though sample size issues are a potential constraint here.

the other hand, there are encouraging estimates of the chances of development on vacant land parcels offering easy access to urban amenities such as schools and train stations. Finally, note that land parcels closer to the CBD have substantially lower odds of development compared to those located 15 kilometres or more from the CBD. So on controlling for policy variables, access to urban amenities, density and housing market conditions, it is generally the case that sites in the outer suburbs are quicker to be developed. The difference in pace of development is particularly noticeable in the inner to middle ring of suburbs five to ten kilometres from the CBD, where chances of construction completion within two years are nearly as low as half those in suburbs beyond the 15 kilometre boundary. It is likely that this variable is picking up the distortion in measurement of time lapse—land parcels over 15 kilometres from the CBD are typically greenfield areas where the development period is measured, but not the planning interval.

The relative metropolitan land price index variable suggests that more expensive land is quicker to be developed, and to the extent that this is the case (and externalities are absent) it implies market adjustments that tend to promote efficiency. An important issue for future research is diagnosis of the strength of such adjustments in land and housing markets. If they are weak, then imbalances in supply and demand can persist with growing market pressures pushing prices even higher. These outcomes could be justified on the grounds that faster development would result in adverse incidental effects (loss of biodiversity, congestion and so on); diagnosing where market adjustments are slow, can help articulate the tradeoffs that need to be considered.

Finally, we note a puzzling finding. In Statistical Local Areas that had relatively high dwelling densities back in 1991, development occurs at a faster tempo. Our measurement approach here could be flawed. We are trying to explore the idea that already built up areas will experience a slower pace of development as compared to greenfield areas where there is no existing built form to disturb. Robust measures should take into account whether areas have existing commercial and industrial development; our measure is based on residential densities only.

5 WHY HAS MELBOURNE'S STRATEGIC PLANNING POLICY BEEN INEFFECTIVE IN ACHIEVING ITS HOUSING SUPPLY GOALS?

The quantitative findings on the scale, location, and characteristics of housing supply as discussed in the previous chapter are now linked to interviews conducted as part of the project, with planners and housing developers in Melbourne. These qualitative findings suggest some possible explanations for why planning policy in Melbourne has not been effective in achieving its goals in relation to housing supply. The planning managers spoken to for this research were all from growth area councils. The housing developers were predominantly involved in growth area housing and house lot production, although some worked in inner and middle areas as well. Interviewees are referred to by code to protect their identity, P for planner or D for developer followed by an individual number, when direct quotes are included.

5.1 Interview responses on housing supply characteristics

Questions in the interviews that concerned the housing characteristics discussed in this paper were:

- What factors do you consider determine the form of housing that you have approved for construction, or constructed?
- Is a mix of types of housing important in any given location, and if so what determines the mix?
- What role does government strategic planning policy (such as *Melbourne 2030*) play in determining the type of housing?
- Do policies designed to increase urban density influence the range of housing constructed?
- Do you believe the current supply of housing satisfactorily meets market demand?

The following is a summary of the answers to these questions. As the interviews were only semi-structured, the answers to one question often related to another, so the following summation does not present the findings addressing individual questions only, but attempts to cover the major findings more thematically.

There was surprisingly little difference in the answers given by planners and developers on factors that determined house type and lot size. Both tended to concur that developers determined the form of housing and the mix of housing types. The view expressed most commonly was that developers build what they perceive the market wants, but they are generally conservative and risk averse in their choices, so they tend to build what they know will sell.

We still deal with a lot of bread and butter developers, as I call them. They do a very traditional product. They know they make money out of them. They are very reluctant to change their model and there's very few developers in the market who you might regard as being innovators, who are actually trying to shift the market itself. (P2)

One planner commented that although the developers might think they are delivering what the market wants, consumers are not able to choose options they are not offered or don't know about. 'Unless the product's there people aren't going to think that they might want that' (P3). The larger developers undertake research into the demographic profile of an area they are building in, in order to match their housing to market requirements. 'It's important to be market responsive' commented one developer (D3).

Developers consider how their product is going to be compared to others that are available in the area, particularly in terms of value for money. This competition could either lead to innovation or to conformity, but innovation is far more difficult and potentially risky.

Well, I think for a lot of developers they work on the philosophy that if it ain't broke don't fix it, so if they have a model that works, and they have a return on investment imperative that says we need to get return on investment in a shorter term horizon rather than needing a longer term horizon, then their desire for innovation is going to be much less. (D1)

This was reinforced by another developer who indicated that the type of housing his company built had not altered significantly in twenty years.

Fundamentally the underlying housing product hasn't changed. Lot sizes have come down, but the actual housing product itself when you strip it all away, is still a three or four-bed, two-bath, double lock up garage, by and large ... the bulk of the market when you drive around suburbia is pretty one dimensional and it's pretty mundane. (D4)

As one developer commented 'if you can actually demonstrate the commercialisation of an innovation, it's happy days, but that doesn't normally happen straight away', (D1).

There's no point, for example, going to the outer corridor in a greenfield area and saying, gee, I'm going to build a four-storey apartment block and sell someone a single-bedroom apartment there, and it'll cost them just as much as they can go and buy a block of land and put a four-bedroom home on it and still have a nice big backyard, It does not work. No one will buy that, because they won't see the value proposition. (D3)

There is an understanding, particularly among the planning managers, that demographic trends suggest a need for a greater range of housing, and in particular for a greater number of smaller options. As one planner explained 'we have 16 per cent of our households are one-person and 26 per cent are two-person, and those two figures are both climbing as you would expect, yet we are delivering something like 80 per cent detached houses'. His explanation for this was that:

It's tried, true, tested ... They [the developers] know they can sell the product quickly, with a minimum of fuss, and turn it over. Whereas if they put a medium density terrace on the market it's going to take a bit more work, a bit more convincing. (P1)

One of the developers interviewed was also concerned about the lack of choice of housing at the lower end of the market, and the problems that increasing lack of housing affordability were causing. This developer gave an example of a house at the lower end of the market in the regional Victorian city of Geelong to reinforce his case.

At Geelong, a \$320 000 house and land package, with the land at \$170 000 and the house at \$150 000, if you take off 10 per cent deposit, assuming the people have got 10 per cent deposit, the borrowings are \$290 000 minimum. At \$290 000, you need \$72 000 income, family income. The number of single income families that have got \$72 000 is 15 per cent of the population of Geelong. If you take one-and-a-half incomes, you'll perhaps reach about 50 per cent or even two incomes you will reach 50 per cent. So a nurse, a single nurse, or a single bus driver, or a single policeman, simply can't afford to purchase. (D4)

The interviewees generally felt that housing mix was important, although this view was put more strongly by planners than developers.

I think it is absolutely critical. At the end of the day, the community is a mix of people, a diversity of people, diversity of age groups, of point in their life cycles, diversity of financial situations, from obviously wealthy to poor. And clearly the housing available needs to be able to reflect the community, you can't have a sort of common housing type and say, well, that should fit everyone in the community, because the community is diverse. The housing needs to match that diversity as well. (P2)

Government planning strategies were thought to have a minor effect by some of the planners and no effect at all by the developers. Some developers interviewed argued that the planning process, rather than strategy, increased time taken and therefore costs that might then result in smaller lot sizes. The type of housing being constructed was seemingly not affected by planning policy, with one planner admitting: 'It's sad as a planner saying this, especially in a growth area context, I think it's more driven by the marketing and the consumer preferences that come of that marketing or are driven by that marketing'. (P3). The developers all contended that they were responding to market demand and the planning managers commonly felt that they had only a minor influence on the form of housing produced. 'Obviously trying to influence them through policy and other means to sort of start to try to shift the way they operate is very difficult.' (P2)

One planning manager commented that to affect the type of housing being built and the density at which it was being built, three elements were required:

You need the policy frame to support it, you need the political support so you're not ending up with mass rallies in the street saying don't build high density in our backyard, and then you need the market to be able to deliver it. (P2)

This interviewee went on to describe an example in a middle ring suburb where the local council had approved thirteen apartment blocks close to an activity centre in line with state government policy. The interviewee stated that the planning minister had apparently been critical of the fact that none of them had actually been built, but also felt that this was because the developers concerned did not feel confident enough that there was a market for this type of housing. 'So all the policy in the world doesn't deliver the market', he concluded.

The only effect of the government's aim to increase density was considered to be the reduction of average lot size. Not all interviewees attributed this trend to government policy directly; some believed that it was simply market forces reacting to the cost of land. The lot size 'hasn't come down because we've mandated it, it's come down because of market pressure' one planner (P4), indicated, adding that this pressure was to reduce prices.

All agreed that decreasing the lot size had not in itself altered the mix of housing types offered as most developers were simply building the same type of housing, or bigger housing, on smaller lots. This was attributed by developers to responding to market desires.

The blocks have been made smaller, but the primary focus seems to be mostly around ... what they want in a built form. So they'll fill the block with the house, to achieve the number of bedrooms and living zones they want. That's their primary want, first. Secondary seems to be the outdoor living spaces, is what we are noticing. (D3)

One planner did, however, think that the mix of lot sizes had increased over time.

There's no question that over the last few years in most subdivisions, I don't say in all of them, but in most subdivisions, you will get a much more diverse range of allotment sizes than you did ten years ago as a standard. (P4)

Developers suggested that their approach was to seek to fit an essentially unchanging, albeit larger, housing product onto smaller lot sizes.

Over the last decade the lot size has continued to decrease [to] ... around the 480 odd mark. If you look at the type of product you can put on that—a three or four-bedroom, two-bath, double lock up garage will fit on about a 500 square metre lot or a little bit smaller. Once you go beyond that, you just can't put that product on. (D3)

Government policy could enforce minimum standards, but:

It doesn't actually force the market to do different things though. It tends to create a ... kind of lowest common denominator of level of performance in the market ... you can't really regulate innovation or innovative thinking. It's something there has got to be a market logic for doing. (D 1)

You know you can lead the horse to water. but you can't make it drink, so to speak. You can do things in the policy and planning and maybe make it more conducive to it happening, but not necessarily force it to happen. (P4)

Planners indicated that many aspects of housing supply were completely out of their control. 'If it meets the relevant building guidelines, we have no ability to say you must only build a two-bedroom house', said one planner (P4). There was general criticism from both developers and planners of the lack of clarity in government policy, and a disjuncture between stated strategic goals and regulatory implementation measures.

5.2 Interview responses on location of housing

Questions asked in the interviews with planners and developers regarding the location of housing were:

- What factors do you consider determine the location of housing that you have approved or constructed?
- What role does government strategic planning policy (such as *Melbourne 2030*) play in determining the location of housing developments?
- Does the proximity of transport or other services influence your decisions?

The following is a summary of the answers to these questions. Once again, as the interviews were only semi-structured the answers to one question often related to another, so the following summation does not present the findings addressing individual questions only, but attempts to cover the major findings more thematically.

Interviewees generally indicated that the determinants of location for new housing differed somewhat according to area. For the growth areas, most interviewees, particularly the planners, indicated that the location was influenced by the structure planning process. These plans would determine both the location of housing and also of transport and activity centres. However, several interviewees mentioned the issue of timing with regard to transport and amenities in the growth areas as housing is often built before other services are provided, so although housing may eventually be located near to services, it may not initially be so.

Some planners suggested that developers were reluctant to try new forms of development, and in particular to embrace the style of medium density housing

around transport and activity nodes referred to as transit-oriented development. One planner noted that while there was plenty of government rhetoric around transit-oriented development, there needed to be stronger requirements to ensure that this intention was translated into action. 'I think it needs to be mandated. If you don't mandate it, it won't happen' (P1). This planner went on to suggest that good examples of transit-oriented development were needed which were commercially successful to demonstrate its viability to other developers. One developer related how his firm had developed an innovative plan for a mixed use development which included employment, retail and residential areas in close proximity, and then convinced local government planners to support the plan. Some interviewees indicated that they knew of examples of transit-oriented development, even if these were still fairly unusual. Several developers interviewed were able to show development plans for activity centres with a mix of housing, however these were not usually around train stations.

Developers were also concerned about housing preferences by the public, and sometimes saw the provision of local transport and amenities as a trade off for house and land size.

I think that some transport accessibility benefit is important, but that alone isn't enough. If you're going to ask people to sacrifice private space for public realm it's a combination of transport accessibility plus good quality public realm, which might be parkland, it might be local activity centres, or schools ... The challenge in growth areas is to be able to get those things in early enough to create the opportunity Transport accessibility is one factor in the range of lifestyle considerations that people think about, but I don't think it's enough on its own. (D1)

The location of new housing within the existing built form, in areas other than the growth areas, was generally considered to be determined simply by the availability of suitable land. One developer indicated that land availability at a suitable price was the main determinant of choice of location and that this was not always easy to find. He said that his company had investigated a particular middle ring suburb seeking sites for medium density development close to transport and services. He claimed that suitable locations for housing in that area were scarce. Most sites were blighted or were not for sale and such factors affected land price. He then added:

The next problem was that the government didn't put its money where its mouth was, and it produced the plan 2030 that we are all going to be based on public transport and then haven't provided the infrastructure to do that.(D4)

The issue of lack of state government funding for transport infrastructure was also mentioned by a number of planners interviewed. One planner, for example, indicated that an entire new suburb had been built which had no public transport services. The subdivision in this area had produced increased densities, but no public transport alternatives existed to car travel.

The state infrastructure is not being delivered as per proposal. So it's one thing to get relatively dense neighbourhoods, it's another to have a transport network that's serving them We are getting fifteen lots per hectare up there, either through fashion or design, or accident, but we are. And so what we're getting is just more cars per hectare. (P1)

This planning manager attributed the delay in supplying public transport services to 'reviews, dilly dallying, and I suppose a centralised bureaucracy that doesn't perceive a localised issue'. (P1)

Another planner indicated that his council was focusing on trying to provide sources of local employment, particularly sites where businesses could locate, in an effort to reduce residents' need for long distance travel. Council debates had addressed the issue of council intervention to gain more intensified housing on sites close to a proposed train station, particularly as there was no guarantee when the station might be built.

We've been doing a lot of work around trying to create much higher levels of local employment, because at the end of the day we're not confident that there's going to be sufficient shifts in the transport infrastructure to allow people to continue their current patterns. (P2)

Consistent with comments about the impact of government policy on the form of housing, most interviewees believed that government policy exerted a minimal influence on the location of housing. One developer suggested that policy could have some influence: 'to some extent it's a bit of policy and opportunism If you start to look at all those activity centres you can find ways of assembling land through market mechanisms' (D1). However, he commented that *Melbourne 2030* was 'policy alone without targeted investment to back it up,' and added that:

There has been a field of dreams kind of mentality among the policy-makers that if we have a broad brush strategy, and we do some structure plans as we need them, then [the] market will do the rest You do need those policy platforms and you do need those structure plans, but on their own it's only about a third of the battle. (D1)

The developers all contended that they were predominantly responding to market demand and the planning managers commonly felt that they exercised only a minor influence on the location or other characteristics of housing produced. 'Obviously trying to influence them through policy and other means to sort of start to try to shift the way they operate is very difficult'. (P2)

There was general criticism from both developers and planners of the lack of clarity in government policy, and a disjunction between stated strategic goals and regulatory implementation measures.

5.3 Interview responses on planning system effectiveness

In their assessments of housing supply in Melbourne, both planners and developers interviewed generally minimised the effect of the regulatory planning system. Planners generally stated that developers and market factors determined the form of houses and urban form generally—that effectively developers controlled the type of housing product sold to the public, lot size, subdivision layout and uses. Councils tried to influence but did not determine urban form. One argued:

It's predominantly market factors ... [which determine the form of housing approved] ... It's very much a developer's decision...trying to influence them through policy and other means ... to shift the way they operate is very difficult ... we spend a lot of time with them, pushing them to sort of make some variations to their development ... they are very reluctant to change their model, and there's probably very few developers in the market who you might regard as being innovators, who are actually trying to shift the market itself. (P2)

Another planner commented that the major determinant of urban form was

... what the market will wear ... they know they can sell the product quickly, minimum of fuss and turn it over. Whereas if they put a medium density

terrace on the market it's going to take a bit more work ... a bit more convincing. (P1)

Similarly, developers minimised the impact of government policy on development decisions. One stated that *Melbourne 2030* had no impact on development decisions. Developers emphasised the importance of development companies attempting to persuade state government and other approvals bodies of the merits of proposals. Peak development groups and individual companies liaised with government on a series of broad issues, such as land supply, but also on particular developments. One developer representative commented that his company maintained harmonious working relationships with government and councils; developers initiated the ideas, formulated plans, and convinced approvals authorities of the merits of their plans:

The land wasn't zoned, it had a restricted use on it, it had to be for employment and we convinced the local council to go along with the concept. They said definitely no residential. Well, two-thirds is residential ... we're taking them along with us ... [the council and government] ... fed into it ... then we had to convince them [of] what we wanted to do. (D2)

Although development companies ultimately determined urban form, housing type and mix, they generally stated that they took government policy into account in their planning at a broad level. State government and local councils set broad parameters for outer urban development. One planner commented that council set principles but developers set practice. *Melbourne 2030* stated a general objective of increasing dwelling density. The Precinct Structure Plan Guidelines prepared by the Growth Areas Authority (GAA) attempted to apply an increased residential density of 15 dwellings per hectare through the structure planning process. Developers and planners interviewed agreed that this was leading to gradually increasing density. However, opinions varied on the impacts of broad strategic policy. One developer commented:

We still have a very good relationship with the government and also local councils because we try and work with them to develop an outcome for a development ... [but] *Melbourne 2030*, those sorts of policy, no we don't take them into account, they're so vague. I mean, how could they ever influence anything you do. They're so general. (D2)

Council planners placed a different interpretation on innovation, arguing that for the most part, developer design and practices were conservative, based predominantly on detached housing and a separation of uses, concentrating on lifestyle marketing and sometimes based on exclusion by, for example, using minimum floor areas.

Varying views were expressed within councils and between councils, government agencies and developers on the proper role of government. Councils generally believed that the planning system did not provide sufficient regulatory power, and government policy was too vague for certain outcomes, while government and developer representatives emphasised the importance of flexibility and negotiation.

Planners in one council commented that council oscillated between seeking a potentially more regulatory role, or attempting to demonstrate the benefits of better design, higher density and greater housing diversity. They described power conflicts with these roles, as follows:

We've actually tried to mandate that [developers] have to have a small proportion of multi-unit housing ... we've put our toe in the water very gently ... we only pitched 2 per cent and we caused outrage ... the Growth Area Authority couldn't cope with the dreadful behaviour we were going on with, and

they decided that's not how planning's done in Victoria ... we relented on that occasion, [but are creating]..a zone around an activity centre .[requiring].20 dwellings per hectare...if you don't mandate it, it won't happen. (P1)

In contrast, another stated that;

... [we have to be] ... able to show in the market that [change] works from a market point of view ... you can have all the best intentions in the world as far as policy goes, but unless the market is prepared to deliver then you know change won't happen. (P2)

Councils also argued generally that the planning tools available do not provide them with enough power to force change. Policy contained in the State Planning Policy Framework and Clause 56 of ResCode was broad. One planner commented: 'Labor has taken away more power from councils than Kennett did' (P2). Council regarded a mix of housing as critical, tries to change mono-housing type and increase diversity. But developers target market segments, argue that they cannot develop higher density housing around activity centres, and are reluctant to change. Another council planner stated: 'Government needs to intervene ... [providing standards for] ... construction, design and development'. (P2)

Planners generally identified as another difficulty the vague and general language used in planning policy and regulatory instruments. They argued that the drafting of planning policy used conditional language, and relied on broad requirements. Precinct structure plans (PSPs) were inserted into planning schemes, but the language used was weak, not prescriptive. They were not specific enough to require compliance, so that developers constantly used vague and general provisions to reduce requirements and argue that they complied. Again, some council planners, however, also argued that over-prescription could reduce innovation and that negotiation delivered better responses than regulation. Planners at one council stated: '[densities] haven't come down because we've mandated, but...because of market pressure', (P1)

Council planners often commented that government policy direction hadn't helped or hindered. The role of the GAA varied between councils. The GAA was established with a number of purposes, but fundamentally is charged with responsibility for strategic planning in the growth corridors. Consequently, council attitudes towards the GAA, and GAA interactions with councils, varied. In one growth area, the GAA played an advisory role, leaving strategic planning primarily to the council. Other councils were concerned about the GAA's strategic planning role, regarding it as a threat, one planner commenting that 'the Growth Areas Authority is not helpful' (P1). Planners from several councils believed that the GAA wanted to take over the strategic role formerly exercised by councils, and to control the amendment process and even ultimately to issue permits where required.

However, councils believed that the GAA played a potentially important role coordinating government agency decisions, gaining and making available data. On data provision, one council cited the GAA action of funding expensive studies into native vegetation. One council planner described strategic planning in growth areas as a 'breathtaking nightmare' (P1), citing one government agency not wanting to prevent a noxious industrial zone near residential land, and the DPCD remaining uninvolved. Other planners cited the example of the DSE trying to protect grassland sites near proposed rail stations. In such cases, councils supported the actions of the GAA in assisting the coordination of government responses. However, planners at one council were concerned that the GAA might broker deals within government excluding councils from any involvement. Concern was also expressed that developers would approach the GAA direct, again without council knowledge. The

result might be decisions made without adequate council involvement and without any council knowledge of sources of influence or arguments presented.

Some councils saw the potential for demarcation problems in responsibility for strategic planning. The GAA generally runs the amendment process. For land inside urban growth corridors, the Development Plan Overlay is generally used along with the Urban Growth Zone. Precinct Structure Plans—strategic plans guiding future development—can be prepared by a local council or the GAA. PSPs are incorporated into planning schemes. Eventually, a planning scheme amendment incorporates PSPs into planning schemes, and land is rezoned with the nominated zone and overlay applied. Some councils believed that this process meant that effectively developers could rewrite their own zones through the use of schedules to achieve the PSP.

5.4 Interview responses on the effectiveness of Melbourne 2030's urban growth boundary

All interviewees were asked the question: Has the imposition of the urban growth boundary altered the type of housing supplied? Varying views were expressed between local government planners and between planners and developers on the impact of the urban growth boundary (UGB) on the type of housing and on the price of land. All accepted that the price of land had risen, particularly recently, with one land sale in the committed Point Cook area selling recently for \$1.3 million per hectare.

Those interviewed varied in their belief as to whether the UGB had influenced land price inside and outside the boundary. Planners generally believed that the introduction of the UGB had not unduly affected land price. The most common explanation, by planners, for land price rises was not a lack of land supply brought about by the UGB but the control by a relatively few development companies of most land inside the UGB. This may have led in recent years to substantially increased prices paid for the remaining areas of land still owned by individual landholders.

A developer also pointed to the impact of the UGB on landowner expectations, arguing that the UGB led to expectations of high prices by farmers within the UGB. The result was that some landowners retained land because of expectations that in time land would become scarcer and prices would rise. In response to this issue interviewees suggested that other policies were needed to supplement the UGB, such as a withholding tax and assistance with land assembly. Interviewees felt that there was no understanding of the importance of land assembly with *Melbourne 2030*. Another developer commented:

People that are inside the UGB, the farmers and the owners, believe their land is liquid gold ... gone are the days where the farmer needed protection from the developer. It's flipped the other way. The developer needs protection from the farmer these days, but that boundary imposed that expectation. (D3)

One planner also pointed to a change in land use brought about by rezoning from non-urban to urban land uses as a major reason for the rise in land values inside the UGB. Councils and developers generally believed that the UGB had not driven a change in house type or size. A fixed UGB might be expected to lead to more efficient land use, smaller lots and a range of lot sizes, in turn leading to varying house design and size. Developers tended to argue that the UGB was leading to more efficient land use. Councils agreed that average lot size was reducing, but argued that a lack of diversity in lot size and housing type was evident. However, all agreed that house size was increasing substantially despite the introduction of the UGB while government policy—particularly the introduction of Precinct Structure Plan (PSP) Guidelines—was

gradually leading to a reduction in average lot size. Government policy sought to increase the average net residential lot size to 15 dwellings per hectare. This had led to larger houses being sited on smaller lots, not generally to substantially increased diversity in lot sizes and house types, or to smaller average house size. One developer commented:

Blocks have been made smaller ... so.[people].fill the block with the house to achieve the number of bedrooms and living zones they want. That's their primary want ... second seems to be the outdoor living spaces ... we have five-bedroom homes that are on 350 square metres of land...when you're in the outer corridor, the underlying land value is not the driver. The cost of the home becomes a driver...people say 'Well, I've paid this much for my land, I've got this much to spend on my house, how much house can I have for that?' (D3)

Smaller blocks often led to higher cost double storey housing:

If you want to go double storey versus single you're already getting 20 per cent to 30 per cent slug on the house price, so at times, in theory while you're paying less for the land, that's more than offset by the cost of the house, so the outcome of affordability can't be achieved ... people may well ... elect for a slightly smaller block to have a double storey home. (D3)

Another developer agreed saying:

If the lot size gets smaller and you want to build a three or four-bedroom place, you have to go to two storey and the cost of two storey on a small block is greater than the cost of a larger single storey on a larger block ... land is not at least 50 per cent, probably 60 per cent of the house and land package ... so the lot size has come down and the price has gone up significantly. (D4)

Government and local government planners pointed out that a net residential density of 15 dwellings per hectare was not difficult to achieve. One government planner stated that:

In the growth areas of Melbourne ... density expectations have increased slowly [to] 15 dwellings per hectare ... That's not a huge stretch really ... if you were really wanting to make sort of a quantum change in the growth areas, you would set that bar higher. And you don't need to introduce a huge proportion of alternative housing forms to necessarily get there ... You get there through accommodation of smaller lot sizes which the market is increasingly become more comfortable with, and a little bit of product diversification. You don't really have to be that radical. (D1)

Some local council planners agreed, with one stating: 'You can get densities for around 20 odd [dwellings] to the hectare quite easily'. (P1)

Some development companies were building attached townhouses and smaller lots and dwellings, though in small numbers. One government representative stated that at best, only 5–10 per cent of new housing in corridors was attached, apartments or smaller dwellings up to 350-square metres. One council planner argued that there was no matching of smaller lots and house size to need. There was general agreement that higher densities were not usually being located around activity centres in growth corridors.

A lack of competition between a limited number of developers might affect land price through a controlled rate of land release. Views varied between development companies, government agencies and councils on whether price was being affected

by a slow rate of land release—that is, whether land banking was occurring. Some councils believed that a lack of competition in the land market and housing development industry was limiting the number of lots being brought onto the market, arguing that a few large developers controlled the supply of land. A whole estate may be approved but released slowly. Nominating large areas of future urban land would not necessarily lead to the release of additional land. As one council planner said:

The issue that's not discussed enough is the concentration of ownership of land ... there are simplistic arguments about the capacity of the area, and the reality is how it's released onto the market, that's probably the bigger issue ... [this growth municipality] ... has 15 years supply if we're growing at typical levels, about 3000 a year. So there's adequate land there. If you look on a map you can see there are huge blank areas. (P1)

Some council planners also pointed out that activity centre development was controlled by only a few developer companies. Planners and development companies also varied in their views on competition. One planner disputed the view that a slow release of land was causing land shortages and price rises:

I don't believe there is a whole lot of land banking ... [some developers are] ... selling everything [they] can. If they had control of that market ... they wouldn't bring a direct competitor to be selling alongside their own stuff. There is reasonably good competition. (P5)

Another planner commented that the UGB had led to higher prices but should force the market to change and adapt.

A varying UGB was seen by some planners and developers as a factor which had led to land speculation and price increases. Some planners argued that by extending the UGB, the government had sent signals to the development industry about where to buy land in the expectation of speculative profits. Planners interviewed pointed to the large supplies of land and of zoned land in corridors—in one municipality, 20 years supply and 8–10 years zoned land supply, with 1500 lots a year being developed. Planners in one council believed that the 2003 government commitment to provide a continuous 15-year land supply in the growth corridors by extending the UGB had helped control land prices. Planners in another council effectively summarised different positions on the impact of the UGB and the government undertaking to provide a continuous 15-year land supply in the corridors. One planner commented:

The manner of ... [the UGB's]...imposition affected the entry price. When government announced the clear position that it was going to maintain 15 years minimum supply, and they immediately released ... [more land] ... that almost flattened the growth off completely. We've only really seen it in the last year or so, it's started to ratchet up again. So once the speculators and the investors and the developers know that there is going to be a controlled roll out that's going to maintain competition, this clearly takes the heat out of it. (P1)

One developer stated that the combination of a lack of competition inside corridors and a government signal that the boundary would change led to speculation outside the boundary. Development companies were aware of the commitment to a 15-year continuous land supply. A few developers controlled most of the land inside the UGB and were selling it slowly, forcing new entrants to buy land just outside the UGB. Then they pressured the government to change the boundary by working to the most senior levels of government: 'One of the reasons why the council backed us is because ... they see ... a lack of competition in this area, and if they want competition they can't just have ... [one or a few developers] because ... [existing developers are land banking] ... and just dripping out land at their pace. (D2)

5.5 Interview responses on the effects of taxes and charges

All interviewees were asked the question: In what way do you think the current charges and levies required to be paid by landholders or developers in the process of land development affect the nature of housing constructed?

None of those interviewed expressed a view that charges on development altered the form of housing, although one planner linked the decrease in lot sizes we have observed to the charges developers are obliged to pay.

I think it's certainly been a part of the reason why developers had to embrace some high densities, because in terms of the charges for infrastructure and things like that, they're obviously likely to get better cost recovery by increasing density. (P2)

Most of those interviewed considered that charges were generally passed on to the consumer, adding to the cost of housing, but there was a range of differing views about the degree to which this was true or the way in which it was done. For example, one developer pointed out that the alternative for developers was to pay less for the land.

The land developers aren't the ones that actually pay the development charge. It's either paid for at the time of purchase in a lower land price, or it's paid by the end user. Now the only times that it's paid by the reduction in the price, is when there's an economic downturn and when there's a shortage of, when there's plentiful supply. As soon as the supply kicks up, that charge is then added on to the cost of production. (D4)

One planner estimated that the total financial impost on development might add \$50 000 to \$70 000 per dwelling. This amount would include funding for all necessary services such as sewerage, roads, train lines, water supply, public open space, preschools, maternal and child health services, playgrounds, sports grounds and other community facilities. The provision of all of these services needed to be factored into housing cost, but 'part of the affordability of housing is the affordability of being able to access all the services' that are provided through developer contributions. (P1)

This planner felt strongly that outward growth should be self-funding:

There is a pretty potent argument that if urban growth isn't substantially self-funding you're therefore basically subsidising it and all you're doing is encouraging outward growth without responsibility for it. To my way of thinking that is just a disaster. You are literally underwriting the dispersal of urban areas. (P1)

This view was in contrast to one developer who believed that the costs of new suburban development should be borne by the whole community through general taxation. The government should not penalise the new home buyer on the fringe.

It would seem a fair bit more equitable because chances are that people that are living in the middle ring established area didn't have to pay that sort of penalty when they bought in. They got their trains, they got their roads, and that sort of thing, as part of general provision. (D3)

One of the planners interviewed made the point that, whatever, that infrastructure must be paid for some way and that the cost of such things would be borne by the house purchaser. 'You are either paying through your taxes or paying through rates. You pay either way because developers are going to keep the same profit margin up no matter what.' (P4) This planner went on to add that the financial risk was borne by the council, and by extension the community, because there was always a shortfall

between the cost of infrastructure and services provided and the contributions sought from developers. He considered, however, that:

the key issue is affordability, but even with proposed Growth Area Infrastructure Charge when you compare what average development costs are for new residential areas in Victoria versus other states, our charges are the lowest in Australia. (P4)

One developer, citing the proposed Growth Areas Infrastructure Contribution (GAIC) charge on landholders selling greenfield land for conversion to residential, that the manner in which developers will deal with charges was quite clear.

We're just going to pass them onto the end user. I mean, that's all you can do the GAIC for instance ... land is a huge imposition, because we were very competitive Australia wide and these charges just make it less competitive. (D2)

Another developer believed that the cost of taxes and charges would be passed on to the consumer, but not in a direct linear manner. 'It always is to a degree, but it's never a one-to-one translation so you don't get a perfect translation of cost to price. And again it will vary from place to place'. (D1) However he added, with reference to the introduction of a new tax, that this depended a little on timing.

It's all about how quickly you implement these things. If it takes a long time and you create an uncertain environment for the industry for a long time then ... the industry will respond conservatively with its pricing and pricing regimes. If it's unsure about costs, it will try and cover itself. If you can introduce these kinds of things pretty quickly, then the market will adjust pretty quickly. The land value will adjust quickly. You'll get these kind of costs reflected in the price developers pay for land in the first place and so not as much will be passed on. (D1)

5.6 The use of covenants

The issue of the growing use of restrictive covenants in new housing estates was raised with all municipal council planners. From the interviews conducted it would appear that the use of private covenants is now becoming widespread. The most common types of covenants are those mandating a minimum floor area and those that prevent any future subdivision. Both of these are designed to reassure prospective buyers that the area they are buying into will not be able to change in future with the addition of smaller houses, medium density or apartments, or through the building of second houses on an existing house block—known as dual occupancies. Covenants are attached to the title of the property and prevent future owners from undertaking certain actions as specified.

One council planner, (P1), had commissioned some research on the topic in his municipality and found that the use of these restrictive legal devices was widespread. He estimated that in some areas more than 90 per cent of all new houses being built were subject to these legal restrictions. This information was only able to be gained through individual title searches. The investigation in this municipality found that these structures were being used as a market strategy to reassure perspective buyers that their investment would be safeguarded against changes to an area, in particular future smaller more affordable housing. This planning manager believed that developers were pandering to fears that may have racist undertones, implying that these covenants would keep out immigrant communities as well as poorer people generally.

Two other planners confirmed that they were aware of the use of restrictive covenants but could not quantify the extent as their use occurs outside the planning process. One of these planners thought that 'the practical relevance of it is questionable at our end of it I think but that's a big push' (P4). The use of covenants in one estate compelled their more widespread use, he argued. This planner confirmed the comments of other interviewees that councils could not control covenant use because they may be introduced through the contract of sale rather than at the time of planning approval over the subdivision. As another planner stated: 'once we issue a statement of compliance which allows the title to be released, it's a commodity that can be bought and sold and we don't have any say in what happens'. (P3)

The concern from a policy point of view is that covenants are designed to prevent change which may be deemed necessary or appropriate in the future—if not the present—such as urban consolidation, dwelling mix, or the inclusion of social housing or aged care accommodation. The apparently widespread use of private covenants is another indicator of the influence of consumer and developer expectations on patterns of housing supply, as compared to strategic planning policy.

6 CONCLUSIONS, POLICY IMPLICATIONS AND AREAS FOR FUTURE RESEARCH

This project set out to address the following questions:

1. Do changes to land use planning policies and mechanisms impact on the types of housing supplied, particularly in new release areas?
2. Are policies designed to bring about urban consolidation affecting the type of housing being built, and if so in what way?
3. Is there a correlation between planning policies and changes in house prices?
4. To what extent and in what way do government policies impact on decisions on housing supply made by the development industry?

6.1 Conclusions

The methodology using data from the Victorian Valuer-General was able to provide a detailed picture of all new housing constructed on vacant land in Melbourne since 1990. While this data has a high level of coverage, in some sense it has limitations, for example, by having a lower coverage level of new housing built after the demolition of a previous building. An estimated undercount of around 33 240 or 7 per cent over 1990 to 2008, based on ABS approval figures, is suggested. Our answers to the research are therefore necessarily qualified. However, the extent of our data analysis combined with interview findings enables at least indicative findings to each of the questions in turn.

On the first question it would appear that most of the changes to planning policies and regulatory mechanisms which occurred during the study period have had little effect on the types of housing supplied. We have analysed both the form and location of housing and investigated details of housing characteristics including housing size, type, density, variety and location in relation to urban centres and transport. Very few of these characteristics show marked change following the introduction of policies intending to alter them. The exception to this seems to be that housing lot size has decreased in this period, although factors other than densification policy may have influenced this reduction. It does seem likely that, at least in the growth areas, the Precinct Structure Planning process has influenced a reduction in average block size as a means of increasing density.

The change in the planning regulatory regime through the introduction of the VPPs in 1996 does not appear to have strongly affected the characteristics of housing supply. In the growth areas, there is a strong shift toward larger dwellings on smaller lots, and little increase in the provision of smaller or attached dwellings. The data does show a converse increase in smaller apartment dwellings in the inner region. There is thus a mix of housing sizes across Melbourne, but not within the regions of Melbourne.

On the second question, the policies designed to bring about urban consolidation do not appear to have had an observable impact on the type of housing being built. No increase in the range of housing types being constructed in the growth areas has occurred. The majority of new housing is built in growth corridors. Multi-unit housing as a proportion of housing in inner areas rose substantially from the early 1990s, but since then has leveled out or fallen. A trend is evident towards smaller dwellings and an increase in one-bedroom dwellings in inner areas, and an increasingly segmented housing supply. The number of multi-unit dwellings within 1 kilometre of principal or major activity centres across Melbourne has fluctuated since 2002, but overall has fallen slightly. The median distance to the nearest train station of new dwellings in the

growth areas has increased to 3.29 kilometres. Overall, the findings suggest that planning policies which sought to increase the proportion of new housing built close to designated activity centres and public transport nodes, specifically train stations, appear to have had very little influence particularly on the urban fringe.

On the third question, views differed between planners, and between planners and developers, over the relationships between planning policies and changes in house prices. Some planners argued that the introduction of the urban growth boundary had not unduly reduced land supply in the growth corridors, and therefore the land price component. Others believed that it had led to some landowners inside the boundary withholding land from sale in the expectation of higher prices. Similarly, differences of opinion were evident on whether there was a lack of competition among development companies inside growth corridors and whether this was influencing price, particularly through controlled land release. Dwellings size had increased significantly, and developers generally argued that this trend had acted to counteract the price impacts of smaller lot sizes. Developers also generally stated that high building costs for apartments over three storeys prevented medium and higher rise construction of multi-unit dwellings outside inner areas, and reduced the affordability of inner urban apartments. Such factors counteracted the intent of planning policies aimed at intensification and affordability.

On the fourth question, there was general agreement among planners and developers that both government policy and developer decisions affected housing supply and that while government policy could influence developer decisions, there was general agreement that development companies were more influential. Government policies generally acted as guidelines within which developers would operate to pursue a series of ends. Planning policies sometimes produced unexpected results, such as planning policies aimed at improving efficiency in approvals leading to no overall reduction in construction times, and a continuation of local variation in planning controls between municipalities.

6.2 Policy implications

The research generally pointed to a limited impact of planning policy on the mix of housing being constructed. Segmented and different housing markets exist between the growth corridors and the inner urban areas catering largely to different demographic groups. Development companies, with some exceptions, generally operate in one of these market types. Change is occurring in that, for example, the size of inner urban apartments is falling and the size of predominantly detached urban corridor dwellings is increasing. However, much change seems not to be strongly driven by government planning policy. The research suggests that governments and market-oriented policies and practices have not satisfactorily addressed many of the emerging pressures on city growth. Developers minimised the impact of government policy on development decisions. One stated that *Melbourne 2030* had no impact on development decisions. Some developers stated that they based their planning on strategic market research into demographic trends, consumer preferences, and market opportunities, and that they understood and catered to market preferences.

Planners generally identified the vague and general language used in planning policy and regulatory instruments as a difficulty. Councils also argued generally that the planning tools available do not provide them with enough power to force change. Most interviewees suggested that strategic policy needed to be supported by more effective implementation measures. The findings thus point to the role of uncertainty in development regulation. Uncertainty can lead to a concentration of the industry to a small number of large players, and restrict the choice of housing products available to

consumers (Evans 2004). Comparatively, housing development in the UK is subject to a regulatory regime that leaves considerable uncertainty about whether or not planning approval is ultimately granted. This system allows for greater scrutiny of development proposals regarding their compliance with policy objectives than in many other countries. But it can also deter smaller developers from entering the market, as these frequently do not have the resources to carry the associated risks of refusal or delays (Gurran et al. 2008). Hence, 'the more uncertain and expensive it is to secure planning approval, the more likely it is that a few large companies will dominate the process' (Gurran et al. 2008, p.40). Uncertainty can lead to a tendency for developers to put resources into activities not directly related to the production of housing but adding to its cost, such as lobbying (Morrison 2009).

Consistent with this view, planners interviewed for the study indicated that the planning framework was not specific enough to require compliance, so that developers constantly used vague and general provisions to reduce requirements while arguing that they were compliant. Developers interviewed for the project also emphasised the importance of development companies attempting to persuade state government and other approvals bodies of the merits of proposals. Most of the developers and planners interviewed for this project expressed some frustration with the lack of clarity of planning policy. Policies that rely on aspirational statements appear to have little influence on the behaviour of the housing development industry. Internationally, limited municipal power in sectors such as transport, water, energy, solid and liquid waste management and land use planning often result in uncertainty (Allen 2003), confusion, and inconsistent and ineffective policy arrangements. The quantitative and qualitative findings in relation to accessibility pointed to the potential importance of direct infrastructure provision and investment by government.

The experience of regulatory uncertainty and vagueness in planning practice can potentially be mitigated by a policy framework that states its objectives and procedures as clearly and as unambiguously as possible, and applies them consistently (Gurran et al. 2008). Government and developer representatives, however, also emphasised the importance of flexibility and negotiation in encouraging innovation.

6.3 Areas for future research

Possible areas of future research include investigating evidence of faster rates of development in inner areas in 1991 than more recently; analysis of the strength of possible market adjustments for increased efficiency of land and housing markets and impacts on supply and demand; the range of factors which affect land supply and price; the relationships between accessibility and housing choice; and factors affecting housing affordability across the metropolitan area. The study of vacant land trends could also be extended to include the broad range of land types used for housing to gain a more inclusive picture of building construction in or near mixed use activity centres. The issue of private covenant use would appear to be an area worthy of further research, firstly to indicate the nature of the covenants and the extent of their use, and secondly to gauge the potential future impact they might have.

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