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National Housing Supply Council

2nd State of Supply Report

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Foreword

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The Hon Tanya Plibersek MP
Minister for Housing
Parliament House
Canberra ACT 2600

Dear Minister,

On behalf of the National Housing Supply Council, I am pleased to present our second *State of Supply Report 2010*. It updates the Council's projections of housing demand and supply over the next 20 years and reflects on the adequacy of construction rates and land supply to meet future needs.

This year, the Council has explored further some of the housing issues identified in last year's foreword: the impact on supply and demand of the global financial crisis, high housing costs affecting lower income home buyers and tenants, and aspects of planning and development assessment processes that constrain housing supply and affordability. It also disaggregates national data to provide more specific 'sub-market' assessments of housing supply, for example, in relation to demand from older households over the next 20 years.

This second *State of Supply Report* also expands the evidence base, especially in relation to land supply. The latter work has been undertaken in conjunction with Commonwealth, state and territory officials. In collating and analysing this information, the report identifies concern about the future adequacy of land supply - both greenfield and infill - and the way in which aspects of the planning and development assessment system currently inhibit the responsiveness to demand of the residential development and construction sectors. That said, while there are encouraging signs in the industry of accelerating adaptation to changing circumstances, there is still widespread resistance to the view that past patterns of construction and urban development are unsustainable. Improving the quality and consistency of data on land and housing supply around Australia is an essential part of the effort to address these issues on the basis of sound evidence, but remains a challenge despite the advances made to date.

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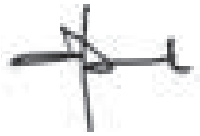
There is also much more for the Council to do to improve its analysis and develop better methods of projecting likely trends. We hope, nonetheless, that this report will provide a valued contribution to improving housing supply and affordability. Our first report drew attention to the shortage of affordable rental housing for households in the bottom 40 per cent of the income distribution. The data presented in the second report make this point even more strongly, drawing attention to the critical role of governments in ensuring access to affordable housing for those dependent on lower incomes. The Council has pointed out that maintaining effort in this arena is an important and challenging priority.

This second *State of Supply Report* is the outcome of the hard work, good thinking and willing engagement of many people, including fellow Council members, staff of the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs, other Australian Government, state and territory agencies, industry organisations and interested individuals. My sincere thanks go to them all.

I would also like to thank you again for your active support for, and engagement in, the work of the Council. We look forward to continuing this relationship and making further progress in the year ahead.

Yours sincerely



Dr Owen Donald
Chair, National Housing Supply Council

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Executive summary

The National Housing Supply Council (the Council) was established in 2008 by the Treasurer and the Minister for Housing to monitor housing demand, supply and affordability in Australia, and to highlight current and potential gaps between housing supply and demand from households. The inaugural *State of Supply Report 2008* was released in March 2009, outlining the Council's demand and supply projections to 2028.

For this second State of Supply Report, the National Housing Supply Council has updated:

- its projections of underlying demand and land and housing supply over 20 years from 2009 to 2029
- the gap between housing demand and supply
- its Key Indicators 1–6 on demand, supply and affordability, especially for low-income renters.

During the past year, the Council has also expanded its collection of data on land supply in partnership with state and territory officials. It has also added Key Indicator 7 on the efficiency of the housing market. As well as updating the demand and supply projections, the Council's 2010 report introduces a second part to highlight topical housing market issues. The 2010 report focuses on the challenges of building infill housing, the efficiency of the housing market and the implications of the ageing of the population on the housing market.

The economic environment has changed in the past 18 months from a period of moderate interest rates and sustained high levels of economic growth to the sudden and major disruption of the global financial crisis. Associated changes in the housing market and building activity have had significant short-term implications for housing supply.

Demand for housing is projected to grow further over the next 20 years

The Council's projections of growth in household numbers reflect growing demand over the next 20 years as the population increases to over 28 million.[1] The greatest pressures are likely to be in south-east Queensland, Melbourne, New South Wales and Perth. Also, ageing of the population and changes in predominant household types are projected to increase underlying demand for medium and higher density dwellings. The demand for separate houses is projected to grow proportionately less quickly.

Key points from the Council's analysis are:

- In 2009, there were an estimated 8.5 million households in Australia (which is higher than the 8.3 million households estimated in the Council's 2008 report).
- By 2014, the number of households is projected to be 9.3 million.

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1 This compares with the Intergenerational Report 2010's estimates of 29.2 million by 2030 (The Treasury, *Australia to 2050: future challenges*, Commonwealth of Australia, Canberra, 2010).

National Housing Supply Council estimates are based on projections of household formation commissioned from Professor Peter McDonald and Dr Jeromey Temple of the Australian Demographic and Social Research Institute, the Australian National University. McDonald and Temple have developed three projection scenarios – low, medium and high – depending on migration rates. More detail is provided in Chapter 2 and McDonald –Temple's (2009) report of the projections on <www.nhsc.org.au>.

- By 2029, the number of households is projected to be 11.8 million (on a medium growth scenario).[2]
- The projected increase of 3.2 million additional dwellings needed to meet underlying demand by 2029 is slightly higher than the 2008 report's medium growth projection of 3.1 million additional households from 2008 to 2028.[3]
- Around two-thirds of the additional demand is projected to be in and around four of the major cities: Melbourne (19 per cent), Sydney (16 per cent), Perth (10 per cent) and Brisbane and surrounding areas in south-east Queensland (21 per cent).
- The demand for separate houses is projected to grow proportionately less quickly than demand for flats, units and apartments.

The approach taken to project underlying demand implicitly assumes that household formation decisions are taken without regard to housing market conditions. However, it is likely that market conditions are affecting household formation decisions—manifested in homelessness, overcrowding, and adult children remaining at home for longer periods.

Recent increases in average household size (following decades of decline) may indicate that housing shortages and costs are leading to larger household sizes and reduced household formation rates. But there are other influences at work, including an increase in the fertility rate and possible changes to household formation patterns associated with the experience of various immigrant groups.

Chapter 2 explains the methodology used and presents the results in more detail (with supporting data tables in Appendix 2).

Supply is also projected to grow (after a slowdown in 2009–2010)

- The stock of private dwellings in Australia is estimated to be 9,009,000 dwellings at June 2009, incorporating revised data for demolitions for the years 2007 to 2009.
- Information provided by the states and territories on land for greenfield and infill development indicates scope for up to 176,000 additional dwellings (gross) a year for 2009-10 and 2010-11.
  - The Council is concerned that if only a small proportion of these potential new dwellings do not proceed to completion (which is highly likely), new dwelling completions will not meet the increase in underlying demand.
- Information provided by the states and territories also indicates that, on average across Australia, over two-thirds of dwelling growth in capital cities from 2009-10 to 2018-19 is expected to be provided through infill development.
  - While nearly all infill activity would be expected to be medium and high density to meet demand growth, only 30 per cent of all dwelling completions in recent years have been flats, apartments or townhouses.
- The Council stresses that land supply projections beyond two years are highly speculative because of uncertainty about whether potential dwellings will be built. Economic, environmental and development-related factors also impact on the pattern and rate of growth in the housing stock.
- The Council has analysed the stock of vacant dwellings identified in the 2006 Census and earlier censuses and has concluded that a portion of future supply is likely to continue to be for holiday and second homes. At any one point in time, a portion of the stock is also likely to be vacant for other reasons (including awaiting repair, demolition, sale or reletting). This portion has been projected to be 5.9 per cent of the net increase in stock in projecting the gap in Chapter 4.

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2 The medium growth scenario is based on (among other parameters) net overseas migration of 180,000 persons a year.

3 The Council's projections range from 2.7 million to 3.7 million in 2029 depending on migration assumptions.

- The Council is keen to see planning reform encompass greater strategic direction and more as-of-right development and code-based assessment. This should be balanced by measures to ensure public engagement at a strategic level. Such reform, as well as further development assessment reform (such as greater use of development assessment panels to approve major projects), should make the housing market more responsive to changes in demand.

Preliminary data on the residential construction industry suggest that a labour shortage is looming, especially as greater numbers of skilled tradespeople retire than the industry is able to replace with new migrants or apprentices.

The global financial crisis has had a significant effect on residential development in 2008-09, and will continue to impact on dwelling completions in the next few years. The impact of the Australian and state governments' responses, including major investment in social housing and the First Home Owners Boost, has been difficult to assess in the short term, especially because the supply effects will be extended over time. Although residential approvals showed signs of recovery in the latter part of 2009, a sustained recovery requires improved confidence among investors and developers, and improved access to development finance, especially in the multi-unit sector.

Chapter 3 provides more detail on these projections as well as on the planning and land development processes for new housing, and the construction industry.

The gap between demand and supply is likely to continue to grow

- The gap between total underlying demand and total supply is estimated to have increased by approximately 78,800 dwellings in the year to June 2009, to a cumulative shortfall of 178,400.
- The gap has increased by more than the Council's projection of 23,000 in the 2008 report. The increase is mostly the result of a larger estimated increase in the number of households in 2008-09 than the Council had projected; 205,900 households instead of the Council's projected increase of 152,000 households under its medium growth scenario.[4]
  - There was an estimated net increase in dwelling supply of 135,000 in the 2008–09 year, or 127,100 net additional dwellings (when adjusted to take vacant dwellings into account). This compares with a medium supply projection of 129,000 additional dwellings in the 2008 report.
- The gap estimate of 85,000 for 2008 has also been revised (to reflect an updated methodology) to 99,500.
- The Council has also updated its longer term estimates of the gap (although they are highly sensitive to the assumptions used).
  - Over the five years to 2014, the overall gap is projected to grow to 308,000 dwellings (based on assumptions of medium growth in supply and underlying demand).
  - By 2029, the same projection assumptions produce a cumulative gap of 640,600 dwellings.

As noted in Chapter 3, if the net increase in the dwelling stock over the next two years is less than the projected longer term supply trend, the gap between demand and supply is likely to increase further.

Chapter 4 provides more detail on the Council's estimates and Appendix 3 sets out the methodology used.

The Council is not alone in projecting an undersupply in housing. Other commentators have estimated a current undersupply of dwellings relative to demand of between 100,000 and 250,000 depending on the time frame and methodology used.

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4 This is because actual net overseas migration was 285,000 people (Australian Bureau of Statistics, *Australian demographic statistics*, Dec. 2009, cat. no. 3101.0, ABS, Canberra, 2010), which was higher than the projected increase in net migration of 180,000 people that the Council's medium projection scenario assumes.

The long-term estimates of the gap may not occur if the market responds to changes in demand by increasing supply. However, the Council has identified a range of constraints in the market that may limit the responsiveness of supply. Even if the market responds to excess demand by increasing supply over time, it is unlikely to provide sufficient housing for people whose incomes are towards the bottom of the household income distribution. A gap might stimulate private investment for some of these household types, like older households. However, a substantial part of the response to this gap needs to lie with government policy.

The Australian Government is implementing policies and program responses to address homelessness and increase construction of both new social housing dwellings and subsidised private rental accommodation (see Chapter 4). These actions will take time to be fully effective and will require significant additional capital and recurrent expenditure to address the full extent of the deficit at the lower end of the housing market.

Housing is still unaffordable for many households

While housing affordability for first home buyers and private renters declined over the decade to 2008, the global financial crisis and lowering of interest rates have subsequently meant short-term improvements in affordability for mortgagees.

In 2007–08, there were over 300,000 lower income home buyers paying more than 30 per cent of their gross income in mortgage repayments (a common definition of 'housing stress'). Around 160,000 of these households were paying more than half of their income in repayments. Many of these mortgagees would have experienced a lowering of repayments during and after the global financial crisis because of lower interest rates.

Renters, however, have not benefited directly from the lowering of interest rates. In 2007–08, some 445,000 lower income households renting privately were in 'housing stress'; around 170,000 paid more than half their gross household income in rent.

These affordability outcomes are the direct result of the ways in which housing supply shortages play out in the market. In 2007–08, there were 814,000 lower income private renters for whom the rents charged for some or all of 1.4 million private rental dwellings were nominally affordable (i.e. not more than 30 per cent of a household's gross income). However, over three-quarters of these rental dwellings were in fact occupied by households in higher income groups, leaving a shortfall of almost 500,000 dwellings that were both affordable and available for those in the bottom 40 per cent of the income distribution.

The strong demand for housing resulting from population growth, coupled with falls in residential construction in many submarkets, is also likely to lead to tighter rental markets across the country.

Chapter 5 outlines data on the affordability of home ownership and renting and updates the key indicators on affordability from the 2008 report.

It is hard to develop 'infill' housing in the current housing market and planning framework

Metropolitan plans for Australia's major cities include targets for the proportion of new housing to be provided through infill development of between 50 per cent and 70 per cent. The Council's demand projections indicate increasing demand for attached and medium-density housing over the next 20 years. The Council has explored the likely increase in supply over the next 10 years from infill development as well as greenfield development.

The Council has noted the barriers to infill development and difficulties that planners and developers face in adding to housing supply in this way. In particular, housing is generally more expensive to build in infill developments than in greenfield ones. For example, in all major cities except Sydney,

it costs more to build a two-bedroom unit in an infill development than a comparable three-bedroom house with a backyard in a greenfield development. Planning approval and development assessment processes generally add time, uncertainty and costs to the development process regardless of location; there are particular challenges in many infill locations. It is one of the factors alongside higher construction and raw land costs that make it generally more expensive and commercially risky to build infill than greenfield dwellings.

Community opposition is often a significant barrier to infill and medium-density development. The options for governments to make up the gap are to increase greenfield land release, increase residential densities on the fringe, or take substantial steps to facilitate infill development. It is also important to consider measures to retain, if not increase, affordable rental in infill areas.

The housing market could work better

In its 2008 report, the Council noted that it wanted to explore the efficiency of the housing market in more detail. Its work in 2009–10 has identified some of the constraints on the efficiency of the housing market, including the planning, development assessment and tax systems. The government is due to release the Henry Review on proposed changes to the tax system. The government's response to the recommendations of the review of the tax treatment of housing could have implications for how well the housing market operates.

Chapter 7 sets out some of the Council's initial thinking on what an efficient housing market would look like and some of the current barriers. The Council plans to focus in 2010–11 on how the planning system and construction industry impact on the efficiency of the housing market, especially the responsiveness of supply to changes in demand.

The ageing population will increase demand for different types of dwellings

Ageing of the population will have significant impacts on the housing sector, as the proportion of older households (those with the reference person[5] aged 65 years or over) is projected to grow from 19 per cent to 28 per cent of all households over the next 20 years. This represents an increase from 1.6 million households to 3.2 million households.

The Council commissioned demand projections for households aged 65 years and over to better understand how demand from this submarket will affect the housing market from 2008 to 2028.

Owner occupation will remain the preferred type of tenure and probably most older people will remain in their detached homes for as long as they can. However, projections of underlying demand indicate that there will be pressures on both private and public rental markets to meet the needs of older renter households. Underlying demand for private rental among older households is projected to rise from 146,200 to 321,400, while public rental demand is projected to rise from 86,500 to 189,800.

The Intergenerational Report 2010[6] projected an increase of 2.6 million in the population of older people from 2010 to 2030.

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5 'Household reference person' is the term used by the Australian Bureau of Statistics to mean the household member whose relationship with all other members of the household identifies the composition of the household in a way that is relevant to family formation. Australian Bureau of Statistics, *Family, household and income unit variables*, cat. no. 1286.0, ABS, Canberra, 2005.

6 The Treasury, *Australia to 2050: future challenges,* Commonwealth of Australia, Canberra, 2010.

As lone-person and couple-only aged households grow in numbers, they may increasingly seek smaller dwellings. Other challenges remain to ensure that there are sufficient options for older households to age in their own home or in alternative appropriate accommodation, such as retirement villages or nursing homes for aged people.

Chapter 8 outlines the Council's demand projections for older households and some of the challenges to the housing stock to respond to these changes.

Ongoing challenges

The Council's work indicates that demand will continue to increase as the population grows, and that this increased demand will put pressure on prices, with a particularly adverse impact on low-income households. The government's significant investment in social and affordable housing will improve the situation for some low-income households. However, the challenges of demand pressures and poor housing affordability are likely to remain unless there is significant supply-side reform.

Immigration in 2008–09 has been higher than expected

Immigration is a key contributor to growth in the labour force, to additional internal demand for goods and services, and to economic growth. It is also the most significant driver of underlying demand for additional housing stock. Net migration rates have increased in recent years, from 135,700 in 2000–01 to 285,300 in 2008–09. However, migration levels do vary over time and have been much lower in the past.

Higher immigration rates have a significant influence on the demand for housing, especially given the large proportion of young adults among the immigrant population. The 2008 report showed the significant effect of a change in migration numbers on housing demand (see Table 1).[7] Immigration in 2008–09 was significantly higher than projected in any of the scenarios modelled below.

These higher migration levels are reflected in the updated demand projections of an additional 3.2 million households between 2009 and 2029.[8] Continued high migration alongside the fall in dwelling production levels in 2009–10 is likely to put more pressure on the housing market, especially for lower income households.

Table 1: Different migration rates and household formation projections

Scenario	Net overseas migration per annum (individuals)	Average number of new households per annum over 20 years
Low growth	120,000	135,000
Medium growth	180,000	161,000
High growth	230,000	183,000

Source: National Housing Supply Council projections.

7 The Council uses projections of the number of individuals in net migration figures as one of the inputs to its projections of changes in the number of households.

8 The number of new households formed is based on Australian propensities (births and deaths) to form households rather than the propensities of new migrants. See <adsri.anu.edu.au/pubs/Kippen/net%20transition%20probabilities.pdf>. The Council's work program for 2010-11 includes exploring any differences between the household formation patterns of migrants and the Australian propensities that the demand projection model uses.

Rental affordability remains an issue (especially for low-income households)

The strong demand for housing resulting from population growth, coupled with falls in residential construction in many submarkets, is also likely to lead to tighter rental markets across the country.

Although affordability has improved for some mortgagees able to secure finance with historically low interest rates, renters have not benefited directly from the lowering of interest rates.

As the Council's Key indicator 4 shows:

- Over 20 per cent of lower income private renters paid rents in excess of 50 per cent of their household income.
- Over 70 per cent of private renters wholly reliant on government income support paid rents in excess of 30 per cent of their total household income including Commonwealth Rent Assistance.
- Over 25 per cent of private renters wholly reliant on government income support paid rents in excess of 50 per cent of their total household income including Commonwealth Rent Assistance.

There has been a significant investment by the government but a gap remains

As noted in Chapter 4 (and in the 2008 report), the government has made a significant investment in social and subsidised housing through the Social Housing Initiative, Nation Building and Jobs Plan, and National Rental Affordability Scheme.

Figure 4.7 outlines the significant increase in the number of these dwellings projected under these initiatives. It also shows the fall in the share of social and subsidised housing that will occur without continued investment.

Alternative mechanisms for financing social and affordable housing, including through the development of the community housing sector, will need to continue to meet demand from low-income households.

Better planning and development assessment systems are needed, aligned with infrastructure delivery, to support housing supply and the growth of cities

The planning system is critical for delivering an adequate supply of dwellings and land to meet future demand. Its importance to improving housing affordability and the vibrancy of cities was noted last year by the Prime Minister.[9]

The Council welcomes the Council of Australian Governments' (COAG) agreement to a set of national criteria for capital city plans to ensure sustainable, liveable cities with affordable housing, as well as COAG's broader housing supply and affordability reform agenda.

State and territory governments already have initiatives under way to streamline development assessment processes and improve the certainty of planning systems. However, greater clarity concerning the basis for developer charges and reform of planning governance would support COAG's objectives for capital cities, as well as remove barriers to new housing supply.

9 Address to the Business Council of Australia, Building a big Australia: Future planning needs of our major cities, 27 October 2009, <http://www.pm.gov.au/node/6282>

In particular, clarity about the roles and responsibilities of the different levels of government in the planning system is needed. The way that cities are planned and infrastructure is delivered could be improved by considering metropolitan or regional governance of planning and related implementation processes.

Closer integration of planning systems with the delivery of infrastructure is needed to support residential development. The financing of this infrastructure is an important issue, as is the planning of the type of infrastructure needed, its quality and the timing of its rollout.

State of Supply Report: Future directions

In the past year, the Council has:

- worked with state and territory planning officials to refine data on housing supply in infill and greenfield development
- conducted workshops on the efficiency of the housing market and on developing a dynamic model of the housing market
- explored the costs of producing infill and greenfield housing (see Chapter 6)
- analysed the vacant dwelling stock (see Chapter 3)
- undertaken some preliminary analysis of the submarkets for aged households and first home buyers (see chapters 2, 4 and 8)
- refined the set of indicators, added an indicator on the efficiency of the housing market, and explored possible indicators of greenfield supply.

In 2010 and 2011, the Council will work on:

- the challenges in meeting additional demand through infill and greenfield housing, including the relative merits of these different forms of development in terms of affordability and sustainability
- a more detailed analysis of the cost of producing housing, including land development and infrastructure
- exploring the supply-side of the housing market further, including the characteristics of the social housing sector, non-private dwellings, the private rental sector and companies involved in land development and housing construction
- developing a greater understanding of some key drivers of underlying demand, including the settlement patterns of migrants, changes in household size and changing housing preferences
- a more fine-grained assessment of the relationship between demand and supply in certain submarkets, including to assess the extent to which increasing prices are excluding moderate income households from owner occupancy.

Part A
Housing demand, supply and affordability

Introduction

Chapter One

Chapter 1: Introduction

The National Housing Supply Council was established in 2008 by the Treasurer and the Minister for Housing to monitor housing demand, supply and affordability in Australia, and to highlight current and potential gaps between housing supply and household demand.[10] The inaugural *State of Supply Report 2008* was released in March 2009.

The 2008 report outlined:

- projections of underlying demand and land and housing supply from 2008 to 2028
- the gap between housing demand and supply, with a particular focus on affordability issues for lower income households
- the Council's data collection and methodology, including the need for more sophisticated modelling and improved data collection and analysis, particularly in relation to land supply for residential development.

This second State of Supply Report updates the findings in the 2008 report and includes additional chapters on the costs and difficulties of constructing infill development, elements of an efficient housing market and implications of the ageing of the population for the housing market. This report also considers the impact of the global financial crisis on housing supply and affordability.

Understanding the housing market

The Council's view of the factors that influence demand and supply in the housing market is outlined in Figure 1.1 (which appeared in the 2008 report). This conceptualisation of the housing market encompasses the:

- demand for rental accommodation (private and social), home ownership and investment
- the processes of providing that housing both through new building and existing dwellings.

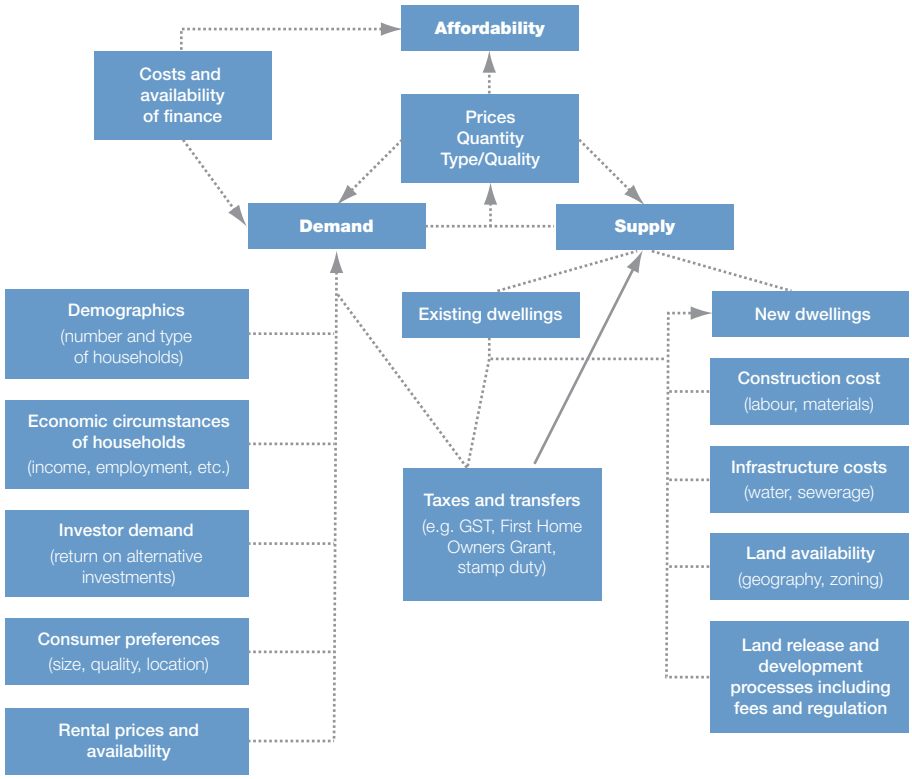
The markets that contribute to the provision of new housing include the land, finance and labour markets as well as markets for other inputs into housing production. Housing competes in the market for land with other possible uses; the planning system is a key determinant of permitted uses and, therefore, of the price of land. The housing market has an interdependent relationship with the labour market. It relies on the supply of labour for construction, but the location of work also drives demand for housing.

While cyclical factors can have a profound effect on housing demand and supply in the short to medium term, the Council's Terms of Reference focus on the longer term and, therefore, the structural influences on housing markets and related policy settings. However, the distinction between structural and cyclical factors is often blurred. It could be argued, for instance, that the long period of economic growth experienced in Australia until the recent global financial crisis has had structural effects on the supply of labour for construction as well as on housing preferences and production. In turn, the present economic situation could have longstanding structural implications for access to development finance and, particularly, for the development of multi-unit dwellings.

10 The Terms of Reference are attached as Appendix 1.

The Council has updated Figure 1.1 from the 2008 report to include the availability of finance.

Figure 1.1: Factors influencing housing supply, demand and affordability



Source: Adapted from Productivity Commission, *First home ownership: inquiry report*, Productivity Commission Melbourne, 2004, p.5, viewed 25 February 2010, <www.pc.gov.au/projects/inquiry/housing/docs/finalreport>.

The concept of submarkets is also essential for understanding how the housing market operates, as housing market influences and outcomes differ by submarkets in terms of location and the characteristics of groups seeking housing. For example, the report explores the following submarkets:

- The report's projections of demand, supply and the gap between them are broken down by state and territory.
- Demand from first home buyers and renters is analysed in chapters 2 and 4, and affordability outcomes for lower income renters and home buyers are considered in Chapter 5.
- Chapter 8 explores demand projections from older households.

Overall, it is hard to analyse the housing market, and its efficiency, in isolation from other markets and without considering the local, national and international interconnections. While much of the data underlying the 2008 report focused on the national level, with some state and territory breakdowns where available, the Council has identified the need to explore the dynamics in the

Australian housing market further. This report sets out some further information on the particular issues faced by developers in constructing infill developments and more detailed supply data for the states and territories where possible.

This report also sets out in Chapter 8 some of the pressures that will emerge as a result of the ageing of the population.

State of Supply—methodology

The Council's work for the 2008 report focused on projecting demand, supply and the gap between them, as well as on developing indicators of demand, supply and affordability outcomes for lower income households. This report adds data on greenfield and infill development (Chapter 3) and an indicator of the efficiency of the housing market (Chapter 7).

The Council's focus on longer term scenarios and structural influences on supply and demand (rather than on shorter term cyclical factors) has led it to develop projections based on medium- to long-term trends in construction activity (supply projections) and population growth (underlying demand projections). The methods used are outlined in Chapters 2 and 3 and Appendix 3. As noted in the 2008 report, long-range projections are error prone at the best of times. Thus, 20-year projections should only be regarded as illustrating the possible consequences of proceeding on a certain trajectory.

The demand projections have been updated in this report to reflect higher population projections. The supply projections are informed by data of better quality on demolitions and land supply in the states and territories. The Council's future work program includes continued efforts to develop better and more consistent data on the current state of land and housing supply.

Key findings of the Council's 2008 report

The Council's projections over the 20-year period to 2028 demonstrated that levels of dwelling production based on recent trends were likely to be insufficient to meet Australia's emerging housing needs. It projected that underlying demand for dwellings would grow by around 3 million over the period 2008 to 2028, with a net increase of 2.7 million dwellings projected during that period (medium underlying demand and supply scenarios).

The housing shortfall in 2008 was estimated at around 85,000 dwellings. This estimate was based on the incidence of homelessness and the low level of vacancy rates in the private rental markets.[11] Assuming medium growth in underlying demand and supply (including levels of construction), the shortfall was projected to rise to 431,000 by 2028. The annual additional shortfall was projected to be 23,000 dwellings in 2009-2010.

Housing affordability for first home buyers and private renters declined over the decade to 2008. In 2005–06, there were 280,000 home buyers in so-called 'housing stress' (i.e. paying more than 30 per cent of their income). Of these households, 131,000 had housing costs that exceeded 50 per cent of their income. In 2006, there was a shortfall of more than 250,000 affordable and available dwellings for lower income private renters (i.e. those in the bottom 40 per cent of the income distribution).

11 The Council's methodology for calculating the gap has been updated in this report to estimate changes in demand and supply since 2001 (minus some proportion of unoccupied dwellings) (see Chapter 4).

Changes in outlook since the 2008 report

The 2008 report was launched a few months after the global financial crisis emerged and just following the announcement of the Government's Nation Building and Jobs Plan in February 2009.

It is now clear that the impact of the global financial crisis on Australia has been less pervasive and severe than in other advanced economies. The financial crisis has led to some tightening in lending criteria among lending institutions, making access to credit tougher for residential property developers and, to a lesser extent, some residential purchasers. A longer-lasting effect of the crisis on supply is likely to be reduced multi-unit development resulting from more restrictive access to development finance for multi-unit building activity.

Some of the key changes since March 2009 that are likely to influence the balance between demand and supply include the following:

- Interest rates were lowered by the Reserve Bank of Australia to record-low emergency levels of 3 per cent in April 2009 and have been raised five times following positive economic performance to 4.25 per cent as at April 2010. Mortgage interest rates have varied in response to this as well as to changes in lending institutions' costs of raising funds. The Reserve Bank of Australia's indicator lending rate series shows that the average bank variable rate mortgage in August 2008 was 9.6 per cent. It bottomed at 5.75 per cent in May 2009. It has since risen to 6.9 per cent in March 2010.[12]
- Unemployment is recovering from a high of 5.8 per cent (trend rate) in mid-2009 following a low of 4.1 per cent in early 2008. Employment has recovered more quickly than expected, with the unemployment rate reaching 5.4 per cent in January 2010.[13]
- Population growth has been relatively rapid. The estimated resident population increased by over 2 per cent to 21.9 million in the year to June 2009. Both natural increase and net migration rates are above trend, especially migration. Net migration was 213,700 in 2007–08 and 285,300 in 2008–09. The latter increase represents 64 per cent of total population growth in 2008–09. Migration alone increased the total population by more than 1.3 per cent.[14]
- House prices declined in some segments of the market during 2008, while staying stable or increasing in the traditional first home buyer segments. House prices have been rising more broadly since early in 2009. Australian unit values increased by 13.5 per cent during 2009, while house values increased by 10.4 per cent.[15]
- After rising by more than 8 per cent on average in 2008 (the fastest rate in 20 years), capital city residential rents increased at a progressively slower pace over 2009 to 5.4 per cent a year in the December quarter.[16] The movements have been even more marked in some cities. In Melbourne, for instance, rents increased by annualised rates of 11 to 13 per cent over the period from June quarter 2007 to December quarter 2008, before falling back to an annualised rate of increase of 6 per cent in June 2009.[17]

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12 Reserve Bank of Australia, *Indicator lending rates*, RBA, Canberra, 2010, accessed 16 April 2010, <www.rba.gov.au/statistics/tables/xls/f05hist.xls>.

13 Australian Bureau of Statistics, *Labour Force, Australia, Jan. 2010*, cat. no. 6202.0, ABS, Canberra, 2010.

14 Until 2008–09, annual population growth had not exceeded 2 per cent since 1982, when the Australian Bureau of Statistics' present population series commenced. Net annual overseas migration has exceeded 1 per cent of the total population only once (in 2006–07). Australian Bureau of Statistics, *Australian demographic statistics, June 2009*, cat. no. 3101.0, ABS, Canberra, 2009.

15 RP Data website, accessed 24 February 2010, <www.rpdata.com/press_releases/australias_residential_property_market_takes_a_breather_in_december.html>.

16 Australian Bureau of Statistics, *Consumer Price Index, Australia, Dec. 2009*, cat. no. 6401.0, ABS, Canberra, 2010.

17 State Government of Victoria, Australia, Department of Human Services, Rental Reports, June 1999 to June 2009.

- Building activity continued to fall across all sectors during the first six months of 2009, but picked up in the detached dwellings sector in the second half of 2009. Total dwelling approvals reached nearly 15,000 per month in December 2009 from a low of just over 10,000 in January 2009.[18]
- The First Home Owners Boost was phased out between October and December 2009 and price caps for the First Home Owners Grant have been introduced in some states.

The impact of these changes is discussed in the demand, supply and affordability chapters of this report.

Key elements of the Council's 2010 report

This second State of Supply Report updates the projections and indicators from the 2008 report as well as the evidence on affordability (Part A). This report expands on the aggregate analysis in the 2008 report of supply and demand and the gap between demand and supply by considering:

- the stock of vacant dwellings
- more detailed data on land supply from infill and greenfield development
- the residential construction workforce
- the impact of government assistance for first home buyers on the housing market.

This report introduces a second section to highlight topical housing market issues (Part B), including:

- the difficulties of building infill housing
- the efficiency of the housing market
- the implications of an ageing population on demand and supply.

Analysis of some of these issues will be repeated annually as the Council's evidence base and modelling capability expand.

The report is structured as follows:

- Part A: Demand, supply and affordability
  - Chapter 2 explores the drivers of underlying and effective demand and presents projections of future underlying demand.
  - Chapter 3 projects housing supply, and outlines a variety of influences on the levels of housing production and prices including the planning and development assessment systems and the construction industry.
  - Chapter 4 compares the Council's projections of housing demand and supply, identifying a shortfall, and outlines the impact of government assistance on supply shortages.
  - Chapter 5 examines housing affordability in more detail and explores trends for renters (public and private) and home owners, focusing particularly on the availability of affordable supply for low-income households.
- Part B: Focus on specific housing market issues
  - Chapter 6 explores the difficulties of achieving infill development in Australian cities, including the costs relative to greenfield development.
  - Chapter 7 outlines the elements of an efficient housing market and ways of improving efficiency.
  - Chapter 8 outlines the implications of the ageing of the population on demand for housing.
- Chapter 9: Conclusion—highlights issues arising from the report and outlines how these will shape the Council's future work.

18 Australian Bureau of Statistics, *Building approvals, Australia, Dec. 2009*, cat. no. 8731.0, ABS, Canberra, 2010.

Demand for housing

Chapter Two

Chapter 2: Demand for housing

Key points

- The Council estimates that, in June 2009, there were 8.5 million households in Australia (an increase of 200,000 over the estimate of 8.3 million households in the *State of Supply Report 2008)*.
- The number of households is projected to be 11.8 million by 2029 (medium underlying demand projection), representing a net increase of 3.2 million households between 2009 and 2029. This is slightly higher than the 2008 report's corresponding net increase of 3.1 million households between 2008 and 2028.
- Around two-thirds of the additional underlying demand is projected to be in and around four of Australia's major cities: Melbourne (19 per cent), Sydney (16 per cent), Perth (10 per cent) and Brisbane and surrounding areas in south-east Queensland (21 per cent).
- Changing demographics (particularly a smaller proportion of couples with children and ageing of the population) is likely to increase underlying demand for smaller dwellings proportionally more than demand for separate houses.
- Underlying demand for subsidised housing, such as public housing, is also likely to increase as the population ages, unless there is a significant increase in the availability of affordable private rental accommodation.

Overview of housing demand

The Council has identified factors that influence demand and supply in the housing market (see Figure 1.1 in Chapter 1). The factors that contribute to the demand for rental accommodation (private and social), home ownership and investment are:

- demographics (number and type of households)
- the economic circumstances of households (including income and employment status)
- investor demand (return on alternative investments and perceptions of relative risk)
- consumer preferences (size, quality and location)
- price and availability of rental accommodation and houses for purchase
- taxes and transfers (e.g. GST, stamp duty and government assistance to first home buyers)
- the cost and availability of finance.

The 2008 report noted that the impact of the global financial crisis on the housing market was likely to be mixed. The Council expected that even when activity in the market might otherwise be significantly reduced, prices would be likely to hold up because of the undersupply of housing identified by the Council, especially given the significant stimulation of the market at the bottom end by initiatives such as the First Home Owners Boost.

This is consistent with the views expressed more recently in Reserve Bank of Australia publications and statements, that the demand for housing is likely to remain high because of:

- increased demand fed by population growth and demand for second dwellings
- continued increase in household discretionary income enabling a high ratio of mortgage repayments to gross household income
- government concessions (grants and stamp duty reductions) for first home buyers being capitalised over time into house prices.[19]

Housing trends and profiles

Historically, Australians have preferred living in detached houses that they are buying (and are repaying a mortgage on) or own outright. In 2006, just under 70 per cent of households were owner-occupiers (although half of these still had a mortgage). Although the proportion of owner-occupiers has remained relatively stable since 1996, the proportion with a mortgage has increased from 26.5 per cent to 34.7 per cent.

Each of the tenure types has a distinct age profile (Figure 2.1), which is consistent with a traditional housing career pathway of renting, buying a house with a mortgage and then owning outright near or in retirement.[20] Figure 2.1 shows that:

- the median age of renters is 38, although the age distribution is skewed towards younger households
- the median age of households with a mortgage is 42
- the median age of outright owner-occupiers is 61.

While this suggests that renting is predominantly a transitional tenure for younger people who will ultimately buy, a small proportion of older households also rent. The average age of first home purchase has increased over the last 20 years, with many younger households renting for longer periods of time than in the past.

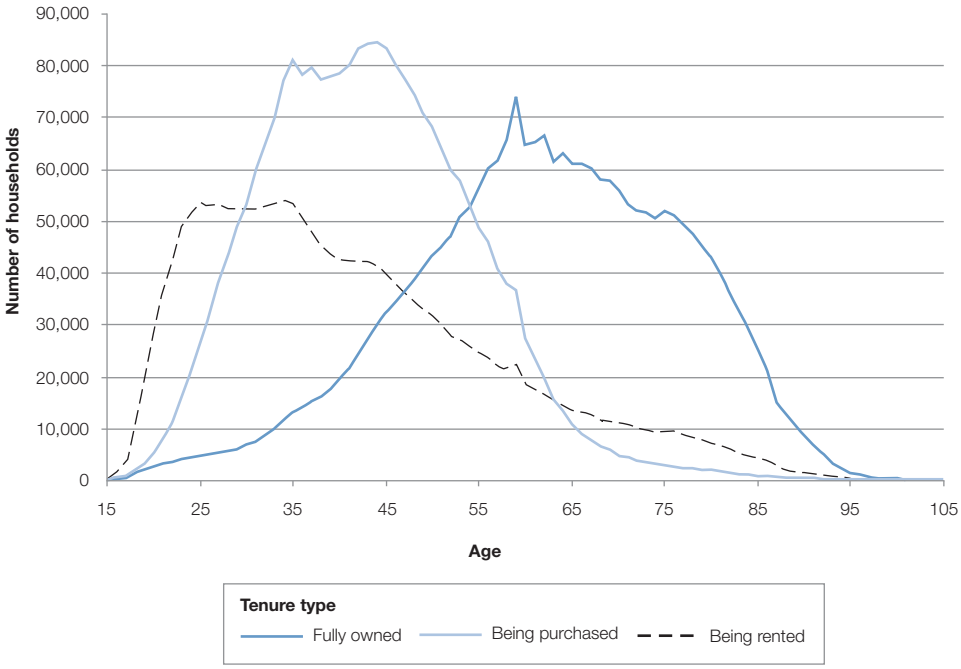
It is also likely that rising house prices are reducing access to home ownership at progressively higher household incomes. This could ultimately reduce home ownership rates across the population and increase demand for rental housing, even among older age groups. Changes in patterns of household formation and housing choices will also reflect the preferences and expectations of the so-called Generations Y and Z (born around 1980 to the mid-1990s, and from the mid-1990s onwards, respectively).

The Council's 2008 report provided profiles of first home buyers and renters, which have been updated and expanded for this report (see boxes 2.1 and 2.2).

19 R Battellino, Deputy Governor, Reserve Bank of Australia, 'Housing and the economy', speech to National Housing Conference, Melbourne, 25 November 2009, reproduced at <www.rba.gov.au/speeches/2009/sp-dg-251109.html>; T Richards, Head, Economic Analysis Branch, Reserve Bank of Australia, 'Housing market developments', speech to Committee for Economic Development of Australia Housing Forum, Sydney, 29 September 2009, reproduced at <www.rba.gov.au/speeches/2009/sp-so-290909.html>.

20 A housing career pathway is the sequence of housing stages that an individual moves through over their lifetime. See P Flatau, P Henershott, R Watson and G Wood, *What drives housing outcomes in Australia? Understanding the role of aspirations, household formation, economic incentives and labour market interactions*, AHURI Positioning Paper No. 64, 2003, p. i.

Figure 2.1: Tenure type by age of reference person, 2006 (number of households)



Source: Australian Bureau of Statistics, *2006 Census of Population and Housing* 'Family/Household Reference Person Indicator and Age by Tenure Type', ABS, Canberra, 2009. Figure generated using ABS TableBuilder.

Box 2.1: Profile of first home buyers

- There were 190,881 first home buyers in the year from January to December 2009—this represents 25.8 per cent of all dwellings financed over this period (compared with 135,000 first home buyers and 17.4 per cent of dwellings financed from March 2007 to March 2008).
- Ninety-two per cent of first home buyers in 2007–08 had a mortgage, compared with 95 per cent in 2005–06.
- Couple households made up the majority (65 per cent) of first home buyers with a mortgage in 2007–08, and just over half of these were couples with children (compared with 68 per cent of first home buyers with a mortgage in 2005–06, with just over half of these being households with children).
- In 2007–08, 22 per cent of first home buyers with a mortgage were lone-person households (compared with 20 per cent in 2005–06).
- The average home loan for first home buyers had risen to $290,100 by December 2009 (from $261,000 in September 2008).
- In 2007–08, first home buyers with mortgages paid an average of $471 per week on housing costs, and purchased a dwelling costing $356,000 (compared with $415 per week for a dwelling costing $310,000 in 2005-06).
- The average weekly housing costs in 2007–08 for those who purchased new dwellings were higher, at $427 per week, than for those who purchased established dwellings ($395 per week).
- In 2007–08, first home buyers with a mortgage had an average weekly gross income of $1,990 (compared with $1,544 in 2005-06), which is 21 per cent higher than the average for all households.
- In 2007–08, 15 per cent of first home buyers were lower income households with equivalised disposable household income between the 10th and 30th income percentiles. More than two-thirds of these households spent more than 30 per cent of their gross household income on housing costs.
- Sixty-four per cent of first home buyers in 2007–08 were households with the reference person aged under 35 years. Less than 10 per cent of first home buyers were 45 years or older.
- Between 1995–96 and 2007–08, the proportion of first home buyers with a mortgage buying new homes, as opposed to established homes, declined from 23 per cent to 9 per cent. This trend is likely to have been offset somewhat since 2007–08 by the additional assistance provided to first home buyers purchasing new homes.
- In 2007–08, 29 per cent of first home buyers with a mortgage purchased medium- and high-density housing, up from 15 per cent in 1995–96.

Sources: Australian Bureau of Statistics, *Housing Finance, Australia, Jan 2010*, cat. no. 5609.0, ABS, Canberra, 2010; Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007-08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009; Australian Bureau of Statistics, *Housing Occupancy and Costs, 2007-08*, cat. no. 4130.0, ABS, Canberra, 2009.

Box 2.2: Profile of renters

- Over 1.9 million households in 2007–08 rented from private landlords (compared with 1.7 million in 2005–06), and a further 0.3 million households rented from state housing authorities (as public tenants).
- Private renters comprised 24 per cent of all households in 2007–08, compared with 18 per cent of households in 1994–95.
- Renters tend to be a younger group than owner-occupiers. In 2007–08, lone-person and couple-only households with the reference person aged under 35 years were most likely of all lifecycle groups to be renting from private landlords (62 per cent and 50 per cent respectively).
- In 2007–08, single parent households were more likely to be renting (60 per cent) than own their own home (38 per cent), and were the lifecycle group most likely to be renting from a state housing authority (16 per cent).
- In 2007–08, households renting from private landlords paid an average of $267 per week in rent, representing 18 per cent of their gross average weekly income.
- Lower income households renting from private landlords in 2007–08 paid an average of $236 per week in housing costs, representing 28 per cent of their average weekly income.
- In 2006, renters were three times more likely than owner-occupiers to have changed address within the previous 12 months. At the 2006 Census, 35 per cent of people who were renting had lived at a different address within the last year, compared with only 10 per cent of owner-occupiers.
- In June 2007, 92 per cent of public tenant households received a government pension or payment as their main source of income.
- Over half (55 per cent) of public tenant households in June 2007 were single adults, and single-parent households made up another 21 per cent.
- Nearly 29 per cent of public tenant households in June 2007 were aged 65 years or over. Only 3 per cent were under 25 years of age.
- There were 1,038,000 individuals and families receiving Commonwealth Rent Assistance as at June 2009.[21]

Sources: Australian Bureau of Statistics, *Australian Social Trends, 2008*, cat. no. 4102.0, ABS, Canberra, 2008; Australian Government Department of Families, Housing, Community Services and Indigenous Affairs, *Annual report 2008–2009*, Commonwealth of Australia, Canberra, 2009; Australian Government Department of Families, Housing, Community Services and Indigenous Affairs, *Housing Assistance Act 1996: Annual report 2006–07*, Commonwealth of Australia, Canberra, 2009; Australian Bureau of Statistics*, Housing Occupancy and Costs, 2007–08, cat. no. 4130.0, ABS, Canberra, 2009;* Australian Bureau of Statistics*, Housing Occupancy and Costs, 2005-06, cat. no. 4130.0.55.001, ABS, Canberra, 2007;* further sources referenced in Appendix 2, Table 5.2.

21 This number is not equivalent to households because, for instance, independent people sharing a rental dwelling are each eligible to receive Commonwealth Rent Assistance, subject to their level of income and other criteria.

Projecting demand based on demographic changes

This chapter projects the **underlying demand** for housing (i.e. the need for housing based on the number of households in the population). Underlying demand differs from the demand actually expressed in the market (i.e. effective demand). The level of underlying demand is driven mostly by migration and other demographic factors—or the first of the seven factors identified at the beginning of this chapter.

By contrast, **effective demand** is the quantity of housing that owner-occupiers, investors and renters are able and willing to buy or rent in the housing market. It is affected by the full range of market forces—including the number of households, incomes, prices, the economic situation, the availability of finance, government policy settings and assistance, and the current supply of dwellings.

Several of the influences on underlying housing demand have changed over time and are likely to continue to change. Examples are:

- changing overseas and interstate migration levels, with settlement patterns often linked to employment opportunities and preferred retirement locations
- regional differences in housing opportunities, along with mismatches between housing location and labour markets
- delays in household formation linked to, among other things, changes in the duration of education and higher house prices
- people living longer, with a marked increase in the number people aged 65 years and over.

Changes in employment levels, interest rates, asset valuations and returns, access to credit and government assistance to first home buyers have altered the level and pattern of effective demand, although the net result is unclear. Over the past 12 to 18 months, parts of the housing market have been stimulated by government first home buyer assistance, with demand being brought forward. However, other sectors of the market—notably demand for upper quartile existing housing and investment in the private rental sector—were dampened. There are signs of increasing strength in these sectors, especially for higher priced homes, but the longer term implications of these changes are not yet clear.

Recent Australian Bureau of Statistics data indicate that the long term decline in the average number of people per household may have ended.[22] This may be due in part to an increase in Australia's fertility rate (births per woman) from 1.727 in 2003-04 to 1.978 in 2008-09,[23] as well as to different household characteristics of recent migrants. The Council intends to explore this further in its future work.

Current demand

The starting point for projections of future underlying demand is the current demand for dwellings in Australia. In 2009, there were an estimated 8.5 million households in Australia, up from the estimate of 8.3 million households in the Council's 2008 report.

The impact of migration on demand for housing

Net overseas migration is a key driver of the underlying demand for dwellings. Net migration rates have increased strongly in recent years, from 135,700 in 2000–01 to 285,300 in 2008–09. Higher immigration rates have a significant influence on the demand for housing, especially given the large proportion of young adults in migration flows.

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22 Australian Bureau of Statistics, *Housing Occupancy and Costs, 2007-08,* cat. no. 4130.0, ABS, Canberra, 2009.

23 Australian Bureau of Statistics, *Demographic Statistics, Sept 2009,* cat. no. 3101.0, ABS, Canberra, 2010.

While demand forecasts usually incorporate longer term migration figures only, housing demand is also affected by changes in the number of temporary migrants staying for more than six but less than 12 months, and by changes in the number of Australian residents living overseas.

Interstate migration is also an important determinant of population growth and distribution across Australia's states and territories. Interstate migration depends on many factors, such as varying economic opportunities, overseas migration and settlement patterns, and lifestyle choices. According to Australian Bureau of Statistics (ABS) projections (and those the Council has commissioned), all of the capital cities will experience larger percentage growth than the rest of each state or territory. The result will be a further concentration of Australia's population around capital cities.[24]

The Council's model for projecting demand

The Council's 20-year outlook for housing demand is based on projections commissioned from Professor Peter McDonald and Dr Jeromey Temple (Australian Demographic and Social Research Institute, Australian National University). Their model estimates the probable formation of different household types based on various assumptions relating to migration and household transition.[25]

The projections illustrate the housing demand for occupied dwellings (by structure and tenure type) that would result from changing demographic and social trends (population size, births, deaths, international migration, interstate migration, age structure changes, and family and household formation and dissolution). These are all demographic demand-side factors. The projections do not consider supply-side factors such as availability of land, the number of vacant dwellings, and affordability. The projections also do not take into account the impact of housing markets and prices on demand.

Low, medium and high household growth scenarios have been developed using different assumptions about net overseas migration:

- **Low:** 120,000 individuals a year (with shares to states and territories as per the 2008 ABS projections)
- **Medium:** 180,000 individuals a year (with shares to states and territories as per the 2008 ABS projections)
- **High:** 230,000 individuals a year (with shares to states and territories as per the 2008 ABS projections).

The net overseas migration assumptions used in the Australian Treasury's *2010 Intergenerational Report* (the IGR 2010) are the same from 2012 and future years as the assumptions in the medium growth scenario (180,000 people a year).[26] The IGR 2010 incorporates higher short-term net overseas migration figures, with an average of around 244,000 a year for the three years to June 2009, falling to 180,000 people a year from 2012.

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24 This is consistent with the Major Cities Unit's conclusions that much of the growth in the population will occur in capital cities, making Australia an even more urbanised population than it is today. (Australian Government, Infrastructure Australia, Major Cities Unit, *State of Australian cities 2010*, Commonwealth of Australia, Canberra, 2010, accessed 1 April 2010, <http://www.infrastructureaustralia.gov.au/files/MCU_SOAC.pdf>).

25 The projection methodology is described more fully in the 2008 report (see page 15). Further detail on the model and the projections can be found in McDonald and Temple's (2009) report on the National Housing Supply Council website at <www.nhsc.org.au/housing_demand/default.htm>.

26 Australian Government, The Treasury, *Intergenerational Report 2010*, Australia to 2050: future challenges, Commonwealth of Australia, Canberra, 2010, accessed 1 April 2010, <http://www.treasury.gov.au/igr/igr2010/>.

The *State of Australian Cities 2010* report, prepared by the Major Cities Unit,[27] refers to ABS population statistics and the migration projections in the IGR. Household projections used in the *State of Australian Cities 2010* report were released by the ABS in 2004.

The Council's scenarios do not consider the possible impacts on population movements of housing supply factors. If housing supply in one region is constrained or if prices rise relative to other regions, net migration flows may be affected.

Demand projections for older households are considered further in Chapter 8.

Updated projections of underlying demand for housing

In the 2008 report, the Council projected that the number of households would increase from 8.3 million in 2008 to 11.4 million in 2028—or an increase in underlying demand of 3.1 million households over the 20 years to 2028 (or 153,000 net new households a year). This was based on the medium underlying demand scenario.

Under the Council's updated medium scenario projections, the number of households is projected to be 11.8 million by 2029—an increase of more than 3.2 million (161,000 a year) in underlying demand over the 20-year period from 2009 (see Table 2.1).

The increase is the result of an adjustment by the ABS to its base population estimates and the higher than previously anticipated population growth in 2008–09.

Table 2.1: Projections of national underlying demand by household type ('000 households, with percentage of increase in brackets), 2009 to 2029, medium household growth scenario

Household type	Year, as at 30 June							
	2009	2010	2011	2012	2013	2014	2019	2029
Two-parent families	2,689.4 (31.5%)	2,714.9 (31.3%)	2,740.7 (31.0%)	2,767.0 (30.7%)	2,793.7 (30.5%)	2,820.9 (30.2%)	2,960.4 (29.2%)	3,228.4 (27.5%)
Single-parent families	973.6 (11.4%)	986.4 (11.4%)	999.0 (11.3%)	1,010.6 (11.2%)	1,021.2 (11.1%)	1,030.8 (11.1%)	1,081.0 (10.7%)	1,212.6 (10.3%)
Couples without children	2,318.5 (27.2%)	2,370.8 (27.3%)	2,423.2 (27.4%)	2,475.6 (27.5%)	2,527.6 (27.6%)	2,578.7 (27.6%)	2,813.1 (27.7%)	3,170.5 (27.0%)
Lone-person households	2,210.8 (25.9%)	2,270.4 (26.1%)	2,332.5 (26.4%)	2,396.8 (26.6%)	2,463.3 (26.9%)	2,531.6 (27.1%)	2,896.5 (28.6%)	3,712.8 (31.6%)
Group households	337.7 (4.0%)	344.2 (4.0%)	350.3 (4.0%)	355.9 (4.0%)	361.3 (3.9%)	366.4 (3.9%)	389.8 (3.8%)	435.7 (3.7%)
Total households	**8,530.2 (100.0%)**	**8,686.7 (100.0%)**	**8,845.7 (100.0%)**	**9,005.9 (100.0%)**	**9,167.1 (100.0%)**	**9,328.4 (100.0%)**	**10,140.9 (100.0%)**	**11,760.0 (100.0%)**

Note: Figures are rounded to the nearest '00. Percentages were calculated using raw data. Numbers and percentages may not sum to totals due to rounding.

Source: National Housing Supply Council projections based on McDonald–Temple medium household growth scenarios, 2009 to 2029.

27 Australian Government, Infrastructure Australia, Major Cities Unit, *State of Australian cities 2010*, Commonwealth of Australia, Canberra, 2010, accessed 1 April 2010, <http://www.infrastructureaustralia.gov.au/files/MCU_SOAC.pdf>

Table 2.2 compares additional underlying demand on a state and territory basis under the low, medium and high household growth scenarios. These projections are sensitive to assumptions about rates of net overseas migration.

Table 2.2: Additional households by region for low, medium and high household growth scenarios ('000 households), 2009 to 2029 as at 30 June

Region	Low growth scenario	Medium growth scenario	High growth scenario
Sydney	359.1	514.9	644.7
Rest of NSW	304.5	311.6	317.5
Total NSW	***663.6***	***826.5***	***962.2***
Melbourne	469.7	600.0	708.4
Rest of Vic.	156.0	163.9	170.5
Total Vic.	***625.7***	***763.9***	***879.0***
Brisbane	303.3	361.4	409.9
Rest of Qld.	498.3	539.8	574.4
Total Qld.	***801.5***	***901.2***	***984.3***
Adelaide	89.9	123.0	150.6
Rest of SA	46.6	49.7	52.2
Total SA	***136.5***	***172.7***	***202.8***
Perth	267.4	335.9	393.0
Rest of WA	99.1	107.0	113.6
Total WA	***366.5***	***442.9***	***506.6***
Hobart	20.4	23.1	25.3
Rest of Tas.	21.2	23.1	24.7
Total Tas.	***41.6***	***46.2***	***50.0***
Total NT	***31.2***	***34.3***	***36.9***
Total ACT	***38.9***	***42.2***	***44.9***
Australia	**2,705.6**	**3,229.8**	**3,666.6**
South-east Qld (a)	591.6	672.4	739.7

Note: Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

(a) South-east Queensland includes the statistical divisions of Brisbane, Gold Coast, Sunshine Coast and West Moreton and Toowoomba Regional Council (Cambooya Shire – PtA, Crows Nest – Pt A, Jondaryan Shire – Pt A, Rosalie Shire – Pt A and Toowoomba City).

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios, 2009 to 2029.

Low household growth scenario

The low growth scenario assumes net migration rates (international and interstate) at the same rate as over the period 2001–06 (when net overseas migration was 120,000 people a year). As a result, this scenario projects a smaller increase in households for Australia as a whole when compared with the other scenarios.

Under the low growth scenario, the areas of greatest growth in underlying demand are projected to be south-east Queensland (29,600 households a year) and Melbourne (23,500 households a year). Growth of an additional 18,000 households a year would occur in Sydney and 13,400 households a year in Perth.

Medium household growth scenario

Under the medium growth scenario (net overseas migration of 180,000 people a year), the areas with the greatest projected increases are south-east Queensland, Melbourne, Sydney and Perth. Compared with the low growth scenario, the medium growth scenario projects higher numbers of additional households (and therefore greater increases in underlying demand) for all areas.

Of the additional underlying demand projected for the 2009–29 period, 20.8 per cent is in south-east Queensland, 18.6 per cent is in Melbourne, 15.9 per cent is in Sydney and 10.4 per cent is in Perth. Nearly two-thirds of additional demand for all of Australia is projected to be in these four locations. The balance of New South Wales accounts for another 9.6 per cent of additional demand in this period.

High household growth scenario

Under the high growth scenario (net overseas migration of 230,000 people a year), a total of 3,666,900 additional households is projected for Australia over 20 years, or 183,000 additional households a year. Again, the areas with the greatest increases are projected to be south-east Queensland, Melbourne, Sydney and Perth. Compared with the low growth scenario, the high growth scenario projects higher underlying demand in all locations.

Under this scenario also, the areas outside the capitals are projected to have much the same levels of annual net migration as under the medium growth scenario, but the net migration to the capital cities is projected to be much larger. Sydney's net annual migration would more than double under this scenario compared with the medium growth scenario.

Table 2.3 shows the cumulative increase in households nationally, starting from 30 June 2009, for selected years under each of the three scenarios.

Table 2.3: Cumulative additional households projected under low, medium and high household growth scenarios ('000 households), from June 2009, selected years

Year	Low growth scenario	Medium growth scenario	High growth scenario
2011	268.0	315.5	355.1
2014	677.2	798.2	899.1
2019	1,361.6	1,610.8	1,818.3
2024	2,039.6	2,423.2	2,742.9
2029	2,705.6	3,229.8	3,666.6

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios for the 20 year period from June 2009.

Projections of demand by dwelling and tenure

The Council has also undertaken some projections of demand by dwelling and tenure type, although they are only indicative of trends in demand for various dwelling types by different types of household. The model assumes that the dwelling and tenure preferences of each cohort of the population (by age, household type and location) for the 20 years to 2029 will be the same as that cohort's proportional use of each dwelling and tenure type in 2006. That is, the model assumes that the 2006 Census distributions of dwelling type and tenure type by region, type of household and age of reference person will remain the same throughout the projection period.

A variety of factors could produce preferences and housing outcomes that are very different from the actual patterns of housing in 2006. For instance, it is likely that, unless present trends change, the demand for rental dwellings and public housing will continue to grow.

Table 2.4 suggests that, based on these assumptions, demand for separate houses will grow proportionally less than demand for other types of dwellings, including semi-detached dwellings and flats. However, if the supply of dwellings does not match anticipated demand, or if the supply is not affordable, demand may be redirected. For example, households may retain their dwelling preference but change their location, or they may change their dwelling preference within their location. Lack of supply may also prevent or defer the formation of new households.

Table 2.4 projects the outcome of anticipated changes in the population profile (as outlined in Table 2.1) on the demand for different dwelling types over the 20 years to 2029.

Table 2.4: Projections (medium growth scenario) of demand by dwelling structure ('000 dwellings), 2009 to 2029

	Year, as at 30 June						Per cent increase
Dwelling structure	2009	2011	2014	2019	2024	2029	2009–29
Separate house	7,146.1	7,398.7	7,785.0	8,445.0	9,110.5	9,761.3	36.6
Semi-detached	577.3	602.3	640.3	701.8	762.6	824.6	42.8
Flat	694.2	726.6	776.3	852.4	923.2	1,001.2	44.2
Other	112.6	118.1	126.7	141.7	157.1	172.8	53.5
Total	***8,530.2***	***8,845.7***	***9,328.4***	***10,140.9***	***10,953.4***	***11,760.0***	***37.9***

Note: 'Other' includes caravans, cabins, houseboats, improvised homes, tents, sleepers-outs and houses or flats attached to a shop, office, etc. Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council projections based on McDonald–Temple medium household growth scenario, 2009 to 2029.

Table 2.5 indicates that demand for public housing is projected to increase in a relative sense by much more than demand for other tenure types. This is because the types of households (by age and other characteristics) that now tend to occupy public housing are set to increase relative to households with other age and household type characteristics. By contrast, the relative demand for private rental housing is projected to fall (essentially because of a projected reduction in the proportion of younger households). These projections also indicate that, in a proportional sense, owner occupation increases slightly over the period, reflecting the positive correlation between age and the current probability of home ownership.

Table 2.5: Projections (medium growth scenario) of demand by tenure type ('000 dwellings), Australia, 2009 to 2029

Tenure type	Year, as at 30 June						Per cent increase 2009–29
	2009	2011	2014	2019	2024	2029	
Owned/Purchasing	6,056.6	6,283.2	6,629.4	7,235.4	7,857.8	8,458.3	39.7
Public rental	350.3	363.7	384.2	420.5	460.3	501.2	43.1
Other rental	1,968.8	2,038.4	2,145.1	2,300.4	2,436.1	2,587.1	31.4
Other	154.5	160.4	169.7	184.6	199.1	213.5	38.2
Total	***8,530.2***	***8,845.7***	***9,328.4***	***10,140.9***	***10,953.4***	***11,760.0***	***37.9***

Note: 'Other rental' includes private rental and community housing; 'other' includes dwellings occupied rent free, on a life-tenure scheme and tenure type not stated. Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council projections based on McDonald–Temple medium household growth scenario, 2009–29.

Conclusions

This chapter projects the **underlying demand** for housing (i.e. the potential need for housing based on projected household formation rates). Since it relies on a demographic model, it assumes that the factors driving additional demand are demographic in nature—for example, births, relationship formation and breakdown, and deaths. It does not incorporate the impact of economic factors such as changes in house prices, rents or capacity to pay on demand.

Under the medium household growth scenario presented in this chapter, the number of households in Australia is projected to increase by over 3.2 million over the next 20 years, or by an average of 160,000 households a year. The low and high growth scenarios project increases of 2.7 million households (135,000 a year) and 3.7 million (183,000 a year), respectively.

Fully accommodating growth of 160,000 households a year would require gross production of over 180,000 new dwellings a year.[28] As demonstrated in the following chapter, this is a substantial challenge when judged against the demonstrated capacity of industry and governments to increase housing production to a sustained new high.

If the supply of additional housing does not keep up with increased underlying demand, the outcomes may include higher prices (which should stimulate additional supply, but might further reduce effective demand for privately produced housing), homelessness, more people living in caravans or sharing accommodation, larger household sizes and adult children staying longer in the parental home. Low-income households would be particularly disadvantaged.

Recent increases in average household size (following decades of decline) may indicate that housing shortages and costs are influencing larger household sizes and reduced household formation rates. But there are other influences at work, including an increase in the fertility rate and possible changes to household formation patterns.

The Council intends to explore some key drivers of underlying demand in next year's report, including the settlement patterns of migrants, changes in household size and changing housing preferences.

28 After allowance for demolitions and to maintain the present proportion of housing stock that is unavailable at any one time to meet additional demand for a primary residence (second home and homes vacant for repair, renovation or sale).

Housing supply

Chapter Three

Chapter 3: Housing supply

Key points

- The stock of private dwellings in Australia is estimated to be 9,009,000 dwellings at June 2009, incorporating revised data for demolitions for the years 2007–09.
  - The revised demolitions data mask the fall in production levels as a result of the global financial crisis.
- The medium trend projection for housing supply, based on a continuation of the trend for average annual net additions to the housing stock since 1980, would see total growth of 2,998,600 dwellings in the period 2009 to 2029 (an average net additional increase of just under 150,000 dwellings per annum).
- Between January 2008 and September 2009, average quarterly house completions fell by 3 per cent and multi-unit dwelling completions fell by 7 per cent, when compared with quarterly completions over the previous 10 years.
  - The largest falls occurred in New South Wales, where completions for houses fell by 39 per cent and for multi-unit dwellings by 33 per cent.
- Information on the land and dwelling supply pipeline provided by the states and territories indicates potential supply of up to 176,000 additional dwellings (gross) a year in 2009-10 and 2010-11.
  - The Council is concerned that if only a small proportion of these potential new dwellings do not proceed to completion (which is highly likely), new dwelling completions will not meet the projected increase in underlying demand.
  - The Council regards this as a highly likely scenario because:
    - imminent greenfield release has consistently been less than expected due to staggered lot releases by current owners, and other sources of attrition
    - infill development is difficult to predict, especially in the present financial environment
    - major projects may be delayed considerably—and have yields reduced—by public consultations and development assessment processes.
- Information provided by the states and territories also indicates that on average over two-thirds of dwelling supply in capital cities between 2009-10 and 2018-19 is expected to be through infill development.
- While nearly all infill activity is likely to be multi-unit development, only 30 per cent of all dwelling completions in recent years have been flats, apartments or townhouses.
- The Council stresses that land supply projections beyond two years are highly speculative because of uncertainty about whether potential dwellings (infill and greenfield) will be built. Economic, environmental and development-related factors impact on the pattern and rate of growth in housing stock.
- The Council has analysed the stock of vacant dwellings identified in the 2006 Census and earlier censuses. It has concluded that a portion of future supply is likely to continue to be for holiday and second homes. At any one point in time, a portion of the stock is also likely to be vacant pending major repair or demolition or for reasons associated with turnover in the market. The portion of new supply that will not be available to meet underlying demand has been projected to be 5.9 per cent of the net increase in stock.

- The Council is keen to see that reform of planning and development assessment policy and processes encompasses:
  - a more strategic approach to engaging stakeholders and the general community in the rationale for growth and change
  - better and more consistent planning, delivery and funding arrangements for hard and soft infrastructure
  - improved governance and facilitation of major development precincts
  - more as-of-right development, code-based assessment and use of development assessment panels for residential development applications.
- Preliminary data on the residential construction industry suggest that a labour shortage is looming, especially as skilled tradespeople retire in greater numbers than the industry is able to replace with new migrants or apprentices.

Overview of supply

The factors identified in Figure 1.1 (in Chapter 1) that influence supply are:

- construction costs (labour, materials)
- infrastructure costs
- land availability (geography, zoning, environmental and heritage constraints)
- land release and development processes (including fees and regulation)
- taxes and transfers.

Land prices and time taken to complete construction are also factors.

One of the Council's challenges is to project future supply. This is difficult in relation to greenfield areas because of data limitations and the many factors influencing the conversion of raw land to completed residential estates. Moreover, land identified and zoned for residential development is usually used for a variety of purposes in addition to housing.

The challenge is even greater within established urban areas (infill development) whether in relation to existing residential areas or on land previously used for other urban purposes (brownfield development). The identification of development opportunities and their conversion involves a greater number of independent players with even more uncertain time frames. Apart from known major projects, there is little to guide the Council on the projected rate of additions to housing stock other than past experience.

In addition to updating last year's projections with more comprehensive data provided by state and territory government representatives on the COAG Data Sub-Group, this chapter also:

- analyses information on vacant dwellings, to assess whether vacant dwellings could be used to add to the supply of occupied housing and to review ways to take into account vacant dwellings as part of the projections
- updates information on the supply pipelines for greenfield and infill developments
- examines the state of the construction industry.

For future reports, the Council intends to develop more robust estimates as it obtains improved data on housing markets and supply factors, including input constraints.

Existing supply

As a starting point in the *State of Supply Report 2008*, the Council estimated that the stock of private dwellings in Australia was 8,860,000 in June 2008. This estimate started with 2006 Census data and incorporated data on completions and stock losses. Using a similar methodology, but with revised estimates of demolitions, the Council estimates that the stock of dwellings at June 2008 was 8,874,200 and at June 2009 was just over 9 million dwellings (see Table 3.1). Updated demolitions data mean that the stock at June 2008 is now higher than was estimated in the 2008 report.

Table 3.1: Existing supply, 2009

		Number of dwellings
1	2006 ABS Population Census occupied private dwellings and unoccupied dwellings adjusted for undercounting	8,605,800
	plus	+
2	ABS dwelling completion data for 2007, 2008 and 2009	438,100
	minus	–
3	Estimated stock losses in 2007, 2008 and 2009 due to demolition	34,900
	equals	=
	Total supply in 2009 (rounded to nearest '00)	**9,009,000**

Source: Adapted from Australian Bureau of Statistics, *Census of Population and Housing – Details of Undercount,* cat. no. 2940.0, ABS, Canberra, 2007; ABS, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009; National Housing Supply Council estimates.

Projecting supply to 2029

The 2008 report projected future dwelling supply based on the trend in growth of aggregate housing supply (as measured by Australian Bureau of Statistics data on completions) since 1980 (adjusted for loss due to demolitions).

The Council has used the same methodology in this report to update its dwelling supply projections to 2029. It uses three scenarios of future supply:

- The low supply scenario is based on a trend rate of the lowest number of net additions in any one year for Australia as a whole since 1980.
- The medium supply scenario is based on a trend rate using the average annual net additions since 1980.
- The high supply scenario rate is based on the highest number of net additions in any one year for Australia as a whole since 1980.

More information about this methodology is included in Chapter 3 and Appendix 3 of the 2008 report.

The cumulative impact of projected building activity on total supply from 1 July 2009 is set out in Table 3.2. These estimates include updated adjustments for the trend in growth of aggregate housing supply since 1980 for losses due to demolition.

Table 3.2: Projected net increase in supply of dwellings, Australia, low, medium and high scenarios, 2009 to 2029

Time period	Low supply scenario	Medium supply scenario	High supply scenario
2009–10 to 2010–11	232,400	282,100	340,900
2009–10 to 2013–14	585,000	710,300	858,400
2009–10 to 2018–19	1,183,600	1,437,100	1,736,700
2009–10 to 2028–29	2,421,200	2,940,100	3,553,200

Sources: Projections are based on dwelling completion trend, 1 July 1980 to 30 June 2009, from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009, and National Housing Supply Council estimates for completions net of demolitions.

Changes from the 2008 report

The supply projections of the 2010 report incorporate improved estimates of demolitions based on additional census information and data from state and territory planning agencies where available.

In the 2008 report, demolition rates were calculated based on the difference in the total dwelling counts between the 2001 and 2006 Censuses and the number of completions reported by the Australian Bureau of Statistics for the same period. The 2010 report uses the same methodology, with two changes:

- In the 2008 report, the total dwelling counts included 'other dwellings' in the census data. These dwellings, however, are not counted in the building activity completions data. This year's methodology includes only the number of houses, townhouses and apartments from the census data.
- State or territory data are used where available.

This new methodology has reduced the estimated annual supply losses due to demolitions, making an upward adjustment to the estimate of the stock of around 14,300 dwellings a year. The 2008 report estimated demolitions to be around 24,100 (or 16.0 per cent of completions) a year, while the 2010 report estimates the demolitions to be around 9,800 (or 6.5 per cent of completions) a year.

As a result, this change masks the decline in building activity that has occurred since the 2008 report, which the Council would expect as part of the global financial crisis.

Figures 3.1 to 3.9 outline dwelling production trends, including dwelling completions for Australia as a whole and by state and territory.

Over the 20 years of updated supply projections (medium trend) commencing from 2010, the projected average net annual increase in dwellings is 147,000, or 1.4 per cent a year (see Appendices 2 and 3). By contrast, the average annual increase in the number of households is projected to be around 161,500, or 1.6 per cent (medium underlying demand), indicating a growing shortfall between supply and demand. Chapter 4 analyses the imbalance between current and future demand and supply and compares production and gap estimates in this report with estimates in the 2008 report.

As noted above, improved information on demolitions on a jurisdiction-by-jurisdiction basis has been included in the projections in this report. Further details are provided in Appendix 3. The Council intends to investigate demolition rates further in future reports.

Breaking down projections by states and territories

The projected total of 2,940,100 net additional dwellings produced under the medium supply scenario is based on a trend rate using the average annual net additions since 1980. The low and high projections are based on the scenario that national production tracks at the lowest and highest trend levels experienced since 1980 (see Table 3.3). Projections for states and territories are based on the lowest, average, and highest trend data for each individual state and territory. The sum of these state and territory figures would not be expected to add up to the low, medium, and high trend data for Australia as whole.

Table 3.3: Projected additional dwellings by state and territory for low, medium and high dwelling production adjusted for demolitions ('000 dwellings), 2009 to 2029

	Low supply scenario	Medium supply scenario	High supply scenario
NSW	452.1	659.3	881.2
Vic.	541.7	833.7	1,101.6
Qld.	520.9	804.3	1,168.1
SA	83.4	149.5	209.7
WA	298.3	409.3	601.5
Tas.	15.2	30.2	43.3
NT	5.4	11.5	19.1
ACT	24.4	42.4	71.8
Australia		2,940.1	

Note: Figures are rounded to the nearest '00. Projections by state and territory are based on the lowest, average and highest trend data (from 1 July 1980 to 30 June 2009) for each individual state and territory. The sum of these state and territory figures would not be expected to add to the low, medium and high data for Australia as a whole.

Sources: Australian Bureau of Statistics, *Building Activity, Australia, September 2009*, cat. no. 8752.0, ABS, Canberra, 2009; and National Housing Supply Council estimates for completions net of demolitions.

Variations in production levels are possible

While the average net national increase in dwellings (gross production minus estimated demolitions) was 130,900 a year over the period 1 July 1980 to 30 June 2009, net annual additions to supply varied by as much as 47.4 per cent (between 106,500 and 157,100) over this period (see Table 3.4).

Table 3.4: Variations in gross completions, 1981 to 2009

	Average annual additions	Minimum annual additions	Maximum annual additions	Percentage increase from minimum to maximum annual additions
NSW	36,400	24,300	45,900	89.1
Vic	30,900	21,700	40,000	84.5
Qld	34,200	21,300	48,900	129.7
SA	7,600	4,200	10,600	149.9
WA	15,600	10,700	21,300	99.9
Tas	2,600	1,300	3,800	201.8
NT	1,200	700	2,000	192.3
ACT	2,400	1,500	4,000	175.6
Australia	130,900	106,500	157,100	47.4

Note: Figures for annual additions are rounded to the nearest '00. Figures for states and territories are the lowest, average and highest annual data for each individual state and territory. The sum of these state and territory figures would not be expected to add to the figures for Australia as a whole. Figures for Australia are the lowest, average and highest annual data for Australia as a whole.

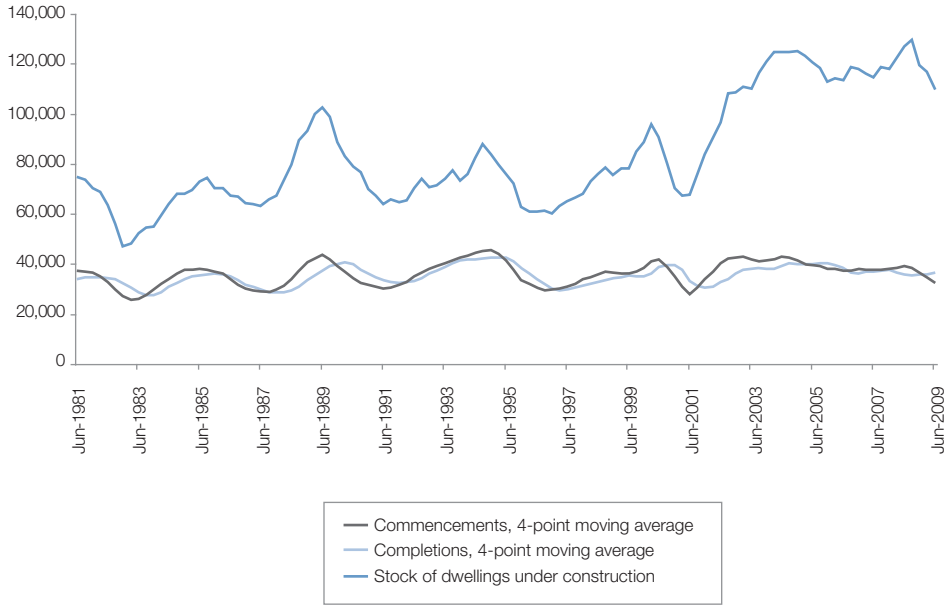
Source: Australian Bureau of Statistics, *Building Activity, Australia, September 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Construction activity

The historic volatility of gross housing construction activity (not considering demolition rates) and the variation between different states and territories in activity levels over time are shown in Figures 3.1 to 3.9.

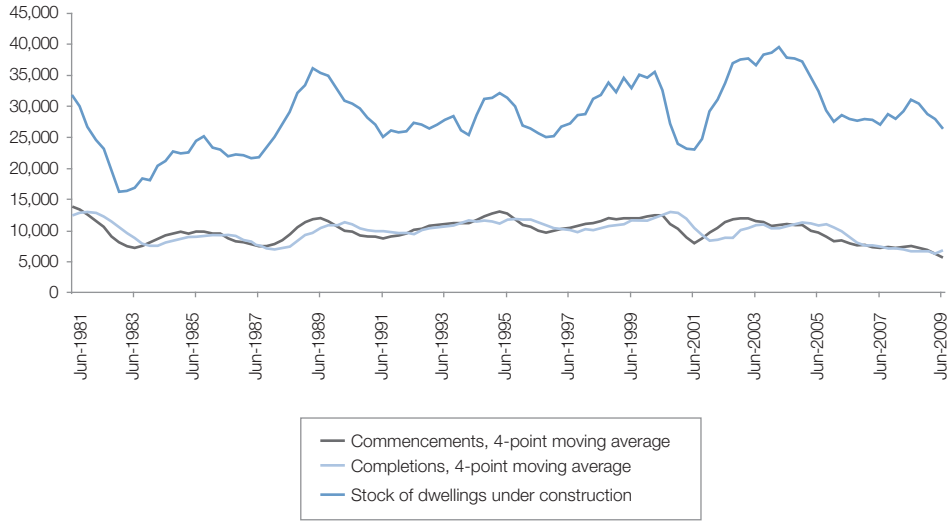
It is clear from these graphs that actual building activity outcomes in any one year may vary significantly from expectations that are based on longer term trends. At any one time, there may also be significant differences in housing industry activity between different jurisdictions. In addition, while the long-term trend is reasonably stable over the 28-year period for Australia as a whole, this does not hold at individual state and territory level.

Figure 3.1: Dwelling construction activity per quarter, 1981 to 2009, Australia



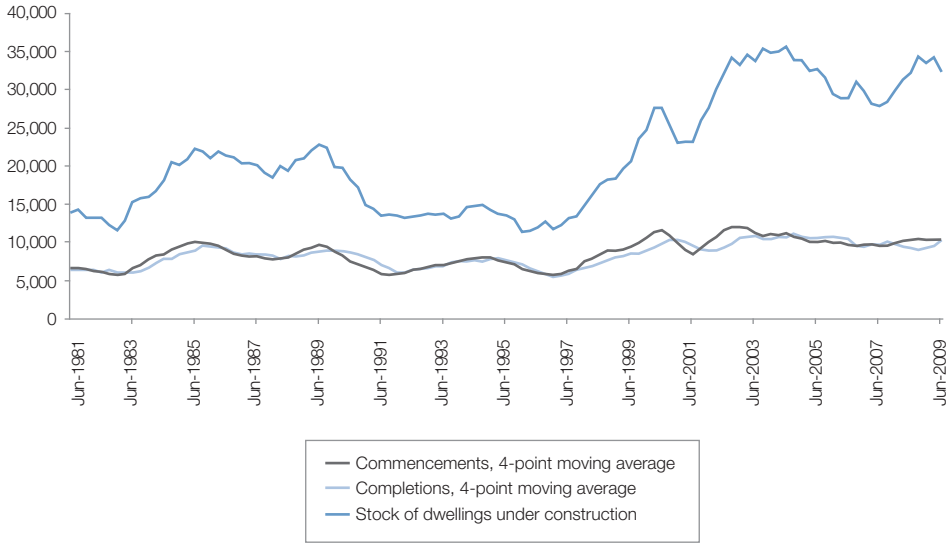
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.2: Dwelling construction activity per quarter, 1981 to 2009, New South Wales



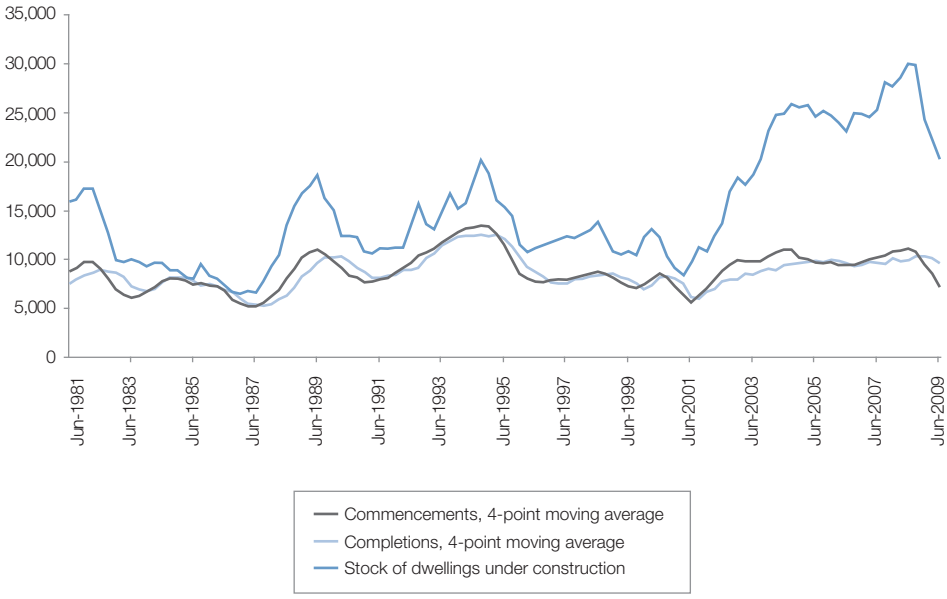
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.3: Dwelling construction activity per quarter, 1981 to 2009, Victoria



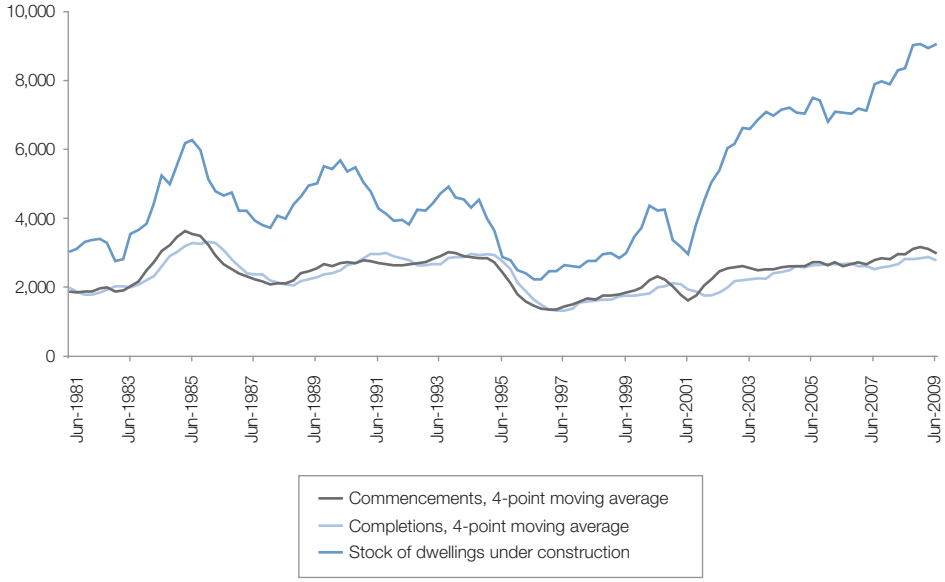
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.4: Dwelling construction activity per quarter, 1981 to 2009, Queensland



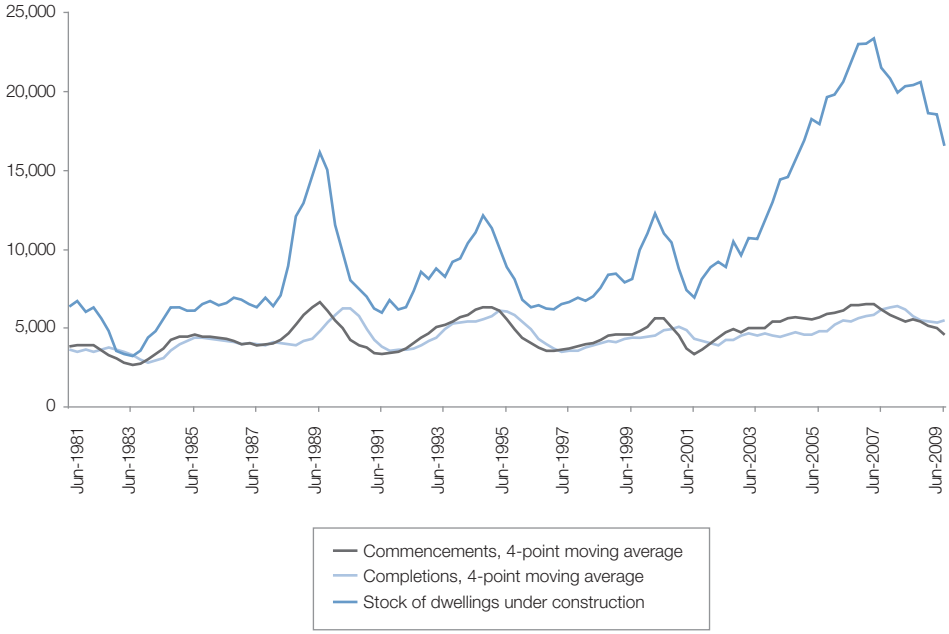
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.5: Dwelling construction activity per quarter, 1981 to 2009, South Australia



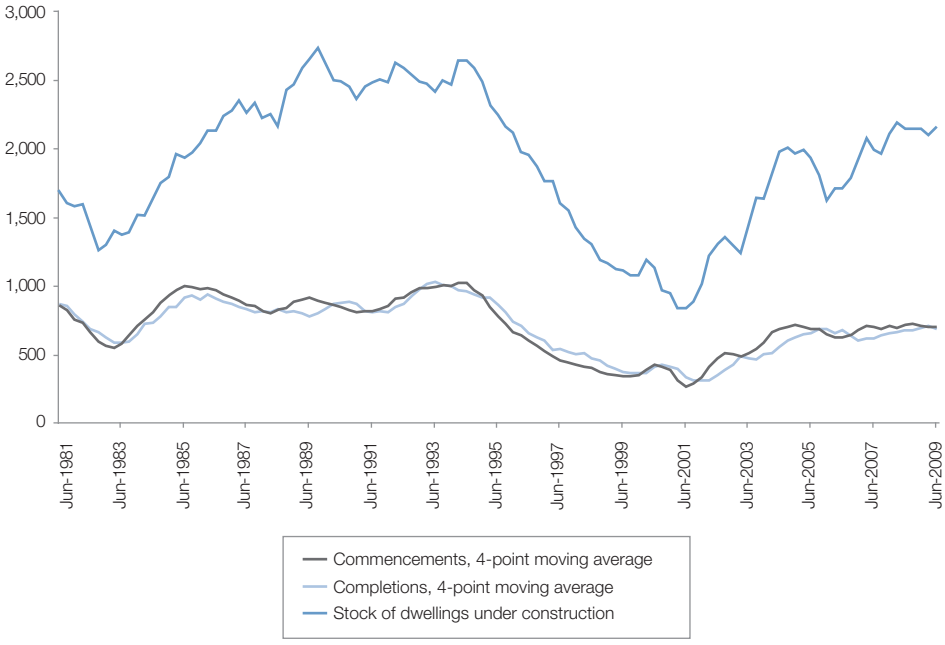
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.6: Dwelling construction activity per quarter, 1981 to 2009, Western Australia



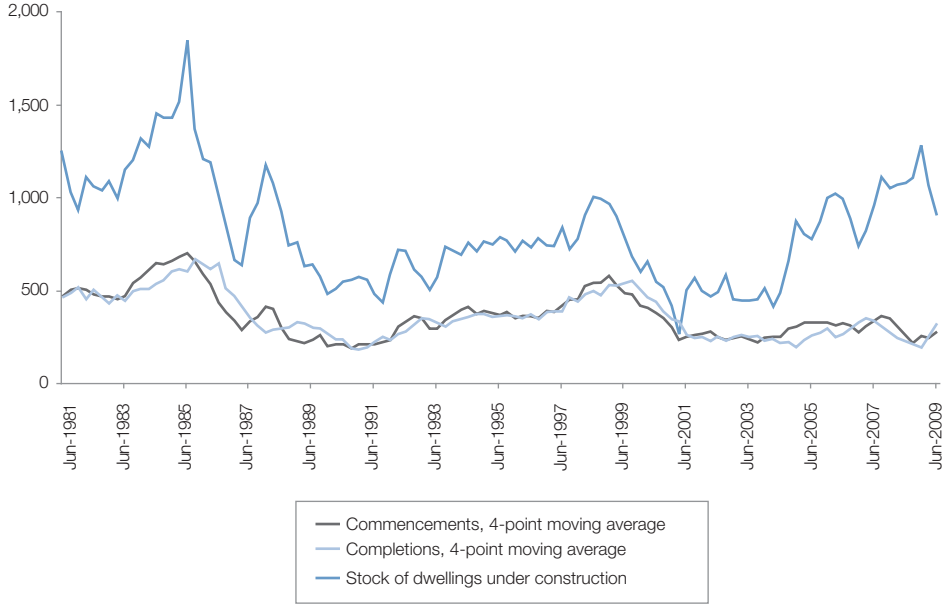
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.7: Dwelling construction activity per quarter, 1981 to 2009, Tasmania



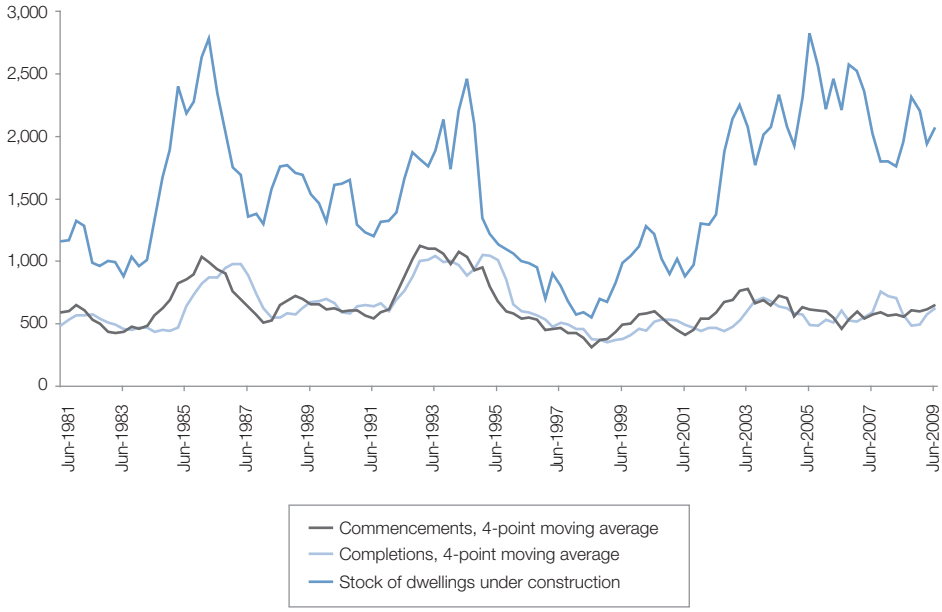
Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.8: Dwelling construction activity per quarter, 1981 to 2009, Northern Territory



Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Figure 3.9: Dwelling construction activity per quarter, 1981 to 2009, Australian Capital Territory



Source: Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Short-term construction activity trends and outcomes

In the 2008 report, the Council noted that the shorter term projections could be optimistic given economic circumstances. Lack of investment and credit restrictions appear to have led to a drop in dwelling commencements in some jurisdictions, particularly in the multi-unit sector (see Box 3.1).

The actual number of dwelling units commenced in 2008–09 was 131,600, which was significantly below the 158,500 dwelling units commenced in 2007–08 and the 152,200 dwelling units commenced in 2006–07.

Although residential approvals showed signs of recovery in the latter part of 2009, a sustained recovery requires improved confidence among investors and developers and improved access to development finance, especially in the multi-unit sector.

Box 3.1: What have the effects of the global financial crisis been on dwelling production levels?

Building activity levels generally dropped in 2008 and 2009 as a result of the global financial crisis. In 2008–09, compared with the previous ten years:

- the average number of approvals for houses across Australia fell by seven per cent
- the average number of approvals for non-house dwellings (generally multi-unit dwellings) fell by 16 per cent.

The table indicates that the greatest falls occurred in New South Wales (where approvals for houses fell by 35 per cent and for multi-unit dwellings by 40 per cent) and Queensland (where approvals for houses fell by ten per cent and for multi-unit dwellings by 20 per cent). Building approvals for houses also fell in Western Australia by five per cent over that period.

In spite of the falls nationally, approvals for houses and multi-unit dwellings rose slightly in Victoria and quite considerably in South Australia over this period. Approvals for multi-unit dwellings also rose in Western Australia. The fall in building approvals, particularly in the multi-unit development sector, is likely to have implications for housing supply in the short to medium term.

House and other dwellings, average monthly approvals and per cent change, January 1998 to December 2007 and January 2008 to December 2009

	House			Other dwelling types		
	Average monthly 1998–2007	Average monthly 2008–2009	Per cent change	Average monthly 1998–2007	Average monthly 2008–2009	Per cent change
NSW	1,927	1,253	-35	1,720	1,039	-40
Vic.	2,633	2,729	4	930	1,008	8
Qld.	2,112	1,907	-10	1,024	818	-20
SA	684	806	18	171	224	31
WA	1,514	1,441	-5	335	368	10
Subtotal for five states	**9,208**	**8,554**	**-7**	**4,339**	**3,656**	**-16**

Note: 'Other dwelling types' comprise apartments, terraced houses and other medium density dwellings as well as about one per cent non-residential dwellings (such as rooming house units).

Source: Australian Bureau of Statistics, *Building Approvals, Australia, December 2009*, Tables 1–6, cat. no. 8731.0, Canberra, 2010.

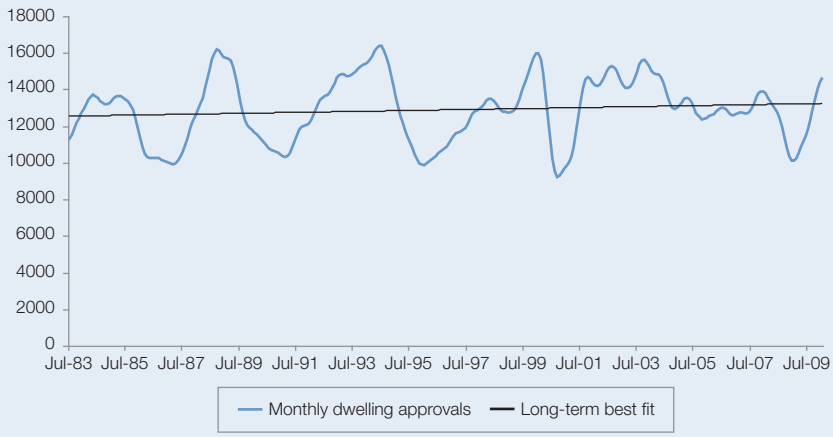
Completions lag approvals by around 12 to 18 months. Therefore, the changes in the number of completions shown in the table below may reflect factors in train in 2007 and 2008 before the onset of the global financial crisis. The fall in completions across Australia of three per cent for houses and seven per cent for multi-unit dwellings reflects very significant falls in completions in New South Wales. Completions in New South Wales were already significantly below the long-term average and trending downwards before the start of the global financial crisis. Nationally, these falls mask the significant increases in completions in South Australia and Western Australia for multi-unit construction.

House and non-house dwellings, average quarterly completions and per cent change, January 1998 to December 2007 and January 2008 to September 2009

	House			Other residential		
	Average quarterly 1998–2007	Average quarterly 2008–2009(a)	Per cent change	Average quarterly 1998–2007	Average quarterly 2008–2009(a)	Per cent change
NSW	5,490	3,373	-39	4,585	3,074	-33
Vic.	7,445	7,538	1	2,311	2,254	-2
Qld.	5,943	6,406	8	2,702	2,909	8
SA	1,843	2,224	21	375	594	58
WA	4,102	4,309	5	776	1,141	47
Subtotal for five states	**25,772**	**24,918**	**-3**	**11,161**	**10,434**	**-7**

Note: (a) 2008–2009 does not include December quarter 2009.

Source: Australian Bureau of Statistics, *Building Activity, Australia, September 2009*, Table 38, ABS cat. no. 8752.0, Canberra, 2010.



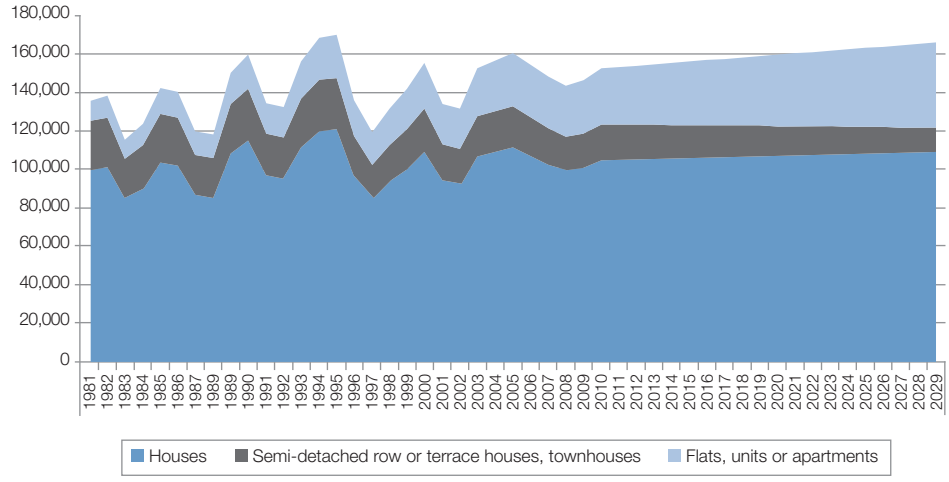
Source: Australian Bureau of Statistics, *Building Approvals, Australia*, *Jan 2010*, Table 6, cat. no. 8731.0, ABS, Canberra, 2010.

Type of dwellings

Despite the relatively larger decline in multi-unit dwelling approvals and completions over 2008 and 2009, as shown in Box 3.1, Figure 3.10 below and Table A3.9 show that over the longer term there has been a decline in detached house completions relative to flats, units and apartments. This is likely to reflect the housing preferences of the increasing proportion of one- and two-person households without dependent children.

Around 30 per cent of all dwelling completions in recent years have been flats, apartments or townhouses.

Figure 3.10: Type of production (gross)



Note: Actual completion data used up to 2009. Projections used thereafter.

Source: Projections are based on dwelling completion trend, 1 July 1980 to 30 June 2009, from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Unoccupied dwellings

Around 10 per cent of private dwellings (830,000) were identified in the 2006 Census as unoccupied on census night. Unoccupied private dwellings included dwellings that were vacant for sale, to let, for repair or for demolition, newly completed dwellings, holiday homes and dwellings that were vacant for other reasons or for no apparent reason.

> The vacant stock identified in the 2006 Census was roughly equivalent to six times the number of new dwellings completed each year, and eight times the number of homeless people in 2006.

In the 2008 report, the Council committed to do further research to identify those vacant dwellings potentially available for rent or sale and to better understand the implications of changes in the stock of vacant dwellings.

This analysis has shown that most of these vacant dwellings are not located in the areas where demand–supply gaps exist. The areas with the lowest proportions of unoccupied dwellings are high-growth areas in, and in the immediate vicinity of, the capital cities. Comparing information for the capital city and the rest of each state, the non-metropolitan area consistently has a higher proportion of unoccupied dwellings (see Table 3.5). There were 1.8 times as many unoccupied dwellings in the non-metropolitan areas of the six states as in their capital cities. The areas with a high proportion of unoccupied dwellings are also those that are popular areas for holiday homes, such as the south coast of New South Wales and south-west Western Australia. The proportion of unoccupied dwellings is lower in capital cities and higher in the coastal areas surrounding capital cities.

Table 3.5: Unoccupied private dwellings by capital city and balance of state for six states, 2006 (per cent)

	Capital city	Balance of state	State total
NSW	7.4	12.5	9.5
Vic.	8.1	15.7	10.3
Qld.	6.4	11.2	9.2
SA	6.9	18.5	10.3
WA	8.0	17.6	10.7
Tas.	8.1	15.9	12.8
Six states total	**7.5**	**13.6**	**9.9**

Source: Australian Bureau of Statistics, CDATA Online, Australia, 'Division by Dwelling Type' and 'State/Territory by Dwelling Type', ABS, Canberra, 2007.

Historical data also show that the proportion of unoccupied dwellings has been relatively constant over the last 30 years (see Table 3.6).

Table 3.6: Dwelling type, 1976 to 2006

	Occupied	Unoccupied	Total	Unoccupied dwellings as a proportion of all dwellings (per cent)
	Number of private dwellings ('000s)			
1976	4,140.5	431.2	4,571.7	9.4
1981	4,668.9	469.7	5,138.7	9.1
1986	5,187.4	543.5	5,731.0	9.5
1991	5,852.5	597.6	6,450.1	9.3
1996	6,496.1	679.2	7,175.2	9.5
2001	7,072.2	717.9	7,790.1	9.2
2006	7,596.2	830.4	8,426.6	9.9

Source: Australian Bureau of Statistics, *1976, 1981, 1986 Censuses*, ABS cat. nos. 2104.0, 2103.0, 2102.0, ABS, Canberra, 1979, 1983, 1988; Australian Bureau of Statistics, *2001 Census Time Series Profile, Australia*, 'Table 18: Dwelling structure', cat. no. 2003.0, ABS, Canberra, 2003; Australian Bureau of Statistics, *2006 Census Tables*, 'Dwelling structure by occupied/unoccupied dwellings', cat. no. 2068.0, ABS, Canberra, 2007.

The reasons for vacancy were generally stable in the 1976, 1981 and 1986 Censuses, when this information was collected by the Australian Bureau of Statistics (see Table 3.7 below). These figures suggest a slight upward trend towards more holiday homes (2.4 per cent of all housing stock in 1986) and residents absent (3.4 per cent of all housing stock). This now dated information also indicates that about 2 to 3 per cent of all housing stock at any one time is vacant awaiting demolition, sale, refurbishment or re-letting.

Since 1986, the Australian Bureau of Statistics has not collected information on the reasons for vacant dwellings from population census collections. It is quite likely that the figures understate the proportion of holiday houses. There would have been holiday houses that were occupied on census night and therefore not counted as vacant. Also, BIS Shrapnel's report on the holiday homes market[29] estimates that 7.8 per cent of households own a holiday home, ranging from 6.6 per cent of total households in Queensland, to 8.8 per cent of households in Perth.

Table 3.7: Reason for vacancy, 1976, 1981 and 1986 (per cent)

	1976	1981	1986
For sale	6.7	5.8	6.5
To let, not holiday home	10.4	10.6	11.3
New awaiting occupancy	5.7	4.4	3.8
Vacant for repair	4.2	4.6	4.4
Holiday home	23.5	24.2	24.7
Condemned for demolition	2.7	1.8	1.2
Resident absent	30.1	n.a.	34.7
Not stated	6.2	n.a.	4.6
Subtotal: Resident absent or not stated	*36.3*	*39.4*	*39.3*
Other reasons	10.5	9.2	8.9
Total unoccupied	**100.0**	**100.0**	**100.0**

Note: The Australian Bureau of Statistics ceased the collection of these data in 1986.

Source: Australian Bureau of Statistics, *1976, 1981, 1986 Censuses*, cat. nos. 2104.0, 2103.0, 2102.0, ABS, Canberra, 1979, 1983, 1988.

29 BIS Shrapnel, *The Holiday Home Market in Australia*, <http://www.bis.com.au/reports/hol_home_mkt_r.html>, accessed 1 April 2010.

Appendix 3 includes further detail. Chapter 4 includes discussion of the way in which vacant dwellings have been taken into account in assessing the gap between underlying demand and supply.

Enhancing projections of future supply outcomes

The work of the Council continues to be constrained by a lack of comprehensive, consistent and independent information available to it for detailed analysis of residential development in metropolitan areas. Areas identified for future attention by the Council and the COAG Data Sub-Group (made up of Australian Government, state and territory officials) include:

- better indicators of lot production data such as the number of residential titles issued
- better use of the wide range of information held by state and territory and local governments, including on smaller, ad hoc infill development
- improving the quality and consistency of data holdings on land activities in the pipeline including standard definitions to enable a more informative compilation of a national housing supply picture
- comprehensive analysis of the factors affecting development risk and the relative price of various types of residential development.

How does new supply become available?

Understanding the stages that precede dwelling construction and the factors that impact on the land and dwelling supply pipeline is important for better understanding how the market adds new supply and responds to changes in demand.

In the 2008 report, the Council produced a chart showing the stages involved in the land and dwelling production pipeline and estimated times taken to proceed through those various stages. The information related to greenfield and major brownfield development activity. A summary of the stages is shown in Table 3.8.

Table 3.8: Stages of the generic supply pipeline for greenfield activity

Stage of supply pipeline	Description
Stage 1	Future urban designation
Stage 2	Specific use zoning
Stage 3	Structure planning
Stage 4	Development/subdivision approval
Stage 5	Civil works and issue of title
Stage 6	Building approval and completion

Source: Adapted from National Housing Supply Council, *State of Supply Report 2008*, Canberra, 2009, Box 3.4.

Table 3.9 below shows the estimated time that a land development activity commenced in 2009 is likely to spend in the supply pipeline.

Table 3.9: Estimated time in supply pipeline for land development activity started during 2009

Pipeline start in 2009	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Facilitated	Stage 1		Stage 2	Stage 3	Stages 4 & 5	Stage 6									
Normal	Stage 1			Stage 2		Stage 3		Stage 4	Stage 5	Stage 6					
Difficult or complicated	Stage 1				Stage 2			Stage 3			Stage 4		Stage 5		Stage 6

Legend:

Facilitated track = 6.25 years
Normal track = approximately 10 years
Difficult or complicated track = 14.5 years

Greenfield development started in 2009 will generally take between 6 and 15 years to progress from raw land made available for urban use (Stage 1) to dwellings for sale in a new suburb (Stage 6). As shown in Table 3.9, development that has the shortest passage through the supply pipeline—6.25 years—is likely to have dwelling construction being undertaken around 2014. The conversion from raw land to the provision of dwellings may take considerably longer, and the Council has estimated that some greenfield development activity commenced in 2009 may not result in dwelling construction activity until 2023.

Similarly, looking back, the dwelling construction activity currently being undertaken in greenfield areas is the result of supply development activity that is most likely to have commenced in the period 1995 to 2004.

The significant time period required to convert raw land to new dwelling and land packages in the housing market reflects the pipeline stages and the economic and social environment associated with each individual land development project.

The Council recognises that greenfield and infill supply activity are distinct undertakings and that different processes and procedures apply for new developments and redevelopments in each state and territory. There are also variations in the way different jurisdictions differentiate between 'greenfield', 'brownfield' and 'infill' developments. The lack of nationally comparable data of good quality presents a major challenge to national understanding of the supply pipeline, and improved data and monitoring activity is required.

The generic stages in the residential supply pipeline used by the Council do not encompass the provision of social and economic infrastructure, such as public transport, arterial road improvements, schools, health services and shops. These are important for residents' amenity and may influence demand for a new residential development. Delays in the provision of such infrastructure may, therefore, delay the release of land and may further extend the period for development and sale of dwellings in a new residential development.

State and territory land and dwelling pipelines

In its 2008 report, the Council identified major gaps and inconsistencies in land supply data. Some of these are due to varying definitions and expectations about development time frames and housing yield of land identified for residential use. Many of these data deficiencies are yet to be resolved.

Improving national information on the land and dwelling supply pipeline is one of the major priorities of the Council. To achieve this, it has been working with state and territory government representatives on the COAG Data Sub-Group to map and develop standard definitions and to collect data on the key stages in the land development and dwelling supply pipelines. In the absence of national administrative planning data, the Council has used the information available from the Data Sub-Group on the likely land release for capital city areas (for Queensland, the south-east Queensland area was used), and data on activity in the land and dwelling supply pipeline to estimate expected and potential dwelling supply. More information about the methodology and more state-by-state data are included in appendices 2 and 3.

Each state and territory provides the legislative and operational framework for the development of land and provision of dwellings. As noted above, there is some variation between jurisdictions in terms of the pipeline outlined in Table 3.8. This section provides a summary of how the supply pipeline operates in the capital cities to provide land and dwelling packages in mostly greenfield developments. The content has been provided to the Council by Data Sub-Group representatives from the relevant state or territory. Appendix 2 has the detailed tables that underpin the estimates of land supply in this section. The information sources used in the following sections are explained in more detail in Appendix 3 and the terms used are defined in the glossary.

Housing supply in Sydney

In the Sydney region, most new dwellings are produced within existing urban areas. Over the last 30 years, about 70 per cent of new dwellings have been built in existing urban areas and 30 per cent in fringe greenfield locations. This is a different pattern of development from that in other Australian capital cities.

The New South Wales Government has had a land release program linked back to the 1968 Sydney Region Outline Plan, which identified major growth corridors. In the 1970s, land was released in stages. In 1981, an Urban Development Program was established. In 1997, it was expanded to monitor growth in existing urban areas. Since 2001, this work has been undertaken as part of the Metropolitan Development Program, and it includes examining dwelling potential in existing urban areas. Data availability reflects the systems that have been created over that period of time.

The New South Wales Government has primary responsibility for ensuring adequate land supply, the timely provision of infrastructure and the efficient operation of the planning system, for which it has established benchmarks. The rest of the process for developing land into lots and then housing is the responsibility of councils and the development industry.

For Sydney, the release of greenfield land is based on a decision by the New South Wales Government to release a fringe area for urban expansion. The decision is based upon multiple factors including meeting state government benchmarks for different stages in the land supply process and servicing requirements. Only when land is released is it included in the Metropolitan Development Program. There are currently 79 release areas included in the program. At 30 June 2008, land identified for future urban use in Sydney (at Stage 1 of the generic supply pipeline shown in Table 3.8) represented potentially 30 years of greenfield supply (see Table A3.11). This equates to 36,900 hectares of land expected to provide 195,700 additional dwellings.

Rezoning follows a detailed statutory process that leads to the gazettal of an environmental planning instrument. Rezoning involves detailed layout planning, environmental considerations and infrastructure provision, and may be undertaken by state and/or local government.

In Sydney, structure planning for major growth corridors or sectors (Stage 3 of the generic supply pipeline) may occur prior to the government's decision to release a fringe area for urban uses. Structure planning for smaller areas may also commence, subject to meeting metropolitan strategy sustainability criteria.

For Sydney, servicing (Stage 5 of the pipeline) may occur in parallel with rezoning. Servicing is categorised as lead-in trunk water and sewerage infrastructure to the edge of the release area. This may be the responsibility of service agencies or the private sector. In New South Wales, stages 2 and 3 may involve a different process outside Sydney, Wollongong and Newcastle. As at 30 June 2008, Sydney had 47,564 potential lots of land identified for future urban use that had been zoned for residential (specific use zoning) and/or structure planning (that is, at Stage 2 or 3 of the supply pipeline) (see Table A3.12).

For Stage 4, involving development and subdivision approval, the major stages in Sydney are the approval of development applications by local government, construction of civil works, and title registration. Table A3.13 shows greenfield land that had received development/subdivision approval (Stage 4); at 30 June 2008, Sydney had an estimated dwelling yield of 10,900.

Stage 5, the sale of vacant lots ready for residential construction, primarily involves the marketing of land to builders and home purchasers. Table A3.14 shows land identified for future urban use for which residential title had been issued (Stage 5); at 30 June 2008, Sydney had an estimated dwelling yield of 2,760.

Housing supply in Melbourne

In Melbourne, decisions to release land are based on identifying the urban growth boundary and urban growth zone. The urban growth zone is intended to provide for 10 years' supply, with a further five years' supply in the urban growth boundary. These areas and the amount of land supply are reviewed every five years. For growth areas, this stage also covers pre-planning issues including broad constraints such as native vegetation, and links with individual precinct structure plans.

At 30 June 2009, Melbourne had 6,490 hectares of land identified for future urban use (at Stage 1 of the supply pipeline) with an estimated dwelling yield of 64,936 dwellings (see Table A3.11). This represents an estimated 4.5 years of supply from land already designated for future urban use.

The second and third stages of the generic pipeline, relating to rezoning and structure planning, occur at the same time in Melbourne. Structure planning is undertaken by the proponent/local government/growth area authority with infrastructure providers. In growth areas, the process generally takes two to three years.

At 30 June 2009, Melbourne had 12,373 hectares at Stage 2 or 3 of the supply pipeline, providing an estimated dwelling yield of 91,974 (see Table A3.12). This represents an estimated 5.7 years of supply from land that has been zoned for residential (specific use zoning) and/or structure planning.

Development approval (stage 4) is issued by the relevant local government after referral to servicing agencies. Development approval can be commenced at the same time as the structure planning process. At 30 June 2009, Melbourne had an estimated 38,455 lots of greenfield land that had received development/subdivision approval, or a potential dwelling yield of 38,455 dwellings, assuming a 1:1 ratio (see Table A3.13).

Stage 5 of the supply pipeline primarily involves the construction of subdivision and installation of infrastructure services, with land titles being issued on satisfactory completion of works. In growth areas, the issue of residential titles can happen immediately after lot certification, but most developments are staged. At 30 June 2009, Melbourne had 28,759 lots available for future urban use for which residential title had been issued (Stage 5) (see Table A3.14).

For Stage 6 of the greenfield supply pipeline (relating to the amount of land for which building approval has been issued but where building has not yet commenced), at 30 June 2009, Melbourne had 30,961 lots in subdivision plans (see Table A3.15).

Housing supply in south-east Queensland[30]

This section describes processes in the south-east Queensland area rather than in the Brisbane metropolitan area only. The data are based on the boundary of south-east Queensland (SEQ), as defined for the purpose of the *SEQ regional plan 2009–2031*. The area includes infill in the 'existing urban area' and greenfield land, for the purpose of the tables presented in Appendix 2.

For south-east Queensland, the urban footprint in the SEQ region plan is intended to accommodate growth to 2031 (i.e. over 20 years). The plan for future urban use is reviewed every five years, with any extension of greenfield boundaries being based on demand and a suitability assessment. At 30 June 2009, SEQ had 10,700 hectares of land identified for future urban use, with an estimated dwelling yield of 122,200 dwellings (see Table A3.11). This represents an estimated 27 years of supply from land already designated for future urban use.

The second and third stages of the pipeline, rezoning and structure planning, have been regulated since December 2009 by the *Sustainable Planning Act 2009* (Qld) and the Sustainable Planning Regulation 2009, which replaced the *Integrated Planning Act 1997* (Qld).

The SEQ regional plan identifies development areas within the urban footprint that will be a key focus for accommodating regional dwelling and employment targets. Development areas are located across the region, particularly in areas required to accommodate significant growth. Development areas can be delivered through local planning schemes, structure plans under the 'planning partnerships' section of the *Sustainable Planning Act 2009*, or development applications. The planning for development areas aim to deal with strategic issues and state interests up front. Planning may be initiated and led by councils, developers or the state government as appropriate. The SEQ regional plan also proposes to establish an annual Growth Management Program to monitor land supply and inform the delivery of development in existing urban areas and greenfield areas.

At 30 June 2009, SEQ had land at Stage 2 or 3 of the supply pipeline with an estimated dwelling yield of 142,200 (see Table A3.12).

Development and subdivision approval is issued by local government after referral to servicing agencies. At 30 June 2009, SEQ had an estimated 35,300 lots of greenfield land that had received development/subdivision approval, or a potential dwelling yield of 35,300 dwellings, assuming a 1:1 ratio (see Table A3.13).

Stage 5 of the supply pipeline primarily involves the construction of the subdivision and installation of infrastructure services. Titles are issued on satisfactory completion of works. For SEQ, grouped dwelling titles are issued separately from single residential titles.

30 Information sources for this section include the Queensland Department of Infrastructure and Planning, a number of SEQ local governments, and the Urban Development Institute of Australia (Queensland).

Housing supply in Adelaide

In Adelaide, the intent of planning for future urban use is for 15 years' supply of land to be in the pipeline and a further 10 years' supply identified. The *Greater Adelaide plan 2036* was released in 2009 and it identifies seven to eight years of supply. The urban boundary was last modified in 2007.

At 30 June 2009, Adelaide had 2,885 hectares of land identified for future urban use (at Stage 1 of the supply pipeline), providing an estimated 31,172 potential lots (see Table A3.11).

The second and third stages of the supply pipeline, relating to rezoning and structure planning, occur when land is zoned 'urban'. A development plan amendment is then lodged along with a structure plan. For rural land, structure plans and zoning proposals need to be lodged, and must be consistent with the Greater Adelaide plan. This process may differ outside the Greater Adelaide area.

At 30 June 2009, Adelaide had 4,811 hectares of land at Stage 2 or 3 of the supply pipeline, providing an estimated 49,280 lots (see Table A3.12).

For Stage 4 of the supply pipeline, development approval is issued by local government after referral to servicing agencies.

Stage 5 primarily involves the construction of the subdivision and installation of infrastructure services for individual lots. Titles are issued on satisfactory completion of works. For Adelaide, grouped dwelling titles are separate from single residential titles. At 30 June 2009, Adelaide had an estimated dwelling yield of 6,169 in Stage 5 (see Table A3.14).

Housing supply in Perth and Peel

The Western Australian Department for Planning and Infrastructure has proposed a draft spatial plan for Perth and Peel to 2036 and supporting subregional plans to identify urban growth areas. Land availability is confirmed by statutory Region Scheme zonings. Estimated region schemes hold 18 to 20 years' supply. Land supply holdings and zonings are reviewed irregularly at present. At 30 June 2009, Perth and Peel had 8,824 hectares of land identified for future urban use (at Stage 1 of the supply pipeline), with the potential to provide 105,888 lots (see Table A3.11). This represents an estimated 10 years of supply from land already designated for future urban use.

The second and third stages of the supply pipeline, relating to rezoning and structure planning, require Local Planning Scheme zonings to be consistent with the Region Scheme, and for processes to be undertaken within specified time frames. Structure planning is usually a separate stage with some potential to apply local zonings via a structure plan. At 30 June 2009, Perth and Peel had 7,506 hectares at Stage 2 or 3 of the supply pipeline— with the potential to provide 90,072 lots (see Table A3.12). This represents an estimated 8.5 years of supply from land that has been zoned for residential (specific use zoning) and/or has been subject to structure planning.

For Stage 4, the development approval is issued by local government after referral to servicing agencies. At 30 June 2009, Perth and Peel had an estimated 48,304 lots of greenfield land that had received development/subdivision approval, with a potential dwelling yield of 57,965 dwellings (see Table A3.13).

Stage 5 primarily involves the construction of the subdivision and provision of infrastructure services for individual lots. Titles are issued on satisfactory completion of works. For Perth and Peel, grouped dwelling titles are separate from single residential titles.

Housing supply in Darwin

Urban growth areas for future development zonings are identified for Darwin in the Northern Territory Planning Scheme and reviewed on an 'as needs' basis. Land release to developers by the Crown (which owns all greenfield land in the Northern Territory) follows, with development time frames incorporated.

In relation to the second and third stages of the supply pipeline, rezoning and structure planning, the Northern Territory Government either requires the developer to undertake structure planning or transfers land with the structure plan already in place.

For Stage 4, involving development and subdivision approval, the development approval is issued by local government after referral to servicing agencies.

Stage 5 primarily involves the construction of the subdivision and provision of infrastructure services to individual lots. Titles are issued on satisfactory completion of works. Future development zonings must be normalised (to residential or other specific zonings) before titles are issued. Grouped dwelling titles undergo a separate process from single residential titles.

Housing supply in Canberra

At 30 June 2009, Canberra had land for future urban use with an estimated dwelling yield of 36,000 dwellings (at Stage 1 of the supply pipeline) (see Table A3.11). This represents an estimated 20 years of supply from land already designated for future urban use. At 30 June 2009, Canberra had an estimated dwelling yield of 53,000 at Stage 2 or 3 of the supply pipeline (see Table A3.12). At 30 June 2009, Canberra had an estimated dwelling yield of 4,500 dwellings on greenfield land that had received development/subdivision approval (see Table A3.13). At 30 June 2009, Canberra had 600 dwellings on greenfield land for which building approval has been issued but where building has not yet commenced (Stage 6).

Estimating future dwelling supply

The Council is currently working with state and territory governments to improve the understanding of the stages that precede dwelling construction and provide better data on how the market adds new supply and responds to changes in demand.

The Council is particularly concerned about the lack of comprehensive information available on infill—especially on smaller ad hoc infill capacity—given the emphasis in most capital city metropolitan plans on infill development providing as much as 70 per cent of future residential supply.

Table 3.10 shows estimates of potential dwelling completions in both greenfield and infill developments for four capital cities and the south-east Queensland development area as well as an estimate for Australia's eight capital cities.

Over the next five years, the majority of estimated dwelling supply is planned to come from infill development—63 per cent in the next two years and 58 per cent over the subsequent three years. Sydney expects to achieve 82 per cent of its growth in dwelling completions from infill, followed by Melbourne and Adelaide. Canberra is lowest, at 25 per cent.

Similar information was not available for Perth, Hobart and Darwin.

Table 3.10: Estimated dwelling supply: number of potential dwelling completions, capital cities, 2009 to 2019

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide	Canberra	Subtotal for five capital cities	Eight capital cities (estima-ted) (g)
Estimated dwelling supply: next 2 years or less			(Number of potential dwelling completions)				
Greenfield land (gross)	**7,100**	**26,600**	**29,400**	**6,100**	**6,000**	**75,200**	**91,300**
Infill land							
Large projects (50+ dwellings)	19,800	16,700	20,800	n.a.	n.a.	n.a.	n.a.
Medium projects (11–49 dwellings)	12,700	7,600	8,500	4,300	n.a.	n.a.	n.a.
Small projects (10 or fewer dwellings)		23,200	6,500	6,000	n.a.	n.a.	n.a.
Total infill (gross)	**32,500**	**47,500**	**35,800**	**10,300**	**2,000**	**128,100**	**155,600**
Total completions (gross)	**39,500**	**74,100**	**65,200**	**16,400**	**8,000**	**203,200**	**247,000**
Average gain per annum (gross)	19,800	37,100	32,600	8,200	4,000	101,600	123,500
More than 2 and up to 5 years							
Greenfield land (gross)	**18,200**	**31,600**	**64,800**	**10,800**	**9,000**	**134,400**	**163,300**
Infill land							
Large projects (50+ dwellings)	40,200	26,200	25,100	n.a.	n.a.	n.a.	n.a.
Medium projects (11–49 dwellings)	20,600	5,000	4,700	3,800	n.a.	n.a.	n.a.
Small projects (10 or fewer dwellings)		44,200	2,000	9,000	n.a.	n.a.	n.a.
Total infill (gross)	**60,800**	**75,400**	**31,800**	**12,800**	**3,000**	**183,800**	**223,400**
Total completions (gross)	**79,000**	**107,000**	**96,600**	**23,600**	**12,000**	**318,200**	**386,700**
Average gain per annum (gross)	26,300	35,700	32,200	7,900	4,000	106,100	128,900
More than 5 and up to 10 years							
Greenfield land (gross)	**27,500**	**31,200**	**74,200**	**15,500**	**15,000**	**163,400**	**198,600**
Infill land							
Large projects (50+ dwellings)	44,200	27,800	n.a.	n.a.	n.a.	n.a.	n.a.
Medium projects (11–49 dwellings)	47,100	2,100	n.a.	9,000	n.a.	n.a.	n.a.
Small projects (10 or less dwellings)		115,500	n.a.	15,000	n.a.	n.a.	n.a.
Total infill (gross)	**91,285**	**145,400**	**n.a.**	**24,000**	**5,000**	**265,700(f)**	**322,900(f)**
Total completions (gross)	**118,800**	**176,500**	**74,200(d)**	**39,500(e)**	**20,000**	**429,100(f)**	**521,400(f)**
Average gain per annum (gross)	23,800	35,300	14,800(d)	7,900(e)	4,000	85,800(f)	104,300(f)

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide	Canberra	Subtotal for five capital cities	Eight capital cities (estima-ted) (g)
Estimated dwelling supply: next 10 years or less							
Greenfield land (gross)	**52,800**	**89,300**	**168,400**	**32,400**	**30,000**	**373,000**	**453,200**
Infill land							
Large projects (50+ dwellings)	104,164	70,693	45,900(d)	n.a.	n.a.	n.a.	n.a.
Medium projects (11–49 dwellings)	80,400	14,717	13,200(d)	17,100	n.a.	n.a.	n.a.
Small projects (10 or fewer dwellings)		207,379	8,500(d)	30,000	n.a.	n.a.	n.a.
Total infill (gross)	**184,570**	**292,789**	**67,600(d)**	**47,100(e)**	**10,000**	**577,600(f)**	**701,900(f)**
Total completions (gross)	**237,400**	**357,600**	**236,000(d)**	**79,500(e)**	**40,000**	**950,500(f)**	**1,155,100(f)**
Average gain per annum (gross)	23,700	35,800	23,600(d)	8,000(d)	4,000	95,100(f)	115,500(f)

Notes: 'n.a.': Not available. Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See notes below and more detailed information in Appendix 3: Methodology.

(a) Sydney:

All forecasts are for the period commencing July 2008. Data in this table are based on unpublished data. Minor sites (generally those with fewer than 50 dwellings) are calculated based on the difference between forecast total and forecast major sites.

(b) Melbourne:

Data are for proposed dwelling project commencements rather than completions, as they link better with Urban Development Program (UDP) data. Data in this table are based on unpublished data. The numbers given for 'small projects' correspond to a subtraction of UDP-identified projects from Victoria In Future (VIF) 2008 projected demand. 'Total' is anticipated demand under VIF 2008 (state population projections). Victoria is aware that 'normal' supply in Melbourne each year results in around 12,000 greenfield dwellings, 8,000 major redevelopment dwellings and 10,000 infill dwellings. At any one time, the UDP can identify redevelopment opportunities for around 100,000 dwellings in Melbourne. This is updated annually.

(c) South-east Queensland:

The figures are based on the expected long-term dwelling yield from lots that are expected to be registered during the periods specified (for outside the existing urban area, i.e. greenfield areas, only). These figures would exceed the expected dwelling completions during the same periods.

(d) Excludes south-east Queensland infill data for the 'five to ten years' period.

(e) Excludes Adelaide infill data for large projects for the 'five to ten years' period.

(f) Excludes south-east Queensland infill data for the 'five to ten years' period and Adelaide infill data for large projects for the 'five to ten years' period.

(g) Pro-rated from figures for five capital cities.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table 3.11: Actual dwelling completions, 2002 to 2009, and estimated dwelling completions, selected capital cities, 2010 to 2019

Capital city production	Sydney	Melbourne	Adelaide (a)	Canberra (b)	Subtotal for four capital cities
			Dwelling completions (actual number)		
2002	22,500	27,700	5,000	1,900	57,100
2003	27,300	31,900	6,200	2,400	67,800
2004	26,600	30,700	6,500	2,600	66,400
2005	26,400	30,700	7,100	2,000	66,200
2006	21,300	29,800	7,100	2,400	60,600
2007	17,200	27,700	6,600	2,400	53,900
2008	14,800	27,200	7,700	2,300	52,000
2009	16,600	31,500	7,700	2,500	58,300
Average annual production, 2002 to 2009	**21,600**	**29,600**	**6,700**	**2,300**	**60,300**
			Dwelling completions per annum (estimated number)		
2010 and 2011	19,800	37,100	8,200	4,000	69,000
2012 to 2014	26,300	35,700	7,900	4,000	73,900
2015 to 2019	23,800	35,300	7,900	4,000	71,000
Average annual forecast dwellings, 2010 to 2019	**23,700**	**35,800**	**8,000**	**4,000**	**71,500**

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised; see notes in Table 3.10 and more detailed information in Appendix 3: Methodology.

(a) Production excludes Adelaide infill data for large projects for 2015 to 2019.

(b) Production data for 2002 to 2009 includes all ACT not just Canberra.

Source: Table A3.2 and Table 3.10.

The Council is concerned that, if even a small number of the developments that contribute to the estimated dwelling completions identified in Tables 3.10 and 3.11 do not proceed or take longer than planned, or if proportionate levels of dwelling completions in other areas are not achieved, new dwelling completions will not meet household demand in the short and medium term. There is already considerable anecdotal evidence from industry sources that land availability is less than estimated above in several locations.

Figures from Australian Bureau of Statistics completion data by capital city and balance of state were used to create a medium trend projection. The completions in south-east Queensland as a proportion of completions in Queensland was approximated using the McDonald-Temple medium household growth projections. The resulting data adjusted on a pro rata basis give the following estimated increases (approximate) in dwelling completions (gross) for Australia as a whole:

- 176,000 per annum for years 2010 to 2011
- 184,000 per annum for years 2012 to 2014
- 181,000 per annum for years 2015 to 2019.

As indicated in Table 3.1 earlier in this chapter, there was an estimated stock loss of 34,900 dwellings over the three years 2007 to 2009 (around 12,000 per annum) due to demolitions. Adjusting the gross number of dwelling completions (above) by a similar amount would give an estimated **net** increase in dwelling numbers as follows:

- 165,000 (per annum) for years 2010 to 2011
- 172,000 (per annum) for years 2012 to 2014
- 169,000 (per annum) for years 2015 to 2019.

As mentioned in Chapter 2, the medium projection scenario for underlying demand gives an average increase in the number of households of around 160,000 per annum between 2009 and 2029. Chapter 4 includes further discussion of the gap between underlying demand and supply.

Council members are also aware of stakeholder concerns that, while most capital city strategic plans encompass commitments to reduce the proportion of new dwellings provided though greenfield development, in recent years the proportion of new dwellings being provided on greenfield sites has continued to exceed strategic planning objectives.

This was the case prior to the start of the global financial crisis, when developer financing for multi-unit developments (the predominant form of new housing on infill and brownfield sites) became more difficult to obtain. Given pipeline delays, it is anticipated that, in the short to medium term, the global financial crisis will continue to impact adversely on the number of multi-unit dwelling completions.

Based on information provided by the states and territories, Table 3.12 illustrates the relative importance in the next 10 years that infill and greenfield supply are expected to play, particularly in capital cities. Over two-thirds of dwelling supply in capital cities is expected to come from infill, although this proportion will vary from one capital city to another. Sydney's reliance on infill is expected to be very high over the next two years at 82 per cent, declining to around 77 per cent, while Canberra is likely to continue to rely predominantly on greenfield sites for growth over the period.

Table 3.12: Estimated dwelling supply: per cent of potential dwelling completions from infill and greenfield in next ten years

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide (d)	Canberra	Subtotal for five capital cities	Eight capital cities (estima-ted) (e)
Estimated dwelling supply: Next 2 years or less	**Per cent of potential dwelling completions in jurisdiction**						
Greenfield land (gross)	18	36	45	37	75	37	37
Infill (gross)	82	64	55	63	25	63	63
Total completions (gross)	**100**	**100**	**100**	**100**	**100**	**100**	**100**
More than 2 and up to 5 years							
Greenfield land (gross)	23	30	67	46	75	42	42
Infill (gross)	77	71	33	54	25	58	58
Total completions (gross)	**100**	**100**	**100**	**100**	**100**	**100**	**100**
More than 5 and up to 10 years							
Greenfield land (gross)	23	n.a.	n.a.	39	75	38	38
Total infill (gross)	77	n.a.	n.a.	61	25	68	68
Total completions (gross)	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) Sydney: All forecasts are for the period commencing July 2008. Data in this table are based on unpublished data.

(b) Melbourne: Data are for proposed dwelling project commencements rather than completions as these link better with Urban Development Program (UDP) data. Data in this table are based on unpublished data. At any one time, the UDP can identify redevelopment opportunities for around 100,000 dwellings in Melbourne. This is updated annually.

(c) South-east Queensland: The figures are based on the expected long term dwelling yield from lots that are expected to be registered in the identified periods (for outside the existing urban area, i.e. greenfield areas, only). These figures would exceed the expected dwelling completions during the same periods.

(d) Excludes Adelaide infill data for large projects for the 'five to ten years' period.

(e) Pro-rated from figures for five capital cities.

Planning and development assessment

An efficient, effective, transparent and accountable system for making and enforcing planning policy is a critical element of an efficient housing market.

An effective planning system provides a framework for coordinating the essential shared services needed to support new development. Planning can also facilitate positive externalities such as economies of scale in infrastructure provision, and the provision of public goods such as open space and community infrastructure. Planning provisions manage or prevent negative externalities associated with development activities, such as traffic congestion, that may extend beyond the site of the development itself. The planning process also plays a role in ensuring consultation with affected parties with a view to balancing competing interests equitably.

Cost-effective planning can improve the operations of the housing market if it:

- achieves an efficient and accessible urban structure that promotes productivity and social inclusion
- protects environmental quality, cultural heritage and amenity
- facilitates equitable access to services, work, education and recreational opportunities.

Planning, zoning and development assessment processes also add time and cost to the operation of the housing market. Planning system complexity and ambiguity are associated with significant costs for housing development in Australia.[31] Uncertain and lengthy time frames, unclear policies, and variation in planning standards or procedures between jurisdictions contribute to development costs. These factors could lead developers to avoid certain local government areas, reduce development activity, postpone land acquisition, or target higher market segments.[32]

The planning system regulates:

- the types of land and locations that may be used for housing development
- the amount or density of housing that may be developed
- the configuration and design of this housing
- the sequencing of development
- the types of services to support development (from utilities to parks to community centres)
- some charges for infrastructure.

The planning system does this through overarching plans that set out housing, transport and other urban infrastructure for cities and precincts. Plans outline key directions, challenges for the future and the types of developments needed to meet the requirements of the population. Metropolitan plans and growth strategies are usually developed by state governments, while local councils develop localised plans. Decisions about zoning and development applications are then usually made by local councils within these frameworks. At the state level, ministers of planning usually have call-in powers for major projects, which means that decisions about these development applications can be expedited. In some situations, special purpose institutions are established to facilitate planning and development assessment in priority areas, such as the Growth Areas Authority in Melbourne. Courts or tribunals have varying degrees of responsibility to deal with ongoing disputes and legal challenges arising from development proposals.

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31 N Gurran, K Ruming and B Randolph, *Counting the costs: planning requirements, infrastructure contributions, and residential development in Australia*, Australian Housing and Urban Research Institute, Final Report no. 140, AHURI, Sydney, November 2009.

32 N Gurran et al, Counting the costs: planning requirements, infrastructure contributions, and residential development in Australia.

Public consultation and involvement is an important element of the planning system—especially when strategic plans are being developed. The planning process also plays a vital role in ensuring consultation with affected parties with a view to balancing competing interests equitably and considering environmental impacts. Systems vary across jurisdictions on the extent to which members of the public are to be consulted, or can object to developments.

Development assessment refers to the process for assessing applications from builders and developers for modifications to buildings and well as the construction of new dwellings. It is only one of the functions of the planning system.

Planning also encompasses a range of referrals and approvals by local government and state authorities on matters such as roads, environment, school provision and infrastructure.

At the Commonwealth level, separate approvals for matters of environmental significance may be needed under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act), (see Box 3.2). The EPBC Act may require project referral for development proposals impacting on matters of national environmental significance. Additionally, states may have integrated or separate environmental legislation that also impacts on the development assessment process, in addition to planning legislation. Environmental regulation, if not integrated with, and occurring at a strategic and early stage of, the development assessment process, may impose a further regulatory burden and, therefore, delays. The Council will be investigating the impact of environmental and other (non-planning) regulation and legislation on land and housing approvals in its future work.

Box 3.2: The *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation. It aims to:

- protect the environment, especially matters of national environmental significance identified in the Act, while promoting ecologically sustainable development through the conservation and ecologically sustainable use of natural resources
- conserve Australian biodiversity
- provide a streamlined national environmental impact assessment and approvals process
- enhance the protection and management of important natural and cultural places
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- promote the use of Indigenous peoples' knowledge and recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity
- allow the Australian Government to work with the states and territories in delivering a national scheme for environment and heritage protection and biodiversity conservation.

In December 2009, the report of the Hawke Review—the first independent review of the EPBC Act—was released. Section 522A of the EPBC Act requires that it be reviewed every 10 years. The review assessed the operation of the EPBC Act and the extent to which its objects have been achieved.

The Hawke Review recommended that the Act be redrafted to reflect better the Australian Government's role and that it be renamed the Australian Environment Act. Other recommendations related to streamlining arrangements and processes, improving the transparency of decision making and working more closely with states and territories on matters of national environmental significance.

The Government is yet to respond to the Hawke Review.

The next section outlines some of the Council's observations about the impact of the planning reforms that are currently under way, and identifies issues for further consideration.

Planning reform

It is the Council's view that planning should be much more about strategic direction, coordination of infrastructure and setting the rules for administrative processes (i.e. approvals), rather than just about the assessment of individual development proposals. The key objective in planning reform is to undertake higher quality planning (strategic, concept and master planning) with greater public engagement. Once broad planning principles, frameworks and assessment criteria are in place, there should be greater certainty for developers and less scope for contesting the assessment of individual development proposals (more as-of-right development and more code-based assessment). This could be expected to result in far fewer opportunities for delay and uncertainty associated with referral to higher authorities and third-party appeals.

Some streamlining of development assessment processes could be implemented quickly, but this would be particularly contentious if public engagement on strategic and concept plans had not already taken place.

While reform of the planning and development assessment system would, if successful, improve the conditions for housing development in Australia, other interventions are also needed to improve housing affordability significantly.[33]

The Council observed in its 2008 report the well-recognised scope for reducing compliance costs and improving the efficiency and effectiveness of planning requirements by modernising systems, harmonising requirements across state and local government jurisdictions, and reducing opportunities for third-party appeals when proposed developments are demonstrably consistent with jurisdictions' precinct development plans.

Planning, zoning, subdivision and development assessment processes are often very lengthy, and have been identified by stakeholders as a major continuing constraint on supply. The Council sees a need for continuing effort to improve the efficiency and effectiveness of the planning system and acknowledges that planning system changes may well be required to achieve the level of density envisaged by state governments' urban consolidation plans.

There have been ongoing efforts to reform planning systems at the state and territory level and through COAG (see Box 3.3). At the national level, the Development Assessment Forum (DAF)[34] aims to streamline or rationalise processes to reduce transaction costs and delays without compromising legitimate environmental or heritage goals at the operational and strategic levels.

Research carried out by the Property Council on state and territory development assessment systems and progress in undertaking policy reform shows that progress in implementing the DAF principles is uneven across states and territories. The Council acknowledges Property Council concerns that, even where legislative and strategic planning frameworks are in place to facilitate DAF-like track-based assessments, the outcomes in terms of an improved planning system have not necessarily eventuated.

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33 N Gurran et al, Counting the costs: planning requirements, infrastructure contributions, and residential development in Australia.

34 The Development Assessment Forum was established in 1998 to recommend ways to streamline development assessment while maintaining high quality decision making. It includes members from the Australian, state/territory and local governments, the development industry, and related professional associations (see http://www.daf.gov.au/).

Box 3.3: The Council of Australian Governments' (COAG) planning reform agenda

COAG agreed in July 2009 to reforms of development assessment processes to help reduce building costs. These reforms included improved national planning principles and harmonised code-based development assessments for single residential dwellings. COAG agreed in December 2009 to implementation plans for these reforms. COAG is to receive a further report on extending code-based assessment to residential multi-unit and commercial and industrial buildings in 2010.

COAG also agreed in December 2009 to a housing supply and affordability reform agenda. This work will build on initiatives already underway to improve capital city strategic planning and development assessments. It will also draw on the audits of Commonwealth and state and territory land that have been undertaken since 2008 to ascertain if any land is surplus to requirements, and is available for housing purposes.

COAG has also agreed to a set of criteria for capital city strategic planning systems. The criteria are designed to ensure that cities have strong, transparent and long-term plans in place to manage population and economic growth, address climate change, improve housing affordability and tackle urban congestion. The criteria also aim to support plans that are integrated (for example, plans that cover land use, infrastructure and transport) and coordinated between all three levels of government. The Commonwealth will link future infrastructure funding decisions to these criteria being met.

All states have agreed to have in place plans that meet these criteria by 1 January 2012.

Making development assessment faster and clearer

Government's reforms of development assessment processes, such as electronic development assessment, which has received support through the Housing Affordability Fund, are intended to enhance the efficiency and effectiveness of development assessment (see Box 3.4 for more detail).

Box 3.4: Housing Affordability Fund and electronic development assessment

The Housing Affordability Fund is a five-year, $512 million initiative to address some of the areas that represent significant barriers to the supply of affordable housing.

$30 million from the Housing Affordability Fund is being used to help implement electronic development assessment (eDA). In addition, $3.6 million has been allocated for a national protocol to allow different IT systems to 'talk' to each other to ensure that eDA develops consistently across Australia.

A further $26 million in eDA funding has been allocated to jurisdictions based on figures for housing growth over the last five years. The Commonwealth Government has negotiated with the states and territories and local government associations to ensure funding is directed to high-growth councils (e.g. those identified by the relevant state government as being growth areas or areas that have a high rate of growth when compared with other councils in the state).

More detail is provided in Chapter 4.

The Development Assessment Forum developed a set of principles of leading practice in development assessment processes (see Table 3.13). The Council agrees that clarity in development control instruments and the extent of discretion are important. The Council supports national harmonisation and limitations to third-party appeals, as proposed by the DAF model.

Table 3.13: Development Assessment Forum principles of leading practice

Stage and principle	What does this mean in practice?
Stage 1: Policy making	
Effective policy development	Councillors should develop strategic local planning policies in consultation with stakeholders.
Objective rules and tests	Policies should be clear, objective, measurable, and understandable.
Built-in improvement mechanisms	Councils should continuously review and improve planning policy.
Stage 2: Assessment	
Track-based assessment	Applications should be sorted into assessment tracks.
A single point of assessment	Council staff/expert panels should determine all applications on the advice of referral agencies.
Notification	Clear processes should exist for public consultation on applications under certain tracks.
Private sector involvement	Private sector certifiers have a role in development assessment.
Stage 3: Determination	
Professional determination for most applications	Councils should be able to delegate decision making to staff. Expert panels must determine any applications not decided by staff.
Stage 4: Appeal	
Applicant appeals	Applicants should be able to appeal an adverse decision.
Third-party appeals	Third-party appeals should not be allowed where all rules and tests are met.

Source: Property Council (unpublished).

Clarifying development charging regimes

Development and infrastructure charges vary by state and local council. The 2008 report outlined Housing Industry Association data on infrastructure charges, showing increases in Sydney, Melbourne and Brisbane from the mid-1980s to 2007. Recent research into the costs of the planning system found that it was difficult to generalise about the amount of contributions required in each state or development context—even for projects within the same local government area.[35] An analysis of housing costs including infrastructure charges and government charges and taxes is included in Chapter 6 of this report.

Major concerns raised by developers and local government officials have been about the lack of clarity about charges and the ability to fund and deliver the necessary infrastructure.[36]

35 N Gurran et al, Counting the costs: planning requirements, infrastructure contributions, and residential development in Australia.

36 N Gurran et al, Counting the costs: planning requirements, infrastructure contributions, and residential development in Australia.

A problem arises where the determining authority increases the amount of the developer contribution required after the development process has started. In one example provided in an interview by Applied Economics with a major developer, the initial developer contribution of $1.5 million (for about 250 apartments) rose to $6 million. The developer was able to provide most of this contribution in kind, but it was higher than had been initially expected.

The Council has noted that charges are often not set in a transparent, accountable and efficient way, leading to delays and uncertainty for developers. In particular, betterment levies and infrastructure charges are often confused in individual transactions.

The 2008 report identified three different ways to justify contributions from private developers to fund infrastructure for new developments:

- user-pays charges according to a developer's projected share of beneficial usage of the items
- impact mitigation levies for circumstances where a development creates unanticipated or unplanned demands on local infrastructure because of its design
- betterment levies recognising the uplift in land value as a result of rezoning.

As the Council noted in its 2008 report, there is currently no national benchmarking of the minimum acceptable standards of infrastructure provision for new residential areas, or agreement about who should pay for this infrastructure. The Council's view is that infrastructure charges, if they are to be applied, should be separately defined and regulated from other forms of development contribution. This conclusion mirrors the Productivity Commission's conclusion that general charging principles would help promote more efficient and equitable outcomes. The Productivity Commission has observed that cross-jurisdiction adherence to some general charging principles would help to promote more efficient and equitable outcomes.[37]

To the extent that regulations and infrastructure charges increase the cost of constructing new housing, they may negatively impact on the affordability of new housing. However, this needs to be balanced against quality standards and the provision of infrastructure necessary for liveable dwellings and neighbourhoods.

The Council also sees that improvements to the efficiency of the housing market could come from a closer integration of planning systems with the delivery of infrastructure to support residential development. The best planned developments will not proceed in the absence of supporting public infrastructure. The financing of this infrastructure is an important issue, as is the efficient planning of the type of infrastructure needed, its quality and its timing. These are key factors contributing to the efficiency of the housing supply pipeline.

Reforming planning governance

Local councils currently have a major and increasing role in planning governance. This can sometimes result in a conservative approach to development assessment that favours the retention of 'neighbourhood character' over broader social and economic planning objectives. By contrast, democratically mandated metropolitan planning authorities (along the lines of the Greater London Authority) could enable greater focus on the need to take into account regional priorities. These priorities could include the need for a greater supply of medium- and high-density housing and more-efficient public transport services. There could be a speeding up of development assessment processes if local councils were required to approve all applications that were consistent with the requirements in metropolitan plans.

37 Productivity Commission, *Assessing Local Government Revenue Raising Capacity,* Research Report, Productivity Commission, Melbourne, 2008.

Planning governance could also be more consistent across states and territories. A clear separation of responsibilities and powers between levels of government would lead to better metropolitan governance frameworks. State and territory governments and regional or metropolitan bodies would be better placed than local councils to make decisions in the regional, state or national interests. Local communities' decision-making responsibilities could focus on those areas where the consequences of their decisions would be limited to the local community sphere, without wider implications for surrounding areas.

Table 3.14 sets out some examples of the types of decisions of activities that would be appropriate for each level of government in a planning system.

Table 3.14: Planning decisions at the appropriate level

Level	Examples of activities or decisions for this level
National	■ Improving national consistency of planning and building regulation ■ Resolving cross-border issues such as water supply, ports and transport connections ■ Environment, heritage issues of national significance
State/territory	■ Maintaining state-wide land use and development regulation system ■ Maintaining administrative and judicial review processes ■ Overseeing planning institutions ■ Development planning and development determinations for sites or projects of state-wide significance
Regional/metropolitan	■ Investing in strategic infrastructure of metropolitan significance ■ Designating major activity centres and facilitating development in these centres ■ Designating and managing major transportation corridors ■ Identifying and developing key employment nodes ■ Formulating land release schedules in growth areas ■ Protecting environmental assets of regional significance ■ Maintaining efficient land supply for housing
Local	■ Neighbourhood structure planning ■ Regulating housing development and redevelopment within applicable state and regional guidelines ■ Regulating development in all lower-order activity centres

COAG's work program includes planning and development assessment reform. Some issues to be addressed in implementing national planning principles from the Council's point of view include:

- separating political involvement from development assessment
- ensuring a suitable democratic mandate for institutions making decisions, and the capacity to act independently
- separating strategic plan making and development assessment processes, and ensuring ample community engagement in the former
- ensuring that plan making is responsive to current and future community needs and that it accommodates future land-use requirements to enable land markets to operate efficiently.

Other regulations also impact on the production of housing

This chapter has discussed how the planning system regulates urban planning and development. There are a wide range of other regulations that also impact on the housing sector. These may be applied by Commonwealth, state and/or local government. Regulations on the design and construction of dwellings are designed to improve outcomes for households. In addition to these building and planning regulations, there are a host of other regulations—heritage, environmental, small business and industrial relations, licensing and mandatory insurances, labour and skills development, and taxation regulation—all of which impact on the housing sector.

While there are generally good reasons for regulation, these regulations are also likely to increase the cost of housing. Changing regulations and associated requirements may also create uncertainty and delay across the sector.

The Council has identified the need for more detailed work on the range and implications of housing-related regulation.

The construction industry

The supply of labour is an important determinant of the supply of housing and its cost. This section outlines current data on the residential construction industry. In subsequent reports, the Council will explore possible indicators to monitor industry supply capacity and to compare the Australian industry with similar industries overseas in terms of size and types of operations, types of production and outputs delivered.

Profile of Australia's construction industry as part of the Australian economy

The construction industry plays an important role in the Australian economy. In 2006–07, the construction industry (both residential and non-residential components) contributed 6.7 per cent to gross domestic product (GDP). This is a smaller share than in the mid-1960s and 1970s when it averaged around 9.5 per cent of GDP.

The demand for and supply of construction is driven by a variety of factors including economic growth, changes in interest rates, immigration policies, labour availability and changes experienced within other industries (e.g. agriculture, mining and manufacturing).

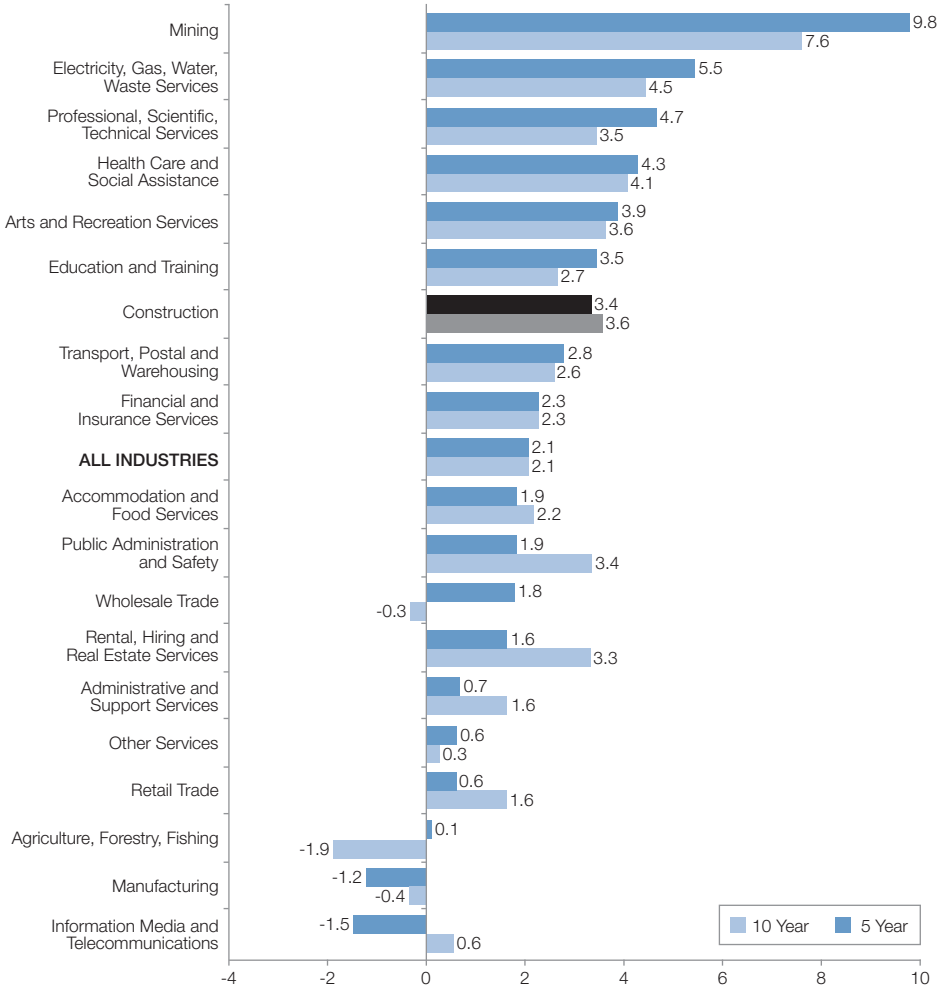
The industry has important linkages with other sectors, impacting on the economy beyond the direct contribution of construction activities.

In the three broad areas of construction activity—residential building, non-residential building, and engineering construction—the pattern of construction activity by area of activity has changed over time.

The construction industry employs the fourth largest workforce in Australia, of just under 1 million (in November 2009), or 9 per cent of the total workforce.[38] A higher proportion of construction industry workers is self-employed than in other sectors (22.5 per cent in May 2007 compared with 8.8 per cent for all industries), except for the agriculture, forestry and fishing industry. Housing subcontractors represent more than 90 per cent of workers involved in on-site home construction activity. Over the past five- and ten- year periods, the construction industry workforce has grown by more than 3 per cent per annum (see Figure 3.11).

38 HIA media release, 13 January 2010.

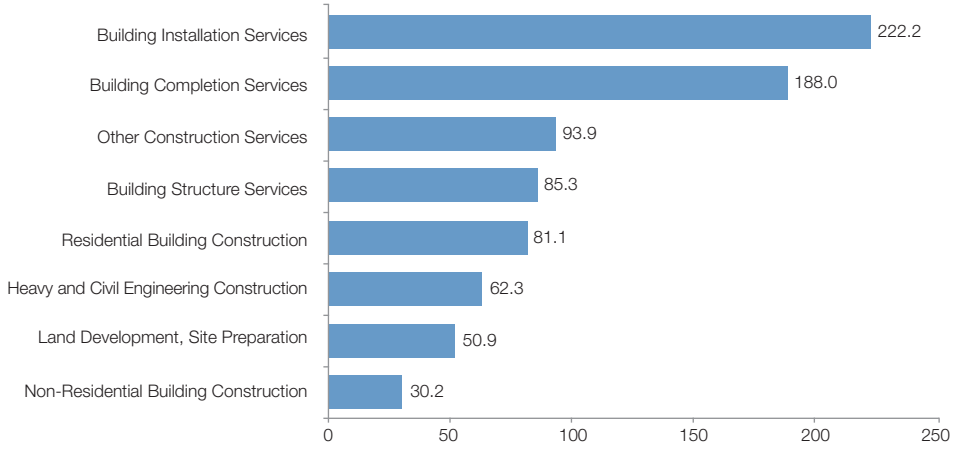
Figure 3.11: Employment growth, five and ten years to November 2009 (per cent per annum)



Source: SkillsInfo website, accessed 6 January 2010, <http://www.skillsinfo.gov.au/NR/rdonlyres/0317ED52-7E7D-4103-8940-792EE464ECDD/0/RecentEmploymentGrowthpcperannum.xls>.

Figure 3.12 illustrates how the construction workforce is spread across the industry, at November 2009, with about 81,000 workers in residential building construction alone.

Figure 3.12: Employment level, construction, November 2009 ('000s)

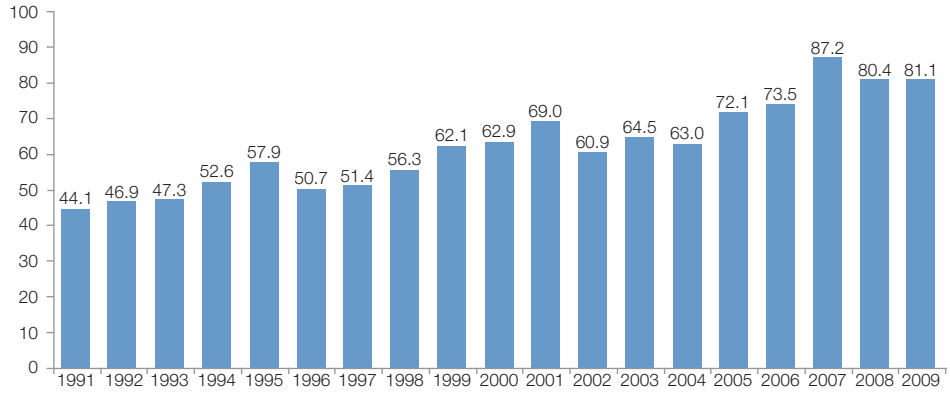


Note: Department of Education, Employment and Workplace Relations independently seasonally adjusted and trended ABS labour force survey data to track the employment levels in each sector.

Source: SkillsInfo website, accessed 6 January 2010, <http://www.skillsinfo.gov.au/NR/rdonlyres/E0646A67-F310-4420-87DA-1FC05534A9BD/0/3EmploymentLevelbyIndustrySector000s.xls>.

The Department of Education, Employment and Workplace Relations (DEEWR) estimates that more than 40 per cent of all construction workers are engaged in residential building activity.[39] Figure 3.13 shows the numbers employed over the last 19 years from 1991 to 2009 in residential building construction. There was a noticeable fall between 2007 and 2008 followed by a negligible increase to 2009, consistent with the impact of the global financial crisis and the subsequent gradual recovery.

Figure 3.13: Employment level, residential building construction, November 1991 to 2009 ('000s)

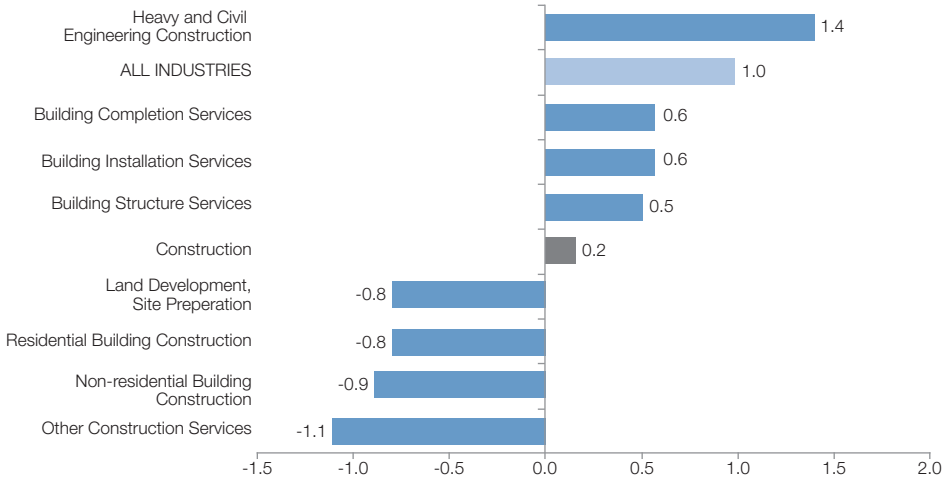


Source: SkillsInfo website, accessed 6 January 2010, <http://www.skillsinfo.gov.au/NR/rdonlyres/622111B0D-9871-4490-87F0/BDD3C2F82C98/0/1EmploymentLevelsooos.xls>.

39 It is important to note that there are likely to be many more people employed in residential building activity than are coded to employment in the ANZSIC Industry Group of Residential Building Construction (three-digit code 301) data. The majority of people employed in construction are coded to one of the three industry groups of Building Installation Services, Building Completion Services and Building Structure Services and more than half of these people would be employed at any one time in the relatively labour-intensive residential building sector (DEEWR, pers. comm. 4 February 2010).

A potential constraint on the future capacity of the construction industry to supply housing is found in the DEEWR employment growth projections for each sector for the next five years from 2010 to 2014. These projections take into account a wide range of considerations and are constrained at the aggregate level by Treasury forecasts. In early 2009, Treasury was forecasting an overall employment loss. DEEWR projections are likely to be revised over the coming months as the Treasury forecasts are updated following the end of the global financial crisis.[40] While employment for 'all industries' and the construction industry are estimated to grow at 1 per cent and 0.2 per cent per annum to 2013–14 respectively, employment in residential building construction is projected to fall by 0.8 per cent per annum over this period. Employment in Building Completion Services, Building Installation Services and Building Structure Services is projected to grow by 0.6 per cent, 0.6 per cent and 0.5 per cent per annum respectively (see Figure 3.14).

Figure 3.14: Projected employment growth, construction to 2013-14 (per cent per annum)



Source: SkillsInfo website, accessed 6 January 2010, <http://www.skillsinfo.gov.au/NR/rdonlyres/7BBC57EE-22D8-4DFD-988D-3A6697165892/0/FutureGrowthbyIndustryANZSIC06.xls>.

Emerging skills shortages are only likely to get worse in the future

Industry data on the supply of skilled tradespeople show a fall in the availability of skilled tradespeople in the second half of 2009.[41] The Housing Industry Association estimates that the national shortage of skilled workers in residential construction is likely to reach nearly 55,000 by 2012–13.[42]

40 DEEWR, pers. comm. 4 February 2010.

41 The Housing Industry Association – *Austral Bricks Trades Report* for the March quarter of 2009 reported a net shortage of skilled tradespeople. The availability of skilled tradespeople moved into moderate oversupply by June 2009 due to the weakening of housing starts over 2008–09. A moderate undersupply of skilled tradespeople reemerged in the second half of 2009. The September 2009 report noted trade availability deteriorated across all trades during the quarter, while the December 2009 report noted trade availability deteriorated over the quarter for carpentry, ceramic tiling, joinery, landscaping, other trades, painting, plastering and roofing but improved for the other four trades included in their quarterly survey.

42 Housing Industry Association, Media release, 13 January 2010.

In addition to skills shortages in the construction industry, a 2004 Productivity Commission inquiry also identified skill shortages in land planning, particularly in Brisbane, Sydney and Melbourne.[43]

The shortages predicted by DEEWR are likely to get worse due to:

- retirement of tradespeople
- limited skilled migration of construction industry professionals ('general electricians' were the only building-related occupation in the top 10 of the skilled migration program in 2008–09)[44]
- falls in apprenticeship numbers (more than 4,000 construction trade apprentices across Australia have been laid off over the last year, and commencements and completions of apprenticeships have declined over the last 10 years).

Conclusion

The Council has revised its supply projections to reflect better data on demolitions. These projections suggest that supply will continue to increase in the longer term even though there has been a fall-off in production since late 2008. The recent recovery in construction has been in the detached housing sector. However, multi-unit development (which is the dominant form of infill development) is still affected by the tightening of finance to developers as a result of the global financial crisis.

The Council has further developed its analysis of the pipeline of dwelling and land supply, identifying the stages of production for infill and greenfield development and estimates of likely production.

The planning system is critical for delivering an adequate supply of land and dwellings to meet future demand. State and territory governments already have initiatives underway to streamline development assessment processes and improve the certainty of planning systems. However, greater clarity of the basis for developer charges and reform of planning governance would support COAG's objectives for capital cities, as well as remove barriers to new housing supply. A closer integration of planning systems with the delivery of infrastructure is needed to support residential development. The financing of this infrastructure is an important issue, as is the efficient planning of the type of infrastructure needed, its quality and its timing. The Council is keen to see planning reform encompass more strategic direction, co-ordination and funding of infrastructure, to provide a framework for more as-of-right development and code-based assessment.

Preliminary data on the residential construction industry suggest that a labour shortage is looming, especially as more skilled tradespeople retire than the industry is able to replace with new migrants or apprentices.

Next year, the Council will update this analysis and continue to improve its methodology and the accuracy of its estimates of supply. It will also explore the supply-side of the housing market further, including the characteristics of the social housing sector, non-private dwellings, the private rental sector and companies involved in land development and housing construction.

43 Productivity Commission, First home ownership, p 144.

44 Department of Immigration and Citizenship, Report on Migration Program 2008–09, Financial Year to 30 June 2009.

Demand-Supply balance

Chapter Four

Chapter 4: Demand-Supply balance

Key points

- The gap between total underlying demand and total supply is estimated to have increased by approximately 78,800 dwellings in the year to June 2009 to a cumulative shortfall of 178,400 dwellings.
- This is significantly above the increased gap of 23,000 projected in the *State of Supply Report 2008* and is explained by a greater number of households (driven primarily by higher than expected net migration). Specifically,
  - households have increased by 205,900 in 2008–09—well above the Council's projected increase of 152,000 households under its medium growth scenario
  - dwellings have increased by 134,800 dwellings in 2008–09 (146,500 completions less an estimated 11,700 demolitions), which, when further adjusted to take into account vacant dwellings, leaves 127,100 dwellings available to meet increased underlying demand.[45]
- Improved estimates of demolitions have been incorporated into the Council's estimation of the gap between demand and supply (see Chapter 3 for further details).
- The approach used in this report to estimating the gap between underlying demand and supply at 30 June 2008 produces a shortfall of 99,500 households, which is above the estimate of 85,000 in the 2008 report.
  - The approach in this report accumulates net additions to supply and underlying demand since the 2001 Census.
  - In the 2008 report, the Council's initial gap estimate for 2008 of 85,000 dwellings was based on the number of homeless and marginally housed households and the gap between capital city rental vacancy rates and the notional 'market clearing' rate of 3 per cent.
- The Council has also updated its longer term projections of the gap, although they are highly sensitive to the assumptions used.
  - Over the five years to 2014, the overall gap is projected to grow by a further 129,600 to 308,000 dwellings (Table 4.6).
  - By 2029, the same projection assumptions produce a cumulative gap of 640,600 dwellings (Table 4.6).
- Projections of the gap based on the methodology used in the 2008 report are in Appendix 2.
- There are several short- to medium-term issues that could affect the balance between supply and demand in ways not taken into account by these simple projections:
  - As noted in Chapter 3, information on potential dwellings in the land and dwelling supply pipeline suggests that the net increase in the dwelling stock over 2009-10 and 2010-11 could be significantly less than the projected longer term supply trend.
  - While there are signs of improvement in access to finance for multi-unit development and in

45 This compares with the Council's medium trend supply projection in the 2008 report of 129,000 net additional dwellings for 2008–09 (comprising projected gross production of 153,000 dwellings less an estimated 24,000 dwelling demolitions).

investor interest in acquiring multi-unit dwellings, it is possible that activity in this sector of the construction industry will be muted for some time.

- On the demand side, the Council's projections assume that migration will drop immediately from over 285,000 in 2008–09 to 230,000 (high projection), 180,000 (medium projection) or 120,000 (low projection) per annum.
- Some increases in population, including through migration, may not increase housing demand proportionally; for instance, increases in household size, 'group households' and shorter term residency for work or study may have temporary and reduced effects on housing demand.

The long-term projections (see Table 4.10) suggest the emergence of a cumulative gap of 640,600 dwellings (assuming medium household growth and medium supply). This shortfall could be as high as 1.6 million dwellings in a high household growth and low supply scenario. However, in a well-functioning housing market, such a large gap should trigger responses in price, levels of production, underlying demand and effective demand that would fully or partially close the gap. The Council has identified a range of constraints in the market that may limit the responsiveness of supply (see chapters 3, 6 and 7).

Price rises relative to incomes could lead to reduced effective demand by delaying household formation and increasing household size as well as reducing the attractiveness of Australia as a destination for migrants. This would reduce the rate of growth in underlying demand for new and established houses in the private market.

Even if the market responds to increased demand by increasing supply over time, it is unlikely to provide sufficient housing for people whose incomes are towards the bottom of the household income distribution. For this sizeable group, a gap might stimulate private investment for some household types (e.g. older households). However, a substantial part of the response to this gap needs to lie with government policy.

The Australian Government and state and territory governments are implementing policies and program responses to address homelessness and to increase construction of both new social housing dwellings and subsidised private rental accommodation. Further details are provided later in this chapter. These actions will take time to be fully effective and are likely to need expansion and adjustment to address the needs of people in the lower half of the household income distribution.

The Council is not alone in projecting an undersupply in housing. Other commentators have estimated an undersupply of dwellings relative to demand of between 100,000 and 250,000 depending on the time frame and methodology (see Box 4.1).

Later in this chapter and in Appendix 3 more detail is provided on the Council's estimates and the methodology used. There is also more discussion of the rationale, advantages and disadvantages and implications of different approaches to estimating the gap.

Overview of demand–supply balance

This chapter assesses the balance between housing supply and underlying demand in 2008–09 and goes on to assess how the gap may change over time.

In its first report, the Council estimated a gap of around 85,000 dwellings between underlying demand for and supply of housing at 30 June 2008. The Council developed a methodology for measuring the gap based on selected measures of homelessness, including the number of marginal residents of caravan parks and the undersupply of private rental dwellings indicated by the rental vacancy rate (see Chapter 4, 2008 report). The measures used in the 2008 report were:

1. **2008 gap size** = additional private rental dwellings required in 2008 to increase the number of vacant private rental dwellings to 3 per cent of the total private rental stock + dwellings required to accommodate people who are homeless and sleeping rough or staying with friends and relatives + dwellings required to house marginal residents of caravan parks.
2. **Gap at a point in time over 2009 to 2028** = 2008 gap + projected net growth in households from 2008 – growth in net housing stock since 2008 (applying a variety of projection scenarios for underlying demand and supply).

The gap measure used in the 2008 report was reviewed by the Council in the preparation of this report.

Members of the Council and some stakeholders were uncomfortable with the composite proxy measure of current undersupply used in the 2008 report. The measure used in the 2008 report has a number of drawbacks, including:

- data on homelessness and marginal residents of caravan parks are updated only once every five years
- data on rental vacancy rates are volatile and relate to capital cities only
- in theory, an interaction between the extent of homelessness and scarcity of rental dwellings, could result in some over estimation of the gap
- a host of factors influence homelessness in addition to the availability and cost of housing, including mental health, family violence and breakdown, and substance abuse
- the extent of homelessness is likely to be a conservative proxy for the gap between underlying demand and housing supply, which may manifest in a variety of different ways, such as increased house prices relative to incomes, delays in family formation, increased household size, and growth in the number of 'group households'.

Housing economists prefer to assess changes in the balance between supply and demand from a period at which the housing market could be termed 'in equilibrium' (when demand and supply are in balance and housing prices are moving with price and income movements more generally). The Council was attracted to the notion of an equilibrium-based measure but cognisant of the conceptual and practical challenges, specifically:

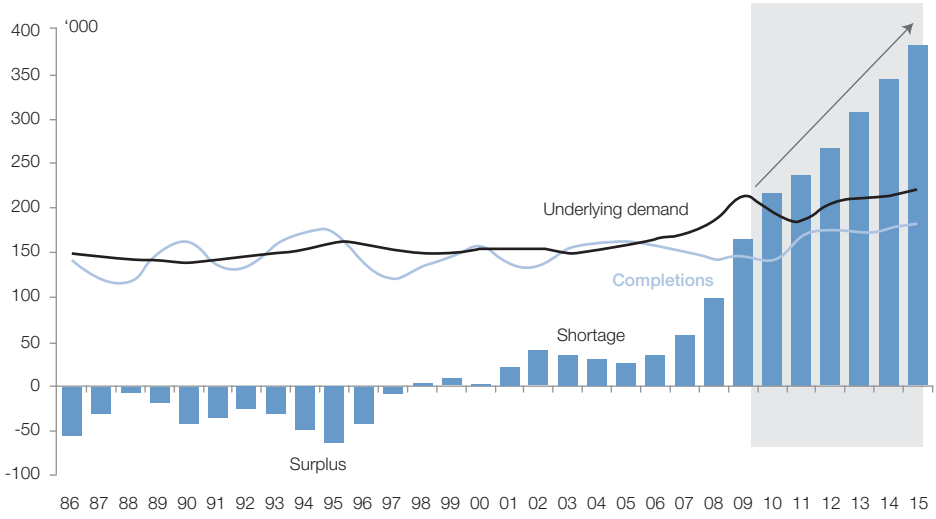
- the existence of geographically separate housing markets across Australia with different time periods in which equilibrium-like market conditions have been observed
- the existence of submarkets across tenures, house types, price strata and income strata, each with likely variation in relevant market dynamics
- lead and lag relationships, substitution effects and 'spill overs' between submarkets leading to diverse points of equilibrium and the possibility that equilibrium in one submarket could be associated with disequilibrium in another
- lack of availability of reliable data to support the development and quantification of a set of equilibrium-based measures of the demand–supply balance across the full variety of submarkets
- the complexity—even with comprehensive and reliable data—of constructing and interpreting an aggregate measure for the Australian housing system as a whole.

The Council is nonetheless attracted to a cumulative measure of the demand–supply gap that starts in a census year because the census provides comprehensive benchmark information on household and housing characteristics.

The Council has decided to use 2001 as the base year for measuring the cumulative gap between underlying demand (growth in the number of households) and supply (growth in housing stock). Figure 4.1, from the ANZ Bank's *Property Outlook 2009*, indicates relatively low levels of surplus or shortage around the period 1997–2001. Comparing the long-term trend in house prices with quarterly levels of the house price index (Figure 4.2) shows that the most recent periods in which the quarterly index measure aligned with the long-term trend in the index were the December 2001 and March 2002 quarters.

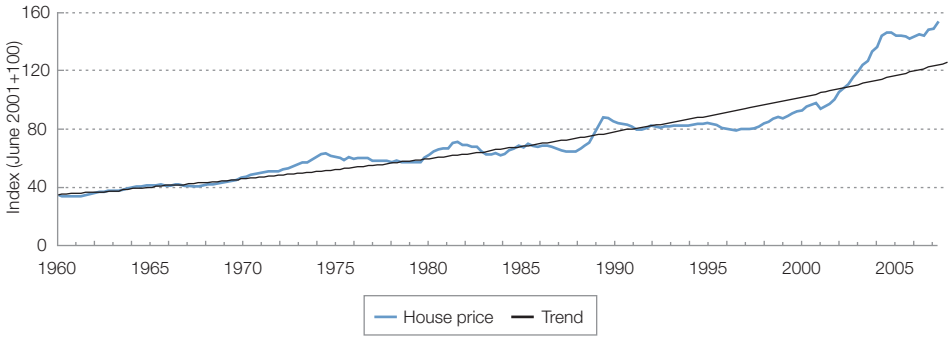
The Council emphasises that the choice of 2001 as the base year is **not** on the basis that that year represents a point of equilibrium nationally or within any particular submarket. Rather, it coincides with a Census of Population and Housing and it is sufficiently long ago to have enabled some market adjustments in response to housing demand. As Figure 4.3 demonstrates, housing production has oscillated considerably over the period since 2001, suggesting that producers have responded to at least some changes in market conditions.

Figure 4.1: ANZ Bank assessment of market balance, 1986 to 2015



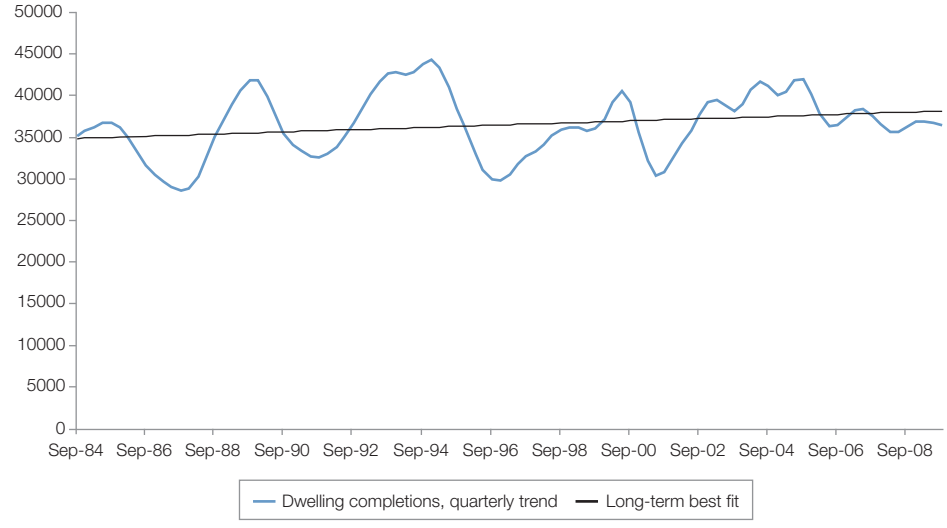
Source: ANZ (unpublished)

Figure 4.2: House price trends, 1960 to 2009



Sources: Adapted from Productivity Commission, *Inquiry Report on First Home Ownership*, March 2004, Figure 1, p. xv, and Australian Bureau of Statistics, *House Price Indexes: Eight Capital Cities*, *Dec 2009*, cat. no. 6416.0, Table 10, ABS, Canberra, 2010.

Figure 4.3: Dwelling completions, quarterly trend and long-term best fit, September quarter 1984 to September quarter 2009



Source: Australian Bureau of Statistics, *Building Activity, Australia*, *Sep 2009*, Table 37, cat. no. 8752.0, ABS, Canberra, 2010.

2009 gap size calculated using cumulative approach

Cumulative unmet underlying demand is the gap between the increase in underlying demand (projected net increase in households) from 2001 to 2009 and net stock additions over the same period. The Council has discounted net stock additions by 5.9 per cent to account for the estimated proportion of new stock that is unable to accommodate additional underlying demand. This proportion of stock is assumed to be unoccupied but unavailable (as analysed in Chapter 3). The basis of the 5.9 per cent estimate of unoccupied stock is outlined further.

The Council's application of this approach used household projections (Series II, the central projection) for the period 2001 to 2009,[46] adjusted as follows.

- For 2001 to 2006, revised Estimated Resident Population (ERP) for these years[47] divided by the Australian Bureau of Statistics' assumed household size in each of the years for the central scenario underlying the household projections.[48]
- For 2008 and 2009, ERP divided by estimates of persons per household consistent with the medium household projections provided to the Council by McDonald and Temple as part of their Household and Population Projection Evaluation (HAPPE) model.
- For 2007, ERP divided by the simple mean of the Australian Bureau of Statistics assumed household size in 2006 for Household and Family Projections 2001 to 2026 and the 2008 HAPPE estimates of persons per household.

Using this methodology, the increases in underlying demand, supply growth and gap for the period 2002 to 2009 are shown in Table 4.1 below. The estimated cumulative gap between growth in underlying demand and supply was a shortfall of 99,500 dwellings at 30 June 2008, growing to a shortfall of 178,400 dwellings at 30 June 2009.

Table 4.1: Estimates of the net dwelling supply gap for 2002 to 2009 using 2001 as a base year, Australia

	Change in underlying demand	Supply growth, net of demolitions, with allowance for unoccupied dwellings excluding 'Resident absent'	Net dwelling supply gap 2002–2009 based on the difference between change in underlying demand and supply adjusted for demolitions and unoccupied dwellings
	('000 households)	('000 dwellings)	('000 dwellings)
2002	138.1	114.7	23.4
2003	139.7	132.9	30.2
2004	138.3	136.5	32.0
2005	137.1	139.5	29.6
2006	137.4	134.2	32.8
2007	162.1	128.4	66.5
2008	157.4	124.4	99.5
2009	205.9	127.1	178.4

Source: National Housing Supply Council estimates of underlying demand for dwellings since June 2001.

At the national level, the estimate for June 2008 is higher than the gap of 85,000 which was the measure used in the 2008 report.

The Council intends to revisit homelessness data when they are next updated. The Council will similarly monitor capital city rental vacancy rates and rents.

46 Australian Bureau of Statistics, *Household and Family Projections, Australia, 2001 to 2026*, cat. no. 3236.0, ABS, Canberra, 2004.

47 Australian Bureau of Statistics, *Australian Demographic Statistics, Dec 2006*, cat. no. 3101.0, ABS, Canberra, 2007.

48 Australian Bureau of Statistics, *Household and Family Projections, Australia, 2001 to 2026*, cat. no. 3236.0, ABS, Canberra, 2004.

Gap estimates for 2009 and subsequent years

The measures used in the 2010 report are:

1. **2009 gap size** = 2008 gap size (recalculated as described above) + the increase in underlying demand – net increase in dwelling supply (gross completions less estimated demolitions) further discounted by 5.9 per cent to account for estimated unavailable unoccupied dwellings.
2. **Gap at a point in time over 2010 to 2029** = 2009 gap + projected growth in households from 2009 – projected net increase in housing stock from 2010 discounted as above to account for estimated unavailable unoccupied dwellings.

Adjustment for unavailable unoccupied stock

On average, the percentage of Australia's dwelling stock unoccupied at the 1996, 2001 and 2006 censuses was 9.5 per cent of the total stock. The Council has adjusted this proportion to an average of 5.9 per cent of total stock for the purposes of calculating the gap by taking into account:

- dwellings that would **not** be available at any point in time to meet underlying demand (such as those vacant to be renovated, demolished or otherwise achieve turnover in the market, and those used as second or holiday homes).

Table 4.2 below shows a state-by-state breakdown of unoccupied housing stock. Chapter 3 provides further information about the unoccupied dwellings identified in recent censuses. State-by-state estimates of net additional supply available to meet underlying demand have been discounted by the respective vacancy rate in each state or territory.

Table 4.2: Adjustment for unoccupied dwellings where the reason unoccupied was not 'Usual resident absent' (per cent)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
Unoccupied (% of all dwellings)	9.1	10.0	9.0	9.9	10.2	12.9	8.4	6.3	9.5
Resident absent (% of unoccupied dwellings)	38.4	37.0	38.1	35.1	48.2	30.1	36.7	53.6	38.4
Unoccupied (adjusted) (% of all dwellings)	5.6	6.3	5.6	6.4	5.3	9.0	5.3	2.9	5.9
Occupied (adjusted) (% of all dwellings)	94.4	93.7	94.4	93.6	94.7	91.0	94.7	97.1	94.1

Source: Derived from Australian Bureau of Statistics, 2006 Census Tables, 'Dwelling structure by occupied/unoccupied dwellings', 1996, 2001, 2006, cat. no. 2068.0, ABS, Canberra, 2007; Australian Bureau of Statistics, 1976 Census, 'Table 61: Unoccupied private dwellings by reason unoccupied (section of state)', cat. no. 2104.0, Australian Bureau of Statistics, Canberra, 1979; ABS, 1986 Census, 'Table C80: Reason private dwelling unoccupied by section of state: unoccupied private dwellings', cat. no. 2102.0, ABS, Canberra, 1988.

Note: See more detailed information in Appendix 3: Methodology.

The projected gap between increased underlying demand and actual supply in 2009 and subsequent years assumes that on average 5.9 per cent of the net increase in stock would not be available to meet underlying demand.

The approach used in the 2008 report was to allow for a constant **number** of vacant dwellings in estimating the future gap. It assumed no growth in this component of housing stock. Census data indicate that historically there has been a proportional increase in this component. The revised approach in this report allows for a **proportional increase** in the number of vacant dwellings that are not available to meet underlying demand. This revised approach is likely to increase the gap over time. Table 4.3 shows the increase in the gap for 2009 based on the increase in underlying demand and adjusted net supply in 2009 based on the state and territory specific demolition rates (see Appendix 3) and unoccupied dwelling rates shown in Table 4.2. The term 'adjusted net supply' refers to the Council's estimates of dwelling completions net of demolitions and adjusted for unoccupied dwellings.

Table 4.3: Estimated additional underlying demand and adjusted net supply, July 2008 to June 2009

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
				('000 households)					
Underlying demand	54.2	52.3	50.1	10.8	30.1	3.2	2.2	3.0	205.9
				('000 dwellings)					
Adjusted net supply growth	23.6	35.9	35.7	8.4	17.8	2.3	1.0	2.3	127.1
Increase in gap in year to June 2009	**30.6**	**16.4**	**14.4**	**2.4**	**12.3**	**0.8**	**1.2**	**0.6**	**78.8**

Source: National Housing Supply Council estimates of underlying demand for dwellings. See Appendix 3: Methodology for detail.

This growth in the gap is then added to the revised gap for 2008. The effect of the growth in the gap for 2009 on the existing gap is shown in Table 4.4 below.

Table 4.4: Estimated dwelling gap, Australia, (number of dwellings), June 2009

Estimated gap as at June 2008, revised (a)			**99,500**
Growth in estimated gap between June 2008 and June 2009:			
plus	Increase in underlying demand in year to June 2009	+ 205,900	
minus	Increase in adjusted net supply (b) in year to June 2009	– 127,100	
equals		= 78,800	**+ 78,800**
Estimated gap as at June 2009			**178,400**

Notes: (a) The gap estimate of 85,000 for June 2008 in the 2008 report has been revised (to reflect an updated methodology) to 99,500. (b) Adjusted net supply is gross additional supply less estimated demolitions, with resulting net production discounted by 5.9 per cent to account for dwellings unavailable to meet underlying demand (see below).

Sources: National Housing Supply Council estimates.

The distribution of the gap across states and territories as at June 2009 is presented in Table 4.5. The national gap is the sum of state and territory gaps.

Table 4.5: Estimated dwelling gap, June 2009 (rounded to nearest '00)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2009	57.6	22.7	56.1	0.1	30.2	1.0	10.1	0.5	178.4

Source: National Housing Supply Council estimates of underlying demand; National Housing Supply Council estimates of dwelling completions net of demolitions and adjusted for unoccupied dwellings.

Future changes in the demand–supply gap

Projecting the future balance between housing demand and supply is difficult. In a well-functioning housing market, the emergence of a significant shortfall in supply would be expected to stimulate an increase in supply (thus, closing the gap). This dynamic aspect of the market should be borne in mind when interpreting the following projections.

A further hazard in projecting the gap is the prospect of change in economic circumstances and government policies and programs affecting the housing market and homelessness. Economic cycles, policies and programs will change at some point over the 20-year period of the Council's projections; indeed, all three are changing at present.

The following projections of the demand–supply gap are derived simply by subtracting the supply projections (Chapter 3) from the demand projections (Chapter 2), taking into account the estimated gap of 178,400 as at June 2009, and adding an adjustment for vacant stock. The 'central' estimate of the gap presented below compares the medium growth projection of demand with the medium growth projections for supply (i.e. average new dwelling production trend since 1980 adjusted for demolitions).

The value of these projections is simply their capacity to show how the gap between supply and demand would develop in a situation of 'all other things being equal'. This provides a potential springboard for change on the part of market participants, housing providers and government policy and programs.

As noted in Chapter 3, information on potential dwellings in the land and dwelling supply pipeline suggests that the net increase in the dwelling stock over 2009-10 and 2010-11 could be significantly less than the projected longer term supply trend. This is likely to further increase the gap between demand and supply.

Box 4.1: But does the evidence support an undersupply?

Some recent commentary about the National Housing Supply Council's demand–supply gap disputes the conclusion that there is an undersupply of housing. Other critiques question the statistical evidence underpinning the gap, particularly questioning the homelessness and vacancy rate measures used to calculate the gap in the 2008 report.

The Council's 2008 report acknowledged the crudeness of the gap estimate and its underpinning assumptions. The limitations of the underlying data are also noted.

However, the Council is not alone in projecting a housing shortage. The Reserve Bank of Australia has estimated a 40,000 annual shortage. Industry analysts have also estimated shortages. The ANZ estimates a shortage of over 200,000 homes in 2009 and 250,000 properties by 2010, with a shortfall per annum of 30,000 dwellings.[49] Westpac estimates a shortage of 190,000 for 2009 and BIS Shrapnel estimates 160,000 by 2010.[50] The Housing Industry Association has estimated a current shortfall of 109,200.[51]

The Council's projections also address whether projected growth in underlying demand could be met by historical levels of total (public and private) production (adjusted in line with population growth) and looks at the land development and housing supply pipeline.

The Council acknowledges—in several places—that a significant gap between supply and demand would be expected to stimulate a range of market and policy responses that close the gap in a well-functioning market. Nonetheless, the gap analysis is important for identifying what could happen if the present demand-and-supply trajectories are maintained without compensating changes in economic, industry and government policy settings.

49 P Braddick, S Wayne and A Montalti, *ANZ housing snapshot*, 04 October 2007, p. 3.

50 C Joye, *Investor news*, 26 August 2009.

51 Housing Industry Association, *Housing to 2020*, Canberra, 2010.

Medium demand and medium supply

Table 4.6 shows how, under the medium supply trend and medium demand trend scenarios, the estimated gap of 178,400 in 2009 is projected to change over the next 20 years. Over the two years to 2011, the gap is projected to grow by an estimated 49,900 to 228,300 dwellings. This is the result of a projected 265,600 net new dwellings (adjusted for vacancies) over the period while projected underlying demand increases by 315,500 households.

By 2014, the gap is projected to grow to 308,000 dwellings. By 2019, the gap is projected to increase to 436,300 dwellings and, by 2029, to 640,600.

Table 4.6: Growth in gap between underlying demand and adjusted net supply including cumulative gap, (number of dwellings), 2010 to 2029, selected years

	Additional annual underlying demand & supply			
Year ended 30 June	Medium household growth	Adjusted net medium supply growth (a)	Annual growth in gap between underlying demand & adjusted net supply	Cumulative gap
		Number of dwellings		
2009	..	..	..	178,400
2010	156,500	132,500	24,000	202,400
2011	159,000	133,100	25,900	228,300
2012	160,300	133,700	26,500	254,800
2013	161,200	134,300	26,800	281,600
2014	161,300	135,000	26,300	308,000
2019	163,000	138,100	24,900	436,300
2024	163,300	141,200	22,100	549,100
2029	157,700	144,300	13,400	640,600

Note: (a) Adjusted net medium supply growth is additional supply less estimated demolitions, with resulting net production discounted by 5.9 per cent to account for dwellings unavailable to meet underlying demand.

Source: National Housing Supply Council projections based on McDonald–Temple medium household growth scenario; National Housing Supply Council projections based on trends in dwelling completions; see Appendices 2 and 3 for full details.

Sensitivity of estimates of the gap

These projections are sensitive to the assumptions used. This is illustrated by Table 4.7, which shows projected underlying demand and dwelling production increases over the five years 2010 to 2014, and the resulting gap, using different combinations of the three underlying demand scenarios and the three dwelling production scenarios.

For example, in a high demand growth/high supply growth scenario, underlying demand is projected to increase over the five-year period by 899,100 additional households and supply is projected to increase by 808,000 dwellings. These increases lead to a projected shortfall of 91,000 dwellings. By contrast, in a low demand growth/medium supply growth scenario, underlying demand is projected to increase by 677,200 while supply is projected to grow by 668,600; this leaves a projected shortage of 8,600 dwellings.

Table 4.7: Change in gap between underlying demand and dwelling supply, five years (June 2009 to June 2014), using different projection assumptions

Demand projection: Underlying demand		Supply projection: Production of dwellings		
		Low adjusted net production	Medium adjusted net production	High adjusted net production
		Increase over five years (2009 to 2014)		
Low household growth	Increase in underlying demand	677,200	677,200	677,200
	Increase in net supply	550,700	668,600	808,000
	Change to gap (a)	126,500	8,600	-130,800
Medium household growth	Increase in underlying demand	798,200	798,200	798,200
	Increase in net supply	550,700	668,600	808,000
	Change to gap (a)	247,500	129,600	-9,800
High household growth	Increase in underlying demand	899,100	899,100	899,100
	Increase in net supply	550,700	668,600	808,000
	Change to gap (a)	348,300	230,400	91,000

Note: (a) Size of gap is measured as the difference between the increase in underlying demand and the increase in adjusted supply. A negative value indicates oversupply.

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios; National Housing Supply Council projections based on trends in dwelling completions; see Appendices 2 and 3 for full details.

The data in Table 4.7 exclude the estimated "initial gap" in 2009. The effect of including this initial gap is shown in Table 4.8, which shows the change in the total gap over the five years 2009 to 2014, using different combinations of the three underlying demand scenarios and the three dwelling production scenarios. For example, high projected growth in both underlying demand and net supply would see the overall gap grow from 178,400 dwellings to 269,400 dwellings over the five-year period. By contrast, in a low demand growth/medium supply growth scenario, the gap would increase from 178,400 to 187,000. Given recent population growth, this scenario looks unlikely.

Table 4.8: Gap between underlying demand and dwelling supply including initial gap, five years (June 2009 to June 2014), using different projection assumptions

Demand projection: Underlying demand		Supply projection: Production of dwellings		
		Low adjusted net production	Medium adjusted net production	High adjusted net production
		Increase over five years (2009 to 2014)		
Low household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.7)	126,500	8,600	-130,800
	Cumulative gap at June 2014	304,900	187,000	47,600
Medium household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.7)	247,500	129,600	-9,800
	Cumulative gap at June 2014	425,900	308,000	168,600

Demand projection: Underlying demand		Supply projection: Production of dwellings		
		Low adjusted net production	Medium adjusted net production	High adjusted net production
High household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.7)	348,300	230,400	91,000
	Cumulative gap at June 2014	526,700	408,800	269,400

Note: A negative value indicates oversupply.

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios; National Housing Supply Council projections based on trends in dwelling completions; National Housing Supply Council estimate of initial gap between underlying demand and supply; see Appendices 2 and 3 for full details.

Table 4.9 and Table 4.10 present the same approach as that used in Table 4.7 and Table 4.8 but refer to the 20-year rather than the five-year projection period.

Table 4.9 shows, for instance, that the high growth scenarios for both underlying demand and net supply result in a gap of 321,900 dwellings. By contrast, in a low demand growth/medium supply growth scenario, a surplus of 62,100 dwellings is projected.

Table 4.9: Change in gap between underlying demand and dwelling supply (adjusted), 20 years (June 2009 to June 2029), using different projection assumptions

Demand projection: Underlying demand		Supply projection: Production of dwellings		
		Low adjusted net production	Medium adjusted net production	High adjusted net production
		Increase over 20 years (2009 to 2029)		
Low household growth	Increase in underlying demand	2,705,600	2,705,600	2,705,600
	Increase in net supply	2,279,100	2,767,600	3,344,700
	Change to gap (a)	426,400	-62,100	-639,100
Medium household growth	Increase in underlying demand	3,229,800	3,229,800	3,229,800
	Increase in net supply	2,279,100	2,767,600	3,344,700
	Change to gap (a)	950,700	462,200	-114,900
High household growth	Increase in underlying demand	3,666,600	3,666,600	3,666,600
	Increase in net supply	2,279,100	2,767,600	3,344,700
	Change to gap (a)	1,387,500	899,000	321,900

Note: (a) Size of gap is measured as the difference between the increase in underlying demand and the increase in adjusted supply. A negative value indicates oversupply.

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios; National Housing Supply Council projections based on trends in dwelling completions; see Appendices 2 and 3 for full details.

The data presented in Table 4.10 include the initial gap in 2009. High growth in underlying demand and adjusted net supply as discussed earlier would see the gap grow from 178,400 dwellings to 500,300 dwellings over the 20-year period. By contrast, low demand growth and medium supply growth would see the gap of 178,400 decline to 116,300 dwellings.

Table 4.10: Gap between underlying demand and dwelling supply (adjusted) including initial gap, 20 years (June 2009 to June 2029), using different projection assumptions

Demand projection: Underlying demand		Supply projection: Production of dwellings		
		Low adjusted net production	Medium adjusted net production	High adjusted net production
		Increase over 20 years (2009 to 2029)		
Low household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.9)	426,400	-62,100	-639,100
	Cumulative gap at June 2029	604,800	116,300	-460,700
Medium household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.9)	950,000	462,200	-114,900
	Cumulative gap at June 2029	1,129,100	640,600	63,500
High household growth	Cumulative gap to June 2009	178,400	178,400	178,400
	Additional gap (from Table 4.9)	1,387,500	899,000	321,900
	Cumulative gap at June 2029	1,565,900	1,077,400	500,300

Note: A negative value indicates oversupply.

Source: National Housing Supply Council projections based on McDonald–Temple low, medium and high household growth scenarios; National Housing Supply Council projections based on trends in dwelling completions; National Housing Supply Council estimate of initial gap between underlying demand and supply; see Appendices 2 and 3 for full details.

Other considerations

It was observed in Chapter 3 that the short- to medium-term projections of supply growth are likely to be optimistic given present market conditions. If this is so, and population growth continues, there is a prospect of a wider gap between demand and supply over the next three to five years. Looming skills shortages in the construction sector also threaten to widen the gap over a longer period (see Chapter 3).

Current and future housing policy initiatives have not been specifically factored into the calculations. The Australian Government's broad-based range of housing and homelessness initiatives and lower interest rates will have a positive impact on the demand–supply gap. Related state and territory policy and program responses are also expected to contribute. It is too early to accurately assess the full impact of these initiatives and the timing of that impact. This will partly depend on funding levels, take-up of assistance measures and specific program settings, or market reaction to them. Further information about government assistance measures is included at the end of this chapter.

Further work on the demand–supply gap

In future reports, the Council will consider how to develop its assessment of the demand–supply gap further. The two principal issues to consider are:

- whether to retain the present accumulation basis of assessing the 'present gap' between underlying demand and supply or modify it, including by starting from different dates representing 'market equilibrium' in each state and territory
- whether and how to take account of housing market dynamics.

The rest of this section outlines some of the Council's initial thinking on the second issue. The projected imbalances detailed above are simply the result of comparisons between projections of demand and supply—the former being demographically driven projections of underlying demand with different scenarios based on net international migration and net interstate movements, and the latter being linear projections of supply based on best, worst and average production over past years. The projections are 'economics free', excluding any consideration of the interactions between demand, supply and price. They also do not incorporate any interaction between the emergence of a demand–supply imbalance and changes in building activity or population growth. There is also no provision for adjustment in response to fluctuations in overall economic activity.

As noted in several places in the 2008 report, a more sophisticated approach to projecting demand and supply would be based on modelling the variety of economic factors influencing the balance between housing supply and demand in the market. In addition to the matters addressed above, this modelling would desirably take account of the impact on investors and production of demand-side assistance (like Commonwealth Rent Assistance and the First Home Owners Grant) and supply-side assistance (like the National Rental Affordability Scheme). It would also need to assess the impact of social housing provision on mitigating any gap between underlying demand and effective demand that is satisfied by the private market.

Such a model could also assist in better understanding and capturing the extent to which variation in housing cost and availability contribute to internal migration and regions' attractiveness to international migrants.

The Council remains committed to developing more robust projections of demand and supply. In the process of considering approaches to modelling, the Council has concluded that priority should be given to understanding and estimating several key relationships likely to have significant bearing on the quality of gap projections. These key relationships include:

- whether cyclical economic downturns affect housing production but have little impact on growth in the number of households
- how household formation responds to housing market conditions
- whether house and land cost increases and interest rates have pushed the entry price for access to the owner occupancy and investor markets to a higher point in the distribution of household income
- whether, therefore, there is an increasing gap between underlying demand and the number of new dwellings the market is able to sell.

The Council will explore further for its 2011 report the costs of inputs to housing and any impacts of the imbalance between demand and supply on specific owner occupancy submarkets.

Key indicators

Key indicator 1 – Cumulative difference between aggregate demand and supply

Table 4.11: Key indicator 1 – Cumulative difference between growth in dwelling supply and growth in underlying demand, 30 June 2001 to 30 June 2009 in major capital cities and other areas

	Whole of Australia	Capital cities (a)	Balance of state (b)
Cumulative difference between dwelling supply growth and growth in the number of households (c)(d)	-178,400	-116,800	-61,500

(a) Sydney, Melbourne, Brisbane (capital city – not including broader south-east Queensland), Adelaide and Perth only.

(b) Includes Hobart, Darwin and Canberra.

(c) Dwelling supply figures adjusted to allow for vacant dwellings.

(d) Underlying demand figures are pro rated using population estimates from Australian Bureau of Statistics, *Australian Demographic Statistics*, *June 2009,* cat. no. 3101.0, ABS, Canberra, 2009.

Notes: Negative numbers imply a supply shortfall. Numbers may not sum to totals due to rounding.

The following table is included to enable comparison with key indicator 1 in the 2008 report.

Table 4.12: Cumulative difference between aggregate supply and demand to 30 June 2009, major capital cities and other areas (based on initial gap measure in 2008 report)

	Whole of Australia	Major capital cities (a)	Balance of state (b)
Initial supply gap at 30 June 2008	- 85,000	n.a.	n.a.
Additional gap in 2008–09	-78,800	-48,200	-30,600
Gap at 30 June 2009	-163,800	n.a.	n.a.

(a) Sydney, Melbourne, Brisbane (capital city – not including broader south-east Queensland), Adelaide and Perth only.

(b) Includes Hobart, Darwin and Canberra.

(c) Dwelling supply figures adjusted to allow for vacant dwellings and demolitions.

(d) Underlying demand figures are pro rated using population estimates from Australian Bureau of Statistics, *Australian Demographic Statistics*, *June 2009,* cat. no. 3101.0, ABS, Canberra, 2009.

Key indicator 2 – Adequacy of annual construction activity since previous year by capital cities/balance of state, Australia, 2009

Table 4.13: Key indicator 2 – Adequacy of annual construction activity in 2008–09 by capital cities/balance of state, Australia, 2009

2009	Whole of Australia	Capital cities (a)	Balance of state (b)
Additional supply in 2008–09 (c)	127,100	76,700	50,300
Number of additional households in 2008–09 (d)	205,900	124,900	81,000
Adequacy of annual construction activity	**–78,800**	**-48,200**	**-30,600**

(a) Sydney, Melbourne, Brisbane (capital city – not including broader south-east Queensland), Adelaide and Perth only.

(b) Includes Hobart, Darwin and Canberra.

(c) Dwelling supply figures adjusted to allow for vacant dwellings and demolitions.

(d) Underlying demand figures are pro rated using population estimates from Australian Bureau of Statistics, *Australian Demographic Statistics*, *June 2009,* cat. no. 3101.0, ABS, Canberra, 2009.

Notes: Negative numbers imply a supply shortfall. Numbers may not sum to totals due to rounding.

Government initiatives

A range of government measures and programs have been initiated to help households to pay for their housing and to increase the supply of affordable housing. These measures and programs have direct and indirect implications for the gap between housing demand and supply.

These measures, which are discussed in more detail below, include:

- direct assistance to first home buyers through schemes such as the First Home Owners Grant and the First Home Owners Boost
- incentives to save for first home ownership through the First Home Saver Accounts
- Commonwealth Rent Assistance paid as an income supplement to income support recipients in the private rental market
- funding for provision and management of social (public and community) housing and related reforms through the National Affordable Housing Agreement
- incentives for institutional investors and community housing providers to build new affordable rental properties
- Commonwealth, state and territory land and planning measures to increase the supply of affordable housing
- Housing Affordability Fund grants to improve planning and infrastructure provision
- possible changes in housing-related taxation emanating from the Henry Review.

First Home Owners Grant

The First Home Owners Grant scheme was introduced in 2000 as a $7,000 grant payment to first home buyers. An additional $7,000 was available for newly constructed dwellings from March 2001 to December 2001, dropping to $3,000 between January and June 2002. The purpose of the additional amount was to provide a short-term stimulus to activity in the residential construction sector.

First Home Owners Boost

On 14 October 2008, as part of its $10.4 billion Economic Security Strategy to strengthen the Australian economy, the Australian Government announced a First Home Owners Boost (with the same eligibility criteria as for the First Home Owners Grant scheme), which provided that:

- first home buyers who purchase established homes would have their grant doubled from $7,000 to $14,000
- first home buyers who purchased a newly constructed home would receive an extra $14,000 (or total grant of $21,000)
- eligible applicants had to buy a home between 14 October 2008 and 30 June 2009.

In the 2009 Budget, this time period was extended to 30 September 2009, with a halved First Home Owners Boost available between 1 October 2009 and 31 December 2009 ($3,500 for those purchasing established homes and $7,000 for buyers of new homes in addition to the $7,000 First Home Owners Grant).

Almost 200,000 households have used the First Home Owners Boost to purchase a property (to 31 October, 2009).

First Home Saver Accounts

First Home Saver Accounts were introduced in 2008 to assist first home buyers to save larger deposits more quickly through the payment of a 17 per cent government contribution on the first $5,000 of personal contributions each year, paid directly into individuals' accounts. This means that any eligible person who contributes $5,000 to their account will receive an $850 deposit from the government. Contributions will not be subject to tax when contributed to a First Home Saver Account, and interest on the account will be taxed at 15 per cent rather than the account holder's marginal rate. Individuals will be able to withdraw their account balance tax free to buy or build a first home in which to live. To be eligible to withdraw the funds for home purchase, the account holder needs to have made minimum contributions of $1,000 a year over the course of at least four separate financial years. Access to the funds to assist purchase of a first home is not available until at least four years of savings have accrued. If the account holder does not use the funds to purchase a first home, the funds are transferred to a superannuation account. Any positive impact on the market will therefore not be seen for at least four years from the commencement of the scheme in 2008.

To 30 September 2009, 15,300 First Home Saver Accounts had been opened with a total value of almost $50 million and an average balance of nearly $3,300.

Take-up has been more limited than expected. The reasons for this are unclear but could include the greater incentives offered by the First Home Owners Boost/First Home Owners Grant to purchase immediately, limited understanding of the scheme, and preferences for home buyers to purchase with immediate assistance rather than save. The uptake of these accounts may have increased with the cessation of the First Home Owners Boost on 31 December 2009.

State and territory government initiatives

In addition to the federal government initiatives, state and territory governments have provided additional levels of assistance such as extra cash grants and stamp duty concessions for first home buyers (see Table 4.14).

Table 4.14: State and territory government initiatives for first home buyers

State/territory	Initiative	Time frame
New South Wales	Extension of $3,000 NSW first home owners supplement	Until 30 June 2010
	Halved stamp duty on all homes up to $600,000 in value	Until 31 December 2009
	Exempts first home buyers buying homes below $500,000 from stamp duty, and discounts duties above this value (First HomePlus Scheme)	
	Abolishes stamp duty on land valued up to $300,000	
Victoria	First Home Bonus (for properties under $600,000) ■ $22,500 for new homes in regional Victoria ■ $18,000 for new homes in metropolitan Melbourne ■ $9,000 for existing homes	From 1 July 2009 to 30 June 2010

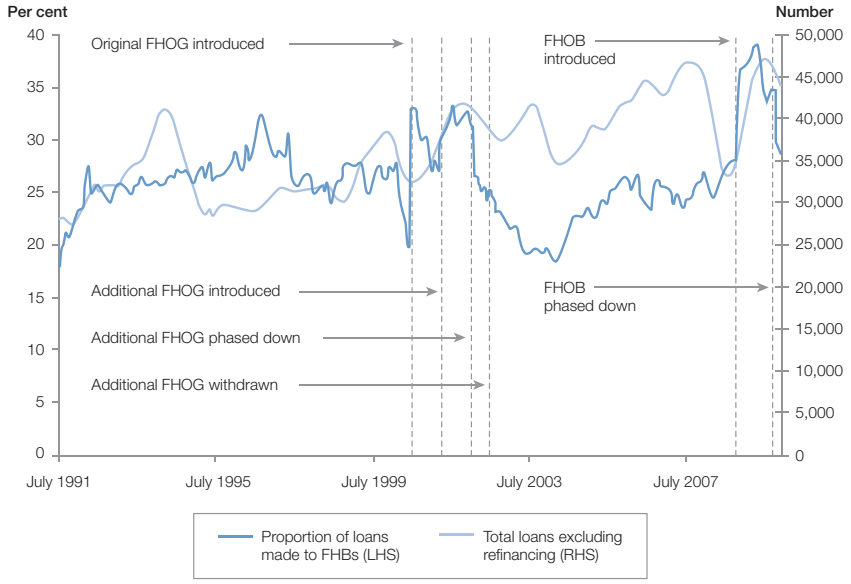
State/territory	Initiative	Time frame
Queensland	Increased stamp duty threshold to $250,000 for vacant land First homes under $500,000 already stamp duty free	
Western Australia	Land tax reductions and extension to pay by instalment arrangements for land tax First Start shared equity scheme (3,000 households over three years from 2008–09)	
South Australia	$4,000 bonus grant to replace the current first home buyer stamp duty concession	
Northern Territory	$14,000 to home buyers not eligible for the First Home Owners Boost who buy a new house or unit Home purchase assistance scheme, Homestart (higher income caps than prior HomeNorth scheme) while keeping key elements of the earlier scheme including: ■ a $7,000 First Home Owners Grant ■ Stamp duty concession of up to $15,515 for first home buyers ■ $2,500 for other home buyers	
Australian Capital Territory	Home buyer concession scheme ■ maximum duty of $20 for properties up to $349,800 in value ■ graduated concession for properties valued up to $422,000 Eligibility criteria of income limits, property value and previous property ownership	From 1 January to 30 June 2010

Impact of grants to first home owners on the market

State and territory governments have been responsible for administration of the First Home Owners Grant scheme and the First Home Owners Boost. There is a lack of nationally consistent data available to assess the full impact of these assistance measures.

Figure 4.4 indicates changes in lending to first home buyers since 1991 alongside key changes in assistance to first home buyers. The likely impact of the First Home Owners Grant scheme on demand can be seen in data on the proportion of home loans made to first home buyers, which was around 22 per cent of all home loans between 1992 and 2000. This proportion rose to 25 per cent on the introduction of the scheme in July 2000, falling back to 20 per cent in early 2001 before being re-energised by the additional grant for new homes in April 2001. After decreases to the grant level in January 2002 and July 2002, the proportion of first home buyers dipped to less than 15 per cent and then stabilised at around 17 per cent—substantially below the 1992 to 2000 average.

Figure 4.4: Monthly loans to all home buyers by number (trend) and proportion of loans to first home buyers (original), July 1991 to December 2009



Source: Australian Bureau of Statistics, *Housing Finance, Australia, December 2009*, cat. no. 5609.0. ABS, Canberra, 2010.

Between the phasing out of the additional First Home Owners Grant scheme in 2002 and the introduction of the First Home Owners Boost in October 2008, lending to non–first home buyers outstripped lending to first home buyers. The proportion of loans to first home buyers was steady at its 3- to 4-year average of around 17 per cent before the First Home Owners Boost was introduced. The previous spike (of around 33 per cent) in the proportion of loans to first home owners corresponded with the introduction and scaling up of the First Home Owners Grant scheme. In 2008–09, 165,100 housing loans were made to first home buyers.[52]

While it is not possible to fully disaggregate the effect of the First Home Owners Boost from the interest rate cuts during 2008–09, loans to first home buyers increased by more than the relative increase in loans to non–first home buyers. This suggests that the increase in loans to first home owners was due to more than just low interest rates. Industry sources have suggested that 50 per cent of prospective first home buyers were in the market because of the First Home Owners Boost.

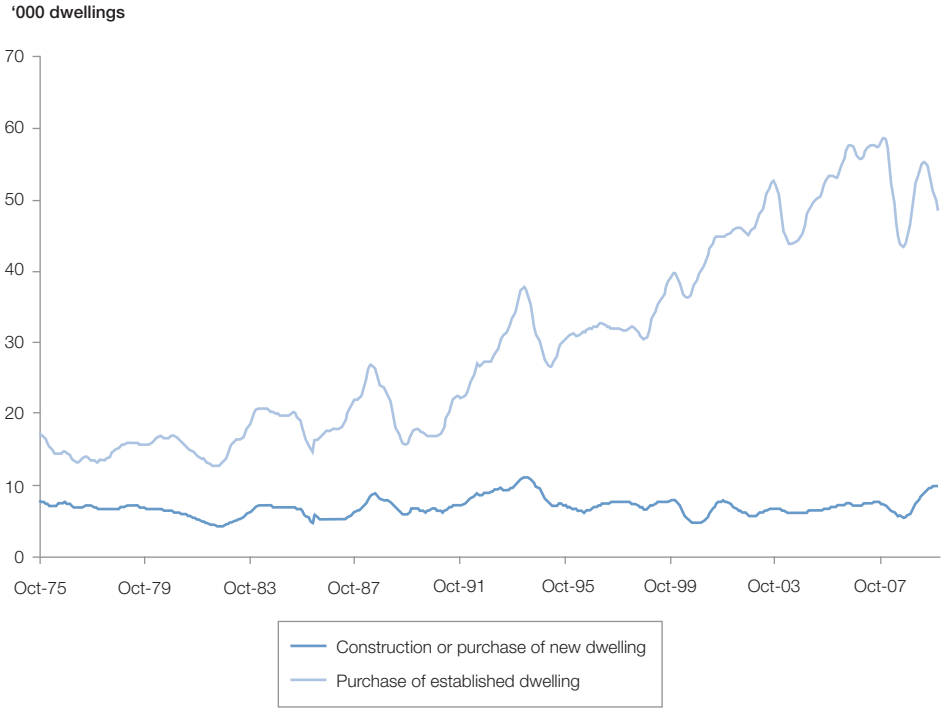
52 Australian Bureau of Statistics, *Housing finance*, cat. no. 5609.0, ABS, Canberra, July 2009, Table 9.

Stimulating new supply

Around 9 per cent of first home buyers and around 17 per cent of non–first home buyers bought new dwellings in 2007–08. Around 20 per cent of all new dwellings in 2007–08 were purchased by first home buyers.[53]

Figure 4.5 indicates some of the effects of the global financial crisis and First Home Owners Boost on the home loan market. Overall, there was a drop in the number of loans taken out for new and existing dwellings, with a low point in September 2008. The number of loans for construction or purchase of new dwellings subsequently rose in the three months to July 2009 to the highest since 1994.

Figure 4.5: Monthly loans to all homebuyers, by purpose, October 1975 to July 2009 ('000 dwellings, trend series)



Note: 'Purchase of established dwelling' excludes refinancing.

Source: Australian Bureau of Statistics, *Housing Finance, Australia, December 2009*, cat. no. 5609.0, ABS, Canberra, 2010.

Figure 4.5 also shows that, in accordance with the past trend, most recent loans have been for the purchase of established dwellings rather than the construction of new ones.

The full impact of the First Home Owners Boost in stimulating new construction is not clear. While only a minority of first home buyers purchased newly constructed houses or units, there would also have been flow-on effects to other parts of the market as a result of the increased activity generated by the First Home Owners Boost. It is also difficult to separate the stimulatory effects of the First Home Owners Boost, the additional assistance provided in some states and territories, and lower interest rates.

53 Australian Bureau of Statistics, *Housing Occupancy and Costs 2007–08*, cat. no. 4130.0, ABS, Canberra, released Nov. 2009, p. 11.

Loans to first home buyers increased from 9,879 in the month of July 2008 to 17,170 in the month of July 2009, while loans for new dwellings increased from 6,482 in the month of July 2008 to 9,959 in the month of July 2009. This suggests that, in the short to medium term, 40 per cent to 50 per cent of the increase in loans to first home buyers as a result of the First Home Owners Boost, may have led to an increase in new dwelling construction, although only part of this impact would have been direct (i.e. first home buyers purchasing new dwellings) and the remainder would have been the flow-on effect of increased housing market activity. It is likely that this reflects some of the pent-up demand in the system as well as some demand from 2010 and later being brought forward.

The additional demand-side home ownership assistance introduced by the government is likely to have shifted some eligible households with sufficient income and savings from the private rental sector to the owner-occupied sector. This may have contributed modestly to additional supply and improved access to affordable rental dwellings by increasing vacancy rates and helping to moderate rent increases.

As well as assisting some households to move from rental to home ownership, the Government's First Home Owners Boost is also likely to have had an impact on total demand by enabling some young adults to move from their parents' home to a home of their own.

While there is some uncertainty about the full effects of home purchase assistance measures on the prices paid by first home buyers, there is certainly evidence to suggest that prices rose for lower-priced homes while prices for other homes were flat or declined.[54] Thus, while the First Home Owners Boost has been successful as a countercyclical measure, it will quite possibly have had little impact on structural trends in home ownership.

Information on recipients of First Home Owners Grant and First Home Owners Boost

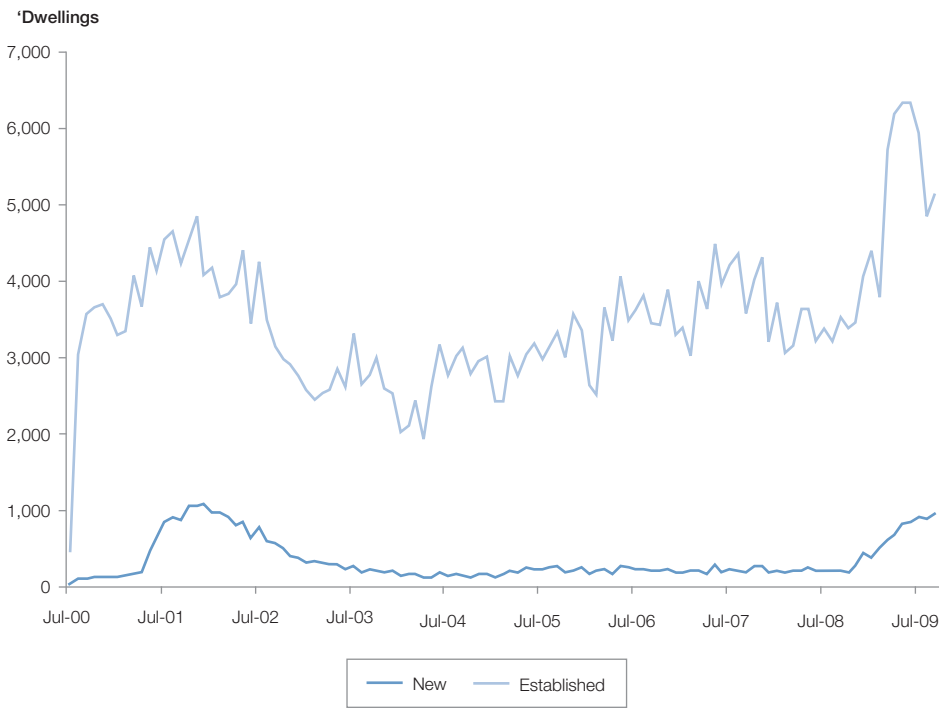
As mentioned above, there is a lack of nationally consistent information on the profile of First Home Owners Grant and First Home Owners Boost recipients and the dwellings they have purchased. While the Council acknowledges the role of the First Home Owners Boost in supporting housing market activity during the global financial crisis, the impact on different segments of the market could have been better evaluated if more comprehensive data had been available.

The following information relates to the impact of home purchase assistance grants in New South Wales

Since its introduction in 2000, around 9 per cent of First Home Owners Grants have been used for the purchase of new dwellings in New South Wales (Figure 4.6). There have been two major increases in the numbers of new dwellings purchased—after the increase of the First Home Owners Grant to $14,000 in March 2001, and after the introduction of the First Home Owners Boost in October 2008. Both of these changes provided increased assistance to buyers of new homes relative to existing homes.

54 See, for instance, Ric Battelino, 'Housing and the economy', RBA Deputy Governor's speech to 6th National Housing Conference, Melbourne, 25 November 2009.

Figure 4.6: First Home Owners Grants for new and established dwellings, New South Wales, July 2000 to September 2009



Notes: This information is derived from the First Home Owners Grant Scheme database, and is limited to New South Wales applicants. The accuracy of the data is dependent on the information provided by the applicant. Data as at 1 October 2009 and may change retrospectively. 'New' includes 'New home', 'Owner builder', Off-the-plan' and 'Contract to build'. Figure 4.6 shows timing of payments.
Important dates:

March 2001: First Home Owners Grants raised to $14,000.

January 2002: First Home Owners Grants reduced to $10,000.

July 2002: First Home Owners Grants reduced to original $7,000.

October 2008: Federal Government announces First Home Owners Boost scheme for contracts between 14 October 2008 and 30 June 2009; 'New Home' dwelling types may be eligible for $21,000 and 'Established Property' dwelling types may be eligible for $14,000.

November 2008: New South Wales Government announces $3,000 New Home Buyers Supplement Scheme for 'New Home' dwelling types for contracts between 11 November 2008 and 10 November 2009.

Source: New South Wales Office of State Revenue, personal communication, 13 October 2009.

Over the last nine years, the proportions of new dwelling purchases in New South Wales were as follows:

New home already built:	39 per cent
Contract to build:	43 per cent
Off-the-plan:	13 per cent
Owner builder:	5 per cent

Commonwealth Rent Assistance

Commonwealth Rent Assistance is an important part of the Australian Government's package of measures to help low- and moderate-income households with housing costs. It is a non-taxable income supplement that provides assistance to eligible Australian residents who rent accommodation in the private market. Eligible residents include pensioners and recipients of Youth Allowance, Newstart Allowance and Family Tax Benefit Part A.

Expenditure for the Commonwealth Rent Assistance Program was $2.62 billion in the 2008–09 year.

As at June 2009, there were over 1 million individuals and families receiving Commonwealth Rent Assistance.

As at June 2009, analysis of Centrelink data demonstrated the proportion of people paying more than 30 per cent of their gross income on rent dropped from 70 per cent prior to receiving Commonwealth Rent Assistance to 41 per cent after receiving Commonwealth Rent Assistance.

Public and community housing—the National Affordable Housing Agreement

The Australian Government and the state and territory governments are parties to the National Affordable Housing Agreement (NAHA) applying from 1 January 2009 with the key objective of improving housing affordability and reducing homelessness.

The new agreement commits all levels of government to undertake reforms in the housing sector, including to:

- improve integration between the homelessness service system and mainstream services
- reduce concentrations of disadvantage that exist in some social housing estates
- improve access by Indigenous people to mainstream housing, including home ownership
- enhance the capacity and growth of the not-for-profit housing sector
- increase capacity to match new housing supply with underlying demand, including as a result of work undertaken by the National Housing Supply Council
- implement planning reform for greater efficiency in the supply of housing.

The National Affordable Housing Agreement includes Commonwealth funding of $6.2 billion over five years. It is complemented by Commonwealth funding through National Partnership Agreements ($400 million for homelessness over five years to be matched by the states and territories, $400 million for social housing and $834.6 million over five years for remote Indigenous housing).

The Nation Building and Jobs Plan Social Housing Initiative, launched in February 2009, provided a further funding boost for social housing. It committed funding of almost $6.4 billion over the years 2008–09 to 2011–12 to fund around 20,000 additional social housing dwellings and the refurbishment of around 2,500 existing public housing dwellings. Although funding was reduced by $750 million in August 2009, the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) has advised Council members that the initiative is expected to achieve 19,300 new dwellings, which is close to the original target. FaHCSIA further advises that:

- Of these dwellings, 2,300 are expected to be completed by June 2010, and nearly 15,000 are expected to be completed by December 2010.
- Under the repairs and maintenance element of the initiative, repair work was completed by the end of the 2009–10 year on over 51,000 existing dwellings. Overall, this element of the initiative is expected to boost the social housing stock by around 10,000 dwellings. This will be achieved by completing upgrade works to more than 1,900 existing dwellings that were already uninhabitable, and on over 8,700 dwellings that would have otherwise become unsuitable for occupancy over the next two years.

A progress report to the Council of Australian Governments from Commonwealth and state and territory Housing Ministers was provided in November 2009 on the National Affordable Housing Agreement and related initiatives. As well as achievements relating to the Nation Building and Jobs Plan Social Housing Initiative, major progress was reported in relation to:

- constructing at least an additional 1,600 new dwellings through the National Partnership Agreement on Social Housing
- bringing new financing and delivery partnerships into the system through the National Rental Affordability Scheme—expected to deliver 11,000 new affordable dwellings by June 2010 (see below for further details)
- implementing A Place to Call Home to deliver 730 new homes for the homeless by 2013, with 74 households already assisted
- addressing land tenure arrangements to improve housing and home ownership outcomes for Indigenous Australians, building and fixing houses, and in some jurisdictions developing hostels for Indigenous people from remote areas visiting towns.

COAG noted at its meeting on 7 December 2009 that Housing Ministers would continue to work towards implementing key housing reforms agreed under the National Affordable Housing Agreement and National Partnership Agreements, with a further report back to COAG in the first half of 2010.

As noted in Chapter 3, COAG also agreed to the development of a housing supply and affordability reform agenda led by Treasurers, for consideration in the first half of 2010.

COAG also agreed at its December 2009 meeting to:

- reforms to ensure Australia's capital cities are well placed to meet the challenges of the future (see Chapter 3 for further details)
- implementation plans for development assessment reforms and a further report on extending code-based assessment to residential multi-unit and commercial and industrial buildings by early next year (see Chapter 3 for further details)
- integrate the plumbing code and the building code into a single, more complete, National Construction Code
- minimise the regulatory burden on not-for-profit organisations in receipt of government grants by allowing the use of a Standard Chart of Accounts.

More detailed information is available on the COAG website: www.coag.gov.au.

Historically, social housing in Australia has been predominantly provided by state and territory housing agencies, with limited provision by not-for-profit providers. This contrasts with significant community sector involvement in the provision of social housing in most European countries.

There has been a decline in the social housing stock as a proportion of the total stock, and an increased shortage of private rental dwellings at rents that are affordable and available for lower income households.

The stock of social housing can be increased in a number of ways, including through stock additions by existing state providers, transferring assets to community housing providers to leverage additional investment, and through inclusionary zoning. Inclusionary zoning and other planning mechanisms have been used in the United Kingdom to require, and contribute to the cost of, a sizeable proportion of affordable dwellings in major development projects. All of these approaches are being used currently in Australia, although with a different mix and at different rates in different jurisdictions.

The Australian Government and most states are exploring the scope for developing a larger community housing sector, with housing associations being able to acquire additional housing stock by leveraging their existing housing assets.

Box 4.2: Growing the community housing sector

In 2007, community housing organisations held 34,700 properties nationally. This compared with 340,000 held by public housing authorities.

The government is seeking to reform the provision of social housing by facilitating the growth of a number of sophisticated not-for-profit housing organisations (called 'growth providers') that will operate alongside existing state-run housing authorities.

There are about 1,000 providers nationally—some managing as few as 10 properties, others who themselves have developed and own over 1,000 properties. Of these community housing providers, there are 11 growth providers such as Community Housing Limited and Common Equity in Victoria and the Brisbane Housing Company that are now property developers in their own right. They are partnering with larger developers and major banks to take on major developments like the Carlton redevelopment in Victoria or Bonnyrigg in New South Wales, with the backing of state governments.

These growth providers are developing sizeable balance sheets—some in excess of $300 million—and leveraging a further 25 per cent from the private sector on top of government subsidies. This adds to the affordable housing stock.

COAG has agreed to establish independent prudential supervision for social housing providers.

National Rental Affordability Scheme (NRAS)

The National Rental Affordability Scheme aims to add 50,000 new affordable rental dwellings to Australia's housing stock. The scheme provides annual incentives to institutional investors and other eligible bodies for 10 years to create new affordable rental properties rented to low- and moderate-income families at 20 per cent below market rents.

The two key elements of this scheme are an annual Australian Government tax offset, or payment, of $6,000 for each dwelling, and a state or territory contribution (in cash or kind) of $2,000 per dwelling a year.

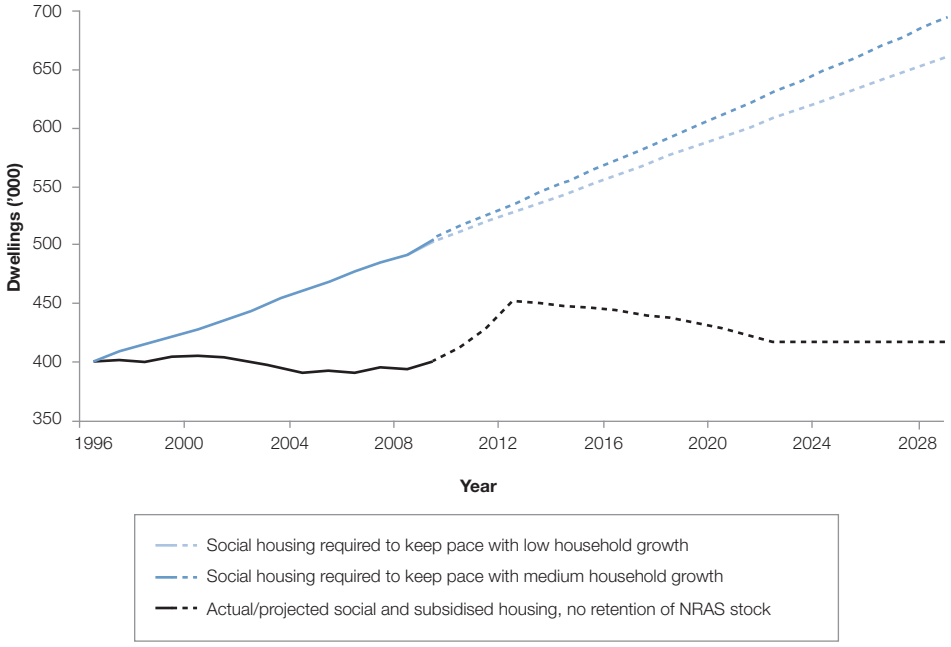
As at January 2010, a total of 1,030 rental dwellings funded by NRAS were in place, and incentives had been offered for the production of a further 10,800 units.

Applications for NRAS Round 3 (the most recently advertised round) close on 31 August 2010. Further information on NRAS is available on the website www.fahcsia.gov.au.

Social and subsidised housing projections

The impact of measures to increase the supply of social and subsidised rental housing is illustrated in Figure 4.7. The additional investment will add substantially to the supply of affordable housing for lower income people. However, the relative market share of social and subsidised housing and absolute supply will not be maintained without continued investment.

Figure 4.7: Social and subsidised housing demand and supply projections



Note: A similar figure is found in 'A progress report to the Council of Australian Governments from Commonwealth, State and Territory Housing Ministers', November 2009, <www.coag.gov.au>.

Assumptions: 70 per cent of 50,000 National Rental Affordability Scheme (NRAS) dwellings have not-for-profit/endorsed charities as tenancy managers. 35,000 NRAS dwellings included, distributed over 2009 to 2012. NRAS dwellings exit affordable housing stock as they leave the scheme. 19,300 Social Housing Initiative dwellings over years from 2009 to 2012. 600 A Place To Call Home dwellings are distributed across years 2009 to 2013.1,700 Social Housing National Partnership Agreement dwellings distributed across 2010 and 2011. Projection does not continue the trend from 1996 to 2006 in actual stock through sale and demolition.

Sources: Australian Bureau of Statistics, *Australian Demographic Statistics, June 2009*, cat. no. 3101.0, ABS, Canberra, 2009; Australian Bureau of Statistics, *Australian Demographic Statistics, June 2006*, cat. no. 3101.0, ABS, Canberra, 2009; National Housing Supply Council projections based on McDonald-Temple low and medium household growth scenarios; Appendix 2, Table A5.3.

Affordable housing provision associated with release of land

Five jurisdictions (New South Wales, Victoria, Western Australia, South Australia and the Australian Capital Territory) have targets for affordable housing associated with the release of land. There are differences in the way in which these targets are set, in the way affordable housing is described, and how targets are achieved (see Table 4.15).

Table 4.15: State and territory targets for affordable housing

State/territory	Initiative
New South Wales	Landcom target that, where commercially feasible, 7.5 per cent of housing and/or land product will be made available at sale prices affordable to moderate-income households. Three per cent of all lots or dwellings produced in development or urban renewal areas with significant amounts of government-owned land for affordable rental housing.
Victoria	VicUrban – five per cent of sales offered to non-government organisations and 40 per cent of lots and 25 per cent of house and land packages to be sold in lowest quartile of house prices.
Western Australia	Department of Housing reserves either one in nine or one in twelve lots in joint ventures for social housing. East Perth Redevelopment Authority delivers ten per cent to 15 per cent of all new housing as affordable housing including social housing.
South Australia	At least 15 per cent of affordable dwellings, including five per cent for high needs clients, in all government residential land releases.
Australian Capital Territory	Fifteen per cent of all new land released to include affordable house and land packages within the $200,000 to $300,000 price range (10 per cent with $60,000–$120,000 for land).

South Australia and New South Wales are also exploring ways to encourage affordable housing in private sector developments, through, for example, the Affordable Rental Housing State Environmental Planning Policy in New South Wales.

A new policy framework for disposing of surplus Commonwealth land was also announced in February 2009. This revamped Commonwealth Property Disposals Policy guides the disposal of land suitable for housing and community benefit. Three sites have already been sold under this policy, and a further 14 sites under consideration for future sale are listed on the Department of Finance website.

Housing Affordability Fund

As well as adding to supply, all jurisdictions are working on removing supply-side barriers that impact on the affordability of housing, including through the planning system.

The Australian Government's Housing Affordability Fund is a five-year, $512 million investment to address some of the areas that represent significant barriers to the supply of affordable housing. It focuses on:

- the 'holding' costs incurred by developers as a result of long planning and approval times, such as interest paid to banks while awaiting development decisions by councils
- infrastructure costs, such as the laying of water pipes, sewerage, transport and the creation of parks.

The fund will assist state, territory and local governments, in conjunction with the private sector, to address these market barriers and ensure that savings generated are passed on to the new home buyer.

Under the Housing Affordability Fund, agreements have also been signed for the implementation of electronic development assessment (eDA) in all states and territories. eDA should improve the speed with which development assessments are made (see Box 3.4 for more detail).

The second round of funding under the Housing Affordability Fund is focused on:

- greenfield and infill developments
- planning system reforms that reduce the time it takes to approve development applications.

The Housing Affordability Fund will directly reduce the cost of over 5,000 lots for new dwellings and speed up the planning and/or development assessment process for around 300,000 lots.

Chapter 3 provides further information on work underway to enhance the efficiency and effectiveness of the planning system.

Taxation review

The government's comprehensive review of Australia's future tax system (the Henry Review) was delivered to the Treasurer in late 2009.

Neither the Henry Review findings nor the government's response to those findings had been released when this report went to press. However, the Henry Review discussion paper[55] noted the disincentives through the tax system for institutional investors, such as pension funds, to invest in rental housing.

It is anticipated that the Henry Review will address a number of factors impacting on housing affordability and supply, including the impact of taxation treatment on investment in rental housing and stamp duties.

Residential property investors currently benefit from negative gearing as well as exemptions on capital gains tax and interest deductibility. These benefits accrue more to higher income investors (and are often criticised for fuelling speculation). Since most rental accommodation in Australia is provided by individual investors, these benefits are potentially important for providing affordable rental housing. However, they arguably contribute to a rental sector dominated by small-scale landlords, rather than encouraging investment by companies or superannuation funds. Around 90 per cent of investors in private rental properties are estimated to own only one or two rental properties.[56]

Attracting large-scale investors into the residential real estate market could provide greater security of tenure for low-income tenants. However, it appears that superannuation funds' trustees and fund managers currently prefer asset classes such as equities and commercial property, with better liquidity and higher returns. Although long-term investment in a portfolio of residential real estate could potentially attract long-term capital, the portability of member superannuation accounts, and the non-securitisation of rental housing assets, have created a bias in favour of more-liquid assets such as equities.

Direct subsidies, trusts, bonds and special-purpose vehicles have been used overseas to fund rental properties. For example, real estate investment trusts have been used in the United States to hold, manage and maintain real estate, which is leased to tenants. The tax treatment of property investment held indirectly through these trusts is broadly comparable to that of property held directly.

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55 Australian Treasury, *Australia's future tax system, Consultation paper*, Canberra, 2008.

56 Australian Bureau of Statistics, *Household investors in rental dwellings*, cat. no. 8711.0, ABS, Canberra, June 1997, Table 1.

Short- or long-term bonds are also used overseas to finance the short-term construction of (typically) low- or middle-income housing or long-term commitments for housing, with guaranteed returns and tax advantages. For example, in Austria, housing bonds are issued to investors for terms of 10 to 20 years. The bonds are not subject to personal income or inheritance tax. After 10 years, investors can write off the initial cost of purchasing the bond against their incomes. Between 1993 and 2003, six 'housing banks' raised €6 billion via the sale of housing construction bonds, which funded production and renovation of around 120,000 affordable dwellings by limited-profit housing associations.[57]

The Council will further consider the potential for greater institutional investment in rental housing provision when the Henry Review findings have been made public.

Conclusions

The gap projections in this chapter present a challenge to the residential development and building industry, social housing providers and governments at all levels. There is a particularly pressing need to focus on measures to increase supply. Some of the measures by which this may be achieved are outlined above and in chapters 3, 6 and 7.

The Council has estimated the effect of the undersupply of housing in terms of the quantity of housing. However, its longer term effects are also likely to include quality trade-offs, especially for lower income groups. The Council intends undertaking a more fine-grained assessment of the relationship between demand and supply in certain submarkets, including to assess the extent to which increasing prices are excluding moderate income households from owner occupancy.

Addressing impediments to greater infill and ways to increase the supply of housing suitable for older people and for low-income households will need to be given high priority.

57 J Lawson and V. Milligan, *International trends in housing and policy responses*, Australian Housing and Urban Research Institute, Final Report no. 110, AHURI, Melbourne, 2007.

Affordability

Chapter Five

Chapter 5: Affordability

Key points

- The substantial reduction in interest rates associated with the response to the global financial crisis, and the introduction of measures such as the First Home Owners Boost, have improved affordability and housing options for many home buyers and potential home buyers since the Council's 2008 report was released.
- First home buyer affordability improved by 36 per cent in the year to September 2009, although this has since been partially reversed.
- The impact of these changes is not reflected in the indicators in this chapter since they have been calculated using 2007-08 data from the most recent Australian Bureau of Statistics Survey of Income and Housing.
- Renters have not benefited directly from the lowering of interest rates in 2008–09 that reduced housing costs for home buyers.
- Fifty per cent of home buyers in the lower 40 per cent of the income distribution in 2007–08 were in housing stress.
- Over 20 per cent of lower income private renters paid rents that were more than 50 per cent of their household income in 2007–08.
- As at June 2009, Commonwealth Rent Assistance reduced the proportion of recipients assessed to be in housing stress from 70 per cent before taking Commonwealth Rent Assistance into account, to 41 per cent after taking Commonwealth Rent Assistance into account.
- In 2007–08, there were 1,410,000 private rental dwellings affordable to the 814,000 private renters with incomes in the bottom 40 per cent of the income distribution. However, 1,089,000 of these rental dwellings were occupied by households in higher income groups, leaving a shortfall of 493,000 dwellings that were both affordable and available to those in the bottom 40 per cent of the income distribution.

Overview of affordability

The *State of Supply Report 2008* identified some of the trends in housing affordability for home owners and private renters over the past 20 years.

Housing affordability for first home buyers generally declined over the decade to 2008. Many would-be purchasers were unable to become home buyers because rising house prices had increased the deposit gap and repayment requirements. Many young adults were remaining for longer periods in the parental home or sharing housing instead of forming independent households.

At least until reduced interest rates and stimulus measures associated with the global financial crisis took effect in the first quarter of 2008–09, long-term private renters unable to move on to home ownership have added to pressure in the private rental market. Vacancy rates in the private rental market have been below 3 per cent since 2005 in most of the state capitals, and rents have increased dramatically in the past two years. The stock of social housing has declined slightly from about 400,000 dwellings in 1996, and has continued to fall as a proportion of the total stock of dwellings. This has also contributed to pressure on the private rental market and to poor affordability for lower income households.

The Council's focus on aggregate demand and supply can mask the diversity of circumstances at the submarket level. Households paying comparatively low rents but living in overcrowded situations, in housing that is of poor quality or poorly located, may not be identified as being in housing stress.

The gap between dwelling supply and underlying demand has led to pressures on house prices and rent levels, and thus to housing affordability problems concentrated among low-income households.

In the decade to 2006, Australian Bureau of Statistics (ABS) data indicate that the proportion of lower income private renters in housing stress increased from 43 per cent to 60 per cent. The Council found that Commonwealth Rent Assistance does alleviate the situation for many of these households: it reduced the proportion of recipients assessed to be in housing stress in June 2009 from 70 per cent before taking Commonwealth Rent Assistance into account, to 41 per cent after taking Commonwealth Rent Assistance into account.

Recent government measures, such as the Social Housing Initiative and the National Rental Affordability Scheme, are yet to have a substantial impact on the proportion of rental housing stock affordable to low-income households.

This chapter updates the findings for the key indicators of affordability presented in the 2008 report.

Measuring housing affordability

Housing affordability for home buyers and renters is measured in a number of ways. For home buyers, it is typically measured by the ratio of average household income to the income required to meet repayments on the mortgage needed to buy a median-priced dwelling. In broad terms, housing affordability for home buyers declines whenever house prices grow faster than borrowing capacity. For renters, housing affordability refers to the relationship between rents and incomes.

The Council's key concerns are:

- the affordability of housing for households at various income levels, especially for those below median incomes
- whether affordability is improving or declining for these groups.

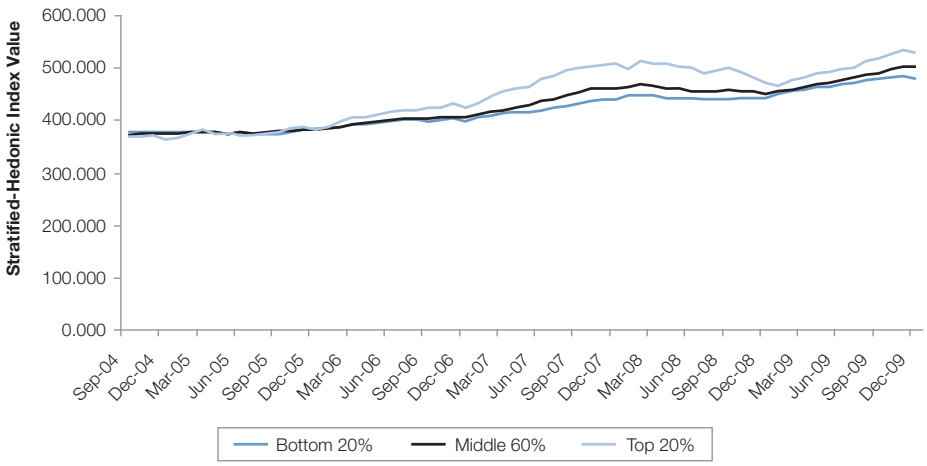
The following sections focus on affordability for first home buyers and renters, with particular emphasis on lower income households as the main groups affected by housing stress.

More detailed information on different measures of housing affordability and stress, as well as data on variations in housing stress in different population groups and areas, were presented in Appendix 5 of the 2008 report.

Affordability for home buyers

As noted in the 2008 report, rapidly rising house prices between 1996 and 2008 contributed to a significant decline in housing affordability for first home buyers. The reduction in interest rates in 2008–09 and slight reduction in median house prices led to an improvement in affordability that has since been partially reversed (see figures 5.1 and 5.3).

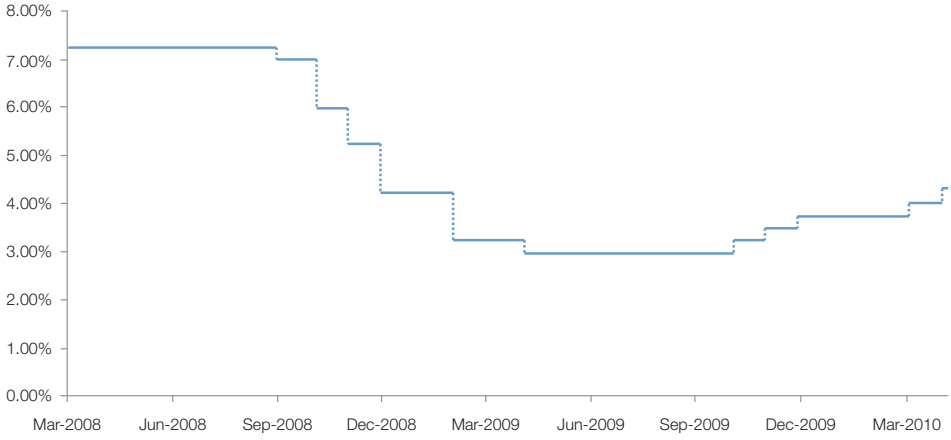
Figure 5.1: Changes in house prices, Australian capital cities (suburbs ranked by price), 2004 to 2009



Source: RP Data-Rismark, *Stratified-Hedonic Index*, unpublished data, 2010.

A sharp change in affordability from the December 2008 quarter, as shown in the Housing Industry Association – Commonwealth Bank affordability index, reflected the response to the global economic crisis, and particularly the reduction in the Reserve Bank of Australia's cash rate target (see Figure 5.2).

Figure 5.2: Changes in the cash rate target, March 2008 to April 2010

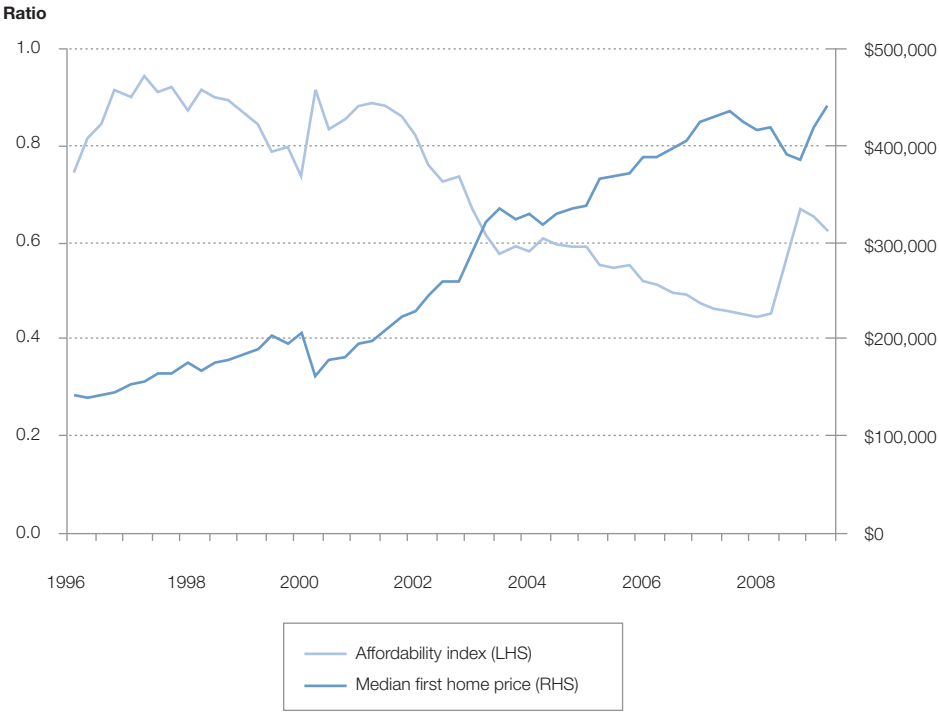


Source: Reserve Bank of Australia, *Monetary policy changes*, Statistical Table A2, RBA, Canberra, 2010.

Mortgage rates have fallen, but not by as much as the cash rate due to a range of factors including the increasing cost of funds.

The substantial reduction in mortgage interest rates associated with the response to the global economic crisis is likely to have improved affordability for home buyers (including lower income home buyers) in the way suggested by Figure 5.3. However, as shown in Figure 5.1, for new buyers the price of lower priced homes fell less markedly than did higher priced homes. Also, increased unemployment or reduced working hours could have offset reduced housing loan repayments.

Figure 5.3: Housing affordability for first home buyers, 1996 to 2009



Note: The affordability index is based on the ratio of average weekly ordinary-time earnings to the income required to service the mortgage required to buy a median-priced dwelling with a ten per cent deposit and a maximum debt service ratio of 30 per cent (assuming a 25-year loan at standard variable bank housing interest rates).

Source: Housing Industry Association – Commonwealth Bank, unpublished data on median first home prices, HIA-CB, 2010; Reserve Bank of Australia, *Indicator lending rates*, 'Standard variable bank housing loans', Statistical Table F5, RBA, Canberra, 2010; Reserve Bank of Australia, *Labour costs*, 'Full-time adult average weekly ordinary time earnings', Statistical Table G6, RBA, Canberra, 2010.

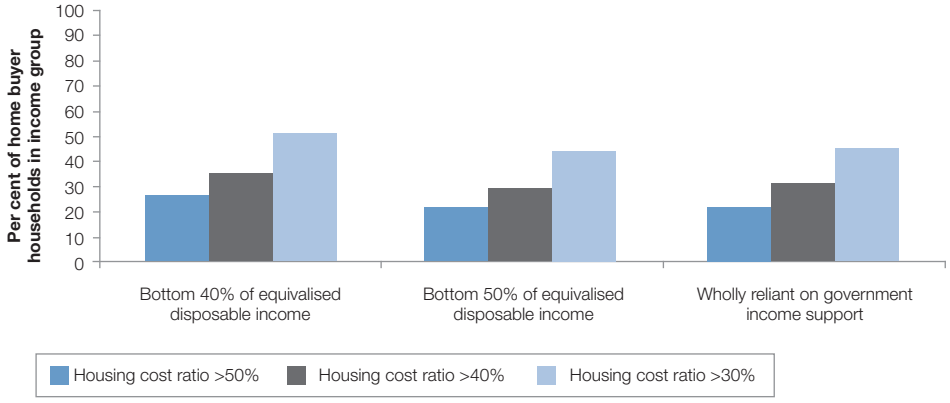
The most recently available ABS Survey of Income and Housing information relates to the year 2007–08. While this updates the information provided in the Council's 2008 report, it does not capture the effects of interest rate reductions and government stimulus measures associated with the global financial crisis. Neither does it take into account the substantial increase in pension payments announced in the federal government's budget for 2009–10.

Figure 5.4 and Table 5.1 update the information provided in the 2008 report, showing housing affordability outcomes for lower income home buyers for 2007-08. They do not compare results with the results in the 2008 report since the data from the Survey of Income and Housing and from the 2006 Census are not directly comparable.[58]

The data indicate that in 2007-08:

- Fifty per cent of lower income home buyers in the bottom 40 per cent of the income distribution in 2007–08 were in housing stress, with housing costs in excess of 30 per cent of their disposable household income.
- Over 20 per cent of the same group had housing costs in excess of 50 per cent of their household income.
- Over 40 per cent of home buyers in the lower half of the income distribution had housing costs in excess of 30 per cent of their household income.
- Over 20 per cent of home buyers wholly reliant on government income support had housing costs in excess of 50 per cent of their household income in 2007–08.

Figure 5.4: Housing cost outcomes for home buyers, 2007-08



Note: 'Housing cost ratio' refers to housing cost as a per cent of household income.

Source: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007-08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009.

58 The 2006 Census data and the 2005-06 data from the Survey of Income and Housing are not shown as they are not directly comparable with the 2007-08 data due to differences in questions, definitions and the methodology used. More detail is available in *Household Income and Income Distribution, Australia, 2007–08* (ABS cat. no. 6523.0).

These data indicate at one level that many lower income households pay much more for housing than is suggested by the affordability measures commonly used. This may reflect realistic expectations about rising incomes or temporary reductions in income associated with childbirth, caring responsibilities or other reasons.

The affordability data also suggest that many lower income households with high housing costs are likely to have little if any discretionary income after housing costs and necessities. There is also a risk of mortgage default if household income were to drop, especially for a sustained period due to unemployment, illness or caring responsibility. The available evidence is that mortgage default is still low in Australia, although it did increase from a very low base during the global financial crisis.[59]

Affordability outcomes for lower income households with high housing costs represent one of the key indicators identified by the Council in its 2008 report. The indicators are intended to provide a benchmark against which the future performance of the housing market might be assessed. This report updates the affordability indicators with 2007-08 Survey of Income and Housing data. The indicators in the 2008 report were constructed using 2006 Census data.

Key indicator 3 shows the number of households in the bottom 40 per cent or 50 per cent of the income distribution paying more than 30 or 50 per cent of their income in repayments.

Key indicator 3 — Affordability outcomes for home buyers

Table 5.1: Key indicator 3 — Number of mortgagees with equivalised disposable incomes below the 40th or 50th percentiles or wholly depending on government income support payments paying more than 30 per cent or more than 50 per cent of their gross income in repayments

	2007–08
Number of mortgagees paying more than 30 per cent of gross income in repayments:	
Income at or below 40th percentile	
Whole of Australia	312,000
Capital cities	179,000
Rest of states	133,000
Income at or below 50th percentile	
Whole of Australia	397,000
Capital cities	239,000
Rest of states	158,000
Number of mortgagees paying more than 50 per cent of gross income in repayments:	
Income at or below 40th percentile	
Whole of Australia	161,000
Capital cities	89,000
Rest of states	72,000
Income at or below 50th percentile	
Whole of Australia	193,000
Capital cities	113,000
Rest of states	80,000

59 T Richards, 'Housing market developments'.

	2007–08
Number of mortgagees wholly depending on government income support:	
Paying more than 30 per cent of gross income in repayments	
Whole of Australia	27,000
Capital cities	12,000
Rest of states	15,000
Paying more than 50 per cent of gross income in repayments	
Whole of Australia	13,000
Capital cities	5,000
Rest of states	8,000

Sources: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007–08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009.

Affordability for renters

Lower income renters in the private market

Lower income renter households have felt the pressures arising from low vacancy rates and higher rents, without any direct benefit from the lower interest rates that reduced housing costs for home buyers in 2008–09.

Figure 5.5 shows the equivalent ABS data for private renter households in 2007–08 as shown in Figure 5.4 for home buyers. As noted previously, Figure 5.5 and Table 5.2 only show affordability in 2007-08 and do not show the similar data for the 2005-06 survey due to a lack of comparability in the data.

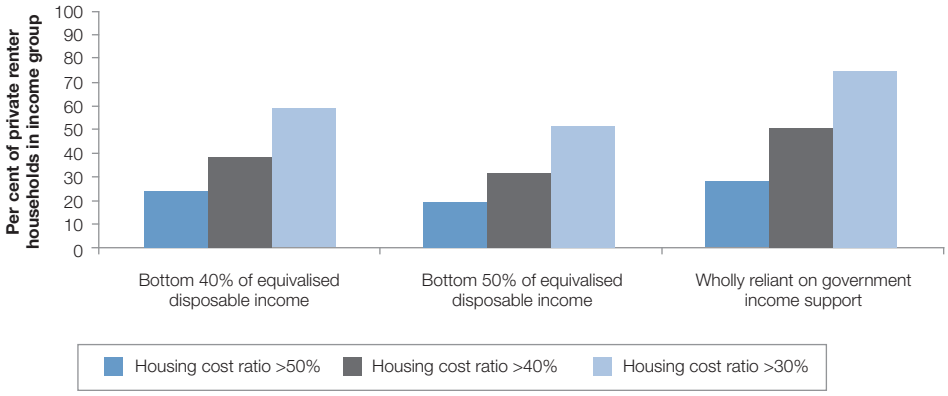
The data indicate that:

- Over 20 per cent of lower income private renters paid rents in excess of 50 per cent of their household income.
- Over 70 per cent of private renters wholly reliant on government income support paid rents in excess of 30 per cent of their total household income including Commonwealth Rent Assistance.
- Over 25 per cent of private renters wholly reliant on government income support paid rents in excess of 50 per cent of their total household income including Commonwealth Rent Assistance.

These proportions would be lower if rents were defined as net of Commonwealth Rent Assistance, but without adding this assistance to income. This is the methodology used by the Productivity Commission in its annual report on government services. Using this latter approach, Commonwealth Rent Assistance reduced the proportion of recipients assessed to be in housing stress in June 2009 from 70 per cent before taking the assistance into account, to 41 per cent after taking the assistance into account. Further, without Commonwealth Rent Assistance, 31.0 per cent of recipients across Australia would have spent more than 50 per cent of their income on rent, while with Commonwealth Rent Assistance the proportion is 12.6 per cent.[60]

60 Productivity Commission, *Report on government services 2010*, Table 16A.73, Productivity Commission, Canberra, 2010.

Figure 5.5: Housing cost outcomes for private renter households, 2007-08



Note: 'Housing cost ratio' refers to housing cost as a per cent of household income.

Source: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007-08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009.

The number of lower income private renter households with poor affordability outcomes, as identified using ABS data, is presented in Table 5.2. Because more lower income households are renting privately than buying, there are more private renters in housing stress than there are home buyers in housing stress.

Key indicator 4 shows the number of households in the bottom 40 per cent or 50 per cent of the income distribution paying more than 30 or 50 per cent of their income in rent.

Key indicator 4 — Affordability outcomes for private renters

Table 5.2: Key indicator 4 — Number of private renters with equivalised disposable incomes below the 40th or 50th percentiles or wholly depending on government income support payments paying more than 30 per cent or more than 50 per cent of their gross income in rent

	2007-08
Number of private renters paying more than 30 per cent of gross income in rent:	
Income at or below 40th percentile	
Whole of Australia	445,000
Capital cities	278,000
Rest of states	167,000
Income at or below 50th percentile	
Whole of Australia	505,000
Capital cities	323,000
Rest of states	182,000

	2007-08
Number of private renters paying more than 50 per cent of gross income in rent:	
Income at or below 40th percentile	
Whole of Australia	172,000
Capital cities	116,000
Rest of states	57,000
Income at or below 50th percentile	
Whole of Australia	179,000
Capital cities	121,000
Rest of states	58,000
Number of private renters wholly depending on government income support:	
Paying more than 30 per cent of gross income in rent	
Whole of Australia	117,000
Capital cities	61,000
Rest of states	56,000
Paying more than 50 per cent of gross income in rent	
Whole of Australia	42,000
Capital cities	21,000
Rest of states	21,000

Source: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007–08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009.

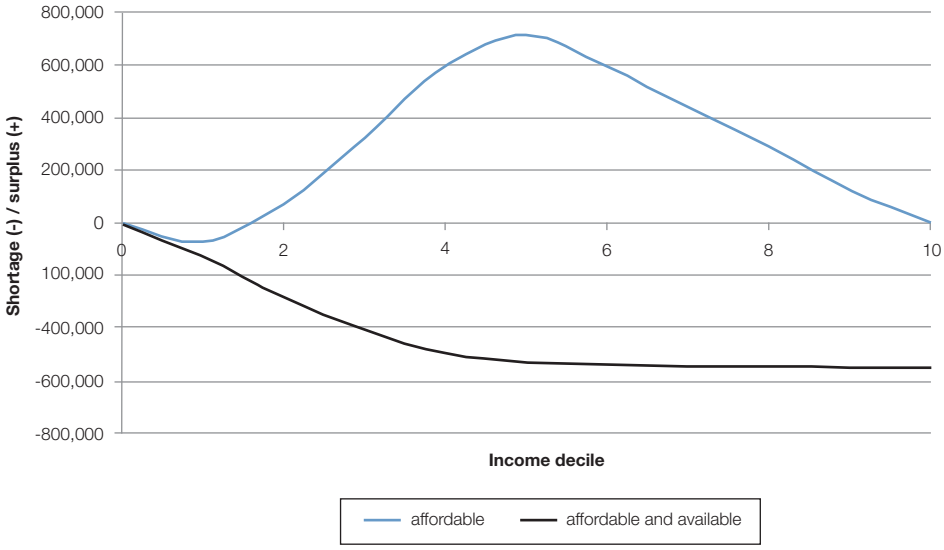
Much of the reason for high levels of housing stress among private renter households arises because of an inadequate supply of affordable rental dwellings.

Supply of affordable rental housing

As noted in the 2008 report, the total stock of private rental dwellings grew between the 1996 and 2006 censuses. However, all of this growth was in dwellings with a rental value of at least $200 per week and most of it was in dwellings with a rental value of at least $300 per week (in 2006 dollars). In 2006, there were 236,000 more private rental dwellings than in 1996. However, there were 125,000 fewer dwellings with rents less than $232 per week (in 2006 dollars) than in 1996. In other words, the total supply of private rental dwellings that were affordable for lower income households fell in absolute as well as relative terms.

Lower income households are also unable to access some of the rental stock that would be affordable to them because it is being occupied by higher income households.

Figure 5.6: Affordable and available housing by income decile, 2007–08



Note: 'Affordable' means rent is less than 30 per cent of gross income; 'available' means the dwelling is not occupied by a higher income household.

Source: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007-08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009. Derived using methodology described in M. Wulff et al, *Australia's private rental market: changes (2001-2006) in the supply of, and demand for, low rent dwellings*, Positioning Paper No. 122, Australian Housing and Urban Research Institute, Melbourne, 2009.

The key findings relating to 2007–08 in Figure 5.6 are:

- A total of 1,410,000 private rental dwellings were affordable for the 814,000 private renter households in Australia with incomes below the 40th percentile.
- Of these, 1,089,000 dwellings were occupied by households in higher income percentiles. This results in a change from an 'apparent surplus' of 596,000 affordable dwellings to a shortfall of 493,000 affordable and available dwellings for those in the lowest two quintiles.
- For the 1,067,000 private renter households with incomes below the 50th percentile, there were 1,777,000 affordable private rental dwellings.
- Of the dwellings affordable for private renters with incomes below the 50th percentile, 1,237,000 were occupied by households in higher income percentiles. This changed an 'apparent surplus' of 710,000 affordable dwellings to a shortage of 527,000 affordable and available dwellings.
- Overall, 70 per cent of all private rental dwellings affordable to households with incomes below the 50th percentile are not available to them because they are occupied by households in higher income percentiles.

Methodology and comparability of data

In its 2008 report, the Council used information from the 2006 Census to analyse the supply of affordable private rental housing and the profile of households accessing this housing. Thus, the data presented in key indicator 5 (Affordable housing supply for lower income renters) and key indicator 6 (Affordable and available housing supply for lower income renters) were drawn from the 2006 Census. This report, however, uses data from the ABS Survey of Income and Housing conducted in 2007–08. Data from these two sources are not directly comparable.

Key indicators for affordability of rental housing supply

Negative numbers in Table 5.3 and Table 5.4 indicate a surplus rather than a shortage.

Key indicator 5 — Affordable housing supply for lower income renters

Table 5.3: Key indicator 5 — Shortage of rental dwellings affordable to renters with gross incomes below the 40th or 50th percentiles

	2008 report (2006 Census)	2010 report (2007–08 SIH)
40th percentile		
Whole of Australia	-230,000	-596,000
Capital cities	-123,000	-319,000
Rest of states	-107,000	-277,000
50th percentile		
Whole of Australia	-394,000	-710,000
Capital cities	-265,000	-431,000
Rest of states	-130,000	-280,000

Notes: 'Affordable' means rent is less than 30 per cent of gross income. Negative numbers indicate a surplus rather than a shortage. SIH = ABS Survey of Income and Housing.

Sources: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007–08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009; M. Wulff et al., Positioning Paper No. 112, *Australia's private rental market: changes (2001–2006) in the supply of, and demand for, low rent dwellings*, Australian Housing and Urban Research Institute, Melbourne, 2009.

Table 5.4: Key indicator 6 — Shortage of rental dwellings affordable to renters with gross incomes below the 40th or 50th percentiles that were available to those renters

	2008 report (2006 Census)	2010 report (2007–08 SIH)
40th percentile		
Whole of Australia	250,000	493,000
Capital cities	160,000	311,000
Rest of states	90,000	182,000
50th percentile		
Whole of Australia	310,000	526,000
Capital cities	190,000	337,000
Rest of states	120,000	190,000

Notes: 'Affordable' means rent is less than 30 per cent of gross income; 'available' means the dwelling is not occupied by a higher income household. SIH = ABS Survey of Income and Housing.

Sources: Derived from Australian Bureau of Statistics, *Microdata: Income and Housing, Basic and Expanded CURF on CD-ROM/RADL, Australia, 2007–08*, cat. no. 6541.0.30.001, ABS, Canberra, 2009; M. Wulff et al., *Australia's private rental market: changes (2001–2006) in the supply of, and demand for, low rent dwellings*, Positioning Paper No. 112, Australian Housing and Urban Research Institute, Melbourne, 2009.

Tables 5.3 and 5.4 show that much of the stock that could have improved rental affordability for households at or below median household income if available to them, was taken up by households with incomes above the median.

Conclusion

One of the consequences of a gap between demand and supply is that prices rise. This chapter has shown the effect of high rents and house prices on affordability outcomes for low income households.

Fifty per cent of home buyers in the bottom 40 per cent of the income distribution in 2007–08 were in housing stress. The global financial crisis and lowering of interest rates have subsequently led to some short-term improvements in affordability for first home buyers and recent home purchasers that are not yet reflected in key indicators 5 and 6 (since they were constructed using 2007-08 Survey of Income and Housing data).

Renters have not benefited directly from the lowering of interest rates in 2008–09. Over 20 per cent of lower income private renters paid rents in excess of 50 per cent of their household income in 2007–08, at which time there was a shortfall of 493,000 rental dwellings that were both affordable for lower income renter households and not occupied by renter households with higher incomes. Housing remains expensive for low-income households, especially in capital cities.

Part B
Focus on key housing market issues in 2010

Adding supply through infill development

Chapter Six

Chapter 6: Adding supply through infill development

Key points

- Australian households tend to live in detached dwellings, although in the capital cities, densities are increasing, especially in inner cities.
- Metropolitan plans include targets for the proportion of new housing to be provided through infill development of between 50 per cent and 70 per cent. The Council's demand projections indicate increasing demand for attached and medium-density housing over the next 20 years.
- However, a number of barriers to adding to housing supply through infill development exist. They include higher construction costs for medium- and high-density dwellings than for detached dwellings; difficulties in aggregating and preparing land for construction; securing development finance; lengthy and sometimes uncertain planning and development assessment processes; delays in securing legal title for flats, units or apartments; and community opposition to infill and to medium- to high-density dwellings.
- Initial data presented in this chapter show that it costs more to build a two-bedroom unit in an infill development than a comparable three-bedroom house with backyard in a greenfield development in the major cities, except in Sydney. Most of the difference in costs comes from higher construction costs for dwellings in infill developments and the longer development time frame.
- State and territory governments have a range of options available to them to encourage such development and support the achievement of their infill dwelling targets, including reform of planning provisions and development assessment arrangements in established residential areas, and using government-owned land and development agencies to facilitate development.

Overview

Historically, Australian households have tended to live in detached houses, although the proportion of households living in medium- and high-density dwellings has been increasing slowly. Approximately 75 per cent of the housing stock in Australia in 2006 consisted of separate houses. However, variation between the states exists, ranging from just under 70 per cent of the stock being separate houses in New South Wales to 64 per cent in the Northern Territory and 86 per cent in Tasmania.

The *State of Australian Cities 2010* report outlined data on the different patterns of density in cities.[61] In particular, the report noted the usual spatial pattern of development of high concentrations of multistorey residential apartment building around central business districts (CBDs), with densities decreasing towards the outer areas. The report noted two exceptions to this pattern: in Gold Coast city, where high-rise residential buildings extend along the coastline, and in Sydney, where there is higher density residential development in each of the major centres in the metropolitan area. The other cities with around 30 per cent or more of their dwelling stock made up of medium and high-density dwellings were Darwin, the Sunshine Coast and Cairns.

61 Major Cities Unit (2010), *State of Australian Cities 2010*, Infrastructure Australia, Canberra, http://www.infrastructureaustralia.gov.au/mcu.aspx.

Seventy-one per cent of building approvals in 2008–09 were for detached houses.[62] New flats, units or apartments accounted for 16 per cent of all dwellings approved in 2008–09, and semi-detached row or terrace houses and townhouses accounted for a further 13 per cent, giving a combined 'other residential' total of 29 per cent of all residential building approvals. There was a slight fall in the proportion of 'other residential' from 32 per cent in 2007–08 and 30 per cent in 2006–07.[63]

The trend towards higher density living has been driven by a number of factors, including:

- changing preferences for dwellings and location (for example, see Table 6.1 for information on the numbers of people living and working in central business districts)
- limited supply of new land in existing suburbs, and space constraints
- increasing land values in existing suburbs
- state and local government planning frameworks encouraging infill.

In Australian capital cities, the pattern of urban growth has been characterised by CBDs that feature a workforce demand that is far larger than the population living in the CBD itself (see Table 6.1). The relationship between the size of the workforce in the CBD and the population housed there varies considerably from state to state.

Table 6.1: Employment numbers in capital city central business district (CBD) areas and number of persons living in the CBD, 2006

Statistical local area (SLA)	Place of work	Place of usual residence	Ratio of workers to residents in CBD area
Sydney (C) – Inner	231,563	21,988	10.5
Melbourne (C) – Inner	153,394	11,593	13.2
Brisbane (C) – Inner	66,332	2,721	24.4
Adelaide (C)	98,537	16,660	5.9
Perth (C) – Inner	61,788	1,082	57.1
Hobart (C) – Inner	16,868	454	37.2
Darwin – Inner	10,507	2,484	4.2
Canberra – City	25,791	721	35.8
Total	**664,780**	**57,703**	**11.5**

Source: Australian Bureau of Statistics, *2006 Census of Population and Housing*, 'Persons; Place of Usual Residence' and 'Persons; Place of Work', table generated using ABS TableBuilder, ABS, Canberra, 2009.

Higher density through infill or greenfield development?

Local and state governments play an important role in determining how much new housing is built and where it is located. Land use policies favouring more compact cities through higher dwelling density justify their stance on the basis of minimising the impacts of urban development on the environment, re-using underutilised land and infrastructure, and meeting the demand for (affordable) well-located housing. For example, the Melbourne 2030 plan states that the urban growth boundary would create a more compact city, which 'promotes sustainable development by directing growth to areas best able to be supplied with appropriate infrastructure and services and by protecting

62 Australian Bureau of Statistics, *Building Approvals, Australia*, cat. no. 8731.0, ABS, Canberra, December 2009.
63 Australian Bureau of Statistics, *Building Approvals, Australia*, cat. no. 8731.0, ABS, Canberra, December 2009.

other valuable land from urban development pressures.'[64] More efficient use of land is mentioned in the south-east Queensland strategy and more efficient use of existing services and infrastructure is identified as an objective in the Greater Adelaide plan.[65] Brisbane is in the process of developing a smart city master plan that will be consistent with the south-east Queensland strategy.

The major cities all have infill targets

Sydney, Melbourne, Perth, Adelaide and south-east Queensland all have dwellings targets for both infill and greenfield developments (see Table 6.2). For example, the New South Wales Government's metropolitan strategy sets an infill target of 60 per cent to 70 per cent of the 640,000 new dwellings required by 2031. Similarly, *Melbourne 2030: a planning update—Melbourne @ 5 million* sets a target of over 50 per cent of new dwellings by 2030 to be located within existing boundaries.

Table 6.2: Infill targets for major Australian cities

City	Strategic planning document	Time-frame	Target dwellings (number)	Percentage from infill (%)
Sydney	City of Cities: A Plan for Sydney's Future	2005–2031	640,000	60 to 70
Melbourne	Melbourne 2030: A Planning Update – Melbourne @ 5 million	2009–2030	600,000	53
South-east Queensland	South East Queensland (SEQ) Regional Plan	2009–2031	754,000	50
Perth	Directions 2031 Spatial Framework for Perth and Peel	2009–2031	328,000	55
Adelaide	The 30-Year Plan for Greater Adelaide	2010–2040	258,000	Moving from 50 to 70

Issues relevant to achieving the infill targets envisioned by states and territories include:

- whether there is sufficient market demand for infill dwellings
- where dwellings should be located
- whether infill places pressure on existing infrastructure
- the implications for greenfield development
- whether infill dwellings address affordability concerns for first home buyers or lower income households.[66]

64 Victorian Department of Sustainability and Environment, *Melbourne 2030: Planning for sustainable growth*, Melbourne, 2005, <http://www.dse.vic.gov.au/melbourne2030online/content/policies_initiatives/02a_policy21.html>, accessed 1 April 2010.

65 Queensland Department of Infrastructure and Planning, *South East Queensland Regional Plan 2009-2031*, Brisbane, 2009, < http://www.dip.qld.gov.au/regional-planning/regional-plan-2009-2031.html>, accessed 1 April 2010, p 12;South Australian Department of Planning and Local Government, *The 30-Year Plan for Greater Adelaide*, Adelaide, 2010, < http://www.dplg.sa.gov.au/plan4adelaide/index.cfm>, accessed 1 April 2010, p. 75.

66 In an unpublished study for the Residential Development Council.

The next section outlines a range of barriers to infill development that suggest that achieving the targets set out in Table 6.2 will be difficult, if not impossible, without significant action from state governments to support their implementation. Better data on infill land supply (and other intra-urban redevelopment opportunities) are a priority for the Council to help it better understand the challenges of delivering more supply through infill housing. It will be an area of focus of the Council's work in 2010 and 2011.

Barriers to infill and medium-density construction

There are a number of barriers to achieving greater density within existing urban boundaries through infill. For developers, these include:

- the higher construction costs for medium- and high-density dwellings compared with those for detached dwellings, including land acquisition and demolition costs for infill
- difficulties in aggregating and preparing land for construction
- delays in securing development finance
- lengthy and sometimes uncertain planning and development assessment processes
- securing legal title for flats, units or apartments
- community opposition to infill and to medium- to high-density dwellings.[67]

The Council has commissioned two pieces of work on this issue:

- interviews with developers of eight large-scale multi-unit developments in Brisbane, Melbourne and Sydney undertaken by Applied Economics
- a comparison of the average costs of constructing a two-bedroom infill unit and a three-bedroom house with a backyard undertaken by Urbis.

Both reports reflect the views of the consultants and those interviewed by them.

The Council intends to undertake further work in 2010 and 2011 on the difficulties of delivering infill, the relative merits of infill and greenfield development (including in terms of affordability and sustainability) and the costs of delivering housing (including land development).

Applied Economics interviewed developers of eight multi-unit developments in Brisbane, Sydney and Melbourne to identify some that they have experienced in recent or current infill developments. A summary report will be available on the Council's website. The key points are summarised here. The Council acknowledges that the views of the relevant planning authorities or communities are not included. Nonetheless, the interviews illustrate some of the challenges that developers face.

67 For example, in the United Kingdom, the National Housing and Planning Advice Unit found that although people were concerned about the impact on young adults of being unable to get onto the housing ladder, support for building more homes, especially among home owners, was low. According to a survey conducted in May 2009, over half of home owners would oppose more houses being built in their area, compared with less than a third of non–home owners. (National Housing and Planning Advice Unit, Public attitudes to housing, NHPAU, London, Department of Communities and Local Government, 2009, p. 8, <http://www.communities.gov.uk/nhpau/keypublications/research/publicattitudes2009/>.)

It takes time and money to aggregate and prepare land for construction

For multi-unit and infill developments, land aggregation and preparation are lengthy and expensive steps. The nature of the initial ownership (single or multiple owners), the state of development controls, and the financial expectations of the owners can all contribute to the cost and time taken. Sites for development may need to be aggregated from separately owned parcels—leaving scope for delays and higher prices for the last parcels of land if owners choose to hold out.

Once a site has been aggregated, preparatory work is needed before any construction can commence. Infill sites in established areas may already have the necessary infrastructure, although some services may have to be augmented to provide for greater residential demand or residential demand in a formerly industrial area. Infill sites may also require demolition of structures or decontamination prior to any construction, which add to the cost, the time and the uncertainty involved in the development. Heritage and conservation issues may also arise, depending on the site.

Remediation of contamination and exposure of toxic subsoils were a particularly prominent issue in an example provided to Applied Economics by a developer of a mixed commercial and residential development on a former 'brownfield' site. The earthworks required three permits to clean up parts of the site; each consent took 5 to 11 months to be approved.

Securing development finance can be difficult

Securing finance for development is a major issue for developers because of the length of time from site acquisition to sales of properties and the amount of capital involved. If a site is acquired before rezoning has occurred, it frequently takes five or six years until the properties are sold for a medium-sized development of 50 to 100 units. For a development of 50 units costing $200,000 each to build, and including the provision of common facilities, the total cost would be $10 million. With site acquisition costs, site development, public levies, and project design and management, the cost for 50 units could total between $15 million and $20 million over five or six years, much of which would be financed using debt for most of the period. The developer may have to obtain a loan via security over assets other than those in the development itself, as the site value alone is often considered to provide too little security.

As a result, medium- and high-rise developments are financially riskier than traditional 'subdivide first and build second', low-density development. With the latter, the ability to subdivide and sell the site and then obtain progress payments during the construction of a dwelling substantially reduces cash flow problems. By contrast, with strata title subdivisions, the final buildings have to be fully completed before title can be obtained and sales can be settled.

With the high level of capital required to construct and service a higher density development, most financing requires some pre-sales before construction can commence. Although pre-sales do not provide cash flow, as in low-density developments, they do provide a project financier with some assurance that if completion occurs there is a reasonable likelihood that those sales will be settled. The tightening of credit to developers as a result of the global financial crisis has led to some changes, including higher pre-sale requirements.

Planning and development assessment processes can sometimes be lengthy, unclear and uncertain

The length of time taken to receive planning approval will differ depending on the local council making the decision, the development controls applying to the site and the extent to which the development applications comply with the relevant code, plan and controls. These decisions are made within the applicable state or territory legislative framework.

Multi-unit and infill developments usually have to go through a full development assessment process. Subsequent changes to the development plans can lower residential yields or add costs, as well as add time to the development process. An exception is in Brisbane where, in certain parts of the inner city, the code allows for some complying multi-unit developments.

Examples of development assessment timeframes from Applied Economics' interviews with developers ranged from nine months for a 78-level mixed-use tower in Brisbane to around seven years for approval on a large development following a failed application and two court cases. In the former example, the developer's proposal complied for the most part with the code. In the second example, the developer's initial proposal did not comply with the relevant plans. After losing a court case, the developer submitted a modified proposal and engaged with the community through a community reference group. The mayor of the locality was re-elected on a platform that opposed the development. A number of stop-work orders were issued. There was a further delay and court case following the completion of construction.

In another example, the developer and local council officers worked together for six months before the developer lodged plans with the council. The development assessment process took about 12 months.

The main risk factors for developers are uncertainty about what will be allowed, and changes and delays in the approval process. Some of the developers that were interviewed indicated they were much less inclined to undertake infill developments where the land had not been rezoned already.

Planning and development control decisions are made differently from one state or territory to another. Applied Economics has identified some of the different approaches between Queensland, New South Wales and Victoria; some examples of these differences are set out in this section.

- Developments in Queensland either comply with the standards set in the code (*code decision*) or require an assessment from planning officials (*impact decision*).
- The New South Wales system requires that all medium and high density applications be assessed against impact criteria (although there is considerable discretion). Fully complying developments do not have the same degree of assurance of being approved as in Queensland.
- The Victorian system allows more scope for third-party objectors than in the other jurisdictions. As a result, the roles of local government, especially of elected councillors—as arbiters of disputes or representatives of their constituencies—can be confused. This feature of the Victorian system also allows community opposition to individual infill and higher density developments at a relatively late stage and on a case-by-case basis rather than at a higher level (e.g. precinct planning stage).

Within each jurisdiction, decisions are sometimes made by different bodies about different aspects of a development—for example, heritage issues are dealt with separately from other aspects of the development assessment process in Victoria and New South Wales. Regional and state processes can also affect decisions on individual sites. Local councils may be required to refer a permit application to the relevant state agencies for comments/input if the proposal affects those agencies' interests, e.g. agencies responsible for roads and water. Also, call-in powers, which allow Ministers of Planning to take over decision-making responsibility for development assessment, can also be used to ensure that major developments are progressed more quickly.

In one example raised with Applied Economics, the responsible council was opposed to a development comprising small office suites, small and large retail and a mix of apartments and townhouses, even though the site was in a designated comprehensive development zone. The Minister decided that it was a priority development zone and that he would use his 'call in' powers so that his department became responsible for development assessment and consent decisions, rather than the local council. The council was still provided with opportunities to comment.

Applied Economics has also outlined some of the reforms in planning processes that have occurred recently that, in its view, improve the planning and development assessment process. For example, Applied Economics has noted that some jurisdictions have attempted to integrate processes. Queensland (like South Australia) has included heritage control in its planning system. In Queensland, the *Integrated Planning Act 1997* aimed to integrate planning at the local, regional and state levels, increasing the ability to manage the process by which development occurs. That Act has been recently replaced by the *Sustainability Planning Act 2009*. As well as focusing on sustainability, the new Act seeks to promote efficiency, making provision for greater power to be given to the Minister in certain circumstances and to align planning processes in all local government areas in Queensland.

The use of private certification (in which appropriately qualified professionals assist councils and other decision making bodies in certain development assessment functions)[68] can speed up the process in some instances. However, some of the developers interviewed suggested that council officers may attach more conditions than necessary to approvals which will be assessed by private certifiers, to maintain some control over the process. Any subsequent changes to developers' plans are then required to go through further approval processes.

Securing legal title for flats, units or apartments can add time and costs

Delays in obtaining final certificates of title can hold up the sale process for developers. In the case of multi-unit dwellings, the need to have one or more corporate bodies owning the buildings and/or land that is common property adds to the cost of development and cost for purchasers. Because of their cost advantages, townhouses without the need for common property have a financial and market advantage over medium-density developments with common property.

Communities tend to oppose infill and medium- to high-density development

There is widespread evidence of community opposition to medium- or high-density development, with communities usually regarding such development as a loss of amenity. Sometimes this is because developers are attempting to seek approval for more intense development than is permitted on the site. However, communities sometimes also object to complying developments for a range of other reasons.

There can often be poor understanding of the way in which good-quality developments can enhance the amenity of neighbourhoods, especially in the case of brownfield sites. In one example given by a developer to Applied Economics, a community group opposed any redevelopment, even though the site had been vacant for 25 years, and the proposed development would provide retail and commercial development as well as a range of housing, including the option of housing tailored for older people in future.

68 Development Assessment Forum, Development Assessment Forum News, April 2003, page 3, www.daf.gov.au, viewed 30 March 2010.

Before infill developments can proceed, heritage and conservation issues may have to be addressed, with statutory listing and controls constraining some demolition and building activities. Sometimes, there can be a community push for 'retrospective' heritage listing. Adverse community reaction can also occur when a site has already been assessed and rejected for listing.

Comparing the costs of infill and greenfield developments

In its 2008 report, the Council noted a number of factors affecting costs, including:

- a very tight market for skilled labour in the construction industry, with competition from other sectors
- increased interest costs for projects due to delays in construction schedules caused by financiers' higher pre-sale requirements and by skill shortages
- higher costs of mid- to high-rise multi-unit developments vis-à-vis low-rise housing
- meeting the demand for better quality finishes and fit-outs in larger houses in response to changing consumer expectations
- fuel prices increasing the cost of construction inputs
- increased environmental requirements
- the additional 9–10 per cent effect of the imposition of GST on the supply of new residential property.[69]

In the 2008 report, the Council presented some Australian Bureau of Statistics data for 2007–08 on the costs of constructing detached houses, semi-detached dwellings and units. Those costs were thought to be low relative to industry and state and territory government experience of construction, based on the Council's consultations with stakeholders. As a result, the Council contracted Urbis Pty Ltd to provide more information about the costs of developing new infill and greenfield housing. Urbis has used industry and geographic averages for each cost component.[70]

The rest of this chapter sets out a snapshot of these costs by comparing the average costs of constructing a two-bedroom infill unit and a three-bedroom house with a backyard. The categories of costs analysed are outlined in Table 6.3. Further details on the methodology and results of the Urbis report on national dwelling costs will be available on the National Housing Supply Council website: <www.nhsc.org.au>.

69 Approximately 9 per cent to the delivered costs of a residential lot and 10 per cent to the construction cost of a typical new house (ACIL Tasman, *Landcost: The impact of land costs on housing affordability*, report prepared for the Urban Development Institute of Australia, May 2006.)

70 Urbis used a point-in-time template cost approach to ensure consistency across locations, and used averages based on industry sources and independently verified published data for each cost component. Where possible, cost escalations during the dwelling development process were considered.

Table 6.3: Major categories of costs of developing housing

Major category	Component costs
Raw land	■ Raw land acquisition
Government taxes and charges (a)	■ Stamp duty on land ■ Stamp duty on dwelling sale ■ Local council fees ■ Infrastructure charges ■ Council rates/water ■ Land tax ■ GST liability ■ Transfer fee on sale
Professional fees	■ Professional fees during development ■ Professional fees on sale
Construction	■ Raw land preparation ■ Dwelling construction costs
Development costs and interest	■ Development management ■ Marketing ■ Sale costs ■ Interest on land and purchase costs ■ Interest on construction

Note: (a) 'Government taxes and charges' includes stamp duty (assuming no available concessions for the developer); local council fees (based on locational-specific local government charges); council rates/water (assuming limited water/garbage usage duing the planning approval stage and rates calculated on a per lot/dwelling basis during the construction stage); land tax (calculated using a jurisdictionally variable per cent less than market value to estimate unimproved capital value); and GST liability (ten per cent of the sale price).

Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

Costs of constructing infill dwellings

The costs of developing a two-bedroom infill unit have been calculated for each of Australia's five major cities. Costs range from $468,389 in Adelaide to $553,621 in Sydney (see Table 6.4).

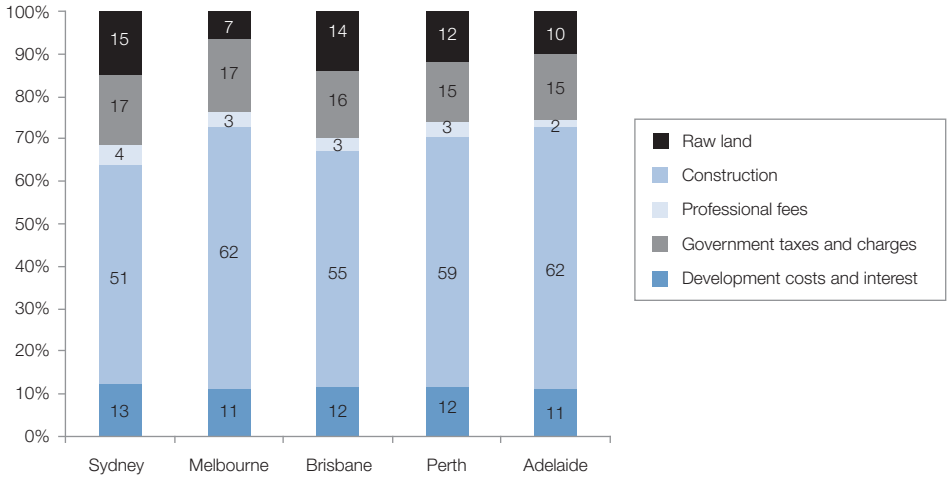
Table 6.4: Costs of developing infill dwellings by city

	Sydney	Melbourne	Brisbane	Perth	Adelaide
			($)		
Raw land	85,000	32,184	72,000	60,000	47,619
Government taxes and charges	91,486	83,177	85,443	75,861	71,407
Professional fees	24,071	16,609	16,040	16,904	7,452
Construction	282,137	301,846	290,809	308,073	290,561
Development costs and interest	70,927	55,707	61,070	59,903	51,350
Total cost	**553,621**	**489,523**	**525,362**	**520,741**	**468,389**

Note: Figures are rounded to the nearest $. Numbers may not sum to totals due to this rounding.

Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

Figure 6.1: Relative importance of cost components of developing infill dwellings by city



Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

Construction costs make up more than half of overall costs

Construction costs are the most significant component of costs, accounting for more than 50 per cent of the total cost. Construction costs are relatively consistent in the five cities—varying from $282,137 in Sydney to $308,073 in Perth for medium-rise apartments. Proportionally, they are most significant in Adelaide and Melbourne (62 per cent) and less significant in Sydney (51 per cent) (see Figure 6.1). The differences in construction costs between one of these cities and another are caused by fluctuations in local prices due to local market conditions (such as demand for materials and labour). Urbis notes that substantial cost increases have occurred in recent years as a result of the high demand for labour and materials and increasing regulation for sustainability and safety.

Taxes and charges also contribute to the cost of housing

Taxes and charges also represent a significant proportion of the total cost of developing infill dwellings, making up between 15 per cent and 17 per cent of total cost. Most of this cost comes from the Goods and Services Tax (GST) liability on new dwellings. Since it is calculated on the dwelling sale price, GST is highest in the locations with the highest sale prices (around $50,000 in GST in Melbourne).

Stamp duty is the second most significant tax or charge and is imposed on the initial land purchase and final dwelling purchase.

Infrastructure charges are quite substantial in Brisbane ($25,000) and Sydney ($15,000), but less so in Adelaide and Perth, and virtually negligible in Melbourne. Both Sydney and Brisbane have infrastructure charges for major roads, rail, and social and recreational infrastructure. This has resulted in much higher charges than in other cities.

The price of raw land also adds to cost

Land for infill development is driven by the availability of supply, which in turn is affected by competition for other uses, and the time and cost of acquiring sites available for development. Land assembly, approval time, demolition costs, the extent of community opposition, and measures to minimise interruptions to existing surrounding services can add to the costs of securing and holding land.

Land costs make up between 10 per cent and 15 per cent of the cost of developing infill dwellings, except in Melbourne, where they make up about 7 per cent. By contrast, high land costs in Sydney and Brisbane (more than double Melbourne's on a per unit basis) have probably resulted from a limited number of apartment sites.[71]

Land costs are comparably affordable in Perth ($60,000 per unit) and Adelaide ($47,619 per unit) and represent a lower proportion of overall costs (between 10 per cent and 12 per cent) than in Sydney and Brisbane. However, infill development is still not widely profitable for developers in these cities because of market conditions.

Development costs and interest

Development and interest costs over the life of the development account for between 11 per cent and 13 per cent of total cost. The overall development time frame is an important factor influencing the interest cost. The largest interest costs are incurred in Sydney ($44,364), which also has the longest development timeframe (34 months). Adelaide incurs the lowest interest costs ($31,550)—attributable to its lower overall costs in land and construction.

Professional fees make up a small component of costs

A small component of costs (between 2 per cent and 4 per cent) is spent on professional fees for the planning and design phase of the development and sales (including legal and real estate agent fees).

Overall costs of developing greenfield dwellings

The overall costs of developing dwellings in greenfield developments are relatively comparable in Melbourne, Brisbane, Perth, and Adelaide, ranging from $369,751 to $383,958. However, average total cost is around $200,000 higher in Sydney, at $560,711, than for the other cities (see Table 6.5). The major cost components driving these differences are higher raw land prices and taxes and charges, including higher infrastructure charges. In all the cities, the costs of raw land as well as taxes and charges are higher as a proportion of cost than for comparable infill development.

Table 6.5: Costs of developing greenfield dwellings by city

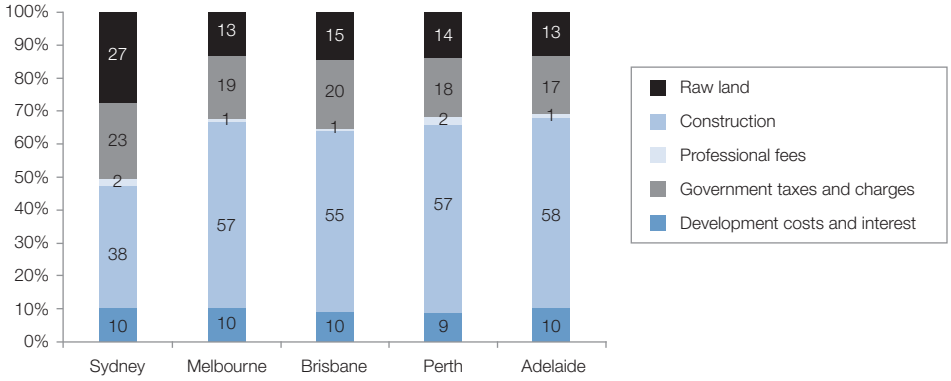
	Sydney	Melbourne	Brisbane	Perth	Adelaide
			($)		
Raw land	151,875	50,000	54,000	52,000	49,714
Government taxes and charges	130,048	71,195	75,707	69,644	65,561
Professional fees	9,773	2,050	3,050	8,588	4,071
Construction	211,146	212,911	201,588	219,204	217,289
Development costs and interest	57,869	38,600	35,406	34,522	38,492
Total cost	**560,711**	**374,756**	**369,751**	**383,958**	**375,127**

Note: Figures are rounded to the nearest $. Numbers may not sum to totals due to this rounding.

Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

71 Urbis tried to control for amenity factors including water views, proximity to transport and the central business district by selecting comparable development locations across each city.

Figure 6.2: Relative importance of cost components of developing greenfield dwellings by city



Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

Construction costs are a significant component of costs

As was the case with infill development, construction costs are the most significant individual cost component of greenfield development—of around $200,000 to $220,000 per three-bedroom dwelling, which is less than the $280,000 to $310,000 on average for a two-bedroom infill unit. This is an important consideration in any policy initiatives to encourage greater infill development.

Taxes and charges also contribute to the cost of housing

Taxes and charges are a more significant component of overall cost for greenfield development, reflecting the higher rates of infrastructure charging in such developments. Taxes and charges range from 17 per cent of total costs in Adelaide to 23 per cent in Sydney. In particular, taxes and charges account for over $130,000 of the cost of developing an average three-bedroom greenfield house in Sydney, almost as much as the price of raw land ($151,875). By contrast, taxes and charges make up between $66,000 and $76,000 per dwelling in the other four cities.

This difference between cities is driven by two factors—the higher sales prices in Sydney leading to higher GST liability and stamp duty, and the higher infrastructure charges.

High raw land prices in Sydney contribute to higher housing costs

Raw land in Melbourne, Brisbane, Perth and Adelaide costs around $50,000 per lot. However, raw land in Sydney costs about three times this amount on average, at over $150,000 per lot. Sydney has experienced extremely tight supply in greenfield land for a number of years, which has placed substantial upward pressure on raw land costs.

Development costs and interest

Development costs and interest costs over the life of the development amount to between 9 per cent and 10 per cent in all the cities on average. They are also lower than for infill developments, ranging from $34,500 in Perth to $58,000 in Sydney (compared with a range of $51,000 in Adelaide to $71,000 in Sydney for infill).

Professional fees make up a small component of costs

Professional fees are relatively insignificant in greenfield dwelling development costs (1 per cent to 2 per cent of total costs). These are marginally less significant than for infill developments, where these costs ranged from 2 per cent to 4 per cent. This difference is partially due to a lesser need for planning consultants, and the economies of scale in spreading professional fees over large developments.

Infill development is more expensive than greenfield development (except in Sydney)

As noted earlier in this chapter, strategic planning policy across Australia is increasingly directing residential growth into infill areas rather than greenfield areas. Major metropolitan strategic plans for Australia's five largest cities set infill dwelling targets of 50 per cent to 70 per cent of all new dwellings over the next 20 years. The barriers to achieving these targets have been outlined earlier in this chapter, including the cost difference between infill and greenfield dwellings. Relative costs for these different forms of development are summarised in Table 6.6.

Table 6.6: Ratio of infill to greenfield costs

	Sydney	Melbourne	Brisbane	Perth	Adelaide
			(%)		
Raw land	-44	-36	33	15	-4
Government taxes and charges	-30	17	13	9	9
Professional fees	146	710	426	97	83
Construction	34	42	44	41	34
Development costs and interest	23	44	72	74	33
Total cost	**-1**	**31**	**42**	**36**	**25**

Source: URBIS, *National Dwelling Costs Study Report*, prepared for the National Housing Supply Council, January, 2010 (forthcoming).

Table 6.6, above, shows that it costs more to build an average infill dwelling than an average greenfield dwelling except in Sydney. An average infill dwelling costs between $93,000 more to build in Adelaide and $156,000 more to build in Brisbane than an equivalent greenfield dwelling. The main reason for these cost differences is higher construction costs for infill dwellings, of between $71,000 and $89,000 across the five cities. Development costs and interest are also more expensive for infill developments—they add between $13,000 (Sydney) and $26,000 (Brisbane) to the cost differential. This occurs because the time taken for an infill development is usually 6 months to 11 months longer than for a greenfield development.

The differential in the price of infill and greenfield land tends to vary across the five cities; greenfield land in Sydney, Melbourne, and Adelaide (marginally) is more expensive than infill land on a per dwelling basis. Taxes and charges are higher for infill dwellings in all cities except Sydney.

Options for stimulating higher density and infill developments

This chapter has outlined a range of barriers that developers face in undertaking higher density and infill developments, many of which have also been identified as general housing supply constraints in Chapter 3. State and territory governments have a range of options available to them to encourage such development and support the achievement of their infill dwelling targets, including:

- reforming the planning system to allow dual occupancy or higher densities as of right and greater integration of planning decisions and processes that apply to single sites
- extending code-based assessment to multi-unit developments
- providing transparent information 'up front' about the costs and charges associated with infill development
- streamlining the development assessment process further, including increased use of private certification, facilitating staged approvals for multi-unit developments, clarifying what development controls apply to a site and using multi-unit design and assessment codes[72]
- using government development agencies and corporations like VicUrban in Victoria to acquire and aggregate land parcels
- releasing surplus government land such as school sites and other public land for medium- and high-density developments
- reforming strata title provisions that unreasonably impede development
- minimising local opposition to infill by putting more effort into upfront neighbourhood planning and reducing the scope for local opposition at the development assessment stage for unaffected third parties (as suggested in Chapter 3)
- using independent development assessment panels (like those used in South Australia and New South Wales—see Box 6.1) or similar institutions to facilitate independent assessment and approval of major development projects to support infill.

72 For example, the New South Wales State Environment Planning Policy 65 – Residential Flat Design Code.

Box 6.1 Development assessment panels

Development assessment panels are a mix of independent experts and elected representatives, created to be the decision-making body to assess development applications. Depending on the applicable governing legislation, these panels have the power to make decisions on applications for development approval, instead of the relevant decision-making authority, for development of a certain class and value.

Development assessment panels already operate in South Australia, New South Wales and Queensland. In South Australia, local councils are required to establish development assessment panels and delegate their decision-making powers about development applications to a council (or regional) development assessment panel or council officer. Amendments introduced in 2006 aimed at greater impartiality in assessment decision-making processes.

In Queensland, panels are required under the *Iconic Queensland Places Act 2008* to consider the effect of any development applications on iconic places.

Western Australia is planning to introduce development assessment panels in 2010 to:

- streamline the determination process for particular types of development applications, by eliminating the requirement for dual approval under both the local and region schemes
- involve independent technical experts in the determination process
- encourage an appropriate balance between independent professional advice and local representation in decision making for significant projects
- reduce the number of complex development applications being determined by local governments, to allow local governments to focus their resources on strategic planning.

Sources: Planning Western Australia <www.planning.wa.gov.au>; Queensland Department of Infrastructure and Planning <www.dip.qld.gov.au>; South Australian Department of Planning and Local Government <www.planning.sa.gov.au>.

Conclusions

Environmental and transport constraints and demographic trends may have led to a push for higher densities in Australia's major cities. However, to achieve this, the cost of building infill has to become cheaper.

This chapter sets out some data that show that it is generally more expensive to develop infill housing than greenfield housing, raising questions about the ability of infill housing to ease affordability pressures for households. The information provided also compares cost components between major cities. The Council will consider the evidence on the relative affordability and sustainability impacts of infill, medium density and greenfield housing developments in future work.

The data in this chapter will feed into work in 2010–11 on developing the Council's understanding of the inputs to the final cost of housing for consumers. As noted in last year's report, these inputs would include raw land costs, development costs and charges, land holding costs, housing production costs, legal costs for producers and consumers, taxes on producers and consumers, marketing costs, risk premiums, and development margins. The Council's objective is to be able to understand these inputs across housing types, geographical locations and market conditions.

Efficiency of the housing market

Chapter Seven

Chapter 7: Efficiency of the housing market

In the *State of Supply Report 2008*, the Council identified 'the efficiency of the housing market' as an area for future inquiry both to develop its understanding of the characteristics of an efficient housing market and to assess the efficiency of the market. A roundtable discussion was held with invitees from industry, government and academia in 2009 to identify some of the key issues.

What is efficiency in the housing market?

The housing market is complex and interlinked with urban systems, land markets and the markets involved in the production of housing (particularly labour and capital markets). It is also characterised by submarkets with different conditions—in terms of locality, tenure type, socio-economic and demographic status.

In economic terms, an efficient housing market is one that:

- responds quickly to changes in demand by providing the housing that is demanded in the location, size and quality for which people are willing to pay
- has no distortions to market prices (such as taxes changing prices)
- provides market participants with full and accurate information
- includes environmental and other impacts on third parties in price.

An efficient housing market should also produce housing goods and services at the lowest cost possible and provide incentives to innovate and provide more choice to buyers.

However, housing markets often do not feature these characteristics. In particular,

- It takes time for supply to respond to changes in demand.
- Market players do not always behave rationally.
- Different parties have different access to the information that they need to make good decisions and do not always respond rationally to such information.
- Housing market transactions ignore social and environmental impacts.
- Demand from submarkets may not be met.

In addition, demand is less responsive to price signals than is the case for other goods, because households need housing, because governments provide housing assistance, and because people make decisions about housing as investments and for emotional reasons about location, size, and amenities.

Housing is also spatially fixed (unlike the theoretical case of perfect markets without global borders). An efficient market would provide housing where it is demanded. Mismatches are likely to arise with short-term movements in labour, as employment opportunities change, such as in the case of 'boom and bust' cycles in mining towns.

It takes time for supply to respond to changes in demand

Changes in supply occur in the long run rather than the short run, since it takes time to build new housing and adjust to changes in demand. It is possible for some changes in demand—for example, when private renters want to buy a house to occupy—to be met by changes within the existing housing stock.

The discussion of the supply pipeline in Chapter 3 illustrates this time delay in practice. A market response to current or projected supply shortages will depend upon the ability of the construction industry and developers to provide appropriate dwellings at accessible prices, by converting raw land into serviced lots or accessing infill opportunities. As the Productivity Commission has observed, 'even in a best-practice supply chain, it can take several years to bring new land on-stream, to provide the associated infrastructure and to construct new dwellings'.[73]

It is unlikely that land will be developed and housing built if the cost of that development exceeds the predicted revenue that can be generated from it. Long lead times add risk that something will happen to reduce the return. In recent years, although prices have been rising, supply levels have remained relatively constant.

Obstacles to industry responsiveness in the short to medium term may include:

- labour shortages
- shortages in, and/or high prices for, building materials
- strategic and statutory planning processes
- taxes and charges including developer contributions for infrastructure
- lack of knowledge of—or confidence in—consumer preferences
- the cost of, and access to, finance
- presence of market power to maintain high prices.

In future work, the Council will explore how long it takes for the market to respond and why supply has not responded significantly to sustained high prices.

Information imbalances are prevalent

In the housing market, particularly the home buying market, different parties have different access to the information that they need to make good decisions. Typically, sellers know more about the product (their house) than do buyers. Buyers, therefore, incur costs for building reports and title searches to overcome their lack of knowledge, and governments regulate for greater information disclosure to assist buyers.

Lack of information about tenants—particularly the likelihood of default of rent payments or damage—may also lead to greater costs for landlords who want to establish the trustworthiness of their tenants before renting a property to them. They may also charge higher rents to manage or mitigate this risk and select tenants that may seem more trustworthy because of their profile.

73 Productivity Commission, *First home ownership: inquiry report*, Productivity Commission, Melbourne, 2004, p. 20.

Housing market transactions ignore social impacts

Private housing market transactions do not consider the impacts of the transaction on other households or the broader social impact. For example, a development that builds on greenfield land in an unregulated housing market could have social costs (or negative externalities), although the buyer and the seller are both happy with the transaction. The social costs of energy inefficient building are also likely to be ignored in a private housing market transaction.

In an efficient housing market, market participants factor these social costs into price. One of the roles that land use planning plays is to prevent or manage these negative externalities.[74] Planning also provides for public goods, such as street lighting and roads that may not be provided, or would be provided selectively, through the private housing market.

Planning regimes improve efficiency to the extent that they overcome these externalities, and provide better design, enhanced health and safety, environmental protection, coordinated development, and services and infrastructure in place to support new development.[75] However, as noted in Chapter 3, planning and development assessment processes can also impede the ability of the market to respond to changes in demand by extending the time taken through the supply pipeline, and add costs that may not enhance efficiency.

In Chapter 3 of this report (and in the 2008 report), the Council has identified the following three aspects of the planning system that create inefficiency in the housing market:

- development assessment processes that add unnecessary delay or uncertainty to development
- lack of clarity over betterment and infrastructure charging that adds delays, uncertainty and costs to development
- planning governance structures that lead to inconsistent decisions, delay and uncertainty.

In the Australian context, the Productivity Commission found that constraints on the supply of land at the urban fringe have contributed to housing price pressures, particularly in Sydney.[76] However, it found that because recent price increases were due mainly to increased demand in established areas, improvements to greenfield land release policies or planning approval processes on the fringe could not have greatly alleviated pressures on affordability. The effect of such policies on housing supply and affordability depends on the scope to increase housing densities, to convert brownfield land to residential use and use infill to add to the stock of dwellings. As the Council has observed, there are substantial impediments to increasing supply within established areas.

Demand from submarkets may not be met

Breaking the market into submarkets by tenure also highlights other instances in which excess demand (or excess supply) occur, such as homelessness, low vacancy rates in rental properties and prices rising dramatically for the lowest priced houses.

Theoretically, an efficient housing market provides housing at a price that an individual is willing (and able) to pay. However, if supply is fixed or lags substantially behind increases in demand, prices will rise as demand increases. As a result, private sector rents can be high as a proportion of income, particularly for those on the lowest incomes. Less secure housing options, such as caravans and makeshift rooming houses, may also be offered to meet housing needs within a price and location that households demand, if there is a lack of other suitable accommodation.

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74 C Whitehead, 'The economics of social housing', 135–52. in *Housing economics and public policy, essays in honour of Duncan Maclennan*, ed. T O'Sullivan and K Gibb, Blackwell, Oxford, 2003.

75 N Gurran, K Ruming, B Randolph and D Quintal, *Planning, government charges, and the costs of land and housing*, Australian Housing and Urban Research Institute Position Paper No. 109, AHURI, Sydney, 2008.

76 Productivity Commission, *First home ownership*, 2004.

Public housing is provided to counteract market failures and provide security of tenure for the most vulnerable households (that would struggle to maintain stable living arrangements in the private sector). Benefits to these individual households may be supplemented by wider social benefits such as improved health status, as long as public housing does not provide work disincentives and other negative neighbourhood effects by concentrating deprived communities. It is unclear from international experience whether increased building by government of low-cost social housing prevents building that the private sector would have undertaken anyway, or whether it adds housing in a segment of the market that the private sector would not have supplied. On the other hand, Chapter 5 of this report shows that rents, dwelling prices and mortgage repayments for new and established homes are beyond the reasonable reach of many Australian households and that Commonwealth Rent Assistance does not close the affordability gap for a substantial proportion of low-income renters. The emergence of a growing gap between underlying demand and supply also suggests that the private sector has struggled to produce dwellings that are affordable for households in the lower end of the income and wealth distributions.

The Australian Government's reforms of public housing, including promoting the use of alternative social housing providers, aim to give low-income tenants more choice by leveraging private sector capital to build the stock of low-cost rental and social housing.

How to stimulate greater efficiency in the housing market

As noted throughout this report, the housing market today is characterised by many government interventions. Government is a key player in the housing market at the federal, state and local levels in Australia. It plays the role of developer, investor and landlord as well as levying taxes, providing subsidies, and determining planning processes and building standards.

Government activity designed to improve efficiency is likely to have a range of impacts on a range of players. For example, regulations on the design and construction of dwellings are designed to correct for market failures—particularly different levels of information between home buyers and builders—to ensure minimum standards of safety and amenity for those who might not otherwise be able to afford them, and to mitigate the consequences of private choices on the welfare of the wider community.[77] Complying with these regulations can increase the cost of constructing new housing or renovating and selling established homes, and thus the prices that buyers pay. This may sometimes exclude lower income people from the market because the regulated cost of supply is beyond their means.

Taxes and subsidies have a range of impacts on the market by eliciting changes in price and in the behaviour of households and investors. They affect demand and supply by encouraging home ownership as well as investment in residential property by small-scale landlords, and they may alter the timing of first home purchase decisions. The benefits available through the tax system to individual owners of rental properties can encourage the supply of housing and rental properties. However, larger scale investors face tax disincentives to invest. The Council is not yet commenting on the changes to taxes and transfers that could enhance the efficiency of the housing market since that is within the scope of the Henry Review of Taxation.

77 Victorian Competition and Efficiency Commission, *Housing regulation in Victoria, building better outcomes*, Victorian Competition and Efficiency Commission, Melbourne, 2005.

A range of other options are available to governments to stimulate greater efficiency in the housing market, including:

- ensuring better information about demand and supply is available to all players
- facilitating and coordinating desired growth, including balancing the needs of existing residents with the need to accommodate growth in an economically, socially and environmentally sustainable manner
- identifying the most efficient and equitable distribution of the financial burden of the infrastructure needed to meet the needs of growing communities and cities
- standardising building and planning regulations
- setting up land development agencies—such as VicUrban in Victoria and Landcom in New South Wales—to facilitate the acquisition, aggregation, master planning and development of urban communities in conjunction with private sector developers and builders.

Assessing the efficiency of the housing market

The Council has explored how to assess how effectively the Australian housing market responds to changes in supply and demand. A range of modelling approaches exists, although all have limitations.

The set of six key indicators from the 2008 report measures the:

- adequacy of supply
- affordability and availability of housing for low-income home buyers and renters.

An efficient market should have smooth transactions, even supply and sufficient supply to meet need in the right places and at prices that people can pay. The Council has developed a seventh indicator to describe how well the housing market operates.

Key indicator 7 – Housing market responsiveness

The extent to which supply is meeting the underlying demand for housing provides a useful indicator of how efficiently the housing market responds to changes in demand with new supply. This report adds a seventh indicator to the 2008 report's set of six key indicators. This indicator measures the gap between demand and supply as a proportion of the increase in demand since 2001. These data are discussed in more detail in Chapter 4.

Table 7.1 shows that since 2001, an ongoing proportion of demand has not been met. The highest proportion was in 2002 at 16.9 per cent of the growth in demand – this represents a shortfall of 23,400 in the growth in total demand of 138,100 households in that year. The proportion was also high in 2009 at 14.7 per cent, when the cumulative gap since 2001 was a shortfall of 178,400 dwellings out of a total growth in demand of 1,216,100 households.

This indicator has also been provided to the COAG Reform Council for use in the National Affordable Housing Agreement performance reporting process for the area of housing market efficiency and responsiveness.

Table 7.1: Key indicator 7 – Cumulative gap between demand and supply as a proportion of the increase in demand since 2001

Year	Australia
	(per cent)
2002	16.9
2003	10.9
2004	7.7
2005	5.4
2006	4.7
2007	7.8
2008	9.9
2009	14.7

Notes: A positive number represents the proportion of demand not met. A negative number represents the proportion by which supply exceeds demand.

Source: See Table 7.3.

State-by-state breakdowns

The indicator is broken down for each state and territory in Table 7.2. The table shows quite different proportions between states and territories at a specific point in time, reflecting the different levels of growth in demand and supply captured by this indicator. Victoria, South Australia, the Australian Capital Territory and the Northern Territory had negative values for this indicator for some years, illustrating periods when the cumulative growth in supply since 2001 exceeded the cumulative growth in demand at that point in time. For the other states and territories, the proportion was positive for each year, indicating an ongoing cumulative gap since 2001.

Table 7.2: Cumulative gap between demand and supply as a proportion of the increase in demand since 2001 for states and territories

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
					(per cent)				
2002	17.8	4.0	28.0	25.2	10.8	43.6	-57.3	0.1	16.9
2003	7.7	-4.4	25.9	16.8	8.8	37.3	-40.4	-4.5	10.9
2004	5.3	-8.4	21.7	11.1	8.9	29.6	-11.9	-8.3	7.7
2005	4.5	-11.8	17.9	5.7	8.8	22.2	6.5	-3.7	5.4
2006	7.5	-13.5	16.1	2.0	6.4	16.9	14.4	-5.7	4.7
2007	9.5	-3.9	16.0	-0.6	9.2	7.5	47.0	0.5	7.8
2008	10.8	2.5	14.7	-4.6	13.4	1.3	62.0	-1.1	9.9
2009	18.9	7.5	16.9	0.2	18.5	6.0	61.2	2.5	14.7

Notes: A positive number represents the proportion of demand not met. A negative number represents the proportion by which supply exceeds demand.

Source: See Table 7.3.

Table 7.3 also breaks down key indicator 7 by states and territories, although in terms of the number of households (rather than proportions as in Table 7.2). It shows the gap calculations (as calculated in Chapter 4) and how demand has increased since 2001.

Table 7.3: Cumulative gap between demand and supply and the cumulative increase in demand since 2001 for states and territories (number of households)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
					Cumulative gap between demand and supply since 2001				
2002	6,600	1,300	11,200	1,900	1,700	900	-300	0	23,400
2003	5,700	-2,900	21,200	2,500	2,800	1,700	-400	-200	30,200
2004	5,900	-8,300	26,400	2,400	4,300	2,000	-200	-500	32,000
2005	6,700	-15,200	28,900	1,600	5,700	2,000	200	-300	29,600
2006	14,100	-21,400	32,300	700	5,200	1,900	600	-600	32,800
2007	20,900	-8,000	38,800	-300	9,900	900	4,200	100	66,500
2008	27,000	6,300	41,700	-2,200	17,900	200	8,900	-200	99,500
2009	57,600	22,700	56,100	100	30,200	1,000	10,100	500	178,400
					Cumulative increase in demand since 2001				
2002	37,100	33,500	40,200	7,400	15,500	2,100	500	1,800	138,100
2003	73,700	66,800	81,700	14,700	31,400	4,500	1,100	3,900	277,800
2004	111,200	98,600	122,000	21,900	47,800	6,700	2,000	6,000	416,100
2005	149,900	128,500	161,000	28,900	64,900	8,900	3,200	8,000	553,300
2006	188,400	158,400	200,300	36,000	82,100	11,100	4,400	10,000	690,600
2007	221,100	205,400	242,700	42,600	106,800	12,300	9,000	12,900	852,700
2008	250,000	252,000	282,500	49,000	133,600	13,900	14,400	14,800	1,010,200
2009	304,200	304,300	332,600	59,700	163,800	17,100	16,600	17,800	1,216,100

Source: National Housing Supply Council estimates of underlying demand; National Housing Supply Council estimates of dwelling completions net of demolitions and adjusted for unoccupied dwellings. See Appendix 3: Methodology for detail.

Another measure of the responsiveness of the housing market

Another possible way to measure the responsiveness of the housing market is to consider how long it takes to complete a dwelling. The average time taken to complete a dwelling (new house) by jurisdiction is shown in Table 7.4. The time taken to complete a new house is shortest in the Northern Territory, the Australian Capital Territory and Queensland. Comparable information is not available for apartments and other multi-unit projects.

While the Northern Territory had the highest proportional cumulative gap between demand and supply (see Table 7.2), the time to build a new house is the shortest. This anomaly could be due to the pressures of the short building season to avoid the rainy season or it may reflect a compositional effect (such as fewer large architect-designed houses).

Table 7.4: Average time from commencement to completion for newly completed dwellings (new houses only) by jurisdiction by quarter completed and months to complete, 2008–09

Completion quarter ending	New houses, months to complete								
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
					(months)				
September 2008	7.1	7.8	6.3	6.8	9.2	7.1	6.9	5.8	7.3
December 2008	7.8	7.4	6.0	6.6	9.4	7.4	5.3	6.3	7.3
March 2009	7.8	7.6	5.8	7.6	8.6	7.1	5.4	5.7	7.3
June 2009	7.9	7.7	6.6	7.5	8.8	9.2	5.8	6.5	7.7

Source: Australian Bureau of Statistics, *Building Activity Survey*, unpublished data.

Conclusion

This chapter has set out some initial thinking and data on efficient housing markets. The housing market as a whole has not responded quickly to changes in demand in recent years, indicating scope to improve efficiency. Chapter 3 and this chapter outline some of the inefficiencies that arise as a result of the planning and development assessment systems. The Council will consider the issues raised further next year, including the recommendations of the Henry Review, the Australian Government's response to those recommendations, and measures to improve the productivity of the construction industry. The Council will also further develop its measures for assessing the efficiency of the housing market.

Housing demand in an ageing population

Chapter Eight

Chapter 8: Housing demand in an ageing population

Key points

- Ageing of the population will have significant impacts on the housing sector as the proportion of older households (households in which the reference person is aged 65 or over) is projected to grow from 1.6 to 3.2 million households from 2008 to 2028.
- This represents an increase from 19 per cent of all households in 2008 to 28 per cent in 2028.
- The projections of underlying demand indicate that there will be pressure on both private and public rental markets to meet the needs of older renter households. Underlying demand for private rental from older households is projected to rise from 146,200 in 2008 to 321,400 by 2028, and public rental demand is projected to rise from 86,500 in 2008 to 189,800 in 2028.
- Underlying demand in the dominant owner-occupier sector is projected to grow from 1.3 to 2.6 million older households over the projection period.
- In 2008, there were 184,400 households with the reference person over 85 years. By 2028, this number is projected to rise to 351,200, an increase of 166,700 households.
- Lone-person households are projected to increase from 47.6 per cent of all older households in 2008 to 51.7 per cent in 2028. As lone-person older households grow in numbers, they may increasingly seek smaller dwellings.
- These growth patterns are sensitive to the assumptions underlying them. The Council's projections are based on recent tenure patterns being maintained over the projection period. A variety of influences, including within the housing market, may change the pattern of demand.
  - The methodology underlying these projections is the same as for the demand projections in Chapter 2. The same caveats about projecting underlying demand based on past tenure and household formation patterns apply to the projections in this chapter.
- Challenges remain to ensure that there are sufficient options for older households to age in their own home or alternative appropriate accommodation close to family, health services and other forms of support.

Overview

The Treasury's *Intergenerational Report 2010*[78] projected increases in the population of older people of 2.6 million from 2010 to 2030.

78 The Treasury, *Australia to 2050: future challenges*, Commonwealth of Australia, Canberra, 2010 (the Intergenerational Report 2010). For IGR 2010, net overseas migration is assumed to fall relatively sharply from an average of 244,000 a year over the three years to June 2009 to 180,000 people a year from 2012.

Demographic projections at the household level presented in Chapter 2 drew attention to changes in underlying housing demand likely to result from population ageing. This chapter examines projections for older households in more detail.

Ageing of the population will have significant impacts on the housing sector. Additional housing will be needed to support independent living as people age, and existing homes will need to be retrofitted. Government policy and programs are also likely to respond to rapidly growing needs in this segment of the population, particularly in relation to the suitability of accommodation for people with changing needs. Changes in policy and programs could have significant market implications.

To gain a better understanding of the impact that this aspect of demographic change is likely to have on the demand side, and thus on the opportunities and challenges for the supply side of the housing market, the Council commissioned projections of underlying housing demand among older households. While most of the information in this report relates to the period up to 2029, detailed information on older households is only available up to 2028. The information is otherwise consistent with the information presented in Chapter 2.

> The definition of 'older households' used throughout this chapter is households in which the 'household reference person' is aged 65 years or over. 'Household reference person' is the term used by the Australian Bureau of Statistics to mean the household member whose relationship with all other members of the household identifies the composition of the household in a way that is relevant to family formation.[79]

This chapter outlines the current dwelling patterns of older households as well as the Council's projections of demand from older households from 2008 to 2028, using the same demand projections model as used in Chapter 2 for the entire population. The chapter then outlines some of the supply-side challenges of meeting this demand and government initiatives currently underway.

Current dwelling patterns of older households

Older households—those households with a reference person aged 65 years or more—have relatively high levels of home ownership. Table 8.1 shows that in 2007–08, home ownership among older households was over 80 per cent while it was under 50 per cent for households with the reference person aged 25–34 years.

Compared with other households, older households had the highest proportion of home owners without a mortgage, the lowest proportion of private renters and the highest proportion of public renters.

However, declines in the rate of home ownership in younger households, particularly those whose reference person is under 35 years of age, are likely to mean that the proportion of older people in the private or social rented sector will increase. In particular, the increasing share of older people living in the private rented sector over the next 20 years is a concern because of the limited security of tenure in that sector.

79 Australian Bureau of Statistics, *Family, Household and Income Unit Variables*, cat. no. 1286.0, ABS, Canberra, 2005.

Table 8.1: Housing tenure/landlord type by age of reference person, 2007–08

	Age of reference person						
	15–24	25–34	35–44	45–54	55–64	65 and over	All households
Estimated number of households			('000 households)				
Owner without a mortgage	6.5	45.7	178.5	401.7	714.3	1,332.5	2,679.2
Owner with a mortgage	41.7	535.9	902.8	861.8	400.4	92.7	2,835.2
Renter							
State/territory housing authority	12.0	39.6	59.2	76.5	69.3	108.6	365.1
Private landlord	275.3	667.7	447.8	281.2	143.3	114.2	1,929.5
Total renters	294.1	726.6	538.6	376.7	222.8	241.0	2,399.9
Total	354.1	1,338.7	1,658.3	1,663.1	1,351.8	1,711.2	8,077.3
Proportion of households with characteristic			(per cent)				
Tenure and landlord type							
Owner without a mortgage	1.8	3.4	10.8	24.2	52.8	77.9	33.2
Owner with a mortgage	11.8	40.0	54.4	51.8	29.6	5.4	35.1
Renter							
State/territory housing authority	3.4	3.0	3.6	4.6	5.1	6.3	4.5
Private landlord	77.8	49.9	27.0	16.9	10.6	6.7	23.9
Total renters	83.1	54.3	32.5	22.7	16.5	14.1	29.7
All households	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Does not include households in 'other' tenures.

Source: Australian Bureau of Statistics, *Housing Occupancy and Costs, 2007-08*, Table 8, cat. no. 4130.0, ABS, Canberra, 2009.

Table 8.2 shows that in 2007–08, older households were only slightly more likely to live in detached houses and semi-detached housing than the Australian average. Seventy-nine per cent lived in detached houses compared with the national average of 78.1 per cent; for semi-detached, the proportion was 9.6 per cent for households where the reference person was aged 65 or over and 8.6 per cent of all households.

Older households had on average 1.8 persons per household—lower than the Australian average of 2.6. The average number of bedrooms in these households was 2.9 compared with 3.1 on average for all households.

Table 8.2: Dwelling structure, average number of persons and bedrooms by age of reference person, 2007–08

	Age of reference person						
	15–24	25–34	35–44	45–54	55–64	65 and over	All households
Dwelling structure			('000 households)				
Separate house	204.7	879.5	1,326.6	1,390.4	1,158.5	1,351.5	6,308.4
Semi-detached/row or terrace house/townhouse	44.3	160.6	124.4	118.1	82.5	164.7	694.6
Flat/unit/apartment	105.5	298.5	199.0	149.7	106.8	183.0	1,042.0
All households	354.1	1,338.7	1,658.3	1,663.1	1,351.8	1,711.2	8,077.3
Dwelling structure			(per cent)				
Separate house	57.8	65.7	80.0	83.6	85.7	79.0	78.1
Semi-detached/row or terrace house/townhouse	12.5	12.0	7.5	7.1	6.1	9.6	8.6
Flat/unit/apartment	29.8	22.3	12.0	9.0	7.9	10.7	12.9
All households	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			Average per household				
Average number of persons in household	2.1	2.7	3.3	3.0	2.2	1.8	2.6
Average number of bedrooms in dwelling	2.6	2.8	3.2	3.3	3.2	2.9	3.1

Source: Australian Bureau of Statistics, *Housing Occupancy and Costs, 2007-08,* Table 9: All households, Selected household characteristics by age of reference person, cat. no. 4130.0, ABS, Canberra, 2009.

Table 8.3 shows the different patterns of expenditure, income levels and the contribution of government pensions and allowances to gross household income for households by age in 2003–04. Older households, on average, have lower incomes and expenditure as well as relatively high levels of household net worth. Also, over two-thirds receive government pensions and allowances as their principal source of gross household income. These differing socio-economic characteristics are important factors in examining housing and standards of living. They are discussed in more detail in the Intergenerational Report 2010.[80]

80 The Treasury, *Australia to 2050: future challenges*, Commonwealth of Australia, Canberra, 2010, Chapter 4, Ageing pressures and spending.

Table 8.3: Age of reference person by household expenditure and income characteristics, 2003–04

		Age of reference person						
		15–24	25–34	35–44	45–54	55–64	65 and over	All house-holds
Mean gross household income per week	$	938	1,282	1,324	1,474	1,006	550	1,128
Mean household net worth	$	77,471	205,302	398,891	570,594	751,106	578,992	473,125
Proportion of households with characteristic								
Principal source of household income								
Zero or negative income	%	**0.4	**0.3	*0.4	**0.4	*0.7	**0.3	0.4
Wages and salaries	%	72.0	80.0	73.6	75.1	47.2	6.4	57.7
Own unincorporated business income	%	*1.3	5.4	9.3	7.7	7.0	1.7	6.1
Government pensions and allowances	%	19.2	12.7	15.2	13.5	29.3	68.9	27.4
Other income	%	7.1	*1.6	*1.5	3.4	15.7	22.8	8.5
Total	**%**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Contribution of government pensions and allowances to gross household income								
Nil or less than 1%	%	59.5	54.5	41.9	59.5	51.5	14.5	44.5
1% to less than 20%	%	10.3	23.9	33.1	19.5	9.2	4.9	18.5
20% to less than 50%	%	10.9	8.8	10.0	7.2	9.1	11.8	9.5
50% to less than 90%	%	*7.6	4.0	5.1	3.5	10.6	22.1	8.9
90% and over	%	11.3	8.5	9.5	10.0	18.8	46.3	18.2
Total	**%**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
KEY EXPENDITURE COMPONENTS								
Current housing costs (selected dwelling)	%	21.0	20.5	16.6	12.4	10.7	13.4	15.3
Household services and operation	%	5.6	6.4	6.8	5.8	6.1	7.0	6.4
Medical care and health expenses	%	2.2	3.6	4.3	5.6	6.9	8.0	5.2
Transport	%	15.3	16.1	14.7	16.5	17.8	13.7	15.8

Note: '*' means the estimate has a relative standard error of 25 per cent to 50 per cent and should be used with caution; '**' means the estimate has a relative standard error greater than 50 per cent and is considered too unreliable for general use.

Source: Australian Bureau of Statistics, *Household Expenditure Survey, Australia: Summary of Results 2003–04*, cat. no. 6530.0, ABS, Canberra, 2006.

Demand projections for older households, 2008–2028

The Council estimates there to be approximately 1.6 million older households in Australia, making up 18.6 per cent of all households in June 2008. This group is growing faster than younger household groups. By 2028, in the Council's medium growth projections of underlying demand, that number will grow to 3.2 million representing 27.6 per cent of all households.

The dwelling and tenure preferences of these older households will have important implications for the housing market. Trends in income, wealth and in the price of housing will also impact on their future housing arrangements. Older people may require modifications to their dwellings or to move to a more suitable dwelling to maintain independent living.

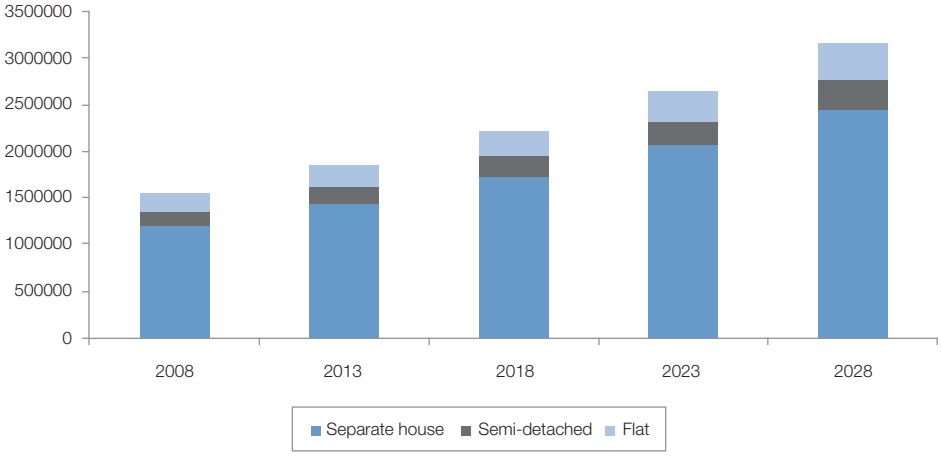
This section outlines the Council's demand projections for older households, including the increase in the number of older households, what types of older households are likely and the tenures and types of dwellings that they are likely to seek (based on current trends). Demand projections by state and territory for the low, medium and high growth scenarios will be available on the Council's website <www.nhsc.org.au>.

Demand will be from smaller households

In June 2008, lone-person households numbered 738,500 and represented 47.6 per cent of all older households. By 2028, in the medium growth scenario, their number is expected to reach 1,650,000 (an increase of 915,450, or over 120 per cent), while the proportion of all older households they represent is projected to reach 51.7 per cent. Demand for smaller dwellings (such as units and semi-detached dwellings) is likely to increase as a result.

Figure 8.1 shows that, based on current trends, older households will continue to prefer living in separate houses, even though the proportion of older households seeking flats or semi-detached units is projected to increase by 2028. Since the projections rely on past dwelling preferences (drawn from the 2006 Census), it is likely that the projections depicted in Figure 8.1 underestimate changes in preferences about dwelling type that are likely to emerge.

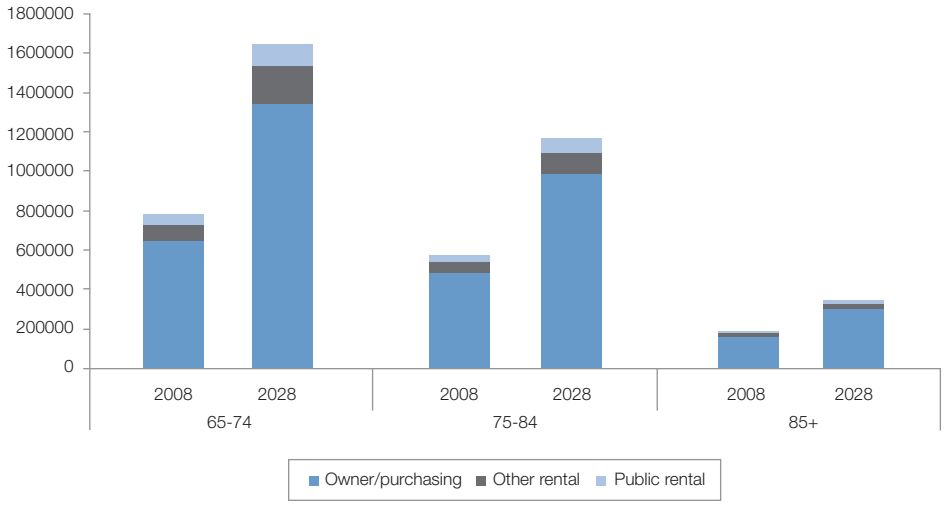
Figure 8.1: Projected household growth where the reference person is aged 65 years or more by dwelling type, 2008 to 2028, selected years



Source: National Housing Supply Council projections based on McDonald-Temple medium household growth scenario

Figure 8.2 shows that, based on current trends, older households will continue to be predominately owner-occupiers. However, the number of renters is projected to grow over the next 20 years.

Figure 8.2: Projected household growth where the reference person is aged 65 years or more by tenure, 2008 and 2028



Source: National Housing Supply Council projections based on McDonald-Temple household growth scenarios.

Older renters will grow in number

Older renters live in a range of dwellings in the public and private sectors. Table 8.1 earlier in this chapter shows that in 2007–08, 14.1 per cent of older households were renting: 6.7 per cent were private renters and 6.3 per cent public renters. Table 8.4 presents projections of the numbers of older renter households over the 20-year period to 2028.

Table 8.4: Projections of older renter households by age groups, 2008 to 2028, selected years

	2008	2013	2018	2023	2028
Reference person aged 65–74 years					
Private rental	79,600	105,700	137,000	158,500	184,700
Public rental	46,500	62,200	81,700	94,700	110,700
Total renters	126,100	167,800	218,700	253,200	295,300
Reference person aged 75–84 years					
Private rental	52,200	54,000	62,000	84,300	108,700
Public rental	31,800	32,200	36,600	49,600	64,100
Total renters	84,000	86,200	98,600	133,800	172,900
Reference person aged 85+ years					
Private rental	14,400	18,600	20,900	23,100	28,000
Public rental	8,100	10,400	11,500	12,500	15,000
Total renters	22,500	29,000	32,300	35,700	43,100

	2008	2013	2018	2023	2028
Reference person aged 65 and over					
Private rental	146,200	178,200	219,900	265,900	321,400
Public rental	86,500	104,800	129,700	156,800	189,800
Total renters	232,600	283,000	349,600	422,700	511,300

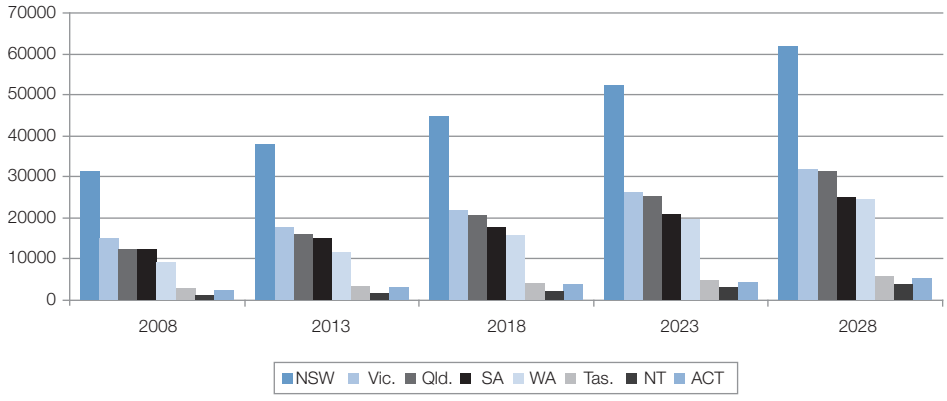
Source: National Housing Supply Council projections based on McDonald–Temple household growth scenarios.

These projections indicate that underlying demand for rental from older households is likely to increase by 120 per cent to 2028, with consequent pressures on both private and public rental markets. Private rental demand is projected to rise from 146,200 in 2008 to 321,400 by 2028. Of these households, the number of households in the group aged 85 years or more is projected to increase from 14,400 to 28,000.

Public rental demand is projected to rise at a similar rate from 86,500 in 2008 to 189,900 in 2028. The number of households in the 85 years or over age group is projected to increase from 8,100 to 15,000.

As evident from Figure 8.3, all states and territories are projected to experience a large increase in underlying demand for public rental housing on the part of older households over the 20-year period from 2008 to 2028. Numerically, New South Wales is expected to experience the greatest increase in such demand, from 31,400 in 2008 to 61,800 by 2028. Significant growth in underlying demand for public rental from older households is also projected to occur in south-east Queensland, from 8,400 in 2008 to 20,100 in 2028 (representing additional demand for 11,800 public rental dwellings). Accommodating this demand will require increased social housing supply or according greater priority to older persons for existing supply, effectively displacing demand that is also projected to increase among other age groups. Either approach would place additional pressure on the private rental market.

Figure 8.3: Projected growth in 65+ years demand for public rental housing, 2008 to 2028, selected years



Source: National Housing Supply Council projections based on McDonald–Temple household growth scenarios.

The ageing population will increase demand for different types of dwellings

Table 8.5 presents the projections of demand by older households for specific types of dwelling. The methodology used indicates that there will not be significant differences over time in the proportions of older households in different dwelling types. However, these projections are based on past trends rather than accounting for possible future changes in preferences or policy settings.

Table 8.5: Projections of older households by dwelling type, 2008 to 2028, selected years

Age group	Dwelling type	2008	2013	2018	2023	2028	Percent increase from 2008 to 2028
65–74	Separate house	607,000	783,700	982,300	1,113,600	1,261,900	108
	Semi-detached	73,200	96,600	124,700	143,000	164,800	125
	Flat	89,700	119,200	155,500	178,900	208,100	132
	Other	13,400	18,200	24,100	28,600	33,800	152
	Total	783,400	1,017,600	1,286,600	1,464,100	1,668,700	113
75–84	Separate house	452,800	472,700	541,600	722,600	916,300	102
	Semi-detached	56,600	59,100	67,800	91,000	115,600	104
	Flat	65,600	67,100	76,300	102,800	131,500	100
	Other	7,600	7,900	9,200	12,700	16,700	119
	Total	582,700	606,800	695,000	929,200	1,180,000	102
85+	Separate house	140,600	181,200	202,900	223,700	268,600	91
	Semi-detached	19,500	25,100	28,000	30,900	37,200	91
	Flat	22,900	29,300	32,400	35,400	42,500	85
	Other	1,400	1,900	2,100	2,400	2,900	104
	Total	184,400	237,400	265,400	292,400	351,200	90
Total	Separate house	1,200,500	1,437,500	1,726,900	2,059,800	2,446,900	104
	Semi-detached	149,400	180,800	220,500	264,900	317,500	113
	Flat	178,200	215,600	264,200	317,200	382,000	114
	Other	22,500	27,900	35,500	43,700	53,400	138
	Total	1,550,500	1,861,800	2,247,100	2,685,700	3,199,900	106

Source: National Housing Supply Council projections based on McDonald–Temple household growth scenarios.

Other options for older people

In 2007–08, the majority of older households were living in separate houses, with only 10.7 per cent occupying units or apartments (see Table 8.2). The demand projections and analysis outlined in this chapter are based on the assumption that this trend will continue, although older people may increasingly seek to live in apartments and semi-detached dwellings. For example, recent research shows that older South Australians are looking for affordable, practical housing in their own neighbourhood, close to transport, local services and shops, and with access to the support services that will help them remain independent.[81]

81 Andrew Beer et al., *Our homes, our communities: the aspirations and expectations of older South Australians*, ECH Inc, Flinders Institute for Housing, Urban and Regional Research, Adelaide, May 2009, p.3.

Purpose-built housing for older people in Australia includes retirement villages, independent living units, supported accommodation, some public housing units and residential aged care. 'Sea change' or 'tree change' migration and 'lifestyle' retirement village options are attractive to only a minority of older people and may not be affordable for many of them.[82] In April 2008, around 140,000 older people were living in more than 1,750 retirement villages, mostly in New South Wales (569 villages), South Australia (374), Victoria (321), and Queensland (245). The retirement village industry estimates that about 500 new villages are in the development pipeline.[83] See Box 8.1 for an overview of the retirement village industry.

Box 8.1: Overview of the retirement village industry

- Aged care facilities, as their name suggests, provide older people with some degree of regulated care. These facilities are regulated under the *Commonwealth Aged Care Act 1997* under which providers need to be approved. Residential care under the Act is the type of care ordinarily provided by a nursing home, and is provided in conjunction with the provision of accommodation to a resident.
- Retirement villages, on the other hand, are regulated under state or territory legislation.
- In a retirement village, a resident enters into an agreement, usually a form of lease (though it can be by strata title), to live in the village. It is the ongoing provision of services in a retirement village that differentiates it from standard medium-density residential development.
- Approximately 40 per cent of aged care villages are operated by the private sector. The remainder are operated by not-for-profit organisations.
- A typical arrangement is for an incoming resident to pay:
  - an amount that is usually slightly below the median price of equivalent established housing in adjoining suburbs
  - a recurrent monthly fee ($250 to $1,200) that is slightly less than the cost of providing the services that the resident receives (including emergency call support, maintenance of common areas, gardening, community bus, and sinking funds).
- These payments are then offset by a cumulative deferred management fee (between 2.5 and 3.5 per cent per annum) that is capped at 30 to 35 per cent of the exit price. In addition, 50 per cent of any capital gain that is realised may be payable by the departing resident (or his/her estate). An entitlement by the village operator to a share of capital gain does not apply in some states. These structures vary from state to state.
- Many not-for-profit retirement villages, as well as a small proportion of private villages, have nursing homes attached to them. The fees and bonds payable by nursing home residents are governed by the federal government.
- Retirement villages may also use a loan/lease structure where an incoming resident pays an amount in the form of a 'loan' to the operator in exchange for a lease over a unit. A departing resident (or his/her estate) is entitled to recover the 'loan' less the deferred management fee entitlements of the operator.

Source: Residential Development Council, industry sources.

82 Andrew Beer et al., *Our homes, our communities*, p. 3.

83 Retirement Villages Association, 'Increased village developments help meet demand'. *RVA News Monitor*, No. 6, Sept. 8, 2008.

The Australian Government's policy of ageing in place and promoting independent living through community care services explains the relatively small proportion of older households living in non-private dwellings, until advanced old age.[84] However, demand for this type of accommodation is projected to increase. In June 2009, the number of households with the reference person aged over 60 years in non-private dwellings was 205,629. The Council projects that demand for this type of accommodation will increase by 28 per cent to 284,200 in 2019 and by 49 per cent to 402,500 in 2029 (medium trend projection). This change reflects the increase in demand for nursing homes and retirement-style accommodation.

Residential (caravan) parks and rental villages are increasingly being marketed to older people as affordable alternatives to retirement village living. Rental villages generally charge no upfront or exit fees. However, rents usually capture a large proportion of a resident's Age Pension and their full Commonwealth Rent Assistance entitlement. Rental villages are subject to state and territory residential tenancy legislation.

Many older people who are too frail to continue living in their own homes live in residential aged-care facilities. As at 30 June 2008, there were close to 157,400 permanent aged-care residents, which represents 5.5 per cent of the population aged 65 years and over.

The availability and provision of formal and informal care will be important for the ability of many people to remain living in their choice of housing as they age, and the likelihood of mobility problems and other forms of disability increases.

It is unclear whether there will be sufficient supply of alternative options for older people to meet the projected demand. The Council aims to monitor changes in demand from older households and supply suited to their needs, and will provide updates in future reports.

Much of Australia's private housing stock (both rental and owner occupied) is not accessible by frail older people or capable of being adapted to enable them to 'age in place'. Similarly, much of the public housing stock is three-bedroom detached houses, which may be too large and difficult for ageing tenants to maintain. Older public housing walk-up flats typically have stairs and no lifts, poorly designed bathrooms and other features that are not suitable for frail older people. While some measures are now being implemented to increase the suitability of the public and community housing stock for frail older people through the Social Housing Initiative (see the section on 'Government Initiatives for older people' later in this chapter), comprehensive change will take time.

The House of Representatives Standing Committee on Legal and Constitutional Affairs has identified the need for all levels of government to work together and with the private sector to develop planning policies and guidelines to encourage adaptable or universally accessible housing and neighbourhoods that support older people to live independently.[85]

Government initiatives for older people

A number of government initiatives make provision for housing for low-income older people and older people who are homeless or at risk of becoming homeless - the National Affordable Housing Agreement (and associated National Partnership Agreements on Social Housing, Homelessness and Remote Indigenous Housing), the National Rental Affordability Scheme and the Social Housing Initiative.

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84 Bishop, B. 1999, The National Strategy for an Ageing Australia, Healthy Ageing discussion paper, Canberra: Commonwealth of Australia.

85 House of Representatives Standing Committee on Legal and Constitutional Affairs, *Access all areas*, Report of the Inquiry into Draft Disability (Access to Premises – Buildings) Standards, Commonwealth of Australia 2009, Canberra, June 2009, accessed 08-07-09 at <http://www.aph.gov.au/house/committee/laca/disabilitystandards/report.htm>.

Projects funded through the Social Housing Initiative and National Rental Affordability Scheme will provide over 3,500 dwellings suitable for frail older people. In many cases, these dwellings will allow older people to move from larger housing into a dwelling more suited to their needs, with, for example, smaller, low maintenance gardens and a community setting with other older people. In many cases, the location of these dwellings will be near their previous address, allowing them to remain connected to their local community.

In addition to these national initiatives, state and territory governments also have a range of housing programs and services that either specifically target older people or focus on older people within a generic program. These policies, programs and services include:

- housing strategies to set policy and longer term directions
- improving the evidence base
- reforming planning requirements to facilitate the supply of age-friendly housing, e.g. ensuring new land releases include seniors social housing; land banks for aged care; facilitating increased housing density to enable ageing in place
- promoting affordable, accessible housing designs and accessible neighbourhoods through, for example, guidelines, awards, and legislated standards
- assistance with home modifications and maintenance
- information, services and support to help older people make housing choices and access services
- housing and support services to link homeless and other vulnerable older people with care and secure housing options
- improving regulation, affordability and security of tenure in residential and caravan parks, parks for moveable dwellings and rooming houses
- concessions and rebates that offset building, purchase or ongoing housing costs.

A Ministerial Council on Ageing was established in 2008 to facilitate a consistent and coordinated approach to ageing and aged care policy across all levels of government, including housing arrangements for older people.

The ministerial council currently schedules meetings twice a year. It provides a forum:

- where the Commonwealth and the states and territories can cooperate to ensure that policies and programs are focused on the inclusion of older people
- for the three levels of government involved in ageing and aged care to effectively collaborate on service planning, development and delivery, and facilitate a consistent and coordinated approach to aged-care policy development and implementation
- for an efficient, cohesive and streamlined approach to ageing and aged-care services and funding commitments.

Conclusion

Older households have historically enjoyed a high level of home ownership that has contributed significantly to their welfare at a time of typically low income. A significant minority is dependent on rental housing with high recurrent costs and is consequently financially stretched.

- As at September 2009, over 188,000 pensioners were receiving Commonwealth Rent Assistance. Even after taking Rent Assistance into account, around 35 per cent of these recipients were paying more than 30 per cent of their income in rent.

As the population ages and longevity increases, there will be a considerable increase in the number and proportion of older people seeking housing assistance, support to remain in their home, and transition to other housing options better suited to their emerging circumstances. The Council's projections of underlying demand for housing—while making no provision for changes in income, wealth, trends in affordability and access to home ownership in earlier age cohorts, urban development patterns, and housing preferences—serve to illustrate the challenge that population ageing presents to the housing industry and government policy at all levels.

Maintaining independent living for as long as possible is an important priority for most older people.[86] Meeting the housing needs of older Australians is as much about health, mobility and maintaining connections with friends, family and support as it is about housing, income and housing costs.

The solutions, therefore, need to be found in a 'joined up' approach that views older households' housing needs as one element in a more holistic view of maximising their independence as and when their circumstances change and their need for support increases. This extends the challenge to society as a whole, including funders and providers of support services, health care agencies and families, to work in partnership with providers of housing and housing assistance to deliver high-quality and affordable outcomes.

The Council is aware that government programs, and a variety of support services in the public and private sectors, are highly focused on providing services and support in accordance with individual households' needs. Policies, programs and actions in the housing sector (public and private) can enhance the effectiveness of these interventions by extending the effective utility of the family home for ageing persons, including those whose means are limited, and providing options for transition to alternative housing options when circumstances or preferences change.

86 Bruce Judd, Diana Olsberg, Joanne Quinn, Lucy Groenhart and Oya Demirbilek, *Dwelling, land and neighbourhood use by older home owners*, Australian Housing and Urban Research Institute Final Report No. 144, AHURI, Canberra, 2010.

Conclusions and future directions

Chapter Nine

Chapter 9: Conclusions and future directions

Key findings are summarised in the Executive summary and at the commencement of each chapter and are reinforced in the Council's key indicators (Key indicators 1 and 2 on aggregate demand and supply; Key indicators 3 and 4 on affordability for home buyers and private renters; Key indicators 5 and 6 on affordable and available supply for private renters; and Key indicator 7 on the efficiency of the housing market). They are not repeated here. Rather, this short concluding section of the report focuses on the implications of the Council's work to date and on what more the Council needs to do to deliver valuable responses to its Terms of Reference.

The Council's updated projections of demand, supply and the balance between them indicate that the issues that were highlighted in the 2008 report remain significant, especially given the increases in demand from higher migration and the impact of the global financial crisis on residential development.

Although the global financial crisis led to some short-term improvements in affordability for some home owners, the overall pressures on rents and house prices are unlikely to be alleviated until supply either equals or exceeds demand.

On present indications, the current gap would take several years to close even if rates of production were at historic highs and if underlying demand were to slow significantly. The projected 'shortfall' in housing supply of 202,400 at the end of 2009–10 would take until 2018 to be absorbed even if underlying demand dropped to the low growth projection from 2010–11 onwards and supply increased to the high growth projection. This is unlikely to occur at the same time across Australia, and represents a substantial challenge to the development and building sectors, to all levels of government and to Australians' housing and neighbourhood aspirations. The Intergenerational Report 2010 has assumed that net overseas migration would be above 180,000 a year (which is the basis for the Council's medium growth projection) until 2012. If the assumptions of the Intergenerational Report 2010 are realised, and current supply trends continue, the present gap will increase rather than decrease in the short to medium term.

The Council's 2010 report has highlighted a number of challenges to reducing the gap between demand and supply, including:

- continued demand from households, including possible demand for different types of dwellings to meet the needs of smaller, ageing households
- the difficulty of adding new supply through infill developments, as intended by all state governments, because of a range of barriers
- the time it takes to add new supply through greenfield development as well as the importance of timely infrastructure provision (and the associated challenges of financing it)
- reform of the planning and development assessment systems
- the productivity of the residential construction industry, including the looming skills shortage.

In 2010 and 2011, therefore, the Council will work on:

- the challenges in meeting additional demand through infill and greenfield housing, including the relative merits of these different forms of development in terms of affordability and sustainability
- a more detailed analysis of the cost of producing housing, including land development and infrastructure

- exploring the supply-side of the housing market further, including the characteristics of the social housing sector, non-private dwellings, the private rental sector and companies involved in land development and housing construction
- developing a greater understanding of some key drivers of underlying demand, including the settlement patterns of migrants, changes in household size and changing housing preferences
- a more fine-grained assessment of the relationship between demand and supply in certain submarkets, including to assess the extent to which increasing prices are excluding moderate income households from owner occupancy.

The Council will maintain its focus on the balance between housing supply and demand, and its implications for housing affordability. It will continue to seek better data and methods to inform governments, the development and building industries and the population at large of impending opportunities and challenges in the housing sector.

Appendices

Appendix 1: Council's terms of reference

Rationale

The Commonwealth Government is concerned to improve housing affordability for home buyers and renters. The Government recognises that better information on supply and demand at local, regional, State and national levels could play a valuable role in improving affordability by guiding policy, practice and market behaviour. The Government has established the National Housing Supply Council (the Council) to aggregate and assess data on housing supply and demand and to report to the Minister for Housing on its findings.

The Council of Australian Governments (COAG) supports the establishment of the Council and has agreed to the establishment of a Working Group of State, Territory and Commonwealth officials to ensure data needed by the Council is supplied to it.

Through its various agencies, the Commonwealth has considerable information on the demand side – notably demographic, immigration and household income and expenditure data – as well as some supply side information – such as Australian Bureau of Statistics (ABS) data on housing approvals and commencements and Australian Institute of Health and Welfare (AIHW) data on social housing and responses to homelessness. States and Territories know about the state of land supply, zoning and planning frameworks, and about residential infrastructure requirements and financing.

The Council will access and assess these and other data to analyse the balance between demand and supply and help governments at all levels to address housing affordability in an effective and sustainable way. To the extent feasible, the Council will undertake this analysis at both aggregate and disaggregate level.

Role of the National Housing Supply Council

The Council will provide forecasts, analysis and policy advice to the Minister for Housing and publish an annual State of Supply Report on the adequacy of land supply and construction activity to meet demand and improve affordability over a 20-year forecast period. The Council will:

- adopt consistent national standards in measuring and assessing the supply of land and housing and their relationship with housing demand and affordability;
- provide a detailed assessment of trends in land availability, construction activity and housing affordability;
- identify possible ways of ameliorating obstacles and otherwise improving the supply response;
- advise on research findings and desirable additional research on housing demand, supply and affordability at regional, State and national levels.

Accordingly, the Council's State of Supply Report will provide consistent data on trends and forecasts of housing demand and supply at national, State and Territory and local scales. The Report will incorporate assessments of, among other things:

- demographic factors influencing demand such as growth and structure of households, immigration rates and patterns, and the movement of households between cities, regions, State and Territories;

- economic factors (cyclical and structural) influencing demand, supply and affordability such as the growth and distribution of household incomes, relative returns from investment in housing, the availability and cost of finance for developers and consumers, business and consumer confidence, and the cost, availability and productivity of land, labour and materials;
- development control arrangements – planning and zoning, development assessment, building approval processes, building standards and related market practices – affecting the release of land, development activity and redevelopment potential, including with respect to the variety of different types, sizes, densities and prices of housing;
- infrastructure provision and financing;
- factors influencing or inhibiting industry innovation in housing and community-building product; and
- practices and output in the public and not-for-profit housing sectors and at the low cost end of the private rental and home purchase markets.

In considering these matters, the Council will focus particularly on the factors affecting the supply and affordability of housing for families and other households in the lower half of the income distribution as well as on the adequacy of, and movement in cost of, housing supply generally.

In considering housing affordability and factors making housing more or less affordable, the Council will consider the immediate and long run price of housing relative to household incomes. Accordingly, it will attempt to address house and land prices, residential rents, interest rates and other recurrent costs (including of utilities, transport costs and other matters affecting the 'sustainability' of housing in various locations).

The Minister for Housing may request specific advice from the Council.

Modus Operandi

The Council will be supported by a dedicated budget determined by the Minister and a Secretariat in the Commonwealth Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) as well as by the Housing Data Working Group and the presence at all Council meetings of senior ex-officio representatives of the Commonwealth Treasury and FaHCSIA.

The Council aims to develop and maintain strong relationships with representatives of the building and development industries, planning and development control agencies, key policy agencies, and other key interest groups. It also aims to develop strong working relationships with data and research bodies, including Australian Bureau of Statistics (ABS), Australian Institute of Health and Welfare (AIHW) and the Australian Housing and Urban Research Institute (AHURI).

In the lead-up to its first report, the Council will meet as often as required to establish standards and procedures, initiate data gathering, analysis, modelling and research, establish a strong working relationship with its Secretariat and progress the inaugural report due by the end of 2008.

In the longer run, the Council aims to meet four times per year at times designed to set the agenda and work programme for the annual State of Supply Report, monitor and guide progress, assist with analysis and the development of findings, consider policy and practice implications and authorise the final report.

As far as is practically possible, the Council will meet in a variety of locations to facilitate the development of strong relations with and the engagement of key interested parties. Council reports will be presented to the Minister and subsequently published on the internet. They will be the subject of an annual national conference – possibly as part of the National Housing Conference or an industry conference with open attendance – to stimulate discussion, innovation in policy and practice, and continuous improvement in the Council's analysis and advice.

Minutes of meetings will be maintained recording a summary of key discussion points, agreed decisions and actions. Progress reports including the Minutes will be provided to the Minister for Housing after each meeting.

The inaugural State of Supply Report is likely to be 'high level' and less detailed than subsequent reports due to the likely early unavailability of detailed information in all areas of interest and the relatively short time available for the report's production. It will nonetheless provide:

- an assessment of the current balance between housing demand and supply;
- likely trends in demand, supply, affordability and their underlying drivers; and
- an early assessment of major inhibitors and contributors to better balance housing supply and affordability.

Subsequent reports will benefit from richer and more rigorous data, the development of data analysis and modelling for the Council, and additional time for consideration and consultation with other experts.

Members of the National Housing Supply Council

The Council comprises the Chair plus eight members. Appointments to the Council are made by the Minister for Housing in consultation with the Treasurer. The Chair is appointed for up to 3 years and Members for 2 years. The Minister, in consultation with the Chair, will elect a deputy Chair. The Chair and members will be appointed as individuals and not as a representative of organisations or businesses.

The Chair is responsible for convening and chairing the Council meetings and presenting the annual State of Supply Report to the Minister for Housing.

Members will be appointed for their individual capacity and expertise in an area relevant to the housing industry as set out below. Members are responsible for attending meetings and contributing to the work of the Council by offering insight and guidance based on their expertise.

Sector representation sought in the membership of the council encompasses the housing, property and building and construction industry, planning and development, social welfare and community housing, banking and finance, and housing research.

Current members of the Council are:

Dr Owen Donald, Chairman	Former Director of Housing, Victoria; former CEO, Australian Housing & Urban Research Institute
Brendan Crotty	Former Managing Director, Australand Property Group
Saul Eslake	Principal, Grattan Institute
Sue Holliday	Former Director-General of Planning, NSW, former (until April 2008) National President, Planning Institute of Australia
Warwick Temby	Executive Director, Housing Industry Association, Queensland
Dr Marcus Spiller	Director, SGS Economics and Planning
Marion Thompson	Urban Development Coordinator, WA Department of Planning and Infrastructure
Stuart Wilson	Managing Director, Wilson Homes, National Industry Skills Committee, Proprietor, Wilson Building Consultants
Dr Judy Yates	Housing Economist, University of Sydney

In addition, the following senior Commonwealth officers attend Council meetings:

Andrew Tongue	Deputy Secretary, FaHCSIA, ex-officio participant observer
Peta Winzar	Group Manager, FaHCSIA, ex-officio participant observer
Mike Waslin	Principal Advisor, Treasury, ex-officio participant observer

Support to the Council in developing this report was provided by Clare Wall, Michelle Weston, David Wilson, Arati Waldegrave, Anna Henderson, James Storer and Bronwyn James.

Appendix 2: Summary data

Table A2.1: Underlying demand projections based on low, medium and high household growth: annual increase in underlying demand and total underlying demand projections, 2010 to 2029

	Annual increase in underlying demand (households)			Total underlying demand		
	Projection series:			Projection series:		
Year	Low household growth	Medium household growth	High household growth	Low household growth	Medium household growth	High household growth
2010	132,900	156,500	176,200	8,639,800	8,686,700	8,725,700
2011	135,100	159,000	178,900	8,774,900	8,845,700	8,904,600
2012	136,100	160,300	180,400	8,910,900	9,005,900	9,085,100
2013	136,600	161,200	181,600	9,047,600	9,167,100	9,266,700
2014	136,500	161,300	182,000	9,184,100	9,328,400	9,448,600
2015	136,700	161,700	182,600	9,320,700	9,490,100	9,631,200
2016	136,700	162,100	183,200	9,457,500	9,652,200	9,814,400
2017	137,200	162,900	184,200	9,594,700	9,815,100	9,998,700
2018	137,000	162,900	184,400	9,731,700	9,977,900	10,183,100
2019	136,800	163,000	184,800	9,868,500	10,140,900	10,367,900
2020	135,800	162,200	184,200	10,004,300	10,303,100	10,552,100
2021	135,500	162,100	184,300	10,139,000	10,465,300	10,736,500
2022	135,200	162,100	184,500	10,275,000	10,627,400	10,921,000
2023	135,600	162,700	185,300	10,410,500	10,790,100	11,106,300
2024	135,900	163,300	186,100	10,546,400	10,953,400	11,292,400
2025	136,600	164,300	187,400	10,683,000	11,117,700	11,479,800
2026	135,400	163,300	186,600	10,818,400	11,281,000	11,666,400
2027	133,700	161,800	185,300	10,952,100	11,442,900	11,851,700
2028	131,100	159,400	183,000	11,083,200	11,602,300	12,034,700
2029	129,200	157,700	181,400	11,212,400	11,760,000	12,216,200

Note: Shaded area depicts the main projection series used in the report. Figures are projected from Estimated Resident Population as at 30 June 2008.

Table A2.2: Projections of underlying demand based on low household growth, by State and Territory, 2009 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
					(households)				
2009	2,735,700	2,100,300	1,701,000	669,000	876,500	208,100	79,200	137,200	8,506,900
2010	2,768,300	2,131,600	1,738,100	675,900	895,100	210,600	81,000	139,200	8,639,800
2011	2,802,100	2,163,000	1,776,500	683,100	913,600	212,900	82,500	141,300	8,774,900
2012	2,836,200	2,194,500	1,815,200	690,100	932,100	215,200	84,200	143,400	8,910,900
2013	2,870,600	2,226,200	1,854,200	697,100	950,600	217,600	85,700	145,500	9,047,600
2014	2,904,600	2,257,900	1,893,700	704,200	969,000	219,800	87,400	147,600	9,184,100
2015	2,938,600	2,289,400	1,933,400	711,200	987,500	222,100	88,900	149,600	9,320,700
2016	2,972,500	2,321,100	1,973,200	718,300	1,005,900	224,400	90,400	151,700	9,457,500
2017	3,006,600	2,352,700	2,013,300	725,400	1,024,400	226,600	92,000	153,700	9,594,700
2018	3,040,800	2,384,100	2,053,600	732,400	1,042,700	228,800	93,600	155,800	9,731,700
2019	3,074,700	2,415,600	2,094,100	739,300	1,061,000	230,900	95,100	157,700	9,868,500
2020	3,108,300	2,446,800	2,134,400	746,200	1,079,400	232,900	96,600	159,700	10,004,300
2021	3,141,900	2,478,000	2,174,700	753,100	1,097,500	235,000	98,100	161,600	10,139,800
2022	3,175,400	2,509,000	2,215,200	759,900	1,115,600	236,900	99,500	163,500	10,275,000
2023	3,208,900	2,540,000	2,256,100	766,600	1,133,800	238,800	101,000	165,300	10,410,500
2024	3,241,800	2,571,100	2,297,400	773,400	1,152,200	240,800	102,600	167,100	10,546,400
2025	3,274,600	2,602,600	2,339,000	780,200	1,170,600	242,800	104,300	169,000	10,683,000
2026	3,306,800	2,633,900	2,380,600	786,800	1,189,000	244,700	105,900	170,700	10,818,400
2027	3,338,300	2,665,100	2,421,700	793,300	1,207,300	246,500	107,400	172,600	10,952,100
2028	3,369,100	2,695,700	2,462,300	799,500	1,225,200	248,100	108,900	174,300	11,083,200
2029	3,399,300	2,726,000	2,502,500	805,500	1,242,900	249,700	110,400	176,100	11,212,400

Note: Figures are projected from Estimated Resident Population as at 30 June 2008.

Source: National Housing Supply Council estimates based on McDonald–Temple low household growth scenario.

Table A2.3: Projections of underlying demand based on medium household growth, by State and Territory, 2009 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
					(households)				
2009	2,742,800	2,106,500	1,705,400	670,800	879,800	208,300	79,300	137,300	8,530,200
2010	2,782,600	2,144,000	1,747,000	679,500	902,000	210,900	81,300	139,400	8,686,700
2011	2,823,700	2,181,700	1,789,800	688,400	923,900	213,400	83,000	141,700	8,845,700
2012	2,865,400	2,219,700	1,833,100	697,100	946,000	216,000	84,700	143,900	9,005,900
2013	2,907,300	2,257,800	1,876,800	705,800	968,100	218,600	86,400	146,200	9,167,100
2014	2,949,000	2,296,000	1,921,000	714,600	990,100	221,000	88,200	148,400	9,328,400
2015	2,990,800	2,334,200	1,965,400	723,300	1,012,300	223,500	89,900	150,600	9,490,100
2016	3,032,600	2,372,500	2,010,000	732,200	1,034,400	226,000	91,500	152,800	9,652,200
2017	3,074,600	2,410,900	2,055,100	741,100	1,056,700	228,500	93,300	155,000	9,815,100
2018	3,116,800	2,449,200	2,100,300	749,900	1,078,700	230,900	95,000	157,200	9,977,900
2019	3,158,900	2,487,600	2,145,800	758,600	1,100,900	233,200	96,700	159,400	10,140,900
2020	3,200,700	2,525,700	2,191,000	767,300	1,123,100	235,500	98,300	161,500	10,303,100
2021	3,242,600	2,563,900	2,236,400	776,000	1,145,100	237,800	99,900	163,600	10,465,300
2022	3,284,500	2,602,000	2,282,000	784,700	1,167,100	240,000	101,500	165,600	10,627,400
2023	3,326,400	2,640,100	2,328,100	793,300	1,189,300	242,100	103,200	167,600	10,790,100
2024	3,367,900	2,678,500	2,374,600	801,900	1,211,600	244,300	104,900	169,600	10,953,400
2025	3,409,300	2,717,200	2,421,500	810,600	1,234,000	246,600	106,800	171,600	11,117,700
2026	3,450,200	2,755,900	2,468,400	819,100	1,256,500	248,700	108,600	173,600	11,281,000
2027	3,490,600	2,794,400	2,514,900	827,500	1,278,900	250,700	110,300	175,600	11,442,900
2028	3,530,200	2,832,600	2,561,000	835,600	1,300,900	252,600	112,000	177,500	11,602,300
2029	3,569,300	2,870,300	2,606,600	843,500	1,322,700	254,400	113,600	179,400	11,760,000

Note: Figures are projected from Estimated Resident Population as at 30 June 2008.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario.

Table A2.4: Projections of underlying demand based on high household growth, by State and Territory, 2009 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
					(households)				
2009	2,748,700	2,111,600	1,709,000	672,300	882,700	208,400	79,400	137,400	8,549,600
2010	2,794,600	2,154,300	1,754,300	682,500	907,700	211,300	81,500	139,600	8,725,700
2011	2,841,800	2,197,300	1,800,900	692,800	932,500	213,900	83,300	142,000	8,904,600
2012	2,889,700	2,240,600	1,848,100	702,900	957,500	216,700	85,200	144,400	9,085,100
2013	2,937,900	2,284,200	1,895,600	713,100	982,700	219,400	87,000	146,800	9,266,700
2014	2,986,000	2,327,800	1,943,700	723,300	1,007,700	222,100	88,900	149,100	9,448,600
2015	3,034,300	2,371,500	1,992,100	733,500	1,032,900	224,700	90,700	151,400	9,631,200
2016	3,082,600	2,415,400	2,040,700	743,800	1,058,200	227,400	92,500	153,800	9,814,400
2017	3,131,300	2,459,400	2,089,800	754,200	1,083,500	230,100	94,300	156,100	9,998,700
2018	3,180,100	2,503,400	2,139,100	764,500	1,108,700	232,700	96,100	158,500	10,183,100
2019	3,229,000	2,547,500	2,188,800	774,700	1,134,100	235,200	98,000	160,700	10,367,900
2020	3,277,700	2,591,500	2,238,200	784,900	1,159,500	237,700	99,700	163,000	10,552,100
2021	3,326,500	2,635,500	2,287,800	795,100	1,184,700	240,100	101,500	165,200	10,736,500
2022	3,375,400	2,679,500	2,337,700	805,300	1,210,000	242,500	103,200	167,400	10,921,000
2023	3,424,400	2,723,500	2,388,100	815,500	1,235,400	244,900	105,000	169,500	11,106,300
2024	3,472,900	2,767,900	2,439,000	825,700	1,261,100	247,300	106,900	171,700	11,292,400
2025	3,521,600	2,812,700	2,490,300	835,900	1,286,900	249,700	108,900	173,800	11,479,800
2026	3,569,700	2,857,500	2,541,700	846,000	1,312,800	252,100	110,800	175,900	11,666,400
2027	3,617,400	2,902,200	2,592,600	855,900	1,338,500	254,300	112,700	178,100	11,851,700
2028	3,664,400	2,946,500	2,643,200	865,700	1,363,900	256,400	114,500	180,200	12,034,700
2029	3,710,900	2,990,600	2,693,400	875,100	1,389,200	258,400	116,300	182,200	12,216,200

Note: Figures are projected from Estimated Resident Population as at 30 June 2008.

Source: National Housing Supply Council estimates based on McDonald–Temple high household growth scenario.

Table A2.5: Additional households by region for dwelling structure 2009 to 2029 (medium growth scenario) ('000)

	Dwelling structure				
Region	Separate house	Semi-detached	Flat	Other	Total
NSW	726.0	36.8	46.4	17.3	826.5
Vic.	580.5	70.8	103.9	8.6	763.9
Qld.	722.5	63.9	93.3	21.6	901.2
SA	138.1	18.1	14.7	1.8	172.7
WA	351.5	47.2	36.1	8.1	442.9
Tas.	39.3	2.2	4.0	0.7	46.2
NT	23.9	3.5	4.9	2.0	34.3
ACT	33.4	4.9	3.7	0.2	42.2
Total	***2,615.3***	***247.3***	***307.0***	***60.2***	***3,229.8***

Note: Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario.

Table A2.6: Additional households by region for tenure type 2009 to 2029 (medium growth scenario) ('000)

	Tenure type				
Region	Owned and/or Purchasing	Public rental	Other rental	Other	Total
NSW	632.6	39.2	135.8	18.9	826.5
Vic.	576.2	28.5	148.1	11.0	763.9
Qld.	643.5	34.5	207.2	16.0	901.2
SA	131.9	15.2	22.5	3.1	172.7
WA	329.2	22.1	83.8	7.8	442.9
Tas.	37.8	2.9	4.8	0.6	46.2
NT	18.2	4.5	10.4	1.2	34.3
ACT	32.4	3.8	5.5	0.4	42.2
Total	***2,401.7***	***150.9***	***618.3***	***59.0***	***3,229.8***

Note: Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario.

Table A2.7: Additional households by region by household type 2009 to 2029 (medium growth scenario) ('000)

Region	Household type					
	Two-parent families	Single-parent families	Couples without children	Lone person households	Group households	Total
NSW	140.7	43.2	217.7	400.4	24.5	826.5
Vic.	105.4	72.2	166.2	391.0	29.1	763.9
Qld.	191.6	72.6	271.9	337.9	27.3	901.2
SA	15.7	8.6	43.0	102.2	3.2	172.7
WA	75.7	34.2	122.2	200.0	10.8	442.9
Tas.	-1.8	1.2	12.9	33.2	0.6	46.2
NT	5.1	4.0	7.8	16.1	1.3	34.3
ACT	6.6	3.0	10.3	21.1	1.1	42.2
Total	***539.0***	***238.9***	***852.0***	***1,501.9***	***98.0***	***3,229.8***

Note: Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario.

Table A2.8: Private households and people in non-private dwellings by region, 2009 to 2029 (medium growth scenario) ('000)

Region	People in non-private dwellings	Total private households
	('000 persons)	('000 households)
NSW	63.5	826.5
Vic.	52.5	763.9
Qld.	54.3	901.2
SA	17.0	172.7
WA	31.6	442.9
Tas.	4.0	46.2
NT	2.5	34.3
ACT	2.7	42.2
Total	***228.1***	***3,229.8***

Note: Figures are rounded to the nearest '00. Numbers may not sum to totals due to this rounding.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario.

Table A3.1: Projections of dwelling completions and net completions (adjusted for demolitions), 2010 to 2029

	Projected dwelling completions			Projected net dwelling completions (adjusted for demolitions)		
Year	Historical low rate projection (a)	Medium trend projection (b)	Historical high rate projection (c)	Historical low rate projection adjusted for demolition rate	Medium trend projection adjusted for demolition rate	Historical high rate projection adjusted for demolition rate
2010	125,800	152,700	184,500	115,900	140,700	170,100
2011	126,300	153,400	185,400	116,500	141,400	170,900
2012	126,900	154,100	186,200	117,000	142,100	171,700
2013	127,500	154,800	187,100	117,500	142,700	172,500
2014	128,100	155,500	187,900	118,100	143,400	173,300
2015	128,700	156,200	188,800	118,600	144,000	174,100
2016	129,200	156,900	189,600	119,200	144,700	174,900
2017	129,800	157,600	190,500	119,700	145,400	175,700
2018	130,400	158,300	191,300	120,200	146,000	176,500
2019	131,000	159,000	192,200	120,800	146,700	177,300
2020	131,600	159,700	193,000	121,300	147,300	178,100
2021	132,200	160,400	193,900	121,900	148,000	178,900
2022	132,700	161,100	194,700	122,400	148,700	179,700
2023	133,300	161,900	195,600	123,000	149,300	180,400
2024	133,900	162,600	196,400	123,500	150,000	181,200
2025	134,500	163,300	197,300	124,000	150,600	182,000
2026	135,100	164,000	198,200	124,600	151,300	180,800
2027	135,600	164,700	199,000	125,100	152,000	183,600
2028	136,200	165,400	199,900	125,700	152,600	184,400
2029	136,800	166,100	200,700	126,200	153,300	185,200

Note: Shaded area depicts the main projection series used in Chapter 3.

(a) A level of dwelling completions at a rate similar to the minimum historic annual level of completions over the period 1 July 1980 to 30 June 2009.

(b) Average long-term growth in dwelling completions based on the trend in completions over the period 1 July 1980 to 30 June 2009.

(c) A level of dwelling completions at a rate similar to the maximum historic annual level of completions in over the period 1 July 1980 to 30 June 2009.

Source: Projections are based on Australian Bureau of Statistics, *Building Activity, Australia June 2009*, cat. no. 8752.0, ABS, Canberra, 2009 and on National Housing Supply Council estimates for completions net of demolitions. Projection methodology is discussed in Appendix 3.

Table A3.2: Low trend projection of dwelling completions, by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	25,600	26,200	24,900	5,200	15,800	1,000	500	1,300	125,800
2011	25,500	26,500	25,100	5,200	16,000	1,000	500	1,300	126,300
2012	25,400	26,800	25,200	5,200	16,200	1,000	400	1,300	126,900
2013	25,300	27,100	25,400	5,200	16,300	1,000	400	1,300	127,500
2014	25,200	27,400	25,600	5,200	16,500	900	400	1,300	128,100
2015	25,100	27,800	25,700	5,200	16,700	900	400	1,300	128,700
2016	25,000	28,100	25,900	5,200	16,800	900	400	1,300	129,200
2017	24,900	28,400	26,000	5,200	17,000	900	400	1,300	129,800
2018	24,800	28,700	26,200	5,200	17,200	900	400	1,300	130,400
2019	24,700	29,000	26,400	5,200	17,300	800	300	1,300	131,000
2020	24,600	29,300	26,500	5,200	17,500	800	300	1,300	131,600
2021	24,500	29,600	26,700	5,200	17,700	800	300	1,200	132,200
2022	24,400	29,900	26,900	5,200	17,800	800	300	1,200	132,700
2023	24,300	30,200	27,000	5,200	18,000	700	300	1,200	133,300
2024	24,200	30,500	27,200	5,200	18,200	700	300	1,200	133,900
2025	24,100	30,800	27,300	5,200	18,400	700	300	1,200	134,500
2026	24,000	31,100	27,500	5,200	18,500	700	200	1,200	135,100
2027	23,900	31,400	27,700	5,200	18,700	600	200	1,200	135,600
2028	23,800	31,700	27,800	5,200	18,900	600	200	1,200	136,200
2029	23,700	32,100	28,000	5,200	19,000	600	200	1,200	136,800

Notes: The low trend projection for each state and territory is based on the lowest dwelling completion rate for four consecutive quarters during the period 1 July 1980 to 30 June 2009. The Australian level projection is based on the same approach but uses national data and as a result the sum of all states and territories for a year will not necessarily add to the Australian total. In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.3: Medium trend projection of dwelling completions, by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	37,400	40,400	38,500	9,400	21,700	2,100	1,000	2,300	152,700
2011	37,200	40,800	38,700	9,400	21,900	2,000	1,000	2,300	153,400
2012	37,100	41,300	39,000	9,400	22,200	2,000	1,000	2,300	154,100
2013	36,900	41,800	39,200	9,400	22,400	1,900	900	2,300	154,800
2014	36,800	42,200	39,500	9,400	22,600	1,900	900	2,300	155,500
2015	36,600	42,700	39,700	9,400	22,900	1,800	900	2,200	156,200
2016	36,500	43,200	40,000	9,300	23,100	1,800	800	2,200	156,900
2017	36,300	43,700	40,200	9,300	23,300	1,700	800	2,200	157,600
2018	36,200	44,100	40,500	9,300	23,600	1,700	800	2,200	158,300
2019	36,000	44,600	40,700	9,300	23,800	1,600	700	2,200	159,000
2020	35,900	45,100	41,000	9,300	24,000	1,600	700	2,200	159,700
2021	35,700	45,500	41,200	9,300	24,300	1,500	700	2,200	160,400
2022	35,600	46,000	41,500	9,300	24,500	1,500	700	2,200	161,100
2023	35,400	46,500	41,700	9,300	24,700	1,500	600	2,200	161,900
2024	35,300	47,000	41,900	9,300	24,900	1,400	600	2,100	162,600
2025	35,100	47,400	42,200	9,300	25,200	1,400	600	2,100	163,300
2026	35,000	47,900	42,400	9,300	25,400	1,300	500	2,100	164,000
2027	34,800	48,400	42,700	9,300	25,600	1,300	500	2,100	164,700
2028	34,700	48,800	42,900	9,300	25,900	1,200	500	2,100	165,400
2029	34,500	49,300	43,200	9,300	26,100	1,200	400	2,100	166,100

Note: In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.4: High trend projection of dwelling completions, by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	49,900	53,300	55,900	13,100	31,900	3,000	1,700	3,900	184,500
2011	49,700	53,900	56,200	13,100	32,200	2,900	1,600	3,900	185,400
2012	49,500	54,600	56,600	13,100	32,600	2,800	1,600	3,900	186,200
2013	49,300	55,200	56,900	13,100	32,900	2,800	1,500	3,800	187,100
2014	49,100	55,800	57,300	13,100	33,300	2,700	1,500	3,800	187,900
2015	48,900	56,400	57,700	13,100	33,600	2,600	1,400	3,800	188,800
2016	48,700	57,100	58,000	13,100	33,900	2,600	1,400	3,800	189,600
2017	48,500	57,700	58,400	13,100	34,300	2,500	1,300	3,800	190,500
2018	48,300	58,300	58,800	13,100	34,600	2,400	1,300	3,700	191,300
2019	48,100	58,900	59,100	13,100	35,000	2,400	1,200	3,700	192,200
2020	47,900	59,600	59,500	13,100	35,300	2,300	1,200	3,700	193,000
2021	47,700	60,200	59,800	13,100	35,700	2,200	1,100	3,700	193,900
2022	47,500	60,800	60,200	13,100	36,000	2,200	1,100	3,700	194,700
2023	47,300	61,400	60,600	13,100	36,300	2,100	1,000	3,600	195,600
2024	47,100	62,100	60,900	13,100	36,700	2,000	1,000	3,600	196,400
2025	46,900	62,700	61,300	13,100	37,000	2,000	900	3,600	197,300
2026	46,700	63,300	61,700	13,000	37,400	1,900	900	3,600	198,200
2027	46,500	63,900	62,000	13,000	37,700	1,800	800	3,600	199,000
2028	46,300	64,600	62,400	13,000	38,000	1,700	800	3,500	199,900
2029	46,100	65,200	62,700	13,000	38,400	1,700	700	3,500	200,700

Notes: The high trend projection for each state and territory is based on the highest dwelling completion rate for four consecutive quarters during the period 1 July 1980 to 30 June 2009. The Australian level projection is based on the same approach but uses national data and as a result the sum of all states and territories for a year will not necessarily add to the Australian total. In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.5: Low trend projection of dwelling completions, adjusted for demolitions (net completions), by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	23,500	24,400	24,500	4,200	13,500	1,000	400	1,300	115,900
2011	23,400	24,700	24,700	4,200	13,700	1,000	400	1,300	116,500
2012	23,300	24,900	24,900	4,200	13,800	900	400	1,300	117,000
2013	23,200	25,200	25,000	4,200	14,000	900	300	1,300	117,500
2014	23,100	25,500	25,200	4,200	14,100	900	300	1,300	118,100
2015	23,000	25,800	25,300	4,200	14,300	900	300	1,200	118,600
2016	22,900	26,100	25,500	4,200	14,400	800	300	1,200	119,200
2017	22,800	26,400	25,600	4,200	14,600	800	300	1,200	119,700
2018	22,700	26,700	25,800	4,200	14,700	800	300	1,200	120,200
2019	22,700	26,900	26,000	4,200	14,800	800	300	1,200	120,800
2020	22,600	27,200	26,100	4,200	15,000	800	300	1,200	121,300
2021	22,500	27,500	26,300	4,200	15,100	700	300	1,200	121,900
2022	22,400	27,800	26,400	4,200	15,300	700	200	1,200	122,400
2023	22,300	28,100	26,600	4,200	15,400	700	200	1,200	123,000
2024	22,200	28,400	26,800	4,200	15,600	700	200	1,200	123,500
2025	22,100	28,700	26,900	4,200	15,700	600	200	1,200	124,000
2026	22,000	28,900	27,100	4,200	15,900	600	200	1,200	124,600
2027	21,900	29,200	27,200	4,200	16,000	600	200	1,200	125,100
2028	21,800	29,500	27,400	4,200	16,100	600	200	1,200	125,700
2029	21,700	29,800	27,600	4,200	16,300	600	200	1,200	126,200

Notes: The low trend projection for each state and territory is based on the lowest dwelling completion rate for four consecutive quarters during the period 1 July 1980 to 30 June 2009 shown in Table 4.2 which is adjusted for loss through demolition. In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009 adjusted for National Housing Supply Council estimates of demolitions (net completions). Projection methodology is discussed in Appendix 3.

Table A3.6: Medium trend projection of dwelling completions, adjusted for demolitions (net completions), by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	34,300	37,500	37,900	7,500	18,600	1,900	800	2,200	140,700
2011	34,100	38,000	38,100	7,500	18,800	1,900	800	2,200	141,400
2012	34,000	38,400	38,400	7,500	19,000	1,800	800	2,200	142,100
2013	33,900	38,800	38,600	7,500	19,200	1,800	700	2,200	142,700
2014	33,700	39,300	38,900	7,500	19,400	1,800	700	2,200	143,400
2015	33,600	39,700	39,100	7,500	19,600	1,700	700	2,200	144,000
2016	33,400	40,200	39,400	7,500	19,800	1,700	700	2,200	144,700
2017	33,300	40,600	39,600	7,500	20,000	1,600	600	2,200	145,400
2018	33,200	41,000	39,800	7,500	20,200	1,600	600	2,100	146,000
2019	33,000	41,500	40,100	7,500	20,400	1,500	600	2,100	146,700
2020	32,900	41,900	40,300	7,500	20,600	1,500	600	2,100	147,300
2021	32,800	42,300	40,600	7,500	20,800	1,400	500	2,100	148,000
2022	32,600	42,800	40,800	7,500	21,000	1,400	500	2,100	148,700
2023	32,500	43,200	41,100	7,500	21,200	1,400	500	2,100	149,300
2024	32,300	43,700	41,300	7,500	21,400	1,300	500	2,100	150,000
2025	32,200	44,100	41,600	7,500	21,600	1,300	400	2,100	150,600
2026	32,100	44,500	41,800	7,500	21,700	1,200	400	2,000	151,300
2027	31,900	45,000	42,000	7,400	21,900	1,200	400	2,000	152,000
2028	31,800	45,400	42,300	7,400	22,100	1,100	400	2,000	152,600
2029	31,700	45,800	42,500	7,400	22,300	1,100	400	2,000	153,300

Note: In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009 adjusted for National Housing Supply Council estimates of demolitions (net completions). Projection methodology is discussed in Appendix 3.

Table A3.7: High trend projection of dwelling completions, adjusted for demolitions (net completions), by State and Territory, 2010 to 2029

Year	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
2010	45,800	49,600	55,000	10,500	27,300	2,800	1,300	3,800	170,100
2011	45,600	50,100	55,400	10,500	27,600	2,700	1,300	3,800	170,900
2012	45,400	50,700	55,700	10,500	27,900	2,600	1,200	3,700	171,700
2013	45,200	51,300	56,100	10,500	28,200	2,600	1,200	3,700	172,500
2014	45,100	51,900	56,400	10,500	28,500	2,500	1,200	3,700	173,300
2015	44,900	52,500	56,800	10,500	28,800	2,500	1,100	3,700	174,100
2016	44,700	53,000	57,200	10,500	29,100	2,400	1,100	3,700	174,900
2017	44,500	53,600	57,500	10,500	29,300	2,300	1,100	3,600	175,700
2018	44,300	54,200	57,900	10,500	29,600	2,300	1,000	3,600	176,500
2019	44,200	54,800	58,200	10,500	29,900	2,200	1,000	3,600	177,300
2020	44,000	55,400	58,600	10,500	30,200	2,100	900	3,600	178,100
2021	43,800	56,000	58,900	10,500	30,500	2,100	900	3,600	178,900
2022	43,600	56,500	59,300	10,500	30,800	2,000	900	3,500	179,700
2023	43,400	57,100	59,700	10,500	31,100	1,900	800	3,500	180,400
2024	43,200	57,700	60,000	10,500	31,400	1,900	800	3,500	181,200
2025	43,100	58,300	60,400	10,500	31,700	1,800	700	3,500	182,000
2026	42,900	58,900	60,700	10,500	32,000	1,800	700	3,500	182,800
2027	42,700	59,400	61,100	10,500	32,300	1,700	700	3,400	183,600
2028	42,500	60,000	61,400	10,400	32,600	1,600	600	3,400	184,400
2029	42,300	60,600	61,800	10,400	32,900	1,600	600	3,400	185,200

Notes: The high trend projection for each state and territory is based on the highest dwelling completion rate for four consecutive quarters during the period 1 July 1980 to 30 June 2009 shown in Table 4.4 which is adjusted for loss through demolition. In some States and Territories dwelling completions are projected to decline over the period 2010 to 2029. This reflects the timing of peaks and troughs over the 1980 to 2009 period chosen as the basis of the trend projection calculations. Had a different timeframe been chosen, projections may have shown a different trend.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009 adjusted for National Housing Supply Council estimates of demolitions (net completions). Projection methodology is discussed in Appendix 3.

Table A3.8: Low trend projection of gross dwelling completions, 2010 to 2029

Year	Houses	Semi-detached row or terrace houses, townhouses	Flats, units or apartments	Australia (a)
2010	86,500	15,200	24,100	125,800
2011	86,700	14,900	24,700	126,300
2012	86,900	14,700	25,400	126,900
2013	87,000	14,500	26,000	127,500
2014	87,200	14,200	26,600	128,100
2015	87,400	14,000	27,200	128,700
2016	87,600	13,800	27,900	129,200
2017	87,800	13,500	28,500	129,800
2018	88,000	13,300	29,100	130,400
2019	88,200	13,000	29,800	131,000
2020	88,400	12,800	30,400	131,600
2021	88,500	12,500	31,100	132,200
2022	88,700	12,300	31,800	132,700
2023	88,900	12,000	32,400	133,300
2024	89,100	11,700	33,100	133,900
2025	89,200	11,500	33,800	134,500
2026	89,400	11,200	34,500	135,100
2027	89,600	10,900	35,100	135,600
2028	89,700	10,700	35,800	136,200
2029	89,900	10,400	36,500	136,800

Note: The low trend projection for each state and territory is based on the lowest dwelling completion rate for four consecutive quarters during the period 1 July 1995 to 30 June 2009. The data in this table are the sum of the state and territory projections and will not necessarily add to the Australian total.
(a) Includes other dwellings not otherwise included in this Table.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.9: Medium trend projection of gross dwelling completions, 2010 to 2029

Year	Houses	Semi-detached row or terrace houses, townhouses	Flats, units or apartments	Australia (a)
2010	105,000	18,400	29,300	152,700
2011	105,200	18,100	30,000	153,400
2012	105,400	17,900	30,800	154,100
2013	105,700	17,600	31,500	154,800
2014	105,900	17,300	32,300	155,500
2015	106,100	17,000	33,100	156,200
2016	106,400	16,700	33,800	156,900
2017	106,600	16,400	34,600	157,600
2018	106,800	16,100	35,400	158,300
2019	107,000	15,800	36,200	159,000
2020	107,300	15,500	37,000	159,700
2021	107,500	15,200	37,800	160,400
2022	107,700	14,900	38,600	161,100
2023	107,900	14,600	39,400	161,900
2024	108,100	14,200	40,200	162,600
2025	108,300	13,900	41,000	163,300
2026	108,500	13,600	41,800	164,000
2027	108,800	13,300	42,700	164,700
2028	109,000	12,900	43,500	165,400
2029	109,200	12,600	44,300	166,100

Note: Includes other dwellings not otherwise included in this Table.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.10: High trend projection of gross dwelling completions, 2010 to 2029

Year	Houses	Semi-detached row or terrace houses, townhouses	Flats, units or apartments	Australia (a)
2010	126,800	22,300	35,400	184,500
2011	127,100	21,900	36,300	185,400
2012	127,400	21,600	37,200	186,200
2013	127,700	21,200	38,100	187,100
2014	128,000	20,900	39,000	187,900
2015	128,300	20,600	39,900	188,800
2016	128,500	20,200	40,900	189,600
2017	128,800	19,800	41,800	190,500
2018	129,100	19,500	42,800	191,300
2019	129,400	19,100	43,700	192,200
2020	129,600	18,700	44,700	193,000
2021	129,900	18,400	45,600	193,900
2022	130,200	18,000	46,600	194,700
2023	130,400	17,600	47,600	195,600
2024	130,700	17,200	48,600	196,400
2025	130,900	16,800	49,600	197,300
2026	131,200	16,400	50,500	198,200
2027	131,400	16,000	51,600	199,000
2028	131,700	15,600	52,600	199,900
2029	131,900	15,200	53,600	200,700

Note: The high trend projection for each state and territory is based on the highest dwelling completion rate for four consecutive quarters during the period 1July 1995 to 30 June 2009. The data in this table are the sum of the state and territory projections and will not necessarily add to the Australian total.
(a) Includes other dwellings not otherwise included in this Table.

Source: Projections are based on trend data for dwelling completions from Australian Bureau of Statistics, *Building Activity, Australia, June 2009*, cat. no. 8752.0, ABS, Canberra, 2009.

Table A3.11: Amount of greenfield land identified at Stage 1: "future urban" at 30 June 2009 in six capital city areas

	Sydney (a)	Melbourne (b)	South-east Queensland (c)	Adelaide (d)	Perth (e)	Canberra
Total hectares	36,885	6,490	10,700	2,885	8,824	n.a.
Estimated total dwelling yield	195,717	64,936	122,200	n.a.	n.a	36,000
Potential Lots	195,717	64,936	122,200	31,172	105,888	36,000
Estimate of number of years supply of land	30.2	4.5	27	n.a.	10	20
Estimated average time taken for land to complete stage 1	18 months	2 to 3 years	5 years	12 to 36 months (a)	0.5–2 years	3 years 6 months

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) New South Wales: NSW data are at 30 June 2008 as 2009 data were not available.

1. The Metropolitan Development Program (MDP) land supply process step most closely matching the National Housing Supply Council stage has been selected for reporting purposes. It is noted that there is no step corresponding to MDP step 3 'Servicing'.
2. The MDP does not report land supply by hectares as it is not considered a useful measure of housing supply by New South Wales.
3. Years supply is calculated based on average dwelling production since 1992-93 when the current pattern of greenfield development commenced with the north-west sector.
4. Growth sectors/structure plan areas identified for urban growth to 2031 in the Metropolitan Strategy and Central Coast Regional Strategy. Other sectors have been identified for growth beyond this time but are not reflected in the data.
5. In NSW, the MDP reports stock levels by dwelling potential of land rather than lots.

Source: Total MDP plus unreleased growth sectors in Metropolitan Strategy and Central Coast Regional Strategy (excluding MDP Steps 2, 3, 4 and 5). Growth sectors/structure plan areas identified for urban growth to 2031 in the Metropolitan Strategy and Central Coast Regional Strategy. Other sectors have been identified for growth beyond this time but are not reflected in the data.

(b) Victoria: Dwelling yield = lot yield for anticipated supply as Victoria assumes one for one construction. Multi-unit developments will increase the dwellings yield if they occur. Estimated years of supply figures are not officially released Victorian Government data.
The pre-planning stage looks at broad constraints, native vegetation etc and covers broad areas that may cover many individual Precinct Structure Plans.

(c) Queensland: These data are derived from the expected dwelling yields identified in the south-east Queensland (SEQ) broadhectare studies 5 (for 2008) and 6 (for 2009), where the land is located within the south-east Queensland Regional Plan 2009-2031 'local and regional development areas'. These studies were released in around 2004 and 2009, respectively. The following should be noted regarding the 2008 and 2009 figures:

- the coverage of Study 5 used for the 2008 figures is smaller and subdivisional activity for the four year period after its release has been removed from the results
- Study 6 includes significant additional areas allocated to urban development between 2004 and 2009
- the Study 5 figures used for 2008 are theoretical dwelling yields, whereas the Study 6 figures used for 2009 are expected dwelling yields which adjust theoretical yields to allow for an assumed probability of development by 2031. The assumed probability of development varies by local government area based on assumed dwelling density, approval status, parcel size and existing use.

(d) South Australia: Data refer to Deferred Urban land including land incorporated into the metro boundary in the December 2007 boundary changes.

The number of potential lots that could be gained from this land does not account for possible reduced yields due to topographic constraints and other land use requirements. The data do not include future land supply options identified in the draft 30 Plan for Greater Adelaide (released July 2009) – this will substantially increase the supply of future urban land.

(e) Western Australia: Refers to land that is zoned as "Urban Deferred" in either the Metropolitan Region Scheme or the Peel Region Scheme and is undeveloped. On average 880 hectares of undeveloped land is consumed for urban use each year. Dwelling yields from future lot production are estimated on 12 dwellings per urban-zoned hectare based on current development densities, however, planning policy is aiming to achieve closer to 15 dwellings per urban-zoned hectare.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.12: Amount of greenfield land at Stage 2 and/or 3: Zoned for residential (specific use zoning) and/or structure planning, in capital city areas at 30 June 2009 in six capital city areas

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide (d)	Perth (e)	Canberra	Total of six jurisdic-tions
Potential Lots	47,564	91,974	142,200	49,280	90,072	53,000	384,018
Estimated dwelling yield	47564	91,974	142,200	10.24 d/ha	12 d/ha	53,000	334,760
Total hectares	n.a.	12,373	n.a.	4,811	7,506	n.a.	n.a.
Estimate of number of years supply of land	n.a.	5.7	n.a.	n.a.	8.5	n.a.	n.a.
Estimated average time taken to move from stage 2/3 above to stage 4	n.a.	3 to 6 months	1 year 3 months	6 to 12 months (b)	6 to 12 months	2 years	. .

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) New South Wales: NSW data are at 30 June 2008 as 2009 data were not available.

1. The Metropolitan Development Program (MDP) land supply process step most closely matching the National Housing Supply Council stage has been selected for reporting purposes. It is noted that there is no step corresponding to MDP step 3 'Servicing'.
2. The MDP does not report land supply by hectares as it is not considered a useful measure of housing supply by New South Wales.
3. Years supply is calculated based on average dwelling production since 1992-93 when the current pattern of greenfield development commenced with the north-west sector.
4. Growth sectors/structure plan areas identified for urban growth to 2031 in the Metropolitan Strategy and Central Coast Regional Strategy. Other sectors have been identified for growth beyond this time but are not reflected in data.
5. In NSW, the MDP reports stock levels by dwelling potential of land rather than lots.
   Source: Zoned MDP release area (excluding MDP Step 4 & Step 5). Rezoning may be by local or state government. Servicing stage (trunk and lead in water and waste water infrastructure) is separately monitored in NSW.

(b) Victoria: Includes years of supply estimates in this category as it is included in the Victorian Government's calculation of total land supply adequacy.

For Growth Areas Stage 2 to 3 Precinct Structure Planning (PSP) process in general takes two to three years, although this depends on when you consider the start of the process to be as there is the pre-planning stage. Once work is done PSP goes on exhibition, then a planning panel meets and it is approved then planning scheme amendment – PSP approved.

(c) Queensland: These figures represent expected dwelling yields from the respective broadhectare studies where located outside the existing urban area, minus the dwelling yields identified in 1 above (areas taken as not yet zoned for urban residential use) and 4 below (areas approved for subdivision which have not yet received survey plan endorsement).

(d) South Australia: Broadacre land yields slightly different as the calculation is based on each Local Government Area and then summed to each region.

(e) Western Australia: Refers to land that is zoned as "Urban" in either the Metropolitan Region Scheme or the Peel Region Scheme and is undeveloped. On average 880 hectares of undeveloped land is consumed for urban use each year. Dwelling yields from future lot production are estimated on 12 dwellings per urban-zoned hectare based on current development densities, however, planning policy is aiming to achieve closer to 15 dwellings per urban-zoned hectare. The apparent significant reduction in land from 9,336 ha to 7,506 ha is due to a refinement in the classification of "non-residential" zonings and does not reflect actual consumption of land.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.13: Greenfield land at Stage 4 that has received development/subdivision approval, six capital city areas at 30 June 2009

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide (d)	Perth	Canberra	Total of six jurisdic-tions
Estimated dwelling yield	10,900	38,455	35,300	n.a.	57,965	4,500	147,120
Year ending lots in subdivision plans	n.a.	38,455	n.a.	n.a.	48,304	n.a.	n.a.
Potential Lots	n.a.	n.a.	35,300	n.a.	48,304	n.a.	n.a.
Total hectares	n.a.	n.a.	n.a.	n.a.	2,330	n.a.	n.a.
For land identified above as at 30 June 2009 est. average time taken to move from stage 4 above to stage 5 above		0 to 18 months	1 year 4 months	6 to 36 months	1 to 4 years	2 years	..

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) New South Wales: NSW data are at 30 June 2008 as 2009 data were not available.

1. The Metropolitan Development Program (MDP) land supply process step most closely matching the National Housing Supply Council stage has been selected for reporting purposes. It is noted that there is no step corresponding to Metropolitan Development Program step 3 'Servicing'.
2. The Metropolitan Development Program does not report land supply by hectares as it is not considered a useful measure of housing supply by New South Wales.
3. Years supply is calculated based on average dwelling production since 1992-93 when the current pattern of greenfield development commenced with the north-west sector.
   Source: MDP Zoned and Serviced Audit DA Approved (excluding MDP Step 5 vacant subdivided land).
   In NSW, new subdivision of zoned and serviced land is monitored by an annual audit and consultation undertaken with councils on progress of applications relating to the land.

(b) Victoria: Data are not based on a point in time but relate to year-ending and quarter-ending 30 June.
Dwelling yield = lot yield for anticipated supply as Victoria assumes one for one construction. Source data are "Residential Lots in subdivision plans submitted to councils" data from the Residential Land Bulletin.
For growth areas development subdivision plans/ land construction take three to six months to complete (certified plans = statement of compliance) and can be commenced concurrent with the end of the Precinct Structure Planning (PSP) process so technically can be ready on approval of the PSP.

(c) Queensland: These figures identify those lots located outside the existing urban area that had received subdivision approval but not yet received survey plan endorsement at the respective dates. The latter step is required for and precedes the actual issue or registration of title, usually by a number of weeks, but is a close proxy for the requested measurement.

(d) South Australia: Broadacre under a residential plan of division (which may or may not proceed).

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.14: Greenfield land at Stage 5 for which residential title has been issued but for which building approval has not yet been given, as at 30 June 2009

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide (d)	Perth (e)	Canberra	Total of six jurisdic-tions
Estimated dwelling yield	2,760	n.a.	n.a.	6,169	46,493	n.a.	n.a.
Lots	n.a.	28,759	n.a.	n.a.	37,844	n.a.	n.a.
Estimated average time taken to move through stage 5	n.a.	3 to 6 months	2 months	1 to 3 months (c)	2 to 3 months	1 year	

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) New South Wales: NSW data are at 30 June 2008 as 2009 data were not available.

1. The Metropolitan Development Program (MDP) land supply process step most closely matching the National Housing Supply Council stage has been selected for reporting purposes. It is noted that there is no National Housing Supply Council step directly corresponding to Metropolitan Development Program step 3 'Servicing'.
2. The Metropolitan Development Program does not report land supply by hectares as it is not considered a useful measure of housing supply by New South Wales.
3. Years supply is calculated based on average dwelling production since 1992-93 when the current pattern of greenfield development commenced with the north-west sector.

Source: Step 5 Dwelling potential of vacant subdivided land. In NSW, subdivided vacant land is monitored by an annual audit and consultation with councils and Sydney Water. Development approval may have been issued for the dwelling(s) but work not commenced.

(b) Victoria: Data are not based on a point in time but relates to year-ending and quarter-ending 30 June. Dwelling yield equals lot yield for anticipated supply as Victoria assumes one for one construction. Source data are "Residential Lots in subdivision plans submitted to councils" data from the Residential Land Bulletin. Residential titles can happen effectively immediately following lot certification but most developments happen in stages as the land is being sold.

(c) Queensland: No data are reported here because the information is not available at an individual parcel level and estimates based on total lot registrations and total house building approvals for a three-year period resulted in a small positive figure for 2009 and a small negative figure for 2008. The englobo datasets are likely to be affected by a significant number of house demolitions followed by rebuilding, resulting in the small negative figure for 2008, but the extent of demolitions/rebuilds is not able to be quantified at this stage.

(d) South Australia: Based on final plans lodged with the Land Titles Office once land division development is completed, for development applications greater than ten lots (assuming one dwelling per lot).

(e) Western Australia: All data are for the Perth Metropolitan Region plus Mandurah and Murray. Note that the year-ending and quarter-ending figures are identical by definition as both figures represent the stock of lots as at 30 June. Hectares are calculated from the average lot size of 540m^2 for 2007-08 year and 482m^2 for the 2008-09 year. Estimated dwelling yield = 1.2 x Lots.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.15: Greenfield land at Stage 6 for which building approval has been issued but where building has not yet commenced, as at 30 June 2009

	Sydney (a)	Melbourne (b)	South-east Queens-land (c)	Adelaide (d)	Perth (e)	Canberra	Total of six jurisdic-tions
Year ending lots in subdivision plans	n.a.	30,961	n.a.	n.a.	n.a.	n.a.	
Qtr ending lots in subdivision plans	n.a.	7,920	n.a.	n.a.	n.a.	n.a.	
Number of dwellings	n.a.	n.a.	n.a.	n.a.	n.a.	600	

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) New South Wales: NSW data are at 30 June 2008 as 2009 data were not available.
In NSW, dwelling completions are monitored. Australian Bureau of Statistics Census Collection Districts do not align with Metropolitan Development Program release areas.

(b) Victoria: Source data are "Residential Lots Released" from the Residential Land Bulletin.
Building permits in growth area generally take three to six months. Staging and market conditions may lead to lags of up to several years.

(c) Queensland: Information could not be supplied for this question as building commencements data are not available at the required geographic level.

(d) South Australia: Not collected - quarterly data from the Australian Bureau of Statistics used to inform about the level of building approvals.

(e) Western Australia: These data are not available at this time. Note that some of the lots in Table 4 may actually be at this stage of development.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.16: Estimates of the average time taken to reach each stage in the greenfield land supply pipeline in four capital cities

		Vic. (a)	Qld. (b)	SA [c]	ACT
B1	For land identified in stage 2/3 as at 30 June 2009, estimated average time taken to move from stage 1 to stage 2/3	2 to 3 years	5 years	12 to 36 months (a)	3 years 6 months
B2	For land identified in stage 4 as at 30 June 2009, estimated average time taken to move from stage 2/3 to stage 4	3 to 6 months	1 year 3 months	6 to 12 months (b)	2 years
B3	For land identified in stage 4 as at 30 June 2009, estimated average time taken to move from stage 1 to stage 4	2 to 3.5 years	6 years 3 months	18 to 48 months	5 years 6 months
B4	For land identified in stage 5 as at 30 June 2009, estimated average time taken to move from stage 4 to stage 5	0 to 18 months	1 year 4 months	6 to 36 months	2 years
B5	For land identified in stage 5 as at 30 June 2009, estimated average time taken to move from stage 1 to stage 5	2 to 5 years	7 years 7 months	21 to 84 months	7 years
B6	For land identified in stage 6 as at 30 June 2009, estimated average time taken to move from stage 5 to stage 6	3 to 6 months	2 months	1 to 3 months (c)	1 year
B7	For land identified in stage 6 as at 30 June 2009, estimated average time taken to move from stage 1 to stage 6	3 to 5 years	7 years 9 months	(d)	8 years

Notes: Data are not directly comparable between individual states and territories due to differences in the way the data are collected and categorised. See footnotes below and more detailed information contained in Appendix 3: Methodology.

(a) Victoria:

The pre-planning stage looks at broad constraints, native vegetation etc and covers broad areas that may cover many individual Precinct Structure Plans (PSPs).

For Growth Areas Stage 2-3 Precinct Structure Planning the process in general takes two to three years. There is also the pre-planning stage.

For growth areas development subdivision plans/ land construction take three to six months to complete and can be commenced concurrent with the end of the PSP process.

Residential titles can be available immediately following lot certification but most developments are staged.

Building permits in growth areas generally take three to six months. Again staging and market conditions may lead to lags of up to several years.

(b) Queensland

B1 In Queensland there are two main processes by which land can transition from being allocated as 'future urban' to being effectively 'zoned' for residential and associated uses. These include a planning scheme amendment, usually associated with the preparation of a structure plan and/or master plans, and a preliminary approval which overrides the planning scheme. The former is generally managed by the local government and the latter results from a development application initiated by a developer. These different processes, together with the varying circumstances of different localities, have resulted in a broad range of times taken for the transition, from about two to about seven years. The identified average of five years is an 'of the order of' estimate only. This is based on recent experience in three south-east Queensland local governments and the advice of the Urban Development Institute of Australia.

B2 The time reported is the estimated average time taken to obtain subdivision approval for developments of 50 or more lots. This is the conceptual approval for the subdivision which needs to be followed by approval of the associated engineering works before the lots can be constructed and registered. This is based on the advice of five south-east Queensland local governments and the Urban Development Institute of Australia.

B3 Equal to B1 plus B2.

B4 This is an estimate of the average time taken from reconfiguring a lot approval to registration or issue of the title of the lots, for developments of 50 or more lots. It is based on the advice of the Urban Development Institute of Australia.

B5 Equal to B3 plus B4.

B6 This is an estimate of the average time taken from issue or registration of title for a lot and obtaining building approval for a dwelling on that lot. It is based on the advice of the Urban Development Institute of Australia.

B7 Equal to B5 plus B6.

(c) South Australia

B1 Time taken depends on the size and complexity of the site, housing demand, etc.

B3 The majority of subdivision approvals will occur within 12 months.

B5 Time taken depends on the developer completing the land division and lodging paperwork with the Land Titles Office.

B7 It is extremely difficult to supply this information with any degree of accuracy.

Source: National Housing Supply Council estimates and data supplied from state and territory planning agencies. See Appendix 3: Methodology for more detailed information on sources.

Table A3.17: Estimates of short-term infill dwelling (a) supply as at 30 June

	Sydney, 2008	Melbourne, 2009	Canberra, 2009
		Number of dwellings	
Large projects (50+ dwellings)	25,019 (b)	3,512	600
Medium projects (11 to 49 dwellings)	n.a.	3,366	200
Small projects (10 or less dwellings)	n.a.	9,456	50
Total number of dwellings	**n.a.**	**16,334**	**850**

Note: (a) Infill sites for which building approval has been issued (equivalent to stage 6 of the greenfield pipeline) but where building has not yet commenced.
(b) Relates to major sites where Development Application has been approved but not under construction for the Sydney Region (including Central Coast).

Table A3.18: Distribution of dwelling supply by type and area, Sydney

NSW	Infill	Transit nodes	Greenfield release areas	Rural	Total
Total past five years, ending 2007-08					
Inner ring	7,646	17,577	0	0	25,223
Middle ring	12,425	16,626	0	0	29,051
Outer ring	16,165	11,983	17,208	1,631	46,987
Total	36,236	46,186	17,208	1,631	101,261
Forecast dwelling supply for the 5 year period: 2007–08 to 2011–12 (inclusive)					
Inner ring	9,937	14,298	0	0	24,235
Middle ring	12,152	21,980	0	0	34,132
Outer ring	15,991	15,452	18,785	2,905	53,133
Total	38,080	51,730	18,785	2,905	111,500
Forecast dwelling supply for the 5 year period: 2012–13 to 2016–17 (inclusive)					
Inner ring	7,970	9,325	0	0	17,295
Middle ring	14,319	20,816	0	0	35,135
Outer ring	15,381	15,599	30,376	3,645	65,001
Total	37,670	45,740	30,376	3,645	117,431

Note: The terms 'infill', 'transit nodes', 'greenfield release areas', and 'rural' used in this table are described in the Metropolitan Development Program.

Source: NSW Metropolitan Development Program 2007–08 ATLAS: LGA summary.

Table A4.1: Projected demand-supply gap using medium household growth and medium supply projections, 2009 to 2029

Year ended 30 June	Medium household growth	Adjusted net medium supply growth [(a)]	Annual growth in gap between underlying demand & adjusted net supply	Cumulative gap
		Number of dwellings		
2009	n.a.	n.a.	n.a.	178,400
2010	156,500	132,500	24,000	202,400
2011	159,000	133,100	25,900	228,300
2012	160,300	133,700	26,500	254,800
2013	161,200	134,300	26,800	281,600
2014	161,300	135,000	26,300	308,000
2015	161,700	135,600	26,100	334,100
2016	162,100	136,200	25,900	360,000
2017	162,900	136,800	26,100	386,000
2018	162,900	137,500	25,400	411,400
2019	163,000	138,100	24,900	436,300
2020	162,200	138,700	23,500	459,900
2021	162,100	139,300	22,800	482,700
2022	162,100	139,900	22,200	504,900
2023	162,700	140,600	22,200	527,000
2024	163,300	141,200	22,100	549,100
2025	164,300	141,800	22,500	571,700
2026	163,300	142,400	20,900	592,600
2027	161,800	143,000	18,800	611,400
2028	159,400	143,700	15,800	627,200
2029	157,700	144,300	13,400	640,600

Note: 'n.a.' is not applicable. (a) Adjusted net medium supply growth is additional supply less estimated demolitions, with resulting net production discounted by 5.9 per cent to account for dwellings unavailable to meet underlying demand.

Source: National Housing Supply Council projections based on McDonald–Temple medium household growth scenario; National Housing Supply Council projections based on trends in dwelling completions net of demolitions; National Housing Supply Council estimate of demand-supply gap in 2009; see Appendices 2 and 3 and Chapter 4 for full details.

Table A4.2: Projected demand-supply gap using medium household growth and medium supply projections, by State or Territory, 2009 to 2029

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT
				('000 dwellings)				
2009	57.6	22.7	56.1	0.1	30.2	1.0	10.1	0.5
2010	65.1	25.0	61.9	1.8	34.7	1.9	11.4	0.4
2011	74.0	27.2	68.7	3.6	38.9	2.7	12.3	0.5
2012	83.6	29.2	75.8	5.3	43.0	3.6	13.4	0.6
2013	93.5	31.0	83.0	7.0	47.0	4.6	14.4	0.8
2014	103.4	32.3	90.4	8.8	50.6	5.4	15.5	0.9
2015	113.5	33.3	97.9	10.6	54.3	6.4	16.5	1.0
2016	123.6	34.0	105.4	12.4	57.7	7.3	17.6	1.1
2017	134.3	34.3	113.0	14.3	61.0	8.3	18.7	1.2
2018	145.1	34.2	120.6	16.1	64.0	9.3	19.8	1.3
2019	156.0	33.7	128.2	17.8	66.8	10.2	20.9	1.4
2020	166.8	32.5	135.4	19.5	69.5	11.2	22.1	1.4
2021	177.8	31.1	142.4	21.2	71.9	12.1	23.2	1.5
2022	188.9	29.0	149.5	22.9	74.1	13.1	24.3	1.5
2023	200.2	26.7	156.8	24.5	76.2	14.0	25.5	1.5
2024	211.1	24.1	164.3	26.2	78.3	15.0	26.7	1.5
2025	222.1	21.5	171.9	27.9	80.3	16.1	28.2	1.5
2026	232.7	18.5	179.4	29.5	82.2	17.1	29.6	1.4
2027	242.9	14.9	186.1	30.8	83.8	18.0	30.9	1.5
2028	252.6	10.5	192.2	32.0	84.8	18.9	32.2	1.4
2029	261.8	5.3	197.7	32.9	85.5	19.7	33.6	1.4

Note: States and territories do not sum to national figures after 2009 as they use state- or territory-specific adjustments for unoccupied dwellings.

Source: National Housing Supply Council estimates based on McDonald–Temple medium household growth scenario; National Housing Supply Council estimates based on trends in dwelling completions net of demolitions adjusted for vacant dwellings; National Housing Supply Council estimate of demand-supply gap in 2009; see Appendices 2 and 3 and Chapter 4 for full details.

Table A5.1: Social and subsidised housing dwellings (actual and projected), 1996 to 2029

	Public rental housing	Community housing	State owned and managed Indigenous housing	Crisis accommo-dation program	Government initiatives	Total
1996 (a)	372,134	13,741	11,119	3,240	0	400,234
1997 (a)	369,340	16,515	11,820	3,520	0	401,195
1998 (a)	361,790	21,958	11,855	4,136	0	399,739
1999 (a)	362,447	23,756	12,009	5,601	0	403,813
2000 (a)	362,967	24,316	12,162	5,507	0	404,952
2001 (a)	359,322	25,937	12,343	5,876	0	403,478
2002 (a)	354,124	27,178	12,579	6,408	0	400,289
2003 (b)	348,012	29,367	12,563	6,820	0	396,762
2004 (b)	345,335	26,753	12,725	6,916	0	391,729
2005 (b)	343,301	29,279	12,860	7,314	0	392,754
2006 (b)	341,378	29,693	12,893	7,350	0	391,314
2007 (b)	339,771	34,672	13,092	7,516	0	395,051
2008 (b)	337,866	36,079	12,778	7,567	0	394,290
2009 (c)	336,464	39,770	12,056	7,567	5,000	400,857
2010 (d)	336,464	39,770	12,056	7,567	15,900	411,757
2011 (d)	336,464	39,770	12,056	7,567	33,100	428,957
2012 (d)	336,464	39,770	12,056	7,567	55,400	451,257
2013 (d)	336,464	39,770	12,056	7,567	54,500	450,357
2014 (d)	336,464	39,770	12,056	7,567	52,500	448,357
2019 (d)	336,464	39,770	12,056	7,567	37,500	433,357
2024 (d)	336,464	39,770	12,056	7,567	20,500	416,357
2029 (d)	336,464	39,770	12,056	7,567	20,500	416,357

Note: The number of dwellings is at 30 June.

(a) Public rental housing dwelling numbers derived from Australia's Welfare 2003; other dwelling numbers derived from Housing Assistance Act 1996 annual reports.

(b) All dwelling numbers derived from Australia's Welfare 2007 or 2009.

(c) Public rental housing, community housing, crisis accommodation and state owned and managed indigenous housing numbers derived from Commonwealth State Housing Agreement national data reports. Government initiative dwelling numbers are projections. For further information refer to 'A progress report to the Council of Australian Governments from Commonwealth, State and Territory Ministers', <www.coag.gov.au>.

(d) All dwelling numbers are projections.

Source: Australian Institute of Health and Welfare, *Australia's Welfare 2003*, cat. no. AUS 41, AIHW, Canberra, 2003; Australian Institute of Health and Welfare, *Australia's Welfare 2007*, cat. no. AUS 93, AIHW, Canberra, 2007; Australian Institute of Health and Welfare, *Australia's Welfare 2009*, cat. no. AUS 117, AIHW, Canberra, 2009; Australian Institute of Health and Welfare, *Public Rental Housing 2008–09*, cat. no. HOU 218, AIHW, Canberra, 2010; Australian Institute of Health and Welfare, *State owned and managed Indigenous housing 2008–09*, cat. no. HOU 216, AIHW, Canberra, 2010; Australian Institute of Health and Welfare, *Community Housing 2006–07*, cat. no. HOU 217, AIHW, Canberra, 2010; Department of Family and Community Services, *Housing Assistance Act 1996 Annual Report 1996–1997*, Commonwealth of Australia, Canberra, 1999; FACS, *Housing Assistance Act 1996 Annual Report 1997–1998*, Commonwealth of Australia, Canberra, 2000; FACS, *Housing Assistance Act 1996 Annual Report 1998–1999*, Commonwealth of Australia, Canberra, 2001; FACS, *Housing Assistance Act 1996 Annual Report 1999–2000*, Commonwealth of Australia, Canberra, 2002; FACS, *Housing Assistance Act 1996 Annual Report 2000–2001*, Commonwealth of Australia, Canberra, 2003; FACS, *Housing Assistance Act 1996 Annual Report 2001–2002*, Commonwealth of Australia, Canberra, 2003; Department of Families, Housing, Community Services and Indigenous Affairs, *Housing Assistance Act 1996 Annual Report 2006-07*, Canberra, 2009;

Commonwealth State and Territory Housing Ministers, *Implementing the National Housing Reforms – A progress report to the Council of Australian Governments from Commonwealth, State and Territory Housing Ministers*, <www.coag.gov.au>, 2009.

Appendix 3: Methodology

This appendix provides information on the data and methodology used in producing the estimates and projections in the report. The two major subjects covered are:

- estimates and projections of underlying demand
- estimates and projections of housing and land supply.

The main types of data needed for this report cover the areas identified in the Council's Terms of Reference (Appendix 1) relating to the provision of projections and analysis on the adequacy of land supply and construction activity to meet demand and improve affordability over a 20-year period.

The projections of underlying demand (as with any projection) are not predictions or forecasts; rather, they provide an assessment of what would happen to Australia's housing in terms of demand for dwellings if the assumed levels of the components of household change (births, deaths, migration and household formation) were to be realised over the next 20 years. Similarly, the projections of construction activity are based on the assumption that existing trends in dwelling completions will continue.

The major data sources used in the report are:

- 2006 ABS Census data on occupied and unoccupied dwellings
- ABS population projection data
- ABS construction and dwelling activity data
- administrative data from state and territory housing and planning agencies
- industry-provided data on costs, affordability and dwelling characteristics.

There are a number of factors that are particularly important to bear in mind when interpreting the results. Areas where the assumptions used are particularly sensitive in terms of their impact on the final outputs are:

- the sensitivity of the population demand projections as shown by the changes in demand between the three scenarios presented
- the sensitivity of the land supply and dwelling construction projections used
- the difference in the underlying projection method between supply (using a trend from 1 July 1980) and demand (using population projections and household transition rates based on 2001 and 2006 Census data)
- the treatment of unoccupied dwellings in examining gaps
- the inclusion and estimation of demolition adjustment estimates
- the effect of externalities, such as new policy or program outlays and structural change to the social and economic environment since 2006, as these have not been incorporated into the assumptions.

Also, as some of the data are drawn from sample surveys, they contain sampling errors which are measured in terms of the standard error of the estimate. The two major data sources based on a sample are the ABS Building Activity Survey data on building commencements and completions and the ABS Survey of Income and Housing. The explanation of standard errors for the ABS Building Activity Survey are contained in the explanatory notes section of Building Activity, Australia, Jun 2009 ABS catalogue number 8752.0. Details of the standard errors for estimates from the 2007-08 ABS Survey of Income and Housing are contained in Chapter 2 of the ABS - Survey of Income and Housing - Confidentialised Unit Record File, Technical Manual, 2007-08 ABS Catalogue number 6541.0.

In adding additional data to the 2010 report, the Council identified areas where it was unable to find consistent national data. These issues will be addressed in future reports. In key areas where there were no consistent national data, the Council has produced estimates based on available information, which may affect the quality of results. In several other sections where information was not generally available, the Council was able to utilise data provided by individual Council members to enhance reporting and analyses.

Demand projections

The Council focused on underlying demand for its long-term outlook. The Council's 20-year outlook of housing demand was based on projections by Professor Peter McDonald and Dr Jeromey Temple, using a model that estimates the probable formation of different household types and incorporates various assumptions on migration and household transition. Low-, medium- and high-growth scenarios were developed using different assumptions about net overseas migration.

The three underlying demand scenarios in the report provide low, medium and high projections of household growth as follows:

- The **low household growth** scenario sets net overseas migration at a constant rate of 120,000 a year from 2008 onwards, with shares to states and territories of overseas migration and rates of interstate migration equated to those used by the most recent ABS medium population projection.[87]
- The **medium household growth** scenario sets net overseas migration at a constant rate of 180,000 a year from 2008 onwards, with shares to states and territories of overseas migration and rates of interstate migration equated to those used by the most recent ABS medium population projection.
- The **high household growth** scenario sets net overseas migration at a constant rate of 230,000 a year from 2008 onwards, with shares to states and territories as per the medium household growth scenario.

More detailed discussions of the methodology are contained in the McDonald–Temple report, *Projections of Housing Demand in Australia, 2008-2038,* which is available on the National Housing Supply Council web page (**www.nhsc.org.au**). The medium and high projections are based on the same assumptions as the 2008 report. In the 2008 report, the low household growth demand scenarios assumed that age- and sex-specific net migration rates (overseas and interstate) for each region as observed in the period 2001–06 are maintained at a constant proportion of the population, with net overseas migration increasing from around 120,000 in 2008 to around 160,000 in 2028.

87 Australian Bureau of Statistics, *Population Projections, Australia, 2006 to 2101*, cat. no. 3222.0, ABS, Canberra, 2008.

Population and changes in immigration trends

Changes in demand for housing and the estimated number of households largely reflect changes in the estimated resident population. An increase in the population reflects both natural increase (births – deaths), plus net increase in overseas migration.

The medium trend household estimates included in the 2010 report are based on projected net overseas migration of 180,000 people per annum. However, for the year ending 30 June 2009, the preliminary estimate of net overseas migration was 285,000 persons. The Council has opted for the use of three fixed long term assumptions on immigration. This approach can conflict with short term changes due to social and economic conditions.

In the Treasury's Intergenerational Report 2010 (IGR 2010), net overseas migration is assumed to fall relatively sharply from an average of around 244,000 a year over the three years to June 2009 to 180,000 a year from 2012, with the same age-gender profile as at present. This is similar to the Council's medium trend projection which includes net overseas migration of 180,000 a year for the next 20 years. The IGR 2010 also advises that:

> "Recent increases in net overseas migration primarily reflect a significant increase in the rate of temporary, demand-driven migration, including international students and 457 visa holders (the latter contributing to fill skill shortages when the economy was growing rapidly) and a change in the ABS methodology.
>
> …Net overseas migration has varied over the past four decades. Historically, this was the result, in part, of governments adjusting the permanent migration program to respond to the need for skilled workers during periods of high economic growth. It also reflects the self-adjustment that tends to occur in temporary migration as it moves in line with economic conditions. Permanent and long-term departures also have a propensity to increase when economic growth is strong."[88]

The impact of population movements across Australia's borders (other than for short term travel) will affect housing demand in different and sometimes complex ways. The following information provides some insight into the ways in which migration and travel statistics are collected and assessed.

As the ABS has identified, international migration can be volatile, with recent trends including:

- increasing volumes of international movements across Australia's borders. (In the year to December 2009 there were a record 24.7 million crossings of Australia's international borders by travellers, representing 1,129 crossings per 1,000 people in the Australian population)
- changes to the composition of international visitors and their duration of stay (for example, a record 390,000 international visitors indicated that education was their main purpose for coming to Australia in 2008-09, with these visitors staying, on average, 142 nights, compared with an average stay of 34 nights for all international visitors[89])
- changing international travel patterns of Australian residents (including duration of absence and frequency of travel).

For the purposes of estimating traveller intentions, the ABS relies heavily on information recorded on incoming and outgoing passenger cards.

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88 The Intergenerational Report 2010, Chapter 1.3 (The Treasury, *Australia to 2050: future challenges*, Commonwealth of Australia, Canberra, 2010).

89 Australian Government Department of Resources, Energy and Tourism, *Tourism Industry Facts and Figures at a glance,* October 2009.

- Of the 12.4 million passenger arrivals in Australia in 2009, 6.2 million were Australian residents returning after a short term absence, 5.6 million were visitors arriving for a short term stay and 642,700 were permanent and long term arrivals.
- Of the 12.3 million departures from Australia in 2009, 6.3 million were Australian residents departing short-term, 5.6 million were visitors departing Australia after a short term stay and 339,100 were recorded as permanent and long term departures.

In determining how many international travellers are to be accounted for in estimating the Australian population, only people living in Australia for 12 months or more are added to the population. Residents leaving Australia for 12 months or more are subtracted from the population.

As can be seem from the above figures, there are many different components to the net overseas migration figures, and changes in one or more components can have both short and longer term impacts on housing demand.

More detailed information on the ABS's methodology and estimates is available in ABS Cat. No 3107.0.55.005 *Statistical Implications of Improved Methods for Estimating Net Overseas Migration, Australia, 2007*, ABS Cat. No. 3401.0 *Overseas Arrivals and Departures, Australia, Dec 2009, and* ABS Cat. No 4312.0.55.001 - *Information Paper: Improving Net Overseas Migration Estimation, Mar 2010.*

Private and non-private dwellings

The demand projections in this report relate to households in private dwellings but it is important to understand there is a group of people who are living in non-private dwellings – and to understand why people may move from private to non-private dwellings or vice versa.

In general terms, a "dwelling" is a structure which is intended to have people live in it, and which is habitable on census night. Some examples of dwellings are houses, motels, flats, caravans, prisons, tents, humpies and houseboats.

Private dwellings are enumerated using household forms, which obtain family and relationship data. Non-private dwellings (hotels, hospitals etc.) are enumerated on personal forms.

All occupied dwellings are counted in the census. Unoccupied private dwellings are also counted with the exception of unoccupied dwellings in caravan parks, marinas and manufactured home estates. Unoccupied residences of owners, managers or caretakers of such establishments are counted. For the 2006 Census, unoccupied units in retirement villages (self-contained) were also counted. The 2001 Census was the first to count unoccupied private dwellings in discrete Indigenous communities. This occurred again in 2006.

Non-private dwellings (NPDs) are those dwellings that provide a communal or transitory type of accommodation. They are classified according to their function. NPDs include hotels, motels, guest houses, prisons, religious and charitable institutions, boarding schools, defence establishments, hospitals and other communal dwellings.

For census purposes, people in NPDs are enumerated on personal forms and so information on their family structure is not available. In the case of accommodation for the retired or aged, where the one establishment contains both self-contained units and units that are not self-contained, then both household forms (self-contained) and personal forms (not self-contained) may be used as appropriate. For the 2006 Census, unoccupied dwellings in retirement villages (self-contained) were included as non private dwellings.

Unoccupied structures in caravan/residential parks, camping grounds, marinas and manufactured homes estates were not included as 'unoccupied dwellings' in the census.

The information above is sourced from Australian Bureau of Statistics, *Census Dictionary, Australia 2006 (Reissue)*, cat. no. 2901.0, ABS, Canberra, 2006. The demand projections available on the Council's website include data on projections of persons in non-private dwellings.

Table A1: Number of occupied and unoccupied private dwellings, states and territories, 2006

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Aust.
Occupied	2,470,452	1,869,388	1,508,520	609,909	757,991	189,069	67,160	122,900	7,595,389
Unoccupied	258,270	215,726	152,228	69,754	91,017	27,675	7,034	8,475	830,179
Total	**2,728,722**	**2,085,114**	**1,660,748**	**679,663**	**849,008**	**216,744**	**74,194**	**131,375**	**8,425,568**

Source: Australian Bureau of Statistics, *2006 Census*, 'Dwelling Type by State/Territory', generated using TableBuilder, ABS, Canberra, 2009.

Related State and territory projections

The household demand projections used in the report were compiled using national data and were primarily designed to provide a national picture of demand. While these data can be used to produce state and territory estimates, they may differ from similar household projections undertaken by state and territory planning agencies. These planning agencies apply local knowledge and information to produce projections at the jurisdictional and local council levels. Table A2 provides references to the related reports and websites containing this information.

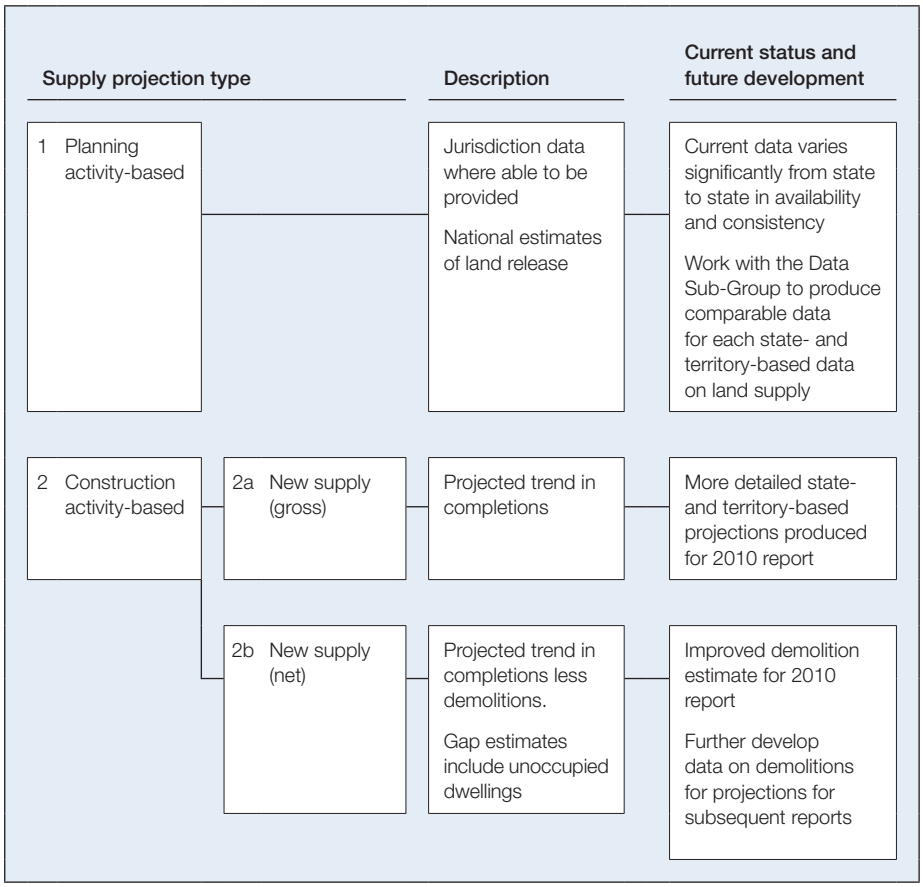
Table A2: Information on relevant state and territory government demand projections

NSW	Department of Planning, *New South Wales Household and Dwelling Projections, 2006–2036: 2008 Release*, Department of Planning, Sydney, 2008, <www.planning.nsw.gov.au> Department of Planning, *New South Wales Statistical Local Area, Population Projections, 2006-2036*, Department of Planning, Sydney, 2010, <www.planning.nsw.gov.au>
Vic.	Department of Planning and Community Development, *Victoria in Future 2008 – Population Projections*, DPCD, 2008, <www.dpcd.vic.gov.au>
Qld.	Queensland Treasury, Office of Economic and Statistical Research, *Queensland's future population, 2008 edition*, Queensland Treasury, 2008, <www.oesr.qld.gov.au/pifu>
SA	Planning SA, *Population projections for South Australia (2001–31) and the State's Statistical Divisions (2001–21)*, Planning SA, 2007, <www.planning.sa.gov.au>
WA	Western Australian Planning Commission, *Western Australia Tomorrow*, WAPC, Perth, 2003, <www.wapc.wa.gov.au/Publications/723.aspx>
ACT	Chief Minister's Department, *Australian Capital Territory population projections: 2002–2032 and beyond*, Chief Minister's Department, Canberra, 2003

Supply projections

In preparing its supply projections, the Council adopted different approaches for dwelling supply and land supply. For dwellings, estimates were based on the trend in dwelling production since July 1980, while for land supply, estimates were derived from information on capital city land supply for residential development (Figure A1).

Figure A1: Summary of supply-based estimates and projections



As the Council establishes more sophisticated modelling capacity, future reports will use a range of assumptions related to construction capacity, market factors and productivity to present supply projections.

Projections and estimates based on dwelling completions

New supply (gross)

The supply projections of construction activity are based on the trend line for ABS completions data over the period 1 July 1980 to 30 June 2009, extrapolated to the projection years presented. The medium supply projections are based on the trend in building completions from July 1980 to 2009. The trend was projected for each state and territory.

A low supply trend was estimated using the lowest level of completions in each state and territory as identified using a moving average annual calculation from the ABS quarterly data from July 1980 to 2009. This low level of completions was expressed as a proportion of the average completion rate for the jurisdiction and applied to its trend projection. The low supply projection reflects a situation where construction of private dwellings is severely constrained in a 'realistic' way (this level of completions has happened at one stage in the last 29 years).

A high supply trend was estimated using the highest level of completions in each state and territory as identified using a moving average annual calculation from the ABS quarterly data from July 1980 to 2009. This high level of completions was expressed as a proportion of the average completion rate for the jurisdiction and applied to its trend projection. The high supply projection reflects a situation where construction of private dwellings is significantly above average and represents a high level of output that is commensurate with what has actually happened at one stage in the last 29 years. The sustainability of such an increase over time would probably require structural change in productivity and/or expansion in capital investment.

New supply (net) – adjusting supply estimates for demolition loss

To adjust new supply for loss due to demolition of existing stock a net measure of new supply has been calculated. To derive the net measure the gross completions data were adjusted for the estimated demolition rate in each jurisdiction based on the difference in the increases in dwellings between the 2001 and 2006 Censuses compared with the total new dwelling completions over that period. The 2010 report measure improves on the approach used in the 2008 report.

Specification of demolition rates

For the 2010 report, the Council has revised its estimates of the demolition rates. The revisions are based on further development of the census-based methodology used in the 2008 report and also incorporate state and territory government provided estimates where available from DSG members. The revised demolition rates are shown in Table A3:

- For New South Wales, Western Australia, Tasmania and Northern Territory - the revised estimates of dwelling demolition rates are based on the revised census methodology – see next section for details.
- For Victoria, South Australia and ACT - the revised estimates of dwelling demolition rates were based on data provided by DSG members.
- For Queensland - the demolition rates used in the 2008 report were also used in the 2010 report – see next section for details.

Table A3: Summary table of demolition rate information

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT
				(per cent)				
2008 report demolition rate	21.85	17.07	1.51	28.52	19.53	20.16	56.05	14.66
Using Census data – revised method	8.25	8.75	-5.65	18.27	14.41	6.73	21.29	5.91
Data sub-group demolition data		7.04		19.87				3.28
2010 report demolition rate	**8.25**	**7.04**	**1.51**	**19.87**	**14.41**	**6.73**	**21.29**	**3.28**

Note: Negative figures in Queensland reflect statistical anomalies in methodology used.

Source: National Housing Supply Council estimates.

In the 2008 report, to adjust the dwelling supply estimates and projections for loss in existing occupied stock due to demolitions, a proxy demolition rate was calculated for Australia and each state and territory based on the difference in the total dwelling counts (occupied and unoccupied) between the 2001 and 2006 Censuses and the number of completions reported for the same period (see Table A2 of the 2008 report).

For the 2010 report, where no DSG demolition rate is available a revised census-based methodology was used as follows. In the 2008 report, the total dwelling counts were used. This included 'other dwellings' in the census data (i.e. caravans, cabins, houseboats, improvised homes, tents, sleepers out, and houses or flats attached to a shop, office etc.). These dwellings, however, are not counted in the ABS Building Activity completions data. For the 2010 report, the estimate of the demolition rate is based on isolating the number of separate houses, semi-detached, row or terrace houses, townhouses and flats, units apartments, and excluding 'other dwellings' from the census data set. These details are shown in Table A4 below. In Table A4, the annual state/territory completions have been constrained to the national data (i.e. data for 'other territories' have been distributed across remaining states/territories), while the completions adjusted for demolitions data used the sum of the eight states/territories in place of adjusted actual data.

A major issue in using ABS census and building completions data to derive demolitions is the assumption that these two data sets are able to be compared and that the data are of sufficient quality to ensure that the calculations produce valid results. The negative result for Queensland illustrates that there may be significant differences in what the two data sets measure with the subsequent calculations producing unreliable results. For Queensland, the Council decided that the demolition rates used in the 2008 report would also be used in the 2010 report. However, for the jurisdictions where there were alternate data available from the DSG (Victoria, South Australia and Australian Capital Territory), the revised method and the DSG data are of similar values (see Table A3).

Projections and estimates of land/dwelling supply pipeline supply

For the 2010 report, a framework for collecting data relating to the land/dwelling supply pipeline was agreed by the Council. Specifications were further developed by the Data Sub Group during 2009. The 2010 report presents the data from state and territory planning agencies as well as Council estimates of national data based on the range of jurisdiction data provided. These data are contained in Tables 3.10, 3.11 and A3.11 to A3.17. While most state and territory planning agencies were able to provide some data for the 2010 report, it is recognised that these data are not directly comparable across all jurisdictions due to a range of data-related issues discussed below. The further development and standardisation of measures of land supply will be the focus of further work leading up to the next Council report.

The data on land supply vary between states and territories in terms of the coverage of the data and how they are defined. While each jurisdiction produces information on the amount of land supply at various stages in the supply pipeline, there are underlying differences in the way the data are produced that need to be resolved. For example, different jurisdictions report the estimates of available land in terms of hectares available, dwelling yield or total years of potential supply. While some jurisdictions measure the total amount available, others measure new supply since the last reporting period.

The methodology used in this report to provide a national estimate of potential land supply, accompanied by a set of relevant state and territory data, does not adequately take into account the levels of planning activity in all jurisdictions for a variety of reasons. The following sections provide notes supplied by DSG members to assist in interpreting the standard set of data used in the report. However, to provide a broader jurisdiction-specific understanding of land and dwelling supply, readers are advised to refer to the relevant planning agency website. Table A5 provides references to the relevant reports and websites containing state land supply information.

Table A4: Details of the Australian Bureau of Statistics component of the revised demolition methodology

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT
Completions								
2001–2006	201,139	206,091	180,559	47,174	94,731	10,897	5,044	11,276
Census point in time excluding other dwellings								
2001	2,503,575	1,878,076	1,423,596	633,362	748,448	203,717	62,363	120,434
2006	2,688,114	2,066,130	1,614,349	671,915	829,526	213,881	66,333	131,044
Census difference								
2001-2006	184,539	188,054	190,753	38,553	81,078	10,164	3,970	10,610
5 year demolitions								
2001–2006	16,600	18,037	-10,194	8,621	13,653	733	1,074	666
1 year demolitions (average)								
2001–2006	3,320	3,607	-2,039	1,724	2,731	147	215	133
2001 to 2006 demolition rate								
Demolition rate	8.25%	8.75%	-5.65%	18.27%	14.41%	6.73%	21.29%	5.91%
Adjustment factor	91.75%	91.25%	105.65%	81.73%	85.59%	93.27%	78.71%	94.09%

Note: Negative figures in Queensland reflect statistical anomalies in methodology used.

Sources: Australian Bureau of Statistics, *Building Activity, Australia, June 2008*, cat. no. 8752.0, ABS, Canberra, 2008; Australian Bureau of Statistics, *2006 Census Tables, Australia*, 'Dwelling Structure by Occupied/Unoccupied Dwellings, Time Series Statistic (1996, 2001, 2006 Census Years)', cat. no. 2068.0, ABS, Canberra, 2007.

Table A5: Information on relevant State and Territory government supply projections

NSW	Department of Planning, 2007-08 *Metropolitan Development Program Report*, Department of Planning, Sydney, 2009, <www.planning.nsw.gov.au>
Vic.	Department of Planning and Community Development, *Urban Development Program Annual Report 2009*, DPCD, Melbourne, 2010, <www.dpcd.vic.gov.au>
Qld.	Queensland Treasury, Office of Economic and Statistical Research, *Residential Land and Dwelling Activity Profile, 2009*, <www.oesr.qld.gov.au/pifu> Queensland Teasury, Office of Economic and Statistical Research, *Broadhectare study, South East Queensland*, Queensland Treasury, 2009, <www.oesr.qld.gov.au/pifu>
SA	Department of Planning and Local Government, *The 30-Year Plan for Greater Adelaide*, February 2010, <www.dplg.sa.gov.au/plan4adelaide>
WA	Department of Planning and Infrastructure, *Land Development Program State Lot Activity, December Quarter 2009*, Western Australian Planning Commission, Perth, 2010, <www.planning.wa.gov.au>
ACT	Chief Minister's Department, *Indicative Residential Land Release Program 2009-10 to 2013-14,* May 2009, <www.cmd.act.gov.au>

The greenfield supply pipeline

The greenfield supply pipeline data contained in the 2010 report uses data provided by the relevant state and territory government planning agencies through their Data Sub Group member. Where data have not been provided for individual states and territories in some tables, a grouped estimate of the activity for these jurisdictions has been undertaken by the Council to create an Australian level estimate based on the 2009 distribution of dwelling completions between jurisdictions. The assumption that supply pipeline data from responding jurisdictions can be used to estimate national data infers some homogeneity between states and territories in pipeline activity. As this may not hold true for all situations, care should be used in interpreting the national estimates based on this approach.

Also, at each stage of the supply pipeline, there may be differences between jurisdictions in their processes and procedures. As a result, it is important to understand the methodology used in each jurisdiction to provide the data presented in this section of the report and note the limitations of the data. To assist the reader in doing this, a general overview of the approach and data sources used in each state and territory that provided data follows. This information should be used along with the detailed footnotes provided for each table to interpret the data. Definitions of the terms used are provided in the glossary and general issues are summarised below.

In particular, in interpreting land supply information, it is important to note that the growth pattern of each capital city is affected by different patterns of development, including a different reliance on growth on the urban fringe. For example in the Sydney region, greenfield land is not the main source of dwelling supply as most new houses are built in established areas (historically, about 70 per cent). For South East Queensland, the figure is around 50 per cent (see Tables 6.2 and A3.18).

Table A6 provides a comparison of the key steps in the land supply process in six jurisdictions based on the Council's generic supply pipeline for major greenfield development.

Table A6: Comparison of NHSC generic supply pipeline for major greenfield development with structure in six jurisdictions

Stage	New South Wales (Sydney)	Victoria (Melbourne)	Queensland (South East Queensland)	SA (Adelaide and environs)	WA (Perth and Peel)	NT (Darwin)
1 Future Urban	Step 1 - decision by NSW Government to release a fringe area for urban expansion. The decision is based upon multiple factors including meeting State Government benchmarks for different stages in the land supply process and servicing requirements. Only when land is released is it included on Metropolitan Development Program (MDP). There are currently 79 release areas included on the MDP. Note: Structure planning for major growth corridors/ sectors may occur prior to the NSW Government decision to release a fringe area for urban uses. Smaller areas may be included on the MDP following consideration of the Metropolitan Strategy Sustainability Criteria.	Urban Growth Boundary (UGB) is redrawn and Urban Growth Zone (UGZ) is identified. Gazetted by the Victorian Government. Intended 10 years supply in UGZ, further 5 years in UGB. Reviewed every 5 years.	Urban footprint in SEQ Region Plan intended to accommodate growth to 2031 (i.e. over 20 years). Reviewed 5 yearly. Any extension based on demand and broadacre suitability assessment.	Intent is for 15 years supply of land and a further 10 years identified. Greater Adelaide Plan 2036 (released 2009) identifies 7-8 years. Urban boundary last modified in 2007.	Draft spatial plan to 2036 and supporting sub-regional plans proposed to identify urban growth areas. Land confirmed by statutory Region Scheme zonings. Estimated region schemes holding 18-20 years supply. Reviewed irregularly at present.	Future development zonings identified via NT Planning Scheme and reviewed on an 'as needs' basis. Land release to developers by the Crown follows, with development timeframes.

Stage	New South Wales (Sydney)	Victoria (Melbourne)	Queensland (South East Queensland)	SA (Adelaide and environs)	WA (Perth and Peel)	NT (Darwin)
2 and 3 Specific Use Zoning and Structure Planning (May be a different process outside metropolitan centres)	Step 2 – For Sydney rezoning is a detailed statutory process that leads to the gazettal of an environmental planning instrument. The process is based on detailed layout planning, environmental considerations and infrastructure provision. This step may be undertaken by State and/or local government. Step 3 – Servicing – (may occur in parallel with rezoning): principally construction of trunk water and sewerage infrastructure to enable subdivision. Serviced is categorised as lead in infrastructure to the edge of the release area. This may be the responsibility of service agencies or the private sector.	Precinct structure planning undertaken by proponents/Local Government/ Growth Areas Authority with infrastructure providers. Zoning occurs at the same time.	The SEQ Regional Plan 2009-2031 identifies Development Areas within the Urban Footprint which can be delivered through local planning schemes, structure plans under the "planning partnerships" section of the Sustainable Planning Act 2009, or development applications. Planning may be initiated and led by councils, developers or the state government as appropriate.	If land is zoned urban then Development Plan amendment is lodged together with a structure plan. For rural land, structure plan and zoning proposal are to be lodged, and are to be consistent with Greater Adelaide Plan.	Local Planning Scheme zonings are required to zone land (usually Urban development) to be consistent with Region Scheme, and in specified time frame. Structure planning usually follows as separate step but some potential to apply local zonings via structure plan.	Government may require developer to undertake structure planning or more recently will transfer land with structure plan in place.
4 Development /sub division approval	Step 4 – Subdivision – approval of development application by local government, construction of civil works, and title registration.	Development approval issued by Local Government after referral to servicing etc agencies	Development approval issued by Local Government after referral to servicing etc agencies	Development approval issued by Local Government after referral to servicing etc agencies	Subdivision approval issued by State Government after referral to servicing etc agencies	Development approval issued by Territory Government after referral to servicing etc agencies.

Stage	New South Wales (Sydney)	Victoria (Melbourne)	Queensland (South East Queensland)	SA (Adelaide and environs)	WA (Perth and Peel)	NT (Darwin)
5 Civil Works and Issue of Title	Step 5 - Sale of vacant land – marketing of land to builders and home purchasers.	Construction of subdivision and installation of infrastructure services. Titles issued on satisfactory completion of works.	Construction of subdivision and installation of infrastructure services. Titles issued on satisfactory completion of works. Grouped dwelling titles separate from single residential titles	Construction of subdivision and installation of infrastructure services. Titles issued on satisfactory completion of works. Grouped dwelling titles separate from single residential titles	Construction of subdivision and installation of infrastructure services. Titles issued on satisfactory completion of works. Grouped dwelling titles separate from single residential titles	Construction of subdivision and installation of infrastructure services. Titles issued on satisfactory completion of works. Future development zonings must be normalised (to residential or other specific zonings) before titles are issued. Grouped dwelling titles separate from single residential titles
6 Building Approval and Completion		ABS dwelling approvals based on 4 classes in Functional Building Classification (FBC).	ABS dwelling approvals based on 4 classes in FBC.	ABS dwelling approvals based on 4 classes in FBC.	ABS dwelling approvals based on 4 classes in FBC.	ABS dwelling approvals based on 4 classes in FBC.

Note: Some Urban Growth Boundaries may extend beyond current city metropolitan boundaries.

The range of data collected for the 2010 report

The four major areas of land/dwelling supply data provided by DSG members were:

A. Land/dwelling supply data for greenfield areas

B: Average time taken to reach each stage of the greenfield supply pipeline

C. Land/dwelling supply data for infill areas

D. Forecasts of expected dwelling yields from land supply (greenfield and infill).

These data areas are outlined below. More detailed information will be provided in the '*National Housing Supply Council Land and Dwelling Supply Pipeline Data Collection Guide, 2009'* available on the Council's website (**www.nhsc.org.au**).

A. Land/dwelling supply data for greenfield areas

Table A7: Key data areas of the land/dwelling supply pipeline for greenfield areas

Supply pipeline stage		National data items	
1.	Future Urban	1a	Amount of land identified for future urban use
		1b	Potential dwelling yield from land identified for future urban use
		1c	Estimates of number of years supply of land
2/3	Specific Use Zoning/Structure planning	2	Number of potential lots (and /or dwellings) with specific use zoning based and structure planning
4.	Development/subdivision approval	3	Lots/ Potential dwellings approved for residential use
5.	Civil works & issue of title	4	Total residential dwelling titles
6.	Building approval	5	Building applications approved.

Land in the supply pipeline at 30 June is only counted once against the current stage it has reached. The data provided at each stage exclude land at other stages in the pipeline. For example, land designated for development (Stage 4) excludes land that is included in structure planning (Stage 3).

Table A8 indicates, in general terms, the initiators of activity in the land/dwelling supply pipeline for greenfield areas. The initiators of each stage in the process vary. Some stages are initiated by the relevant regulatory agency- others by the landowner/developer. Responsibility varies between states and territories and more information can be obtained from the planning agency websites shown in Table A5.

Table A8: Initiators of activity in the land/dwelling supply pipeline for greenfield areas

Supply pipeline stage	Initiator (in general terms – may differ for each state)
1. Future Urban	State as regulatory agency
2. Specific Use Zoning	Studies and initiation by landowner /developer
3. Structure planning	Initiation by landowner /developer
4. Development / subdivision approval	Subject to initiation by landowner /developer
5. Civil works & issue of title	Initiation by landowner /developer
6. Building approval	Initiation by landowner /developer

B: Average time taken to reach each stage of the greenfield supply pipeline

These data measure the average time taken for new greenfield land to be developed. They measure the average time taken to reach each stage of the pipeline identified in Table A7.

C. Land/dwelling supply data for infill areas

The Council has not developed a pipeline for infill development. This work will be progressed for the next report. The greenfield pipeline is not relevant for infill due to the range of different starting points for infill activity.

These data report infill activity in terms of sites where building approval has been issued (equivalent to stage 6 of the greenfield pipeline) but where building has not yet commenced. This is collected for the following categories:

- large projects (50+ dwellings)
- medium projects (11- 49 dwellings)
- small projects (10 or less dwellings).

D. Forecasts of expected dwelling yields from land supply (greenfield and infill)

In the 2008 report, the Council produced a national level estimate based on data provided for some jurisdictions to estimate future potential conversion of land to housing in capital cities. For the 2010 report, capital city level forecasts provided by the relevant state or territory have been published in Table 3.10. The approach provides expected dwelling supply in terms of the number of future dwelling completions from current land and building supply pipeline activity. This approach to projecting expected dwelling yields from land supply is based on on previous and current conversion rates rather than a 'land potential' measure (such as assuming the number of dwellings identified in the initial planning documentation at Stage 2/3 are all achieved). The timing of future dwelling supply is provided for the following categories:

- 2 years or less refers to the period from 1 July 2009 to 30 June 2011
- More than 2 to 5 years refers to the period from 1 July 2011 to 30 June 2014
- More than 5 to 10 years refers to the period from 1 July 2014 to 30 June 2019
- More than 10 years refers to the period from 1 July 2019.

While estimates have been produced across these time periods, the Council stresses that projections beyond two years are speculative given uncertainty about the actual conversion of land to marketable lots as well as potential dwelling yield. In addition, most jurisdictions report difficulty in providing data on redevelopment areas with an individual dwelling yield of less than 10 net additional dwellings. Note that for each jurisdiction estimated dwelling yields and hectares of land have been rounded to the nearest 100.

Jurisdiction specific land and dwelling supply data notes, definitions and methodological issues

The following notes on land and dwelling supply pipeline information are based on information provided by the DSG members.

Notes on New South Wales (NSW) data

A. Land / Dwelling supply data for greenfield areas

1. Sydney Region Pattern of Growth: Each of the major Australian capital cities has a different pattern of development and a different reliance on fringe growth. In the Sydney region, greenfields land are not the main source of dwelling supply as most new houses are built in established areas (historically about 70 per cent).
2. Land Release Program - The NSW Government has had a land release program since the 1968 Sydney Region Outline Plan which identified major growth corridors. In the 1970s, there was the staged release of land. In 1981, the former Urban Development Program (UDP) was established. In 1997, this was expanded to monitor growth in the existing urban areas. In 2001, the UDP and the Metropolitan Urban Development Program (MUDP) were combined into the MDP, which also examines dwelling potential in existing urban areas. Data availability reflects the systems that have been created over that period of time.
3. Key Steps in the MDP land supply process for Sydney:

    a) **Structure Planning** – Structure planning for major growth corridors/sectors may occur prior to the Government decision to release a fringe area for urban uses. Smaller areas may be included on the MDP by Government following consideration of the Metropolitan Strategy Sustainability Criteria.

    b) **Step 1 – Release** – decision by State Government to release a fringe area for urban expansion. The decision is based upon multiple factors including meeting State Government benchmarks for different stages in the land supply process and servicing requirements. Only when land is released is it included in the Metropolitan Development Program (MDP). There are currently 79 release areas included on the MDP.

    c) **Step 2 – Rezoning** – detailed statutory process that leads to the gazettal of an environmental planning instrument. The process is based on detailed layout planning, environmental considerations and infrastructure provision. This step may be undertaken by State and/or local government.

    d) **Step 3 – Servicing** – (may occur in parallel with rezoning): principally construction of trunk water and sewerage infrastructure is measured as one of the important infrastructure steps to enable subdivision. Serviced is categorised as lead in infrastructure to the edge of the release area. This may be the responsibility of service agencies or the private sector.

    e) **Step 4** – **Subdivision** – approval of development application by local government, construction of civil works, and title registration.

f) **Step 5** – **Sale of vacant land** – marketing of land to builders and home purchasers.

4. Government Role in Land Supply pipeline – The NSW Government's role in these steps is in ensuring adequate land supply, the timely provision of infrastructure and efficient operation of the planning system. The latter steps are primarily driven by developer readiness or willingness to proceed which is influenced by market factors including demand. The NSW Government has primary responsibility for the first three steps of the land supply process. Step 4 is the responsibility of local councils and the development industry. Step 5 is the responsibility of the development industry. The NSW Government has established benchmarks for the first three key steps where it has the greatest level of responsibility.

5. Infrastructure – NSW notes that the stages adopted by the NHSC relate only to land use infrastructure and do not include broader infrastructure provision. Economic infrastructure such as aviation and rail could be seen as a missing critical element that can also determine land availability for development.

6. Comparability – NSW notes that each State and capital city has a different pattern of growth, land use planning system and governance arrangements. There is potential for inaccurate reporting of relative performance of states and territories because steps in the process are not comparable. This applies especially to step 2/3 Zoned land.

7. Years of supply - Some consistency between states and territories is needed on how estimated years of supply are calculated. It may be more appropriate to calculate estimated years supply for those stages where state government have primary responsibility (stages 1 and 2 combined) as this would more accurately measure buffer land stocks available to the development industry to subsequently subdivide and build on.

B. Land / Dwelling supply – average time taken to reach each stage in land supply pipeline

1. Historically, the time taken to move through the supply stages has varied enormously depending on size, location, ownership pattern, infrastructure costs, market conditions and multiple other factors. Many of these factors are outside the control of the planning system.

2. The NSW Government has established benchmarks for each of the greenfield land supply steps for which it has primary responsibility (release, rezoning and servicing) to ensure there are adequate buffer stocks in the pipeline for Sydney fringe development. The benchmarks are:

    a. 15 years supply of total MDP stocks (Step 1 of the MDP land supply process) – this equates to land with potential for 112,500 dwellings assuming 7,500 dwellings are produced a year

    b. 8 years supply of zoned land stocks (Step 2 of the MDP land supply process) – this equates to land with potential for 60,000 dwellings assuming 7,500 dwellings are produced a year

    c. 55,000 zoned and serviced lots (Step 3 of the MDP land supply process).

3. The role of rapid rezoning in Sydney – NSW advises that the North West and South West Growth Centres combined with land already released through the MDP are sufficient to cater for Sydney's greenfield housing needs in the medium to long term. Rezoning in the Growth Centres is managed by State Government and follows a precinct planning model. Extensive background studies are conducted to identify issues and an indicative layout plan is used to test the feasibility of development scenarios with state agencies. Local planning documents, such as development control plans and local development contributions plans are prepared at the same time. Prior to the Growth Centre planning process, property owners could wait seven to ten years before land would be rezoned. Oran Park and Turner Road were rezoned in just 16 months. North Kellyville was rezoned within 2 years.

4. Development Application (DA) monitoring – Each year the Department of Planning monitors the performance of all 152 councils in NSW in relation to the time taken to process applications (Development Applications, modifications to consents and complying development certificates). Local Development Performance Monitoring: 2007-08, published in November 2008 identifies:

    a. Complying development – 11 per cent of development matters are dealt with as complying development in 10 days or less

    b. Development Applications – The average time taken by councils to process DAs is 74 days gross (47 days net)

    c. Dwelling Development Applications – The average time taken for new single dwelling DAs was 75 days gross.

5. NSW Planning changes: – the NSW Government over the past four years has been progressively implementing significant changes aimed at reducing the time and cost associated with development including:

    a. Reduced developer contributions – The NSW Government has introduced a range of infrastructure measures including:

        - cutting state infrastructure charges in the SW and NW growth centres from $23,000 to around $11,000 per lot until June 2011
        - abolition of water levies payable to Sydney Water Corporation and Hunter Water saving up to $15,000 per lot
        - allowing the deferral of payment of state infrastructure levies to the point of sale of a new residential lot
        - placing a $20,000 threshold on local infrastructure contributions applying to residential dwellings and residential subdivision unless a higher amount is approved by the Planning Minister.

    b. Faster approvals for complying dwellings – The NSW Housing Code became operational on 27 February 2009. It applies across the state and enables new single and two storey detached houses on lots less than 450 square metres to be approved by an accredited surveyor or council within 10 days if they meet set standards. The code covers some 80 per cent of all project homes available on the market. As a result, the proportion of homes approved in 10 days or less is expected to increase significantly in coming years.

    c. Faster approvals for dwellings requiring a DA – For those dwellings that require a DA because they do not meet the NSW Housing Code, applications can now be processed faster because over 1,300 concurrences or referrals to state government agencies have been deleted, edited or modified.

    d. Streamlined local plan making – A new streamlined process for the preparation of local plans has been introduced to reduce the time it takes to approve plans by 50 percent. The process includes a 'gateway' to provide an early indication of viability of a proposal and an assessment process tailored to the complexity of the matter.

C. Supply of land / dwellings – infill

NSW data in Table A3.17 measure Development Application (DA) activity. Caution should be exercised in using these results as an indicator of land supply. DA approvals and completions only indicate developer readiness to proceed or active development sites. NSW notes further work needs to be done to highlight the approach adopted by each state to understanding dwelling potential. The approach adopted to measure dwelling potential for the Sydney region is outlined below.

1. Dwelling Targets – Dwelling targets to satisfy housing needs to 2031 have been established for subregions and local government areas in the Sydney region through the Metropolitan Strategy (2005), Central Coast Strategy (2008) and draft Subregional Strategies (2008). Most councils are now preparing Principal Local Environmental Plans (LEPs) to identify the locations to achieve the dwelling targets. The LEPs for 23 Councils have been prioritised for completion by 2011.

2. Measuring dwelling potential in the existing urban areas is difficult. The MDPs approach has involved three steps: initial indicative dwelling capacity studies which pointed to the importance of supply from the higher density locations; secondly establishing the major sites database to measure potential from the key redevelopment locations and thirdly using capacity and economic feasibility models to review council's Principal LEPs which are implementing the Metropolitan Strategy targets.

3. Major Sites Data base – The MDP Major Sites data base measures the dwelling potential from the key redevelopment locations in the Sydney Region. Generally, major sites are developments with potential greater than 50 dwellings. Sites may be large former brownfield sites or stand-alone developments. The data base includes information on over 800 sites including dwelling potential, historical production and ownership. It tracks the status of individual development sites through the various stages of development from pre DA, DA approval, construction and completion. The data are rolled forward annually as part of the MDP cycle in consultation with State agencies, councils and the development industry.

4. Development from smaller sites – MDP also includes forecasts for smaller development sites less than 50 dwellings. This is not done on an individual sites basis. The forecasts are based upon capacity in existing zones, geocoded historical dwelling completions, Collector District (CD) level dwelling approvals and trend analysis. The MDP currently has a project for geocoding all dwelling approvals.

5. Dwelling production – The MDP maintains an annual time series of geocoded dwelling completions for the Sydney Region dating back to 1997/98. Data on the split between greenfield and existing urban areas date back to 1981/82. Dwelling production is the most meaningful measure of net increase in dwelling stock. For the Sydney metropolitan area, this is based upon water connections and is obtained in pre-processed form from Sydney Water and includes data on dwelling type. In the Central Coast, this information is obtained from councils. Data are geocoded so dwelling production can be plotted at the lot level.

6. MDP Typology – For development in the established areas, the MDP reports on production by geography of Transit Nodes and Infill (land beyond the 800 metre rail/400 metre major bus or light rail stop Node catchments) as well as the Metropolitan Strategy centres hierarchy.

D. Forecast and timing of expected dwelling supply

All forecasts for NSW are for the period commencing July 2008. The forecasts provided for Sydney are based on the NSW MDP Forecast Methodology and it is important to note that MDP forecasts are based upon dwelling completions and annual consultations with the State service agencies, councils and the development industry. The following should be noted:

- Greenfield - forecasts are for MDP release areas and do not include locations that have a structure plan but have not been released. An audit is undertaken of zoned and serviced release areas which examines for every englobo parcel of land the potential, DA status and development project completion date. The forecast for other release areas is based upon the timing of zoning and servicing and take up rates based upon historical analysis, land fragmentation and ownership.
- Major infill sites - developments with potential greater than 50 dwellings. Sites may be large former brownfield sites or standalone developments. The major sites data base includes information on over 800 sites with a potential of over 125,000 dwellings. The status of individual development sites are tracked through the various stages of development from pre DA, DA approval, construction and completion.
- Smaller infill sites – less than 50 dwellings. The status of smaller infill sites is not tracked on an individual site basis. The forecasts are based upon capacity in existing zones, geocoded historical dwelling completions, CD dwelling approvals and trend analysis. The MDP currently has a project for geocoding all dwelling approvals. Minor sites are calculated based on the difference between forecast total and forecast Major Sites.

In relation to the forecasting horizon, the MDP produces ten year forecasts for greenfield and infill areas for the Sydney Region each year. The MDP does not release forecasts beyond 10 years due to increased uncertainties beyond this time.

Notes on Victorian data

Victoria notes that there are approximately 25,000 hectares of urban land under investigation for an extended Urban Growth Boundary. The results of this investigation have not been included in this report.

The following provides a guide to some of the issues and characteristics of the planning pipeline in Victoria as it has changed significantly over the last few years since the introduction of Precinct Structure Planning (PSP) processes.

Planning process and timings in Victoria Planning

1 Pre-planning stage looks at broad constraints, native vegetation etc and covers broad areas that may cover many individual Precinct Structure Plans (PSPs)

1-3 PSP (Precinct Structure Planning) process: In general, this process takes 2 to 3 years, although this depends on when the start of the process is taken to be as there is the pre-planning stage. Once work is done, PSP goes on exhibition, then a planning panel meets to approve the proposal. Planning scheme amendment – PSP approved.

4 Development subdivision plans/ Land construction: usually tales 3 to 6 months to complete. This stage can be commenced at the same time as the end of the PSP process. It can be ready on approval of the PSP.

5 Residential titles: can happen effectively immediately following lot certification

but most developments are staged so they happen in stages as the land is being sold

6 Building permit: generally takes 3 to 6 months, however, staging and owner's/developer's willingness to construct immediately will vary this up to several years. For display homes, permits are able to be issued early.

The zoning process for new greenfield land is:

- Rural land gets rezoned to UGZ (Urban Growth Zone) but rural uses are still the only allowable uses (in general - there can be exceptions for construction a display village or other uses).
- The PSP process commences - determining the uses for the land in the PSP area that is now zoned UGZ.
- A series of schedules are applied once the PSP process is completed leading to these UGZ1, UGZ2, UGZ3 etc designations. The land is still zoned UGZ but the urban uses can now be progressed.
- Construction of homes or industrial buildings commences and final zonings of Residential, Industrial and Business applied.

A. Land / Dwelling supply data for greenfield areas

For Victoria, dwelling yield is equal to lot yield for anticipated supply as Victoria assumes 1 for 1 construction. Multi-unit developments will increase the dwellings yield if they occur.

Estimated years of supply figures are not officially released Victorian Government data.

Data available are year-ending and quarter-ending 30 June. The year-ending 30 June data have been used in the report tables.

Data are from the Residential Land Bulletin.

B. Land / Dwelling supply – average time taken to reach each stage in land supply pipeline

Victoria notes that a key issue is that the time take to complete a task is different to the delay in time for a stage to be completed. Large areas of land may be ready to develop from a planning perspective but work may be delayed up to several years due to reasons including such as market forces, infrastructure timing and other projects being undertaken by particular developers.

C. Supply of land/dwellings - infill

These data are sourced from raw Building Commission data. These are estimates based on the best available data and the final numbers are broadly in line with dwelling construction numbers for Melbourne. 2008 data are not yet available.

The “Small projects” number does not include dwellings on greenfield land. If greenfield dwellings are included, the figure would be 15,869.

D. Forecasts and Timing of Expected Dwelling Supply

For Melbourne, the data are for proposed dwelling project commencements rather than completions as this better lines up with UDP data. The small project number is purely a subtraction of UDP identified projects from VIF 2008 projected demand.

Source: Urban development Program 2009 – unpublished data.

Total is anticipated demand under VIF 2008 (State population projections).

Total is anticipated demand under VIF 2008 (State population projections).

Demolitions are as projected under VIF 2008

Victoria is aware that “normal” supply in Melbourne each year results in around 12,000 Greenfield dwellings, 8,000 major redevelopment dwellings and 10,000 infill dwellings.

Notes on Queensland data

Scope and source of data

The Queensland data provided for the report are based on the boundary of South East Queensland (SEQ), as defined for the purpose of the SEQ Regional Plan 2009-2031. The Queensland Department of Infrastructure and Planning's 'existing urban area' (EUA) boundary has been used to define infill, with greenfield as the balance of the area, for the purposes of the data provided.

The EUA is a special purpose statistical area that has been created for the purpose of the SEQ Regional Plan to spatially define and measure residential infill development. It is made up of 2006 Census Collection Districts that are wholly or mostly existing urban development, but includes some areas of remnant broadhectare land.

The Queensland Government produces a report called the broadhectare study which measures future residential land supply - according to the Regional Plan Development Areas, local government planning scheme zonings and residential development approvals - on parcels greater than 2500 m^2. The dwelling yields identified in this study that are located outside the EUA have been classified as greenfield. A sub-set of the greenfield land that equates to 'future urban' has been defined using the 'local and regional development areas' of the Regional Plan. These areas are the focus for accommodating regional dwelling targets and include substantial areas effectively not yet zoned for the intended urban residential use.

In 2009 the Queensland Department of Infrastructure and Planning commenced a residential infill and redevelopment monitoring program capturing multiple dwelling development proposals within the EUA, providing the data for infill dwelling potential.

For south-east Queensland, the urban footprint in the SEQ region plan is intended to accommodate growth to 2031 (i.e. over 20 years). This plan for future urban use is reviewed every five years, with any extension being based on demand and a broadacre suitability assessment.

For Stage 2 and 3 of the supply pipeline, in December 2009, the Sustainable Planning Act 2009 and the Sustainable Planning Regulation 2009 came into effect replacing the Integrated Planning Act 1997. Qplan, Queensland's new planning and development system, shifts the focus to sustainable outcomes in order to deliver more sustainable communities across Queensland.

The South East Queensland Regional Plan 2009-2031 (SEQ Regional Plan) identifies Development Areas within the Urban Footprint which will be a key focus for accommodating regional dwelling and employment targets. Development Areas are located across the region, particularly in areas required to accommodate significant growth.

Development Areas can be delivered through local planning schemes, structure plans under the "planning partnerships" section of the Sustainable Planning Act 2009, or development applications. The planning for Development Areas aims to deal with strategic issues and state interests up front. Planning may be initiated and led by councils, developers or the state government as appropriate.

The SEQ Regional Plan also proposes to establish an annual Growth Management Program to monitor land supply and inform the delivery of development in existing urban areas and broadhectare areas consistent with the intentions of the regional plan.

For Stage 4 of the supply pipeline, involving development and subdivision approval, the development approval is issued by local government after referral to servicing agencies.

Stage 5 of the supply pipeline primarily involves the construction of the subdivision and installation of infrastructure services. Titles are issued on satisfactory completion of works. For SEQ grouped dwelling titles are issued separately from single residential titles.

The Queensland Department of Infrastructure and Planning's urban development monitoring programs were the main source for data reported in parts A and D. Information to support the time period estimates in Part B was obtained from a number of SEQ local governments and the Urban Development Institute of Australia (Queensland) (UDIA).

Part A: Supply of land/dwellings - stages in the greenfield land supply pipeline

The 'estimated dwelling yield' and 'potential lot' figures are the same because the figures reflect expected dwelling yields over the long term (20+ years) and each potential dwelling is treated as a lot whether it is a detached house or a unit in a multiple dwelling.

Stage 1: These data are derived from the expected dwelling yields identified in the SEQ broadhectare studies 5 (for 2008) and 6 (for 2009), where the land is located within the SEQ Regional Plan 2009-2031 'local and regional development areas'. These studies were released in around 2004 and 2009, respectively. The following should be noted regarding the 2008 and 2009 figures:

- the coverage of Study 5 used for the 2008 figures is smaller and subdivisional activity for the 4-year period after its release has been removed from the results
- Study 6 includes significant additional areas allocated to urban development between 2004 and 2009
- the Study 5 figures used for 2008 are theoretical dwelling yields, whereas the Study 6 figures used for 2009 are expected dwelling yields which adjust theoretical yields to allow for an assumed probability of development by 2031. The assumed probability of development varies by local government area based on assumed dwelling density, approval status, parcel size and existing use.

Stage 2/3: These figures represent expected dwelling yields from the respective broadhectare studies where located outside the EUA, minus the dwelling yields identified in 1 above (areas taken as not yet zoned for urban residential use) and 4 below (areas approved for subdivision which have not yet received survey plan endorsement).

Stage 4: These figures identify those lots located outside the EUA that had received subdivision approval but not yet received survey plan endorsement at the respective dates. The latter step is required for and precedes the actual issue or registration of title, usually by a number of weeks, but is a close proxy for the requested measurement.

Stage 5: No data are reported here because the information is not available at an individual parcel level and estimates based on total lot registrations and total house building approvals for a three-year period resulted in a small positive figure for 2009 and a small negative figure for 2008. The englobo datasets are likely to be affected by a significant number of house demolitions followed by rebuilding, resulting in the small negative figure for 2008, but the extent of demolitions/rebuilds is not able to be quantified at this stage.

Stage 6: Information could not be supplied for this question as building commencements data are not available at the required geographic level.

Part B: Supply of land/dwellings – average time taken to reach each stage in the greenfield land supply pipeline

In Queensland, there are two main processes by which land can transition from being allocated as 'future urban' to being effectively 'zoned' for residential and associated uses. These include a planning scheme amendment, usually associated with the preparation of a structure plan and/or master plans, and a preliminary approval which overrides the planning scheme. The former is generally managed by the local government and the latter results from a development application initiated by a developer. These different processes, together with the varying circumstances of different localities, have resulted in a broad range of times taken for the transition, from about two to about seven years. The identified average of five years is an 'of the order of' estimate only. This is based on recent experience in three SEQ local governments and the advice of the UDIA.

The time reported is the estimated average time taken to obtain reconfiguring a lot (subdivision) approval for developments of 50 or more lots. This is the conceptual approval for the subdivision which needs to be followed by approval of the associated engineering works before the lots can be constructed and registered. This is based on the advice of five SEQ local governments and the UDIA.

Part C: Supply of land/dwellings - infill

No data have been provided for this part due to the lack of dwelling commencements data at relevant project sizes or appropriate levels of geography. ABS dwelling approvals and commencements data will be investigated as a basis for estimation at the South East Queensland regional level.

Part D. Forecasts and timing of expected dwelling supply

1. The figures reported, based on the SEQ Broadhectare Study 6 as updated for lot registrations to June 2009, are the expected long term dwelling yield from lots that are expected to be registered in the identified periods (for outside the EUA, i.e. greenfield areas, only). These figures would be greater than expected dwelling completions during the same periods.

2-5. These are numbers of new dwellings based on development approvals and applications for 'multiple dwellings', i.e. where there is more than one dwelling on a land parcel, as at 31 December 2008 (for inside the EUA, i.e. infill areas, only). They represent potential dwelling yields during the identified periods rather than expected dwelling completions. Some of these dwellings will have been completed prior to 1 July 2009, but other applications made between 1 January and 30 June 2009 are not included. The figures do not include potential detached houses due to data counting difficulties between relevant datasets for this dwelling type.

Notes on South Australia data

The data supplied are for the Adelaide Statistical Division except for Part A where data are provided for the Outer Adelaide Statistical Division (OASD) as well. Most of Adelaide's future urban land supply is projected to occur in the OASD and the recently released Plan for Greater Adelaide has introduced even more growth areas in this region.

South Australia does not collect commencement data from councils and has a centralised system for tracking the land division process from the proposal through to the deposited plans with the Land Titles Office.

South Australia notes that it is extremely difficult to predict supply from infill sites beyond about 5 years. The future supply estimates are based on an annual net dwelling increase of between 5500 to 6000 for metropolitan Adelaide, with a gross increase of 7000 to 8000 per annum.

South Australia has data on dwelling completions derived annually from the SA Valuation databases in addition to ABS provided data.

Amount of greenfield land (in hectares) identified as 'Future Urban' which has not yet proceeded to stages 2 or 3 below relates to deferred Urban land including land incorporated into the metropolitan boundary in the Dec. 2007 boundary changes. The number of potential lots that could be gained from this land does not account for possible reduced yields due to topographic constraints and other land use requirements (when calculating years of supply the unpredictability of yield from private broadacre land should be taken into account).

Notes on Western Australian data

In relation to Stage 6: Building Approval and Completion, the DSG representative from WA has advised that semi-detached dwellings are likely to have been undercounted in the ABS Census.

Construction Industry employment data

The data in this section relate to Department of Education, Employment and Workplace Relations employment data and the following notes should be borne in mind in interpreting the results:

- It is important to note that there are likely to be many more people employed in residential building activity than are coded to employment in the ANZSIC Industry Group of Residential Building Construction (three digit code 301) data. The majority of people employed in Construction are coded to one of the three Industry Groups of Building Installation Services, Building Completion Services and Building Structure Services (Figure 3.3) and more than half of these people would be employed at any one time in the relatively labour-intensive residential building sector[90]. DEEWR estimates that more than 40 per cent of all construction workers are engaged in residential building activity.
- The DEEWR Trend data as used in Figure 3.4 are sourced from the ABS quarterly Labour Force Survey (LFS) 'employment by industry' series from 1984 and then subjected to independent seasonal adjustment and trending within DEEWR. The ABS only publishes seasonally adjusted and trended employment data at the Industry Division (ie one digit) level and there is close agreement at this level between the 'official' ABS series and those derived from the DEEWR process. Generally speaking, industries with smaller numbers of workers will be subject to greater LFS relative sampling errors and will produce more irregular original series. Series that are too irregular will generate spurious results in the seasonal adjustment process. DEEWR is confident of the basic soundness of the method for the construction industry.
- Figure 3.5 methodology involves DEEWR annual projections of industry employment over a five year projection period at the one, two and three digit industry level. These are based in part on economic models, especially Access Economics and the Monash Model developed by the Centre for Policy Studies at Monash University, but there are many other inputs to the process, including reconciling with past projections, actual recent industry employment growth, industry-specific forward indicators of activity and employment, and prospective industry developments. A degree of risk is always attached to employment projections, and DEEWR projections are constrained at aggregate level by official Treasury forecasts. The projections used in Figure 3.5 were prepared early in 2009 at a time when Treasury was forecasting an overall employment loss over the coming year.

90 Source: DEEWR, pers. comm. 4 February 2010.

Gap estimates and projections

Calculating the gap based on an assumed equilibrium at 2001

This method assumes equilibrium at 30 June 2001. The gap is determined each year thereafter by adding the number of households that would be formed under household size assumptions from the ABS and McDonald and Temple (underlying demand) and subtracting the number of dwellings available to meet underlying demand (supply) (Table A9).

Table A9: Change in the gap since 2001 based on the difference between underlying demand and supply adjusted for demolitions and unoccupied dwellings ('000 dwellings)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	6.6	1.3	11.2	1.9	1.7	0.9	-0.3	0.0	23.4
2003	5.7	-2.9	21.2	2.5	2.8	1.7	-0.4	-0.2	30.2
2004	5.9	-8.3	26.4	2.4	4.3	2.0	-0.2	-0.5	32.0
2005	6.7	-15.2	28.9	1.6	5.7	2.0	0.2	-0.3	29.6
2006	14.1	-21.4	32.3	0.7	5.2	1.9	0.6	-0.6	32.8
2007	20.9	-8.0	38.8	-0.3	9.9	0.9	4.2	0.1	66.5
2008	27.0	6.3	41.7	-2.2	17.9	0.2	8.9	-0.2	99.5
2009	57.6	22.7	56.1	0.1	30.2	1.0	10.1	0.5	178.4

Source: National Housing Supply Council projections based on McDonald-Temple medium household growth scenario; National Housing Supply Council projections based on trends in dwelling completions.

The derivation of underlying demand and dwelling supply are:

Step 1 Establish population estimates

Step 2 Establish conversions of people to households

Step 3 Produce annual household estimates assume 2001 = equilibrium

Step 4 Produce underlying demand

Step 5 Produce annual dwelling production estimates – adjust gross for demolitions and for selected categories of vacancy eg holiday homes.

Step 6 Derive gap estimates

Underlying demand, in households, is the actual estimated resident population (ERP) divided by household size estimates for each year. The household size estimates are based on:

- ERP for 2001 to 2006
- McDonald–Temple projections for 2008 and 2009
- Interpolation of the two for 2007.

Table A10 shows details of household size in states and territories and Table A10 shows the consequent change in underlying demand.

Table A10: Number of persons per household ('000 households)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2001	2.68	2.64	2.62	2.47	2.63	2.46	3.15	2.65	2.64
2002	2.66	2.63	2.61	2.45	2.60	2.44	3.15	2.64	2.62
2003	2.64	2.61	2.60	2.44	2.58	2.44	3.13	2.62	2.60
2004	2.61	2.60	2.59	2.43	2.57	2.43	3.12	2.59	2.59
2005	2.59	2.59	2.59	2.42	2.56	2.42	3.13	2.57	2.58
2006	2.58	2.59	2.58	2.42	2.55	2.42	3.13	2.56	2.57
2007	2.58	2.58	2.58	2.42	2.54	2.42	2.99	2.56	2.56
2008	2.58	2.57	2.58	2.42	2.53	2.42	2.85	2.56	2.56
2009	2.57	2.56	2.57	2.41	2.52	2.41	2.83	2.54	2.55

Source: Australian Bureau of Statistics, *Household and Family Projections, 2001 to 2026*, cat. no. 3236.0, ABS, Canberra, 2004.

Table A11: Change in underlying demand ('000 households)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2002	37.1	33.5	40.2	7.4	15.5	2.1	0.5	1.8	138.1
2003	36.5	33.3	41.6	7.3	15.9	2.3	0.6	2.1	139.7
2004	37.5	31.7	40.3	7.2	16.4	2.2	0.9	2.1	138.3
2005	38.7	29.9	39.0	7.1	17.1	2.2	1.2	2.0	137.1
2006	38.5	29.9	39.3	7.0	17.2	2.2	1.2	2.0	137.4
2007	32.7	47.0	42.4	6.6	24.8	1.1	4.6	2.9	162.1
2008	28.9	46.6	39.7	6.4	26.8	1.6	5.4	1.9	157.4
2009	54.2	52.3	50.1	10.8	30.1	3.2	2.2	3.0	205.9

Source: National Housing Supply Council estimates of underlying demand for dwellings since June 2001.

Gross dwelling supply is based on dwelling completions from the ABS for each state (Table A12). This is adjusted by the state/territory proxy demolition rate to give completions net of demolitions (Table A13).

Some dwellings are assumed to be left unoccupied. The proportion unoccupied is the average unoccupied rate from 1996, 2001 and 2006 censuses, discounted by the proportion of unoccupied dwellings for which the reason given in the 1976 and 1986 Censuses was 'Usual resident absent' prorated to exclude 'Not stated' and 'Other' (Table A13). This gives an indication of the proportion of dwellings that would not be available to meet underlying demand, such as those required for turnover in the market and second or holiday homes.

After adjustment for demolitions and unoccupied dwellings, around 87 per cent of dwellings constructed in 2009 are available to meet underlying demand (Table A14).

Table A12: Supply growth ('000 dwellings)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2002	35.2	36.9	31.1	7.4	17.0	1.4	1.0	1.9	131.9
2003	43.3	43.1	33.9	8.9	18.3	1.9	1.0	2.4	152.8
2004	43.0	42.5	37.6	9.7	18.4	2.2	0.9	2.6	156.9
2005	43.7	42.1	39.3	10.5	19.3	2.6	1.0	2.0	160.6
2006	35.9	41.5	38.7	10.7	21.7	2.7	1.1	2.4	154.7
2007	29.9	38.6	38.6	10.1	24.8	2.5	1.4	2.4	148.2
2008	26.5	37.0	39.7	11.2	23.2	2.7	0.9	2.3	143.5
2009	27.2	41.1	38.4	11.2	22.0	2.8	1.3	2.5	146.4

Source: National Housing Supply Council projections of underlying demand; National Housing Supply Council projections of dwelling completions

Table A13: Supply growth, net of demolitions ('000 dwellings)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2002	32.3	34.3	30.6	5.9	14.6	1.3	0.8	1.8	121.6
2003	39.7	40.0	33.4	7.2	15.6	1.8	0.8	2.4	140.9
2004	39.5	39.5	37.0	7.8	15.8	2.1	0.7	2.5	144.8
2005	40.1	39.2	38.7	8.4	16.5	2.4	0.8	1.9	148.1
2006	33.0	38.6	38.1	8.5	18.6	2.5	0.8	2.4	142.5
2007	27.4	35.8	38.0	8.1	21.3	2.3	1.1	2.3	136.3
2008	24.3	34.4	39.1	9.0	19.9	2.6	0.7	2.2	132.1
2009	25.0	38.2	37.8	9.0	18.8	2.6	1.0	2.4	134.8

Source: National Housing Supply Council projections of underlying demand; National Housing Supply Council projections of dwelling completions net of demolitions

Table A14: Adjustment for unoccupied dwellings where the reason unoccupied was not 'Usual resident absent' (per cent)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
Unoccupied	9.1	10.0	9.0	9.9	10.2	12.9	8.4	6.3	9.5
Resident absent	38.4	37.0	38.1	35.1	48.2	30.1	36.7	53.6	38.4
Unoccupied (adjusted)	5.6	6.3	5.6	6.4	5.3	9.0	5.3	2.9	5.9
Occupied (adjusted)	94.4	93.7	94.4	93.6	94.7	91.0	94.7	97.1	94.1

Source: Derived from Australian Bureau of Statistics, 2006 Census Tables, 'Dwelling structure by occupied/ unoccupied dwellings', 1996, 2001, 2006, cat. no. 2068.0, ABS, Canberra, 2007; Australian Bureau of Statistics, 1976 Census, 'Table 61: Unoccupied private dwellings by reason unoccupied (section of state)', cat. no. 2104.0, Australian Bureau of Statistics, Canberra, 1979; ABS, 1986 Census, 'Table C80: Reason private dwelling unoccupied by section of state: unoccupied private dwellings', cat. no. 2102.0, ABS, Canberra, 1988.

Table A15: Supply growth, net of demolitions, with allowance for unoccupied dwellings excluding 'Usual resident absent' ('000 dwellings)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
2002	30.5	32.2	28.9	5.5	13.8	1.2	0.8	1.8	114.7
2003	37.5	37.6	31.6	6.7	14.8	1.6	0.8	2.3	132.9
2004	37.3	37.1	35.0	7.2	14.9	1.9	0.7	2.4	136.5
2005	37.9	36.8	36.5	7.8	15.6	2.2	0.8	1.8	139.5
2006	31.1	36.2	35.9	8.0	17.6	2.3	0.8	2.3	134.2
2007	25.9	33.6	35.9	7.6	20.1	2.1	1.0	2.2	128.4
2008	22.9	32.3	36.9	8.4	18.8	2.3	0.7	2.2	124.4
2009	23.6	35.9	35.7	8.4	17.8	2.3	1.0	2.3	127.1

Source: National Housing Supply Council estimates.

Adjusting supply for stock vacant on a long term basis

Unoccupied dwellings were divided into 'Usual Resident absent' and 'Other'. The usual resident absent represented the proportion of dwellings that while vacant on Census night could be considered to be usually occupied. The 'Other' group expressed as a proportion represented the proportion of stock that could be considered vacant on a long term basis. This rate was then applied to the current production of dwellings to adjust the number to represent that amount of new production that would be occupied by a usual resident household.

This rate was calculated based on the average rate of unoccupied and occupied dwellings from the 1996, 2001 and 2006 Censuses adjusted for the per cent of unoccupied in 1976 and 1986 Censuses that were identified as "Resident absent". The 'Resident absent' dwellings were attributed to occupied dwellings with the remainder representing the overall rate of dwellings that are at a point in time unoccupied with no usual resident absent.

Table A16: Data adjustments used in gap calculation

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
Total: occupied									
1996	2,174,917	1,591,657	1,204,072	555,834	629,303	175,197	57,435	106,686	6,496,072
2001	2,343,677	1,731,343	1,355,613	584,042	695,649	181,172	65,057	114,842	7,072,202
2006	2,470,453	1,869,384	1,508,522	609,911	757,989	189,066	67,162	122,901	7,596,185
Total: unoccupied									
1996	212,908	177,063	121,487	61,374	68,995	25,927	3,514	7,697	679,165
2001	227,863	182,868	127,299	61,902	77,129	26,874	6,919	6,910	717,877
2006	258,268	215,729	152,226	69,751	91,017	27,680	7,031	8,474	830,374
Per cent unoccupied									
Total	9.1%	10.0%	9.0%	9.9%	10.2%	12.9%	8.4%	6.3%	9.5%
Per cent of unoccupied in 1976 and 1986 that were "Resident absent" prorated to "Other" plus "Not stated"									
	38.4%	37.0%	38.1%	35.1%	48.2%	30.1%	36.7%	53.6%	38.4%
Per cent unoccupied discounted by "Usual resident absent" prorated to "Other" plus "Not stated"									
Total	5.6%	6.3%	5.6%	6.4%	5.3%	9.0%	5.3%	2.9%	5.9%

Source: Australian Bureau of Statistics, *Census Tables, 2007,* Dwelling structure by occupied/unoccupied dwellings, 1996, 2001, 2006. Unoccupied - reason, time series, state 1976-1986; based on 1976 and 1986 Census, cat. no. 2068.0, ABS, Canberra, 2007.

Updating the Dwelling Gap method used in the 2008 report

The method adopted in the 2008 report estimated an initial gap of 85,000 dwellings in 2008, and then added the difference between underlying demand and dwelling supply in subsequent years.

Table A17: Estimated dwelling gap, June 2009 states and territories (rounded to nearest '000)

	NSW	Vic.	Qld.	SA	WA	Tas.	NT	ACT	Australia
Initial gap estimated for 2008									
Homeless persons – sleeping rough by state and territory 2006									
	2,100	1,331	3,003	517	1,422	222	1,056	48	9,700
Homeless persons – staying with friends or relatives by state and territory 2006									
	8,797	5,932	10,543	2,942	6,347	1,007	1,917	515	38,000
Homeless persons – marginal resident of caravan parks by state and territory 2006									
	3,792	2,072	4,744	556	1,482	120	203	31	13,000
Vacancy rate									
	11,782	8,956	3,238	1,908	343	216	298	260	27,000
Subtotal	26,000	18,000	21,000	6,000	9,000	1,000	3,000	1,000	85,000
Growth in initial gap estimate: 2009									
2009 increase in demand	54,200	52,300	50,100	10,800	30,100	3,200	2,200	3,000	205,900
2009 increase in supply	23,600	35,900	35,700	8,400	17,800	2,300	1,000	2,300	127,100
Growth in initial gap	30,600	16,400	14,400	2,300	12,300	800	1,200	700	78,900
Estimated gap	56,600	34,400	35,400	8,300	21,300	1,800	4,200	1,700	163,900

Source: National Housing Supply Council estimates.

Changes in the 2010 report from the 2008 report due to different data sources

For key indicators 5 and 6, data are sourced from the 2007-08 ABS Survey of Income and Housing for the 2010 report whereas the numbers for the 2008 report were derived from the 2006 Census. Due to the different methodology and definitions used by the ABS to produce the data, the two sets of numbers are not comparable.

Also there is a difference in the methodology for key indicator 6. In the 2008 report, dwellings were considered affordable and available if they were not occupied by a household in a higher income decile. In the 2010 report, dwellings are considered affordable and available if they are occupied by a lower-income household paying less than 30 per cent of their gross income in rent. This latter methodology is closer to that used by the United States Department of Housing and Urban Development.

Major data limitations

The major data limitations identified in producing the 2010 report are outlined in Table A18.

Table A18: Major data limitations identified in producing the 2010 report

Data area
Demand projections
Issue: Projections relate only to underlying demand.
Approach used: The projections used in the report do not attempt to allow for non-demographic factors that contribute to effective demand.
Dwelling supply data
Issue: There are no official data on the annual number of demolitions.
Approach used: The Council's methodology was based on estimates using census dwelling counts and dwelling completions data supplemented by Data Sub-Group data where available.
Dwelling supply data
Issue: There are no national data that separately identify current production of infill and greenfield land and dwellings.
Approach used: The Council was unable to provide nationally consistent data on infill and greenfield supply activity.
Demand–supply gap definition
Issue: There is no standard methodology for measuring the gap between supply and demand.
Approach: Two methodologies are described in Chapter 4 and other approaches cited may produce different estimates of a gap.

Glossary and abbreviations

Glossary

Australian Bureau of Statistics (ABS)	The ABS provides statistics on a wide range of economic, industry, environment and energy, people and regional matters, covering government, business and the community in general.
affordable housing	Housing that is affordable for households on low to moderate incomes, when housing costs are low enough to enable the household to meet other basic long-term living costs. For example, housing costs should be less than 30 per cent of household income for occupants in the bottom 40 per cent of household incomes.
affordability index	Compiled by the Commonwealth Bank and the Housing Industry Association, the index relates the monthly loan repayment on a typical 25-year mortgage loan covering 80 per cent of the cost of a dwelling of median price paid by first home buyers, to household income.
average household size	The average number of people per household in any given area.
betterment levies	A charge that recognises the uplift in land values created by the scope of the development permitted on a particular site.
broadhectare sites	See *greenfield sites*.
brownfield sites	Development sites typically surrounded by existing built-up areas.
census	The Census of Population and Housing carried out by the Australian Bureau of Statistics. It aims to accurately measure the number of people in Australia on census night, and to gather information on their key characteristics and the dwellings in which they live. Census 2006 is the most recent Australian census.
collection district	The smallest geographical area defined by the ABS, used for the collection of census information. In urban areas, there is an average of 225 dwellings in each collection district. In rural areas, the numbers of dwellings per collection district declines as population densities decrease. Collection districts are defined for each census and are only current at census time. They cover, in aggregate, the whole of Australia without gaps or overlaps.
Commonwealth Rent Assistance (CRA)	A non-taxable Commonwealth Government supplementary payment added on to the benefit or family payment of people who rent in the private rental market above applicable rent thresholds.
Commonwealth State Housing Agreement (CSHA)	A multilateral agreement between the Commonwealth Government and each state and territory. It was replaced by the National Affordable Housing Agreement (NAHA) in January 2009.
community housing	Housing that is managed and sometimes owned by a not-for-profit community organisation.

Consumer Price Index (CPI)	An Australian Bureau of Statistics measure of price change based on a set basket of goods and services.
Council	See *National Housing Supply Council*.
Council of Australian Governments (COAG)	The peak intergovernmental forum in Australia, comprising the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association. COAG's role is to initiate, develop and monitor the implementation of policy reforms that are of national significance and require cooperative action by all levels of government.
crisis accommodation	Short-term accommodation for people who are experiencing or are at risk of homelessness, including refuges and shelters.
Data Sub-Group (DSG)	A group of Commonwealth, state and territory government officials established to provide the Council with information on potential land supply and demand.
deposit gap	The amount by which the dwelling price exceeds the amount that a household can borrow.
Development Assessment Forum (DAF)	A partnership between government, industry and professional organisations to streamline development assessments and cut red tape without sacrificing the quality of the decision making. The forum's membership includes the three spheres of government (Commonwealth, state and territory, and local), the development industry and related professional associations.
developer contributions	Usually payments or in-kind works required by state and local governments to contribute toward the provision or upgrade of infrastructure.
dual occupancy	The development of two dwellings on the one allotment of land. Dual occupancy may consist of two dwellings attached to one another (attached dual occupancy) or two separate unattached dwellings (detached dual occupancy).
dwelling approval	Permission to commence construction of a building, such as a building permit issued by local government authorities and other principal certifying authorities, contract let or day labour work authorised by Commonwealth, state, semi-government and local government authorities, or major building approval in areas not subject to normal administrative approval e.g. building on remote mine sites.
dwelling commencement	A building is commenced when the first physical building activity has been performed on site in the form of materials fixed in place and/or labour expended (this includes site preparation but excludes delivery of building materials, the drawing of plans and specifications and the construction of non-building infrastructures, such as roads).
dwelling completion	A building is completed when building activity has progressed to the stage where the building can fulfil its intended function.
dwelling under construction	A dwelling is regarded as being under construction at the end of a period if it has been commenced but has not been completed, and work on it has not been abandoned.

dwelling unit	A self-contained suite of rooms, including cooking and bathing facilities, intended for long-term residential use. Units (whether self-contained or not) within buildings offering institutional care, such as hospitals, or temporary accommodation such as motels, hostels and holiday apartments, are not defined as dwelling units. The value of units of this type is included in the appropriate category of non-residential building.
effective demand	The quantity of housing that owner-occupiers, investors and renters are able and willing to buy or rent in the housing market.
efficient vacancy rate	A vacancy rate that indicates sufficient turnover of rental properties to accommodate demand from renters. It is generally acknowledged to be 3 per cent of rental stock.
equivalised disposal income	Equivalence scales devised to make adjustments to the actual incomes of households in a way that enables analysis of the relative wellbeing of households of different size and composition. For example, it would be expected that a household comprising two people would normally need more income than a one-person household if the two households are to enjoy the same standard of living.
FaHCSIA	Australian Government Department of Families, Housing, Community Services and Indigenous Affairs.
financial deregulation	A process that occurred from the mid-1980s with the aim of releasing the previous extensive controls on the financial sector in the interests of promoting competition in and flexibility of the finance industry.
first home buyer	A person or couple purchasing their first home in Australia.
First Home Owner Grant (FHOG) scheme	A Commonwealth Government scheme introduced in 2000 giving a lump-sum grant to first home buyers to offset the introduction of the Goods and Services Tax (GST).
First Home Owners Boost (FHOB)	A scheme established by the Commonwealth Government from October 2008–December 2009 providing eligible first home buyers with additional grants of up to $14,000 to purchase their first home.
flats, units or apartments	Dwellings not having their own private grounds and usually sharing a common entrance, foyer or stairwell.
greenfield sites	Former agricultural or undeveloped natural land on the periphery of towns and cities that has been rezoned for urban development.
Henry Review	A review into Australia's future tax system commissioned by the Commonwealth Government and chaired by Dr Ken Henry, Secretary to the Treasury.
homelessness	A person is homeless if he or she does not have access to adequate housing that is safe and secure. People who are homeless fall into three broad groups—that is, those who are: ■ sleeping rough (living on the streets) ■ living in temporary accommodation, such as crisis accommodation or staying with friends or relatives ■ staying in boarding houses or caravan parks with no secure lease and no private facilities.

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house	A house is a detached building primarily used for long term residential purposes. It consists of one dwelling unit. For instance, detached 'granny flats' and detached dwelling units (e.g. caretaker's residences) associated with a non-residential building are defined as houses. Also includes 'cottages', 'bungalows' and rectories.
household	The household is the basic unit of analysis in this publication. A household consists of one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling. The persons in a household may or may not be related. They must live wholly within one dwelling.
household growth scenario	A projection scenario of household growth based on (among other factors) the projected rate of net overseas migration.
household reference person	Term used by the Australian Bureau of Statistics to mean the household member whose relationship with all other members of the household identifies the composition of the household in a way that is relevant to family formation.
Housing Affordability Fund (HAF)	A Commonwealth Government scheme that commenced on 1 July 2008 investing $512 million over five years in infrastructure linked to housing developments.
Housing Industry Association (HIA)	A peak body representing the building, renovating and land development industries, covering residential house and land development and refurbishment, commercial building, manufacture and supply of building products, and financing of property development.
housing infrastructure	Infrastructure, such as the supply of safe drinking water and effective sewerage systems.
housing stress	Condition of households (in the bottom 40 per cent of income distribution) paying more than 30 per cent of their gross income on mortgage or rental repayments.
housing submarket	An independent subset of a larger housing market. For example, the rental apartment market, smaller units on the urban fringe, medium-density housing, aged persons housing and first home buyers.
income support	Commonwealth Government pensions, allowances, supplementary payments, family payments or housing assistance.
independent living	A living arrangement that maximises independence and self-determination of older people living in a community instead of in a medical facility.
infill sites	Housing development sites within existing urban areas (as opposed to *greenfield sites*).
Intergenerational Report 2010	Report undertaken by Treasury to focus on the implications of demographic change for economic growth and assess the financial implications of continuing current policies and trends over the next four decades.
interstate migration	The movement of people between states and territories.

land identified for future urban use	Greenfield land identified as “future urban” from new land release areas. New land release areas refer to the strategic identification and designation by a state or territory planning agency that a parcel of land or an area may have urban development potential. Stage 1 of the generic greenfield supply pipeline.
land with specific residential use zoning and structure planning	Rezoning of land refers to the gazettal of rezoning/ material change of use. Stage 2 of the generic greenfield supply pipeline. Development/ structure plan refers to preparation of a development plan or structure plan comprises more detailed site planning for the land. Stage 2 of the generic greenfield supply pipeline.
lot	A tract or parcel of land owned or meant to be owned by one or more owner(s). A lot has defined boundaries (or borders) which are documented, but the boundaries need not be shown on the land itself. Developers divide a large tract of land into lots to make a subdivision out of it.
lots approved for residential use	Greenfield land that has received development/subdivision approval. Stage 4 of the generic greenfield supply pipeline. Land subdivision refers to statutory subdivision and development approval In most states and territories. Statutory development/subdivision approvals is the responsibility of the relevant local authority which responds to developer-initiated applications generally on a stage-by-stage basis. These approvals usually relate to road layouts, lot sizes and dimensions and sometimes streetscapes and house designs where integrated housing projects are being developed.
low-income household	Households with income in the bottom 20 per cent of all household income distribution.
lower income household	Households with income in the bottom 40 per cent of all household income distribution.
medium density housing	Medium density housing is a term used to describe residential developments that are at higher densities than standard low-density, (or ‘broadhectare’) suburban subdivisions, but not so high that they might be regarded as high density housing. It is generally defined as more than one dwelling on an ordinary house block, or any form of attached housing such as townhouses or apartments.
migration	The movement of people from one area to another. This movement may take place within a city or region, between different states (interstate migration), or between different countries (overseas migration).
multi-unit development	Development that involves building three or more residential buildings on a single lot.
National Affordable Housing Agreement (NAHA)	The National Affordable Housing Agreement replaced the Commonwealth State Housing Agreement and the Supported Accommodation Assistance Program Agreement in 2009. The NAHA encompasses housing and homelessness assistance provided at all levels of government (Commonwealth, state and territory, and local).

National Housing Supply Council (NHSC)	The National Housing Supply Council was appointed by the Treasurer and the Minister for Housing and announced by the Prime Minister in May 2008. The Council provides projections, advice and analysis of trends in demand and land availability to measure and assess the supply of land and housing and its relationship with demand to assist the government in assessing adequacy of supply and future needs for up to 20 years.
National Rental Affordability Scheme (NRAS)	A Commonwealth Government scheme that commenced on 1 July 2008, providing annual incentives to institutional investors and other eligible bodies for 10 years to create 50,000 new affordable rental properties rented to low-income and moderate-income families at 20 per cent below market rents.
negative gearing	A taxation arrangement applicable when costs exceed investment income, under which the loss may be deducted from other taxable income.
net overseas migration	A figure calculated from incoming and outgoing passenger movements at Australian ports maintained by the Department of Immigration and Citizenship. A person must have been in Australia for 12 of the previous 16 months to be counted.
net transition probability approach	A statistical approach that projects probable change in household types at the national and subnational levels.
new residential dwelling titles issued	Stage 5 of the generic greenfield supply pipeline. This stage usually commences with the commissioning of engineering designs for the civil construction of the subdivision and the provision of services. The completion and certification of the construction works by approval agencies is usually a condition preceding the issue of titles to the new residential lots.
non-private dwelling	Non-private dwellings (NPDs) are residential dwellings with accommodation which are not included in the Census of Population and Housing list of private dwelling categories. NPDs are classified according to their function. They include hotels, motels, guest houses, jails, religious and charitable institutions, military establishments, hospitals and other communal dwellings. Where this type of accommodation includes self-contained units (as provided by hotels, motels, homes for the elderly and guest houses), the units are enumerated as part of the NPD. Complexes such as retirement villages, which have a combination of self-contained units, hostel and/or nursing home accommodation, are enumerated as NPDs.
not-for-profit sector	Community organisations providing a broad range of social services, including in relation to homelessness, education, health, conservation and recreation.
older households	Households in which the reference person is aged 65 or over.

'other dwelling' unit commencements and completions	For other residential building (not houses), the statistics presented in the report relate to the number of dwelling units in such buildings (and not the number of buildings). For example, if a new building with 25 apartments is commenced, then 25 is included in the number of dwelling unit commencements under 'new other residential building'. Residential building activity involving a number of residential buildings of the same type of building and which are being built on the same site are sometimes grouped. Thus, when a project involving the construction of, say, a group of 10 houses is commenced in the sense that work has started on the first one or two houses, then all 10 houses may be counted as commencements in the statistics. Conversely, it is not until the tenth house is completed that all 10 houses are included in the number of dwelling unit completions.
other residential building	A building other than a house primarily used for long-term residential purposes and which contains (or has attached to it) more than one dwelling unit (e.g. includes blocks of flats, home units, attached townhouses, villa units, terrace houses, semidetached houses, maisonettes, duplexes, apartment buildings, etc.).
overcrowding	In the housing context, overcrowding occurs when two or more additional bedrooms are required to meet the national standard. The standard used in this report is that as measured by the Canadian National Occupancy Standard.
owner-occupier household	A household in which at least one member owns the dwelling in which they reside, either with or without a housing mortgage on that dwelling.
planning permit	Legal document that allows a certain use or development to occur on a particular parcel of land – usually subject to conditions. A planning permit ensures that: land uses are appropriately located; buildings and land uses do not conflict with each other; the character of an area is not detrimentally affected; development will not detrimentally affect the environment; places of heritage significance are not detrimentally altered or demolished. A planning permit should not be confused with a building permit. A building permit is certification that a building or alteration to a building meets the minimum standard of construction specified in building regulations.
planning scheme	The single instrument of planning control for any area which sets out policies and provisions for the use, development and protection of land. Usually the planning scheme is a statutory document and each municipality in the state or territory is covered by one.
positive externalities	An economic term used to describe positive effects associated with market activities, such as the proximity to shops and services that comes with development. Externalities can also be negative, e.g. increases in road traffic.
potential dwelling yield	The number of residences that can be added to an existing site or produced in a new housing development.

private dwelling	Defined in the census as a house, flat, part of a house, or even a room; but can also be a house atached to, or rooms above shops or offices; an occupied caravan in a caravan park or boat in a marina, a houseboat, or a tent if it is standing on its own block of land. A caravan situated on a residential allotment is also classed as a private dwelling.
Productivity Commission	The Commonwealth Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians.
public housing	Housing, other than employee housing, that is funded and provided by government directly.
quintile	A proportion of a set of data that has been ranked and divided into five groups, each of which contains an equal number of data items. When people (or any other units) are ranked from the lowest to the highest on the basis of some characteristic such as their household income, they can then be divided into equal-sized groups. When the population is divided into five equal-sized groups, the groups are called quintiles.
redevelopment sites	Parcels of land that are being redeveloped from their current urban use (for example, industrial, commercial or residential) into residential dwellings.
rental yield	Annual rental income as a proportion of the dwelling value.
residential title	Residential title refers to: ■ the land title that is registered under a Torrens system of registration—the certificate of title for the land; or ■ the last instrument by which title to the land and dwelling was conveyed.
second home	Often referred to as holiday homes, second homes are dwellings that are owned by, but not the principal residence of, an individual.
semidetached, row or terrace houses, townhouses	Dwellings having their own private grounds with no other dwellings above or below.
sleeping rough	See *homelessness*.
social housing	Rental housing that is provided and/or managed by government or non-government organisations, including public and community housing.
statutory planning	The basic instrument for statutory planning is a planning scheme, which consists of maps and an ordinance containing planning provisions. It includes the preparation and implementation of planning provisions relating to the use and development of land.

strategic planning	Strategic planning is the research and formulation of policies or strategies to implement goals and objectives relating to particular land uses or areas. Strategic planning also involves monitoring and evaluating the implications of the provisions on land use and development.
subdivision	The fragmentation of rural land or rezoning of other land for the purpose of housing development.
supply pipeline stages	Refers to the specific stages in the preparation of land and dwellings to add to the supply of dwellings. There are two general types of supply pipeline: greenfield and infill. Greenfield and infill supply pipeline stages vary between states and territories as discussed in Appendix 3.
tenure type	The nature of a person's or social group's legal right to occupy a dwelling. Tenure types include owner (fully owned or being purchased/with mortgage), renter (private housing or public housing/community housing), rent free, life tenure scheme, shared equity or rent/buy scheme. The category 'other' includes being occupied rent free and being occupied under a life-tenure scheme.
under construction	A building is regarded as being under construction at the end of a period if it has been commenced but has not been completed, and work on it has not been abandoned.
underlying demand	The need for housing based on the number of households in the population, rather than the demand actually expressed in the market (*effective demand*).
Urban Development Institute of Australia (UDIA)	A federation of five state associations that aims to promote the urban development industry.
urban fringe	Housing on the urban fringe is geographically distanced from the inner city area and adjacent to non-urban land.