

LAND RELEASE AND HOUSING SUPPLY IN NEW SOUTH WALES

Organisation: Grattan Institute
Name: Mr John Daley
Position: Chief Executive
Date Received: 20 September 2017



September 2017

Submission to the NSW Legislative Assembly Committee on Environment and Planning Inquiry into Land Release and Housing Supply in NSW

John Daley, Brendan Coates and Trent Wiltshire

Summary

We welcome the NSW Legislative Assembly Committee on Environment and Planning Inquiry into Land Release and Housing Supply in NSW. This submission summarises recent work by Grattan Institute that is relevant to the Inquiry.

NSW housing has become increasingly expensive, especially in Sydney. Median Sydney house prices have increased from around six times median incomes in the early 2000s to more than eight times today. And while house prices rose fastest in Sydney, regional NSW house prices have also risen sharply in recent decades.

Rapidly rising house prices in NSW have triggered renewed community concerns about housing affordability in NSW. While low interest rates make it relatively easy to service a loan today, a new home loan now entails more risk if interest rates rise, and borrowers are living with that risk for longer because lower wages growth is eroding the cost of repayments more slowly than in the past. Home ownership rates are falling, especially among the young and the poor. Without change, many more young Australians will be locked out of the housing market.

The first step to making housing more affordable is to face up to the size of the problem. Demand for housing has risen as interest rates fell, incomes rose, and migration increased. But the supply of well-located homes has not kept up, resulting in higher land prices. Even though land prices have risen, supply has not increased enough because of legislative restrictions on the effective supply of residential land – both limits on rezoning for urban infill and limits on developing land at the urban fringe. The

NSW government must therefore act decisively to boost the supply of land to make housing more affordable.

First, the NSW government should give the Greater Sydney Commission more powers to ensure councils meet new housing supply targets to boost housing supply in Sydney's inner- and middle-ring suburbs. Councils should apply the proposed new medium-density housing code widely and not use floor space ratios to restrict appropriate medium-density developments. And all levels of government need to communicate to the public the benefits of medium-density living, and the dire consequences of not planning for future population growth.

Second, the NSW government should increase the supply of greenfield land on Sydney's urban fringe. The government should implement the proposed Greenfield Housing Code and tighten statutory timeframes for re-zonings. The government also needs to maintain a long-term supply of new land for development, and reform infrastructure charges to align with the Productivity Commission's general principles on infrastructure costs.

Third, both the Commonwealth and NSW governments need to use existing transport infrastructure better, particularly in Sydney, and make better decisions on what new infrastructure to build. This will make outer suburbs more attractive and give residents access to more jobs.

Increasing housing supply will only restore housing affordability slowly. But without a concerted effort to boost housing supply in Sydney and surrounds, housing affordability in NSW will only get worse.

1 Housing is becoming more expensive and less affordable

Australian housing is becoming increasingly expensive. Sharp price rises in recent years have triggered renewed community concerns about housing affordability.

People are spending more of their income on housing. Dwelling price rises accelerated in the mid-1990s. Real house prices increased at about 2 per cent a year from the 1970s to the mid-1990s. Since then, real house prices have risen by about 5 per cent a year. Prices rose particularly fast in the major capital cities, but they also rose in regional areas. These higher prices primarily reflected higher land costs, not more expensive buildings.

Interest rates have fallen, and so repaying a typical new home loan is *not* particularly difficult at the moment. But a new home loan now entails more risk if interest rates rise, and borrowers are living with that risk for longer because lower wages growth is eroding the cost of repayments more slowly than in the past. It has become harder to build a deposit. And rents are higher relative to incomes, particularly for low-income households in capital cities.

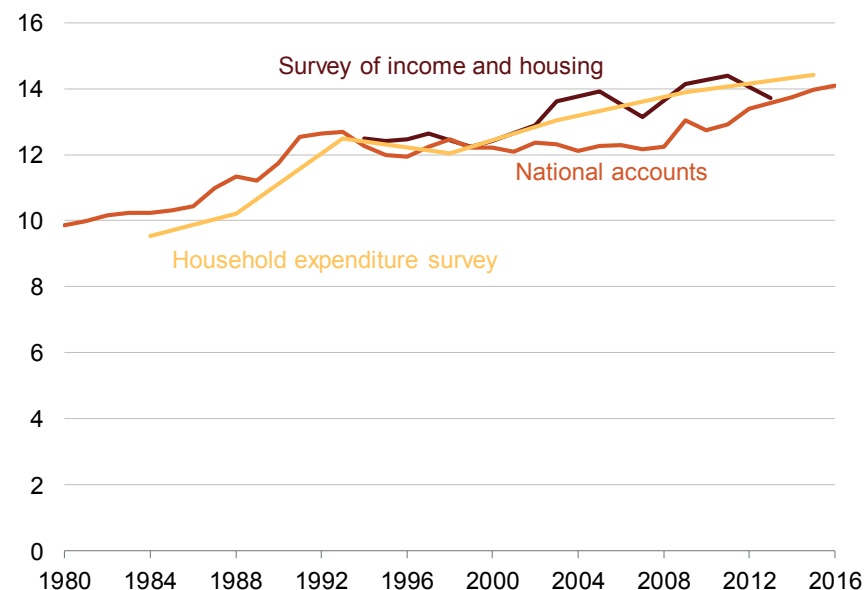
1.1 We're spending more on housing

Australian spending on housing has increased from about 10 per cent of total pre-tax household income in 1980 to about 14 per cent today (Figure 1).¹

¹ This includes rent and imputed rent.

Figure 1: Australians are spending more of their income on housing

Housing costs as a share of gross pre-tax (household) income, per cent

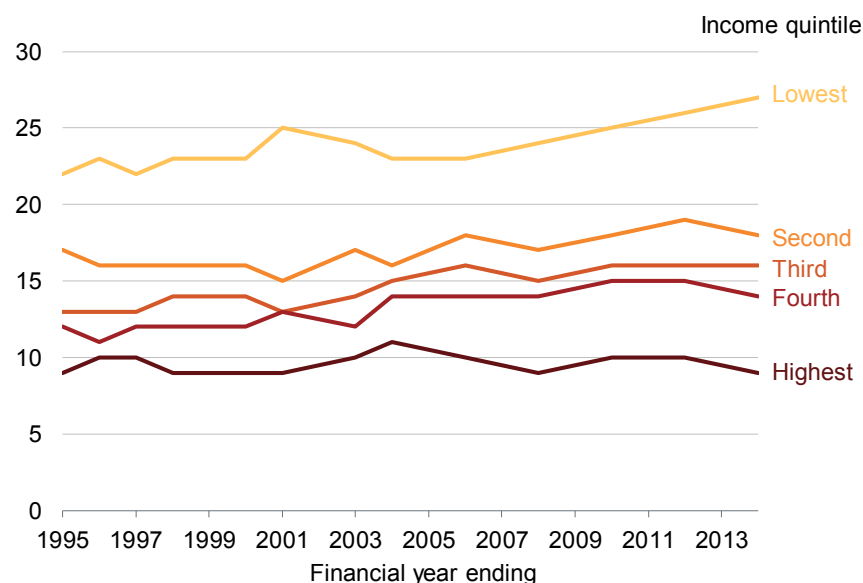


Notes: National accounts: Rent paid by households to the owners of dwellings, plus imputed value of housing services accruing to owner-occupiers (both their principal residence and any additional residence) and water and sewerage services, as share of gross disposable income (aggregate measure, nominal); Survey of Income and Housing: Mean household rent, mortgage and rates (general and water) payments as share of mean gross household income; Household Expenditure Survey: Mean household rent, mortgage (principal plus interest) and rates payments as share of mean gross household income. Data point for 2015-16 is an approximation based on currently available data. Sources: ABS (2015b); ABS (2016a); ABS (2011)

Low-income households have always spent more of their income on housing than others. But their spending on housing as a share of income has increased more than other households over the past decade (Figure 2).

Figure 2: Low-income households are spending more of their income on housing

Housing costs as a proportion of gross household income, by equivalised disposable household income quintile, per cent



Notes: For definitions of housing costs and income, see Figure 1. Data interpolated for missing years.

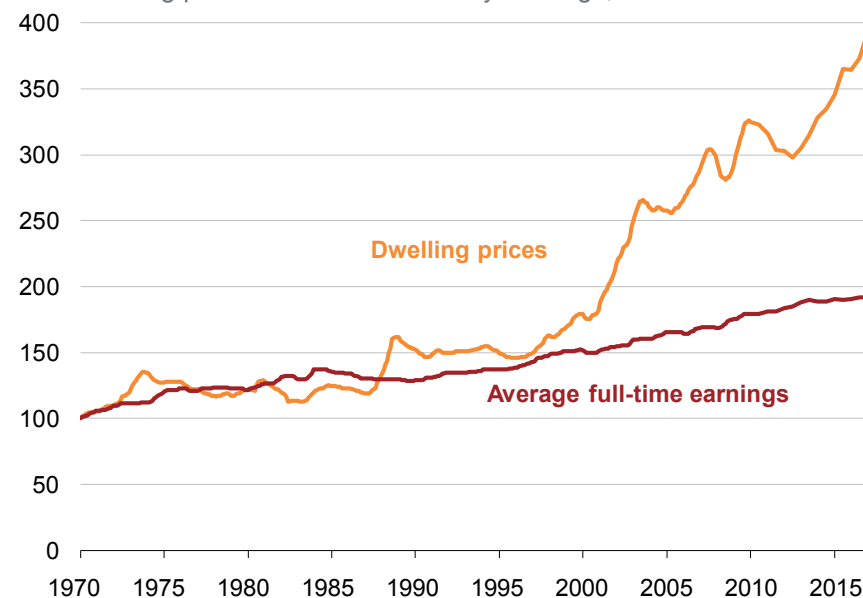
Source: ABS (2013b).

1.2 House prices have risen much faster than incomes over the past 30 years

Australian dwelling prices have grown much faster than incomes, particularly since the mid-1990s (Figure 3).

Figure 3: House prices have grown much faster than incomes since the mid-1990s

Real dwelling prices and full-time weekly earnings, index 1970 = 100



Notes: Data for 1970 to 2010 is from Yates (2011). Data from 2010 is six-monthly growth in the ABS residential property price index from ABS (2017b), deflated by CPI. Earnings data is full-time ordinary time earnings from ABS (2017d), deflated by CPI.

Sources: Yates (2011); ABS (2017b); ABS (2017d).

Over the long term, prices have risen rapidly in all cities, and most regions, although there are variations from year to year.

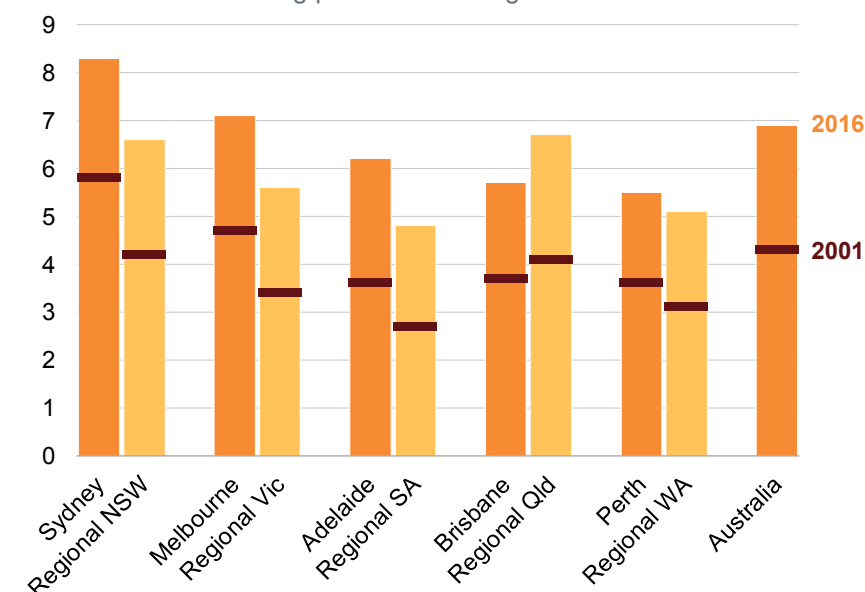
Average prices have increased from around 2-to-3 times *average* disposable incomes in the 1980s and early 1990s, to around 5 times more recently.² *Median* prices have increased from around 4 times *median* incomes in the early 1990s to more than 7 times today (and more than 8 in Sydney) (Figure 4).³

Price movements can vary between regions over the short term. For example, the median dwelling price in Sydney and Melbourne has increased by about 30 per cent since the end of 2014.⁴ By contrast, over the same period house prices have grown much more slowly in Brisbane, Adelaide and Hobart, and have fallen in Perth and Darwin.⁵

House prices have always been significantly higher in Australia's major cities than in the regions (Figure 4). The median house price in Sydney, \$1.1 million, is more than double the median price of \$450,000 in the rest of NSW.⁶

Figure 4: House price to income ratios have jumped in cities and regions

Ratio of median dwelling price to median gross household income



Note: median household incomes modelled by ANU.

Source: CoreLogic (2016).

² Kent (2013); Ellis (2017); and Fox and Finlay (2012).

³ The median dwelling price compared to median household disposable income is the best price-to-income measure, but median measures are often not as readily available as average measures (CoreLogic (2016)) Other price-to-income measures are even higher due to differences in measuring incomes and prices (for example, the Demographia price-to-income ratio calculates Sydney's price-to-income ratio at 12 (Demographia (2017))).

⁴ ABS (2017b), Table 1

⁵ Ibid., Table 1

⁶ Australian Property Monitors (2017)

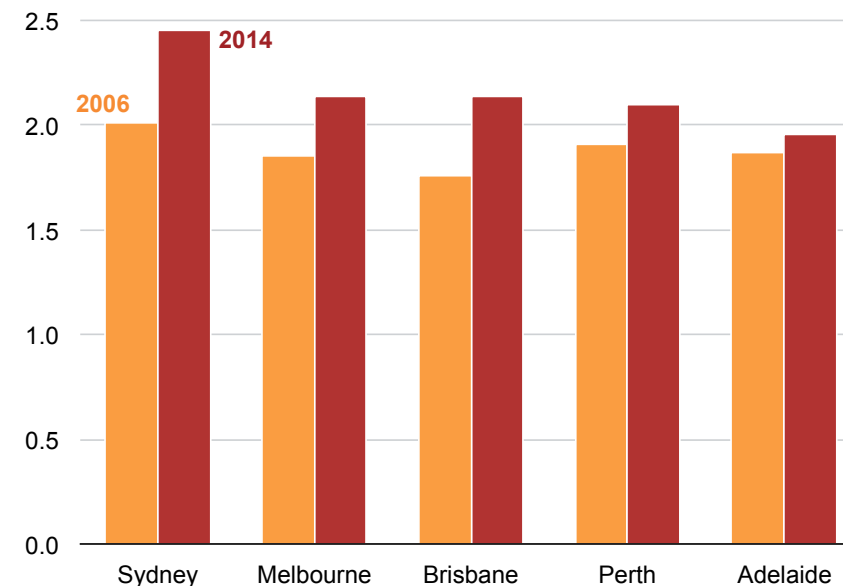
This is not surprising: house prices are generally much higher in large cities all around the world.⁷ House prices in Australia's major cities are at the high end of prices in major global cities.⁸

Prices are generally a lower multiple of incomes in regions further from our major capital cities. But even in most regional areas, prices have risen rapidly. Regional house prices are a higher multiple of regional incomes today than 15 years ago.

In the past 20 years, prices grew fastest in areas closer to the centres of all capital cities, especially in Sydney (Figure 5). This is because capital city populations have grown rapidly, and most of the additional jobs are in city centres, but there is little extra land with good access to these jobs. And as our cities have grown, traffic congestion has got worse and commuting times have increased, making inner-city houses even more desirable.

Figure 5: House prices have grown faster in areas closer to city centres

Ratio of inner ring to outer ring median prices, detached houses only



Note: Four-quarter average ratio.

Source: Ellis (2015).

⁷ Eslake (2014)

⁸ Cross-country comparisons are hard due to measurement difficulties, and individual country characteristics can skew results. For example, Australia's houses are generally quite large and the US has always had a low price-to-income ratio because many of its cities have very elastic supply: Ellis (2017).

1.3 Rising house prices are primarily due to rising land values, not construction costs

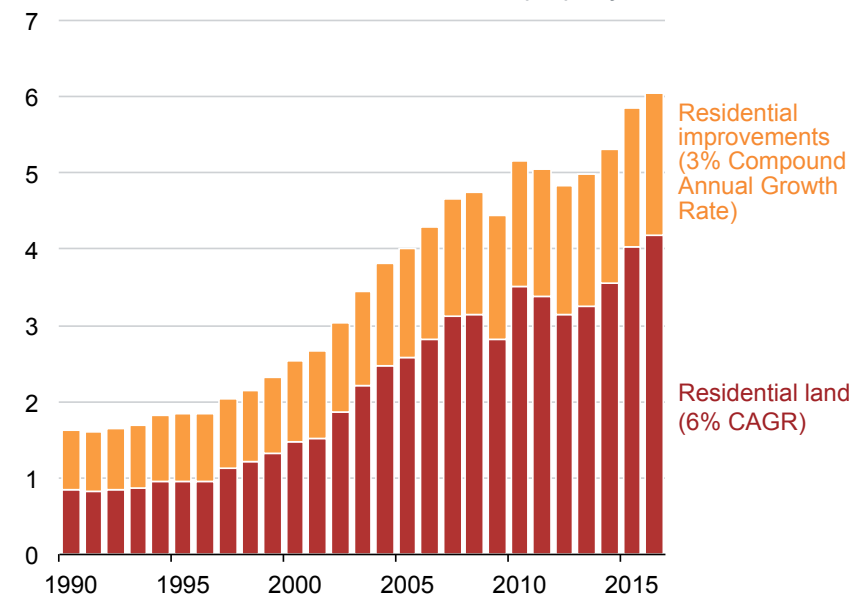
Most of the increase in the value of housing reflects increases in the price of land, rather than the value of housing built on it (Figure 6). While Australia has an abundance of land, there is a limited supply of well-located land, particularly close to the centre of our major cities.

Over the past 25 years, the price of land rose faster than the price of buildings.⁹ In 2016, land accounted for 70 per cent of the value of residential property, up from 50 per cent in 1990.

Again, Australian experience is consistent with international trends. Across the developed world, land values have risen sharply over the past 30 years.¹⁰ Some estimate that about 80 per cent of the growth in real house prices in advanced economies in the second half of the 20th century is a result of higher land values rather than more expensive buildings.¹¹

While rising *land* values dominate the price increases, bigger and better buildings have contributed. From the late-1980s to the mid-2000s, the average floor space of newly constructed houses grew by around 45 per cent, although it has not increased further over the past decade.¹²

Figure 6: Dwelling prices increased primarily because of higher land values, although bigger and better buildings also contributed
Real market value of Australian residential property, \$2016, trillions



Note: 'Residential improvements' consists of the value of the stock of dwelling construction; historical figures are deflated by the Consumer Price Index to \$2016.
Source: ABS (2016b); ABS (2017e)

⁹ Knoll, *et al.* (2017); Abelson and Chung (2005); Fox and Finlay (2012); Kohler and van der Merwe (2015) and Ellis (2015).

¹⁰ Knoll, *et al.* (2017)

¹¹ These studies control for quality improvements and compositional changes: *ibid.* For Australia, they estimate that the land as share of the total housing value increased from 40 per cent in 1980 to 71 per cent in 2010.

¹² Lowe (2015); CommSec (2016).

Houses are also now better quality.¹³ Abelson and Chung (2005) estimate that quality improvements explain about one third of the increase in houses prices between 1970 and 2003.¹⁴

Higher construction costs have increased house prices only a little. Construction costs have increased faster than the CPI, although in line with other labour-intensive services.¹⁵

1.4 The initial mortgage burden hasn't changed much, but borrowers are taking more risk for longer

Of course, most Australians don't buy a home outright; instead, they borrow to purchase a home. Housing affordability is worsening mainly because it takes longer to pay back the principal on a mortgage. That takes longer because house prices have risen much faster than incomes. And nominal incomes are not rising as fast to overtake the nominal amount originally paid for a home.

The first step in buying a house is **saving a deposit**, which is getting harder as prices rise. In the early 1990s it took around six years to save a 20 per cent deposit for an average dwelling – it now takes around nine-to-ten years.¹⁶ Although banks do not insist on a 20 per cent deposit as they did in the past, most people still try to save this much before purchasing a dwelling.¹⁷ Not many new buyers take on high-leverage loans. Most are more risk-averse, and they also want to avoid paying for 'lenders

mortgage insurance',¹⁸ which can add around 4 per cent to the amount borrowed.¹⁹

Because most people borrow for their first home, the **cost of mortgage repayments** relative to income often determines whether a dwelling is affordable. This 'mortgage burden' is often defined as the proportion of household income spent on repaying a mortgage. The mortgage burden on a newly purchased home, assuming a person borrows 80 per cent of the value of the home, is currently lower than for much of the period between 2003 and 2012 (Figure 7).²⁰ Higher house prices were offset by interest rates that remain at record lows.²¹ As a result, interest payments comprise the lowest share of national income level since the early 2000s,²² while principal repayments are now relatively high.

However, a typical first mortgage now entails a lot **more risk**. If interest rates increase by 2 percentage points, then mortgage repayments will be less affordable than at any time in living memory, apart from a brief period around 1989 – an experience that scarred a generation of home-owners.

¹³ Kohler and van der Merwe (2015), Graph 2.

¹⁴ Abelson and Chung (2005); Fox and Finlay (2012).

¹⁵ Kohler and van der Merwe (2015) Graph 2.

¹⁶ Assuming the median household saves 15 per cent of their gross income.

¹⁷ Ellis (2017)

¹⁸ Ellis (2013)

¹⁹ Lenders mortgage insurance reimburses a lender if the borrower is forced to sell, but the sale price does not cover the outstanding loan. For LMI calculations see Home loan experts (2017).

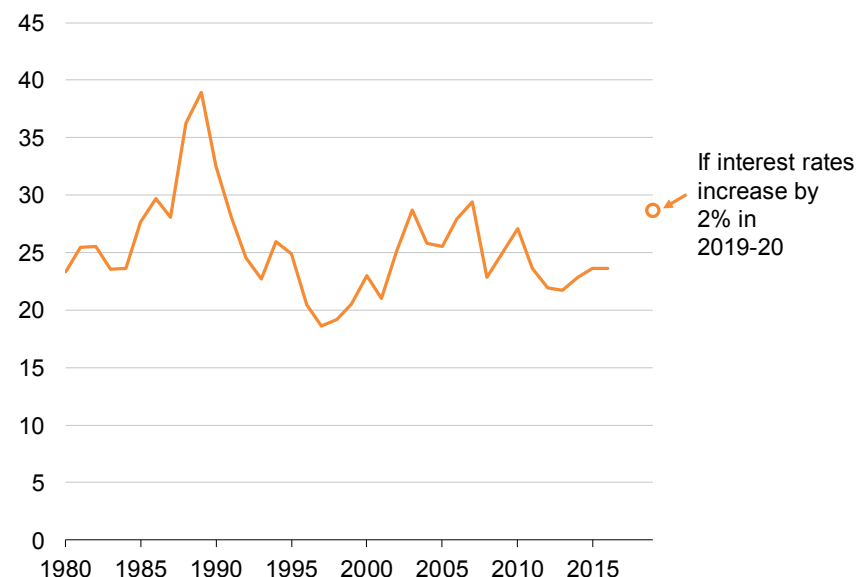
²⁰ CoreLogic (2016). Different measure can be used, such as median rather than mean incomes, pre-tax rather than post-tax incomes, and the 25th percentile dwelling by price rather than the mean. Historical peaks and troughs are similar for all these measures.

²¹ Indeed, some have argued that record low interest rates mean that it is now easier to pay off a home than in the past despite higher house prices (Sloan (2016); Koukoulas (2016)).

²² RBA (2017b)

Figure 7: The cost of servicing a mortgage is not particularly high – provided interest rates don't rise

Per cent of mean household disposable income to service an 80 per cent loan-to-valuation ratio mortgage on average residential dwelling at then current interest rates



Notes: Income measure is gross disposable income from National Accounts measure of income (based on ABS), which includes superannuation income and imputed rent, and before interest payments. Australian residential dwelling price from ABS (2017b), using house price index changes from Bank for International Settlements (2017) prior to 2011. Interest rates are standard mortgage rates until 2004, then discounted. Future scenario assumes house prices and incomes grow at 3 per cent per annum. Sources: ABS (2017b); ABS (2017c); Bank for International Settlements (2017); RBA (2017b); Grattan analysis.

The mortgage burden over the life of the loan can matter as much as the payments burden at the beginning of the loan. Homebuyers repay their mortgages over periods as long as 30 years. The mortgage burden over the life of the loan depends on how fast income grows in nominal terms, and what happens to interest rates.

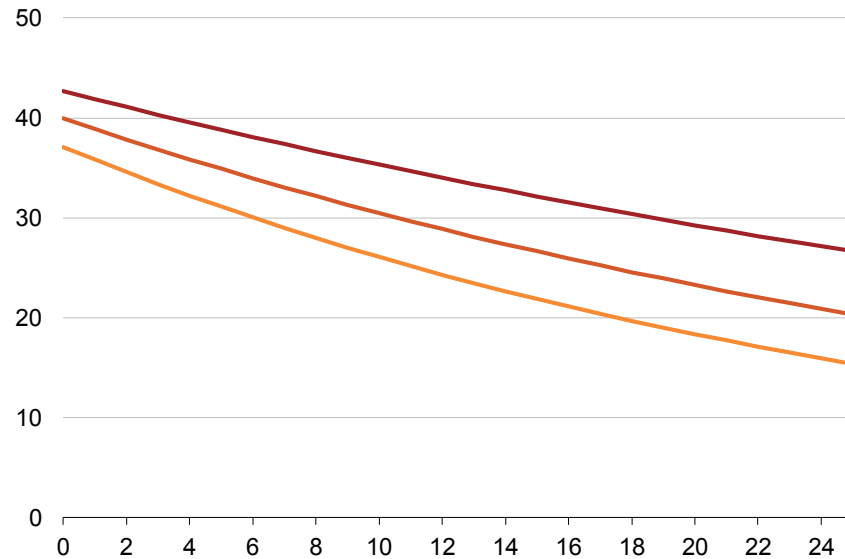
Most people who bought 20 years ago now use only a relatively small share of their income to pay the mortgage. Nominal interest rates fell while nominal wages increased rapidly. Figure 8 shows that a homebuyer purchasing the average house in 1990 spent less and less of their income paying off the mortgage as the years went by.

In contrast, a new homebuyer today is likely to continue to spend a large proportion of their income on the mortgage for many years, unless wages grow faster than in the past few years. If interest rates rise faster than wages, then home-loan repayments will consume an increasing share of income over the life of the loan.

As a result, it is becoming harder for households to pay off a home loan quickly, and fewer now own their home outright.

Figure 8: It is getting harder to pay off a home because loans are larger and wages are growing slowly

Mortgage repayments on an average dwelling, per cent of median household income



Notes: 2017 average dwelling price is \$669,700; 2003 price is \$327,683; 1990 price is \$143,438 (the average Australian residential dwelling price from ABS (2017b), using house price index changes from Bank for International Settlements (2017) prior to 2011).

Calculates mortgage repayments on an average dwelling, with a 20 per cent deposit, 25-year principal-and-interest loan. Based on actual wages growth (Wage Price Index after September 1998 and Average ordinary time, full-time weekly earnings prior to 1998) and interest rates to 2017; future projections assume no change to current interest rates, and wages growth at current rates.

Sources: ABS (2015a); ABS (2017b); ABS (2017a); ABS (2017d); Bank for International Settlements (2017); RBA (2017b); Grattan analysis.

2 Worsening housing affordability has serious consequences

Rising housing costs have contributed to falling home ownership rates, and this has far-reaching implications for our economy and society. Falling home ownership is depriving more Australians of the benefits of owning a home, which include a sense of belonging, a sense of prosperity, the motivation for additional savings, and the basis for investing in a business.

Lower ownership means more people are renting, and for longer. Given current market structures and policies, renting is relatively unattractive: it is generally much less secure; many tenants are restrained from making their house into their home; and they miss out on the tax and welfare benefits of home ownership.

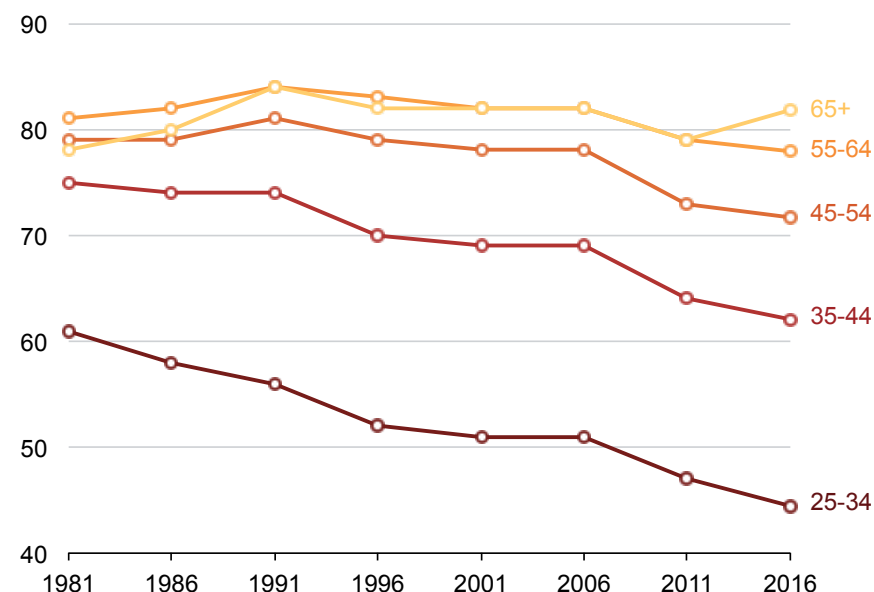
Rising house prices have contributed to greater inequality. Younger people and those with lower incomes who have missed out on buying a house are being left behind. Increasingly, getting the benefits of home ownership depend on the wealth of your parents. And higher levels of household debt may exacerbate the effects of any future economic shock, because people will be more likely to cut back their spending, which may make the downturn more severe.

2.1 Home ownership is declining, especially among the young and poor

Home ownership rates are falling quickly for those under 55. Between 1981 and 2016, home ownership rates among 25-34-year-olds have fallen from more than 60 per cent to 45 per cent (Figure 9). Falling home ownership among younger age groups might be explained away because people are forming long-term partnerships and having children later in life.

Figure 9: Home ownership is falling particularly fast for low-income households

Home ownership rate by age, per cent



Notes: Per cent of occupied private dwellings. Household age group according to age of household reference person. Excludes households with tenure type not stated.

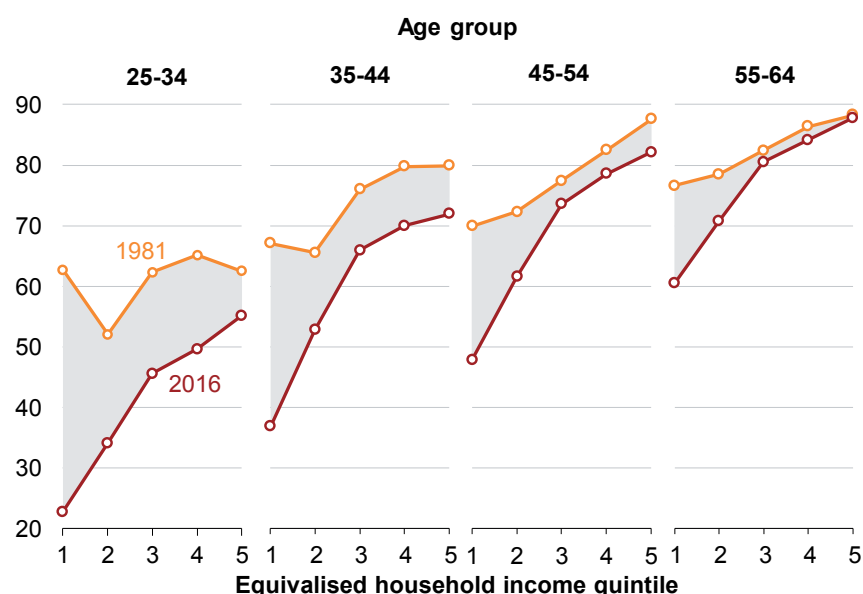
Source: Yates (2015b); ABS (2016c); Grattan analysis.

But this explanation doesn't wash for 35-44-year-olds. Home ownership among this group has fallen from about 75 per cent in 1991 to about 60 per cent today.

Home ownership is falling particularly fast for low-income households (Figure 10). For 25-34-year-olds in the lowest 20 per cent of incomes, home ownership rates have plummeted almost 40 percentage points between 1981 and 2016.

Figure 10: Home ownership is falling particularly fast for low-income households

Home ownership rates by age and income, 1981 and 2016



Notes: Updates Burke, Stone and Ralston (2014) using ABS Census special request data. Household incomes based on Census data are approximate, and so small changes in ownership rates may not be significant. Excludes households with tenancy not stated (for 2016) and incomes not stated.

Sources: Burke, Stone and Ralston (2014); ABS (2016c); Grattan Institute.

2.2 People will miss out on the benefits of home ownership as housing has become less affordable

There are plenty of reasons to care about home ownership. Owning a home can provide a sense of community belonging, a sense of prosperity, the motivation for additional savings, and the basis for investing in a business.²³ Under current policy settings, it provides higher after-tax returns on savings,²⁴ and effectively higher income in retirement. Of course, home ownership also has its costs: for example, home owners may be more reluctant to take on a better job that would involve the emotional and financial costs of moving.²⁵

Given current rental markets and policies, renting is relatively unattractive: it is generally much less secure; many tenants are restrained from making their house into their home; and tenants miss out on the tax and welfare benefits of home ownership.²⁶ Renters are forced to move much more often than home owners, and are less satisfied with their housing (Figure 11).

So it's not surprising that younger generations still want to own their own home. There is little evidence that falling home ownership is due to lack of desire; rather it seems to be due to lack of opportunity, and the heightened risks.

In fact, owning a home remains a core aspiration for most Australians.²⁷ Two-thirds of 25-34-year-olds responding to a 2017

²³ Kelly, *et al.* (2013)

²⁴ Daley, *et al.* (2015)

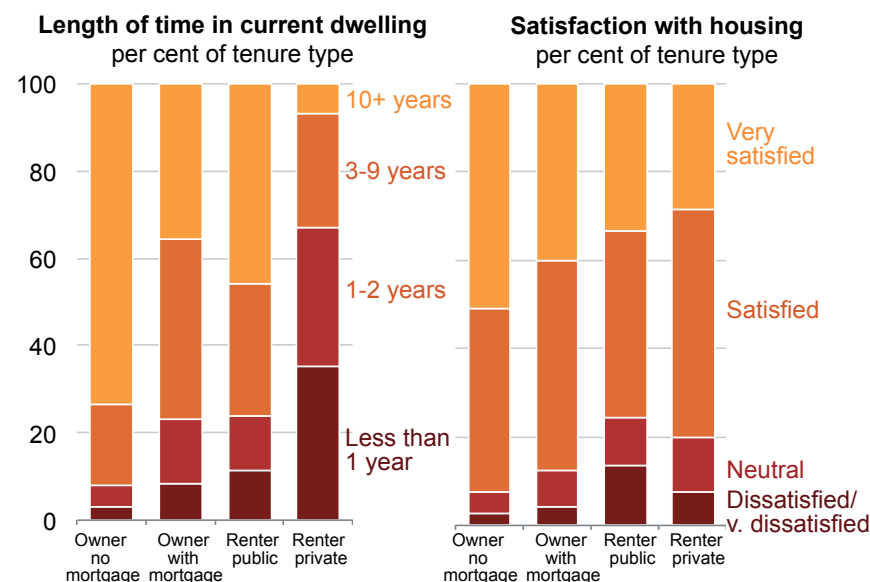
²⁵ Blanchflower and Oswald (2013)

²⁶ Kelly, *et al.* (2013)

²⁷ According to a 2017 ANU survey, 'Emotional security, stability, belonging' was the main reason people purchase a house, with 'investment, financial security' second (Sheppard, *et al.* (2017)).

Australian National University survey thought owning a home was an important ‘part of the Australian way of life’.²⁸ But more than half of all respondents were concerned that younger generations won’t be able to afford a house.

Figure 11: Renters move more often than owners and are less happy



Sources: ABS (2015b); Grattan analysis.

²⁸ Ibid. Similarly, Mission Australia found that three quarters of 14,000 15-19-year-olds considered home ownership highly important.

2.3 Housing in the right places is also becoming less affordable

A generation ago, more jobs, particularly in manufacturing, were dispersed among the suburbs.²⁹ Now, more new jobs are located in and around CBDs.³⁰ But as jobs growth becomes more concentrated, younger generations buying homes on the suburban fringe are further from the city centre than their parents were when they bought their first homes. Many young people are staying closer to the centre and renting for longer, rather than buying on the fringe and facing longer commutes.

New and less expensive housing has always been built on the edge of our cities. But the urban fringe is much further away from the centre than 30 years ago. In Melbourne, suburbs around 20km from the CBD, such as Glen Waverley, Altona and Bundoora, were new suburbs in 1970s; today the city fringe can be more 50km from the CBD in the south-east.³¹ In Sydney, new developments in the south-west are more than 60km from the CBD.³² And whereas 30 years ago first homebuyers in large capitals had the option of some relatively cheap housing in inner-ring suburbs such as Surry Hills in Sydney, Collingwood in Melbourne and New Farm in Brisbane, most of these sorts of suburbs have gentrified and beyond the reach of most first homebuyers.³³

The increasing distance between where jobs are located and where new housing is built has personal and broader economic

²⁹ Kelly and Donegan (2015)

³⁰ Kelly, *et al.* (2013); Daley (2016).

³¹ Victorian Government (2017)

³² NSW Department of Planning and Environment (2014), Figure 2.

³³ Coffee, *et al.* (2016); Kelly, *et al.* (2013) pp.19-20.

costs.³⁴ Grattan Institute’s 2015 report, *City Limits*, showed that the costs of this divide include fewer job opportunities, heavier traffic congestion, longer commute times and a big drop for many people in the quality of their family and social life. Long commutes mean it is harder for both parents to work, with women generally the ones who end up working less than they otherwise would.³⁵ And because employers have a smaller pool of workers to choose from, productivity is lower than otherwise.

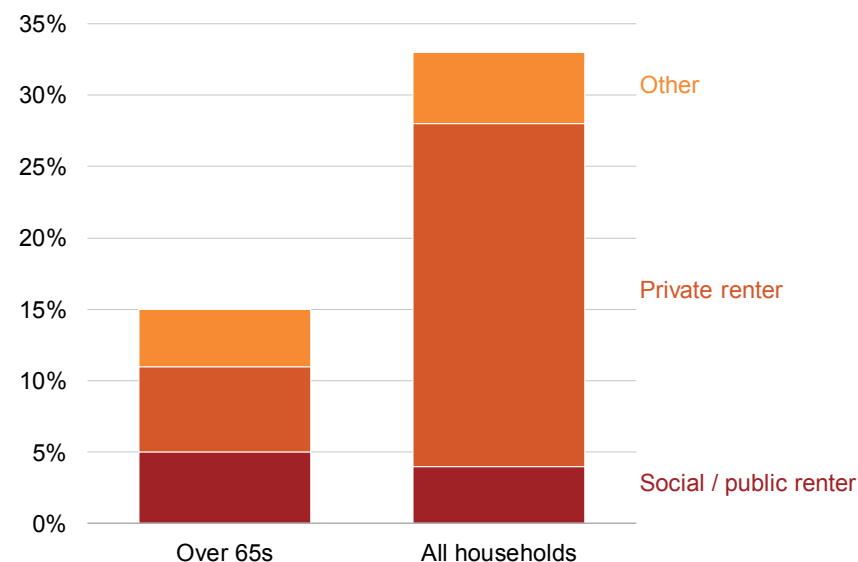
2.4 Higher housing costs and falling home ownership rates threaten future retirement incomes

Australia’s retirement income system has historically operated on the assumption that most retirees would own their homes outright.³⁶ Retirees who have paid off the mortgage are insulated from rising housing costs.³⁷ The safety net of home ownership, should people exhaust their retirement savings, benefits retirees and the broader community. The exemption of the family home from the Age Pension assets test further boosts the benefits of home ownership for retirees.³⁸

Yet if current trends continue, a declining proportion of people reaching retirement age will own their own homes – and a higher proportion of people will need to rent in retirement.

Figure 12: Future retirees are more likely to be living in private rental housing

Renters as per cent of population



Sources: Yates (2016); ABS (2015b)

³⁴ Kelly and Donegan (2015); Hsieh and Moretti (2017); Ganong and Shoag (2017).

³⁵ Daley (2015)

³⁶ Yates (2015a)

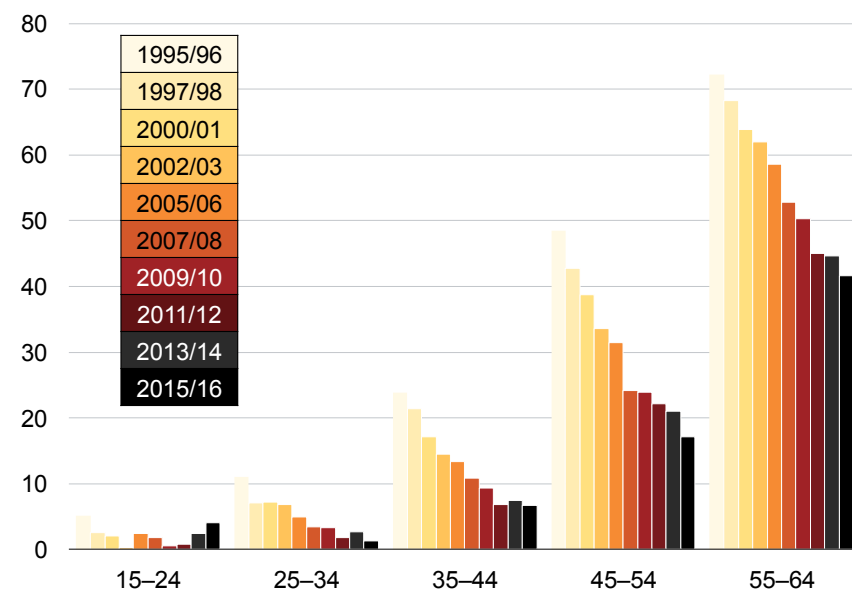
³⁷ Ibid.; Eslake (2017)

³⁸ Daley, *et al.* (2013)

And more people will still be paying off their mortgage when they retire – the proportion of 55-64-year-olds who own their houses outright fell from 72 per cent in 1995-96 to 45 per cent in 2013-14 (Figure 13). Some of these older households will (quite rationally) use some or all of their superannuation savings to pay off their mortgage debt.³⁹

Figure 13: Fewer Australians at all ages own their home outright than in the past

Per cent of households that own their home outright, by age group



Note: by age of household reference person. Chart shows all surveys except for the 2003-04 survey.

Sources: ABS (multiple years-a); Grattan analysis.

³⁹ Eslake (2017), p.10.

2.5 Rising house prices have widened inequality both across and within generations

Dwelling prices and home ownership are increasing wealth divides between generations, and among generations.

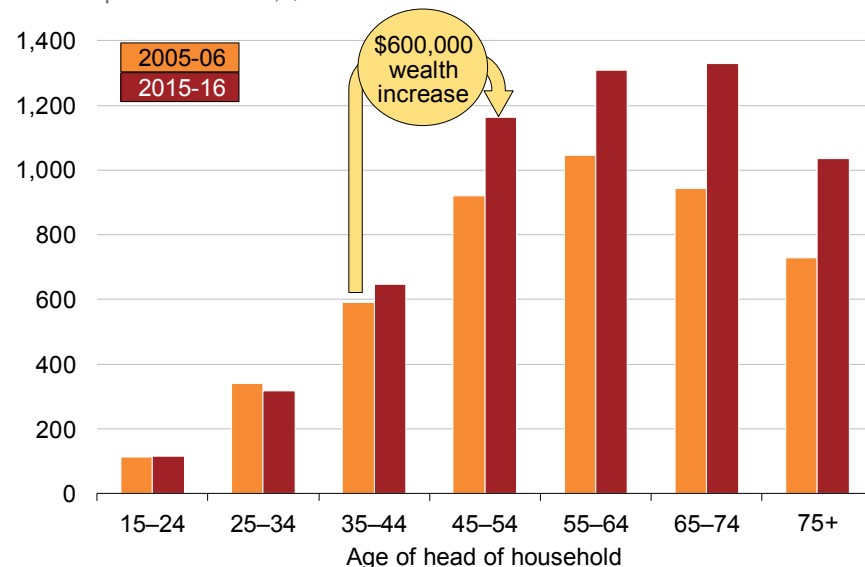
Older Australians are capturing an increased share of the nation's resources. Despite the global financial crisis, households aged between 65 and 74 today are \$400,000 (or 47 per cent) wealthier in real terms than households of that age ten years ago (Figure 14). The average household aged between 35 and 44 in 2005 increased its wealth by about \$600,000 over the subsequent decade.

In part, the wealth of generations has diverged because of the boom in housing prices. Older households that owned homes at the start of the house price boom made big capital gains. These households enjoyed a significant, untaxed windfall gain from rising prices and they continue to benefit from house prices remaining high. Households that did not own property before the boom – disproportionately the younger generation – missed out on the windfall boost in wealth from the price rises. Households aged 25-to-34 today are no more wealthy than the equivalent households a decade before.⁴⁰

⁴⁰ Daley, et al. (2014)

Figure 14: The wealth of older households has increased in ways that are unlikely to be repeated

Wealth per household, \$2015-16 thousands



Sources: ABS (multiple years-b); Grattan analysis.

The fundamentals of the real estate market may keep house prices high. Yet the windfall rise in prices is unlikely to be repeated. Many observers believe that future prices are unlikely to grow as quickly as they did over the past two decades because income growth is likely to be slower, and official interest rates can't fall much further.⁴¹ As a result, young people are likely to face higher housing costs for a long time. In contrast, older people

⁴¹ Eslake (2014); Fox and Tulip (2014); CoreLogic-Moody's (2017); Daley, et al. (2014) p.31. At the time of writing, the cash rate, the interest rate set by the Reserve Bank of Australia, was 1.5 per cent.

who have benefitted from the boom may face higher housing costs for only a few years, and can spend housing wealth on other things by downsizing or withdrawing equity.

Analysis from Australia and abroad also suggests older households generally maintain (and even increase) their wealth in retirement. According to one Australian study, the median pensioner dies with residual wealth equal to 90 per cent of the assets recorded at the start of its eight-year investigation.⁴²

The increasing divide between generations can easily transmit into an increasing divide within generations. If home ownership relies more on the "bank of mum and dad", then getting a home depends more on the success of one's parents than on one's own endeavours. Rising house prices are also likely to boost future inheritances, which tend to transmit wealth to children who are already well off.

Large inheritances and bequests have not been common in Australia to date. But the strong growth in the wealth of today's older generations combined with the steady shrinking of the family size from 1960 to 2000 may lead to more and larger inheritances and greater inequality. In practice, inheritances tend to transmit wealth to children who are already well-off,⁴³ and home ownership is more likely among those who receive an inheritance, and who receive larger inheritances.⁴⁴

⁴² Wu, et al. (2015) p.4. The authors conclude that, "many households preserve a large proportion of assessable assets as a buffer or bequests".

⁴³ Daley, et al. (2014)

⁴⁴ Barrett, et al. (2015)

2.6 Higher house prices and more debt makes the economy more vulnerable to economic shocks

Worsening housing affordability reduces economic stability. House prices are rising faster than incomes. And households are borrowing more, particularly to invest in housing. As a result, household debt in Australia is now a record 190 per cent of household after-tax income, up from about 170 per cent between 2007 and 2015. More households are exposed: in 2002, 20 per cent of households had a debt of more than twice their income; today it's 30 per cent.

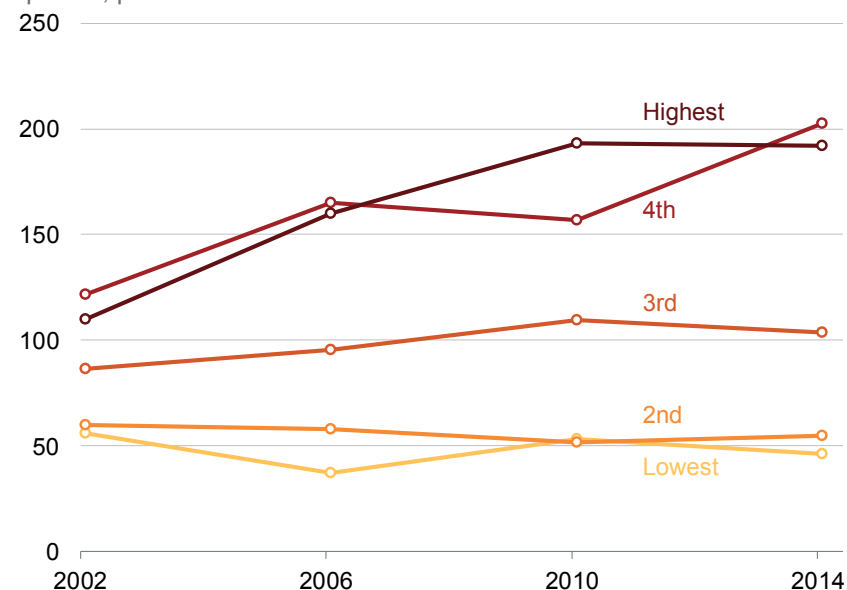
Higher levels of debt increase the risks of borrower default and thus the risks of banks getting into trouble, with all the economic chaos that would create.

But the risks of Australian banking instability are low because relatively few households have high loans-to-total-assets ratios and our banks are highly profitable and well capitalised by international standards. And most people taking on larger debts in Australia appear to be from wealthier households well placed to service those debts (Figure 15).⁴⁵ The debt-to-income ratios for households in the bottom two quintiles (the bottom 40 per cent) of the income distribution remained stable between 2002 and 2014.

⁴⁵ Lowe (2017). Simon and Stone (2017) also found that first home buyers who bought after the global financial crisis are more financially secure and are behaving more conservatively than those who bought before the crisis.

Figure 15: Debt has increased most among high-income households

Household debt-to-income ratio (for households with debt), by income quintile, per cent



Source: Adapted from Lowe (2017).

But there is always a risk that banks will drop their lending standards as they compete for business.⁴⁶ One-third of borrowers have either no accrued buffer or a buffer of less than one month's repayments. This is not historically high – indeed, it is the lowest since records began in 2002.⁴⁷ But those with minimal buffers tend to have newer mortgages, or to be lower-income or lower-wealth households.

⁴⁶ Lowe (2017)

⁴⁷ RBA (2017a), Box C.

Much more concerning is the risk that higher debts could prompt a rapid fall in household spending in the event of a downturn.⁴⁸ Household consumption accounts for well over half of GDP. Recent Reserve Bank of Australia research shows that households with higher debts are more likely to reduce spending if their incomes fall.⁴⁹ A rise in unemployment, perhaps prompted by a slowdown in China or a stuttering US recovery, would force many Australians to save more – and consume less.

Even a relatively small rise in the interest rates paid by households would crimp their spending. As noted in Section 1.4, if interest rates rise by just two percentage points, mortgage payments on a new home will take up more of a household's income than at any time in the past two decades. While the Reserve Bank would only lift interest rates cautiously, another disruption to international financial markets like the 2008 shock could sharply increase banks' funding costs, raising mortgage rates.

Falling house prices may also result in reduced consumption if home-owners feel poorer. But estimates of the size of this effect vary widely. One recent Reserve Bank paper estimated that each dollar of housing wealth lost reduced household consumption by about a quarter of one cent, implying a 0.1 per cent fall in GDP for each 10 per cent fall in house prices.⁵⁰ Another paper suggested that such a “wealth effect” could be ten times larger.⁵¹

⁴⁸ Daley, *et al.* (2017b)

⁴⁹ La Cava, *et al.* (2016)

⁵⁰ Gillitzer and Wang (2015)

⁵¹ Windsor, *et al.* (2013)

3 What should be done in NSW?

As this submission has shown, most of the increase in the value of NSW housing reflects increases in the price of land, not the housing that has been built on it. These higher land prices mainly reflect restrictions on the supply of residential land: urban infill developments are restricted and costly; and developable land on the urban fringe of Sydney is limited. Development restrictions have been most stringent in the more desirable, established suburbs. Unsurprisingly, land values have risen fastest in these inner-city areas.

Although construction rates have increased in Sydney in the last few years, they remain below what is needed given current population growth. The failure to permit enough development reflects the poisonous politics of NIMBYism.

But all of the problems of housing affordability outlined in the first two chapters of this submission will get worse unless the NSW government explains the urgent need for increased density, and changes planning and approval processes accordingly.

The NSW government should also reduce subdivision approval times in greenfield areas, and ensure that developer charges do not make development uneconomic. And transport infrastructure decisions need to reflect actual population growth more closely.

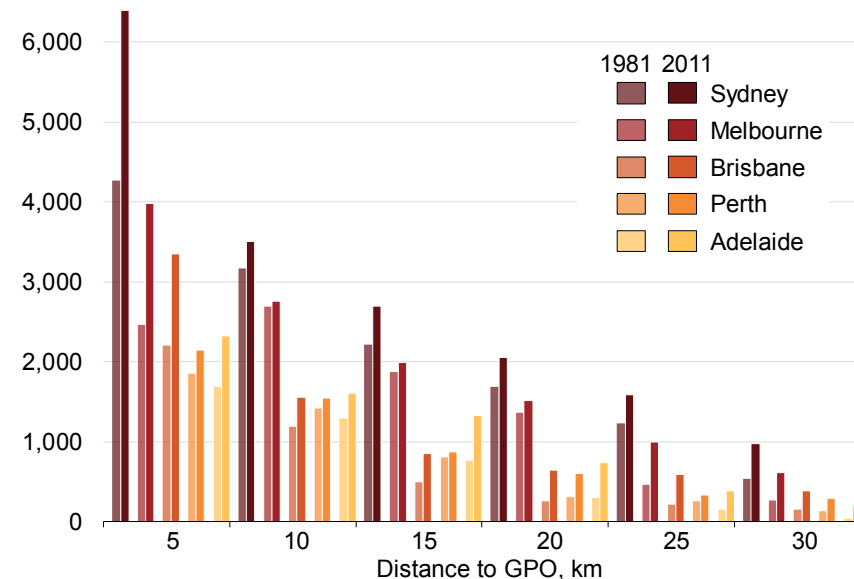
These policy changes will make a real difference. The biggest challenge is to focus on them, rather than following the historic pattern of being distracted by politically easier, but largely ineffective, proposals.

3.1 Construction rates have increased a little, but not enough

Sydney is significantly more densely populated than other Australian cities. Over the long term, population density has increased materially in the inner 5 kilometres of Sydney, and a little elsewhere (Figure 16).

Figure 16: Population density has increased overall, but not by much in the middle ring

Population density, persons per square kilometre, 1981 and 2011

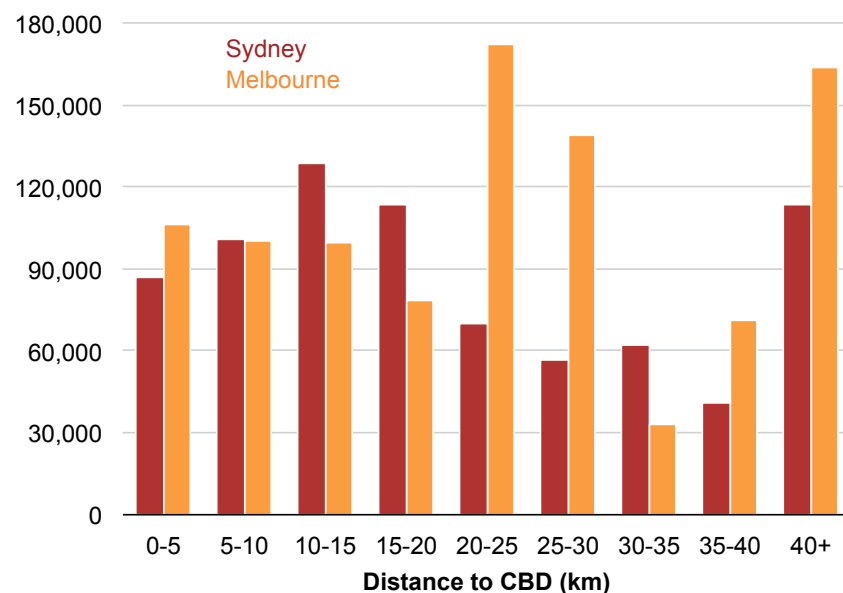


Source: Coffee, Lange and Baker (2016).

In the more recent past, there has been more infill in Sydney than in Melbourne, with more population growth in the middle-ring suburbs (Figure 17). There has been some greenfield development on the city fringe, which is typically more than 40 kilometres from the centre of Sydney. By contrast, Melbourne has seen substantial greenfield development between 20 and 30 kilometres from its centre.

Figure 17: There has been some urban infill in Sydney and Melbourne over the past decade

Population increase between 2006 and 2016, by distance from CBD



Note: Distance from middle of Statistical Area Level 2 (SA2) to capital city GPO.
Sources: ABS (2017f); Grattan analysis.

But there is a substantial backlog in demand, and so increasing supply will restore housing affordability only slowly. Even at current record rates, new housing construction increases the stock of dwellings by only about 2 per cent each year.

In NSW, several years of construction – probably at even faster rates than now – will be needed to erode the large backlog that accumulated in the 2000s. The NSW Treasury’s Intergenerational Report estimated there was an undersupply of 100,000 dwellings in NSW in 2016, with the bulk of this undersupply in Sydney.⁵²

And the problems will get worse. The share of Australia’s population living in our four largest cities is expected to increase from 58 per cent today to 66 per cent by 2061.⁵³ The population of Melbourne is expected to increase from 4.5 million today to 7.9 million by 2051.⁵⁴ Sydney’s population is forecast to increase by 1.7 million people by 2036 and could total 8 million by 2056.⁵⁵

Even today’s record rates of housing construction in Sydney and Melbourne fall well short of what is required to accommodate the population increases projected in state governments’ strategic plans (Figure 18).

⁵² Treasury NSW (2016), p.57

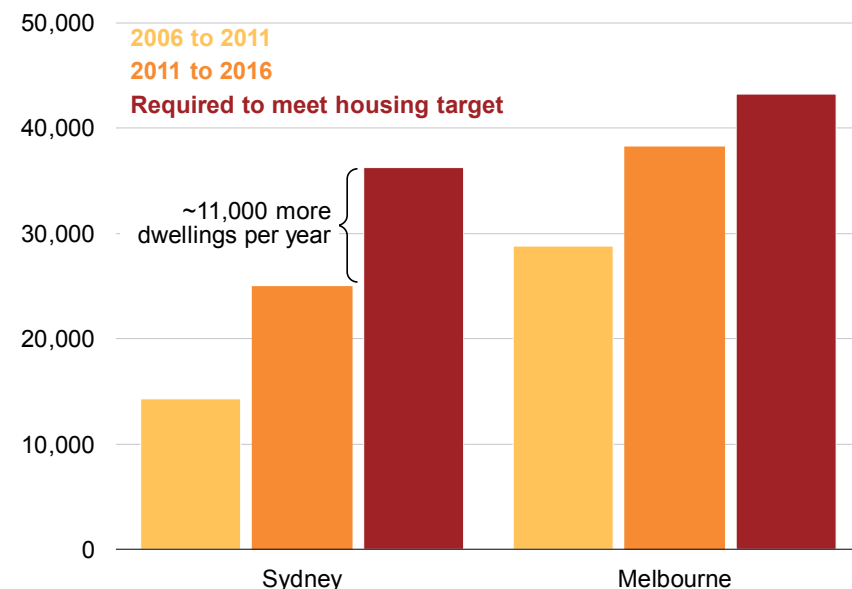
⁵³ Terrill, *et al.* (2016), p.20

⁵⁴ Victorian Government (2017)

⁵⁵ Greater Sydney Commission (2016); ABS (2013)

Figure 18: Housing construction will need to keep increasing to meet city plan housing targets

Average annual net housing construction



Notes: Towards Our Greater Sydney 2056: 725,000 additional dwellings over 2016-2036 (excludes the Central Coast). Plan Melbourne 2017: 1,550,000 additional dwellings over 2015-2051 (based on Victoria in Future projections). Growth and projected growth in dwelling stock is calculated using 2016 Greater Capital City Statistical Area boundaries for the capital cities.

Sources: ABS (2016c); Greater Sydney Commission (2016); Victorian Government (2017); Grattan analysis.

3.2 The NSW government needs to increase medium density housing supply in middle-ring Sydney suburbs

Grattan Institute research shows that people want more townhouses, semi-detached dwellings and apartments in middle and outer suburbs of Sydney (Figure 19).⁵⁶ It is a myth that new home-owners are only interested in the quarter acre block. Often new home-owners buy detached houses on the city fringe simply because that is the cheapest dwelling available. Urban infill could supply a lot of the new housing needed for a growing population.⁵⁷

But there are far fewer medium-density houses and apartments in Sydney's middle and outer suburbs than people are prepared to pay for. Sydney's housing stock has moved closer to what people say they would prefer, with apartments, townhouses and other semi-detached dwellings making up 44 per cent of Sydney's dwelling stock in 2016, up from about 38 per cent in 2006. But this is still well short of the 59 per cent that residents want (Figure 19).

Planning controls limit how much new housing gets built in the inner- and middle-ring suburbs where most people want to live, and which have better access to the city centres where new jobs are increasingly concentrated. Developers say the slow and uncertain development approval process prevents them building more housing in established areas.⁵⁸ There is often community resistance to medium-density development in established suburbs – the NIMBY syndrome.⁵⁹

⁵⁶ Kelly, *et al.* (2011)

⁵⁷ For example, see Buxton, *et al.* (2015) and Phan, *et al.* (2008) on the potential dwelling yields from urban infill in Melbourne. Similar increases in dwellings could be achieved in Sydney.

⁵⁸ Shoory and Rosewall (2017); Hsieh, *et al.* (2012)

⁵⁹ Visentin (2017); Robertson *ibid.*

Figure 19: Sydney's housing stock is moving closer to what people would prefer, but there's still some way to go

Mismatch between 2016 housing stock and preferred housing

Housing stock in 2016, %	Detached	Semi-detached/ town-house	Apartment buildings up to 3 storeys	Apartment buildings 4 storeys plus
Inner	5	4	6	7
Middle	13	3	5	4
Outer	18	4	4	2
Fringe	21	3	1	0
Total	56	14	16	14
<i>Preferred housing stock, %</i>				
Inner	9	4	2	5
Middle	9	7	4	5
Outer	12	7	4	6
Fringe	10	6	5	4
Total	41	25	15	20
<i>Housing stock mismatch (housing stock in 2016 less preferred housing stock), percentage point</i>				
Inner	-4	0	4	2
Middle	4	-4	1	-1
Outer	6	-3	0	-4
Fringe	11	-3	-4	-4
Total	15	-11	1	-6

Notes: Preferred stock is from the trade-off survey in Kelly, Weidmann and Walsh (2011). Excludes dwellings listed as 'Not stated' and 'Other dwellings'. Semi-detached/townhouses includes townhouses, terrace houses, row houses, courtyard houses and villa units. Regions are at statistical local area level, sorted according to land price in 2011, and approximately matches distance to the CBD. Data may not sum to 100 due to rounding. Sources: Kelly, Weidmann and Walsh (2011), Table 2; ABS (2016c); Grattan analysis.

3.2.1 The NSW government needs to communicate the benefits of increased housing density in Sydney

But the politics of planning are poisonous. Many people who live in the established middle suburbs don't like subdivisions in their neighbourhoods.⁶⁰ Even though it is vital to the future prosperity of Sydney, it will not be easy to change laws and practice so that it is easier to subdivide and construct medium-density housing in middle-ring suburbs.

The structure of government makes it difficult to develop to increase density. The benefits of population growth accrue to society as a whole, whereas decisions about development approvals largely sit with local councils. *Existing* residents usually prefer their suburb to stay the same. Restricting development effectively increases the scarcity value of their property. *Prospective* residents that don't already live in middle-ring suburbs can't vote in council elections, and their interests are largely left unrepresented.

The division of responsibility between different levels of government does not encourage difficult decisions. No single level of government owns the challenge of managing population growth in our biggest cities. And so no government is responsible for the serious consequences of failing to plan for growing populations. Instead, more housing will be built on the urban fringe where there are no existing residents to object, but far from jobs and existing infrastructure. And house prices will keep rising.

⁶⁰ For instance, in a recent survey more than half of Sydney respondents said they would not like an increased population in their neighborhood: Productivity Commission (2011), p.28.

The politics will only change if more people understand the trade-offs that are implicit in opposing development. Public engagement is vital. It provides the framework for residents to think about choices facing their cities and neighbourhoods. Residents usually engage in the planning process only to respond to specific development applications rather than to think through proposals on how the whole neighbourhood should change over time. The few examples of successful reform suggest that the public will only accept population growth in their neighbourhoods if residents are actively involved in decisions about the future of their city *and* their neighbourhood.⁶¹

The NSW government needs to clearly articulate the benefits of people accepting more households into their area. Managed well, accepting more residents can lead to improved infrastructure, more and better services, more shops and more funding for community facilities.⁶² More medium density dwellings in established areas are exactly the kind of dwellings that current residents would like their children to buy. They are also the kind of housing that they will want to downsize into in a few years' time.⁶³

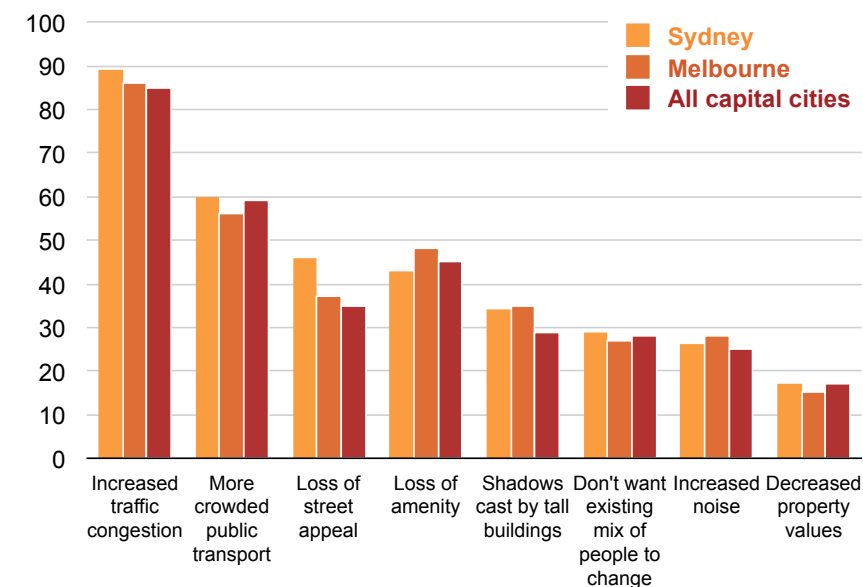
Of course, population growth can impose genuine costs on existing residents, with residents most commonly citing increased traffic congestion and crowding on public transport, greater noise and a loss of “street appeal” as the main reasons for not wanting the population of their neighbourhood to increase (Figure 20).

New approaches that balance the needs of existing and prospective residents can therefore help. Clearer rules around what is acceptable development and what is not can reduce

uncertainty for everyone, including existing residents. Linking higher density development to provision of new or improved social and transport infrastructure may help overcome community resistance to denser developments. Governments can also ensure that new medium density housing will be constructed well by making sure housing complies with building regulations and meets agreed standards.

Figure 20: Reasons for not wanting population of their neighbourhood to increase

Per cent of respondents, 2011



Note: Respondents could choose multiple reasons and so totals do not sum to 100.
Sources: Productivity Commission (2011), p.28.

⁶¹ Kelly, *et al.* (2013); Kelly (2010).

⁶² Sweet (2010)

⁶³ Daley (2017)

3.2.2 Local councils should have more incentives to approve development

Current NSW government rules around council rates do little to encourage councils to approve medium density development.

The NSW government caps the growth of overall council rates revenues. This may discourage councils from accepting growing populations because they must then stretch existing resources across a larger population. While councils subject to rate-pegging can apply for Special Rate Variations (SRVs), they are reluctant to do so even when clearly necessary because exceeding the rate peg excites comment, and so is considered politically risky.⁶⁴

More apartments in an existing suburb can also effectively increase the rates for existing residents. In NSW, rates are assessed on unimproved land values, and so apartment residents pay less per person than those living in houses, even though they often consume council services at a similar rate.⁶⁵

Even when councils and existing residents would get a financial benefit from a boost to their rate-paying populations, experience shows this does not persuade councils to allow denser development in the face of local opposition.

⁶⁴ NSW Independent Local Government Review Panel (2013), p.42; IPART (2012)

⁶⁵ IPART recommended that the NSW government give councils the option to use the capital improved value of a site as an alternative to unimproved value as the basis for setting the variable amounts in council rates (IPART (2016)).

3.2.3 The Greater Sydney Commission should have greater powers to ensure local councils meet housing targets

The NSW government has empowered the Greater Sydney Commission to set housing targets for the six Districts and local councils.⁶⁶ These targets are based on the projections in the Commission's strategic city plan, *Towards Our Greater Sydney 2056*.⁶⁷ The Commission has published draft plans for each of Sydney's six Districts, including 5-year housing supply targets for each local government area and a 20-year housing supply target for each District. To meet these plans, most Sydney councils will need to approve much more housing construction than over the past 5-to-10 years (Figure 18).

This is not the first time that housing targets have been set for Sydney, and it would not be the first time if reality fell well short.⁶⁸ Housing targets only work if they are realistic, and there are consequences if they are not met.⁶⁹ Past housing targets for population growth in each local council area of Greater Sydney have lacked any such credible enforcement mechanism, whether incentive payments or penalties for non-compliance. Nor have past strategic plans in Australian cities attempted to match housing projections in nominated locations with the housing that land use planning rules is likely to deliver.⁷⁰

The NSW government should give the Greater Sydney Commission bigger sticks to ensure councils meet the housing targets included within District Plans. In particular, the government

⁶⁶ NSW Government (2017a)

⁶⁷ Greater Sydney Commission (2016), which is an update to the 2014 strategic plan, 'A Plan for Growing Sydney', released in December 2016.

⁶⁸ Dimasi. (2015), Table 2; UDIA NSW (2017), p.9.

⁶⁹ Kelly, *et al.* (2013), p.13

⁷⁰ Buxton, *et al.* (2015), p.10

should implement two proposals from its draft 2017 housing affordability package that were omitted from the final package or only partially implemented.⁷¹

- **Proposal (ii):** ‘The GSC will only approve changes to a Local Environmental Plan (LEP) if the GSC considers the LEP gives effect to the relevant District Plan targets on housing supply and diversity, and the proposed residential zones are considered to be feasible to develop.’⁷²
- **Proposal (vi):** ‘Where any council fails to meet its obligations in updating a LEP, the Minister may repeal the existing LEP and the GSC may assume the role of the relevant planning authority to update the LEP in line with the District Plan.’⁷³

These proposals would increase development in Sydney’s inner and middle suburbs, close to jobs and transport. Further, the government should make clear whether it is the GSC or the

⁷¹ These were proposals ii and vi in the list of proposed measures supplied by the Department of Premier and Cabinet (NSW Government (2017c)).

⁷² Councils are obliged to ‘give effect’ to the District Plan (when completed) or the ‘Plan for Growing Sydney’ in their LEPs under Part 3B s75AI of the *Environmental Planning and Assessment Act 1979* (see Clayton Utz (2015)). A Bill to align the Act with the NSW Department of Premier and Cabinet’s proposed housing affordability package is currently before Parliament (see NSW Department of Planning and Environment (2017c)). This Bill proposes that councils produce a ‘local strategic planning statement’ that links the District Plan to the LEP (NSW Department of Planning and Environment (2017e)). This proposal adds an extra layer of complexity but should make councils more accountable for meeting their housing targets.

⁷³ According to the package, the Minister will be given powers to ‘intervene if necessary’ to ensure LEPs are updated, which is vaguer than Proposal (vi) (NSW Government (2017b)). Under proposed amendments to the *Environmental Planning and Assessment Act 1979*, councils will be required to check their LEP every five years.

Minister that needs to approve local council strategic planning statements.⁷⁴ The government could also consider making bonus payments to councils that meet or exceed housing targets.⁷⁵

3.2.4 The proposed medium-density housing code will only be effective if it applies widely

The NSW government is developing⁷⁶ a new medium-density housing code, to help fast-track new developments and make the planning approval process simpler and cheaper.⁷⁷ If a proposed medium-density development adhered to the code’s design rules, it would be considered a ‘complying development’ and would not need to submit a development application and be assessed by council.⁷⁸ This proposal would build on existing codes, such as for the construction of ‘granny flats’, which have streamlined the approval process for such developments.⁷⁹

However, for the proposed medium-density housing code to substantially increase the supply of medium-density housing, it

⁷⁴ Mills Oakley (2017)

⁷⁵ The NSW government is providing up to \$2.5 million for each priority council to update their LEPs. The government is also providing incentive payments to other councils that volunteer to update their LEPs (NSW Government (2017a)). These amounts seem too small considering the value of land rezoning and the productivity benefits of more housing in well-located areas.

⁷⁶ Ibid.

⁷⁷ NSW Department of Planning and Environment (2016); NSW Government (2017a); Kelly, *et al.* (2013)

⁷⁸ NSW Department of Planning and Environment (2016). Under the Housing Code for new one- and two-storey houses and small renovations, a development can be approved within 20 days of lodgement if the proposal complies with the code (NSW Department of Planning and Environment (2017f)).

⁷⁹ NSW Department of Planning and Environment (2017f); NSW Department of Planning and Environment (2017a). According to Thomas (2016), 40 per cent of all developments in Sydney now use the code process.

must apply widely to sites suitable for medium-density development. But the medium density housing code will only apply in areas that already allow medium density development under a council's local environmental plan.⁸⁰ Therefore the NSW government, or the Commission, should require councils to zone a minimum proportion of their land as medium-density, and to apply the new code to all these areas.

3.2.5 Councils should loosen floor space ratios in medium-density housing zones

Some Sydney councils appear to use restrictive floor space ratios (FSRs) within their local environmental plan to limit the amount and size of medium and high-density development that is nominally allowed in zones R3 and R4.⁸¹ More restrictive FSRs often apply to residential developments compared to commercial development.⁸² Restrictive FSRs can make medium density developments uneconomic.⁸³ The NSW government, or the Commission, should consider requiring councils to set FSRs so that medium-density housing is commercially feasible in zones R3 and R4.

3.2.6 Minimum apartment design guidelines should be reconsidered

Minimum apartment design guidelines may have pushed up apartment prices.⁸⁴ Although they are nominally only guidelines,

there are reports that many councils effectively treat them as mandatory. One estimate is that these guidelines make an equivalent two-bedroom apartment \$150,000 more expensive in Sydney compared to Melbourne.⁸⁵

3.2.7 Independent panels should determine development applications

The NSW government recently announced that Independent Hearing and Assessment Panels (IHAPs) will be mandatory across all Sydney and Wollongong councils and will assess applications for developments valued at \$5 million to \$30 million.⁸⁶ These independent panels should reduce the workload for council staff, speed up approvals, reduce the risk of corruption and provide greater certainty for developers. But the threshold of \$5 million should be lowered to \$2 million so that it applies to smaller medium-density developments.

3.2.8 Planning rules should allow more medium- and high-density housing near transport infrastructure

Many more dwellings can be built along transport corridors.⁸⁷ The NSW government has encouraged development near transport hubs in recent years (for example, around Green Square and Parramatta).⁸⁸ Developments are being built now around transport hubs in Homebush, Wolli Creek and North Sydney.⁸⁹ And higher-

⁸⁰ Zone R3 (NSW Department of Planning and Environment (2017d))

⁸¹ E.g. the Leichardt Municipal Council wrote that they have set low FSRs to use as a negotiating tool with developers (Leichardt Municipal Council (2014)).

⁸² Urban Taskforce Australia (2011) p.28.

⁸³ FSRs are considered a blunt tool to control development (Mills Oakley (2016); Leichardt Municipal Council (2014)).

⁸⁴ NSW Department of Planning and Environment (2015)

⁸⁵ Tan (2017)

⁸⁶ NSW Department of Planning and Environment (2017b)

⁸⁷ For example, Adams (2010).

⁸⁸ Gurran, *et al.* (2016) p.70-71.

⁸⁹ Kent and Phibbs (2017); Rider Levett Bucknall (2017). NSW Department of Planning and Environment (2014) p.8 and p.72.

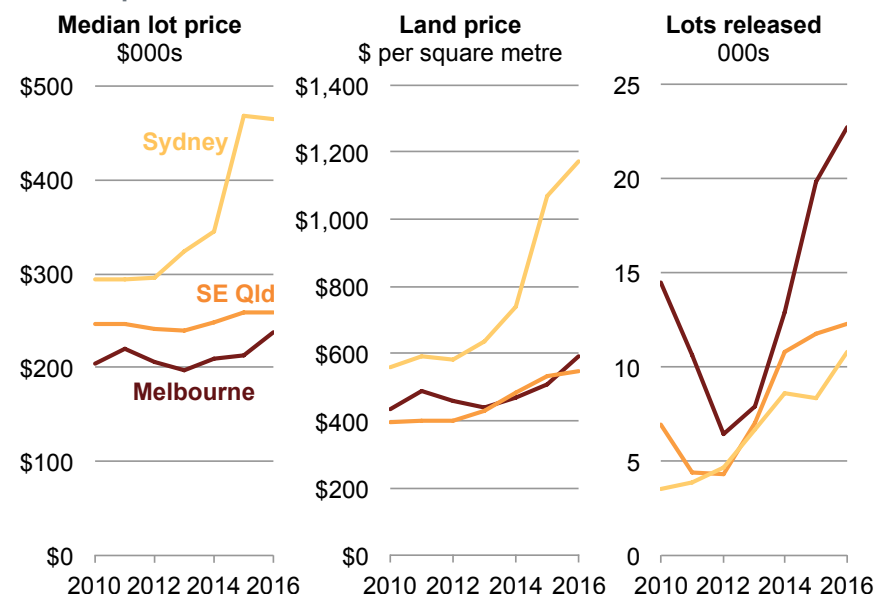
density development is planned for new transport infrastructure, notably along the North West rail link.⁹⁰

The government's proposal to expand Priority Precincts, many of which are near key transport hubs, is encouraging.⁹¹ Developments along key transport corridors should be permitted to rise to up to eight storeys, subject to clear design principles.⁹² Adams (2010) estimates that such an approach could yield up to 1.2 million extra dwellings in Melbourne.⁹³ Applying this approach to Sydney could also yield a substantial number of new dwellings along key transport corridors while keeping most of the suburban area unchanged.

3.3 The NSW government should increase the supply of greenfield land

Greenfield land prices are significantly higher in Sydney than in other capital cities (Figure 21 and Figure 22). Slow planning approval processes, high infrastructure charges, fragmented land ownership and geographical constraints have restricted the supply and pushed up the price of greenfield land in Sydney.⁹⁴

Figure 21: Greenfield land prices are much higher in Sydney than in other capital cities



Note: nominal dollars.

Source: UDIA (2017a); Charter Keck Cramer; Research 4

⁹⁰ NSW Government (2013), p.10.

⁹¹ NSW Government (2017a)

⁹² For instance, Adams (2010) specifies minimum rules for applicable streets, heritage, front and rear height limits, parking, setbacks, and access.

⁹³ Under the high-density scenario, and 500,000 under the low-density scenario (Adams (2009)).

⁹⁴ Glaeser and Gyourko (2017); Hsieh, *et al.* (2012); Property Council of Australia (2016); UDIA (2017b).

To increase the supply of greenfield housing, the NSW government should:

- Implement the proposed **Greenfield Housing Code**. This would speed-up greenfield developments.⁹⁵
- **Tighten statutory timeframes for re-zonings** and planning decisions. This would make the regulatory processes more disciplined and give developers a better idea of the time they should allow for each project.⁹⁶ Where councils fail to meet statutory timeframes, applications should be deemed to have been approved (as occurs with some applications in Queensland and the ACT).⁹⁷
- **Maintain a long-term supply of new land for development** of around 15-20 years⁹⁸ and align Greater Sydney strategic plans and District Plans that contain housing and population forecasts with council housing targets.
- **Reform infrastructure charges** to align with the Productivity Commission's general principles on infrastructure costs.⁹⁹ This would involve levying charges on developers when local residents will primarily benefit from local infrastructure, such

⁹⁵ NSW Department of Planning and Environment (2017g)

⁹⁶ Productivity Commission (2011), p.XLIX

⁹⁷ Ibid., pp.82-83.

⁹⁸ It can take up to ten years after rezoning commences before a subdivision of land is completed, infrastructure is installed and building can commence. If processes outside of planning are included, it can take up to 15 years between site assembly and building construction (ibid., pp.125; 137). Developers complain of a lack of *serviced* land.

⁹⁹ Ibid., p.XLVI

as local parks and roads.¹⁰⁰ Infrastructure charges on developers should be set as close as possible to the cost of providing the local infrastructure in new developments.¹⁰¹

Where councils aim to capture a share of windfall profits from rezoning or planning gain, this should be explicit, charges should be predictable, and only aim to capture a share of the economic value added above costs and a reasonable risk-adjusted return on capital.¹⁰²

- **Use the government agency Landcom as the initial developer** in greenfield areas. It could develop initial infrastructure in greenfield areas and provide a template for developers to follow. This would create a precedent for planning decisions and deliver initial infrastructure to greenfield areas, giving developers greater certainty about the prospects for a new greenfield development.¹⁰³

The government should also require developers to **build a mix of lot sizes and housing types in new developments**.¹⁰⁴ Smaller lot sizes are more affordable and appeal to a different segment of

¹⁰⁰ Ideally, the incremental cost of local infrastructure attributable to each property would be reflected in developer charges. Infrastructure benefiting existing residents would be funded by user charges where appropriate, or via general taxation (Productivity Commission (2014), p.172)

¹⁰¹ Ibid., p.170.

¹⁰² For example, Terrill and Emslie (2017).note that developer charges are most likely to be borne by the landowner at the time the charge is determined by reducing the price a developer will be willing to pay for the land. Yet developer charges are often poorly targeted at capturing value uplift since they are charged per property or per square metre of floor space, and tax some windfall gains but not others.

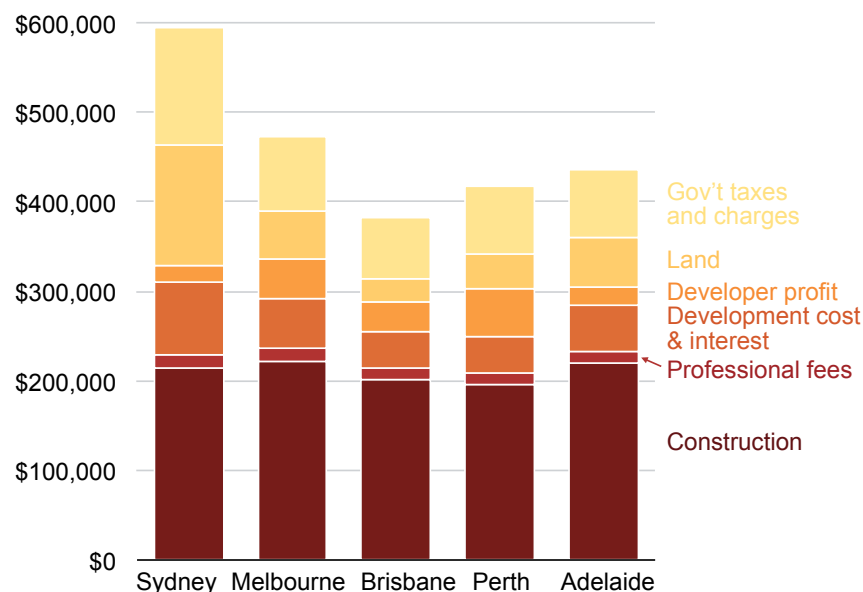
¹⁰³ Productivity Commission (2011), p.137. It was suggested in the government's housing affordability package that Landcom take an active role to improve housing affordability.

¹⁰⁴ Kelly, *et al.* (2012); NSW Government (2017a)

the population than families seeking traditional detached homes.¹⁰⁵ A diversity in lot sizes and house types will increase the flexibility of new suburbs as demographics and preferences change.

Figure 22: Government taxes and charges are contributing to higher greenfield development prices in Sydney

Greenfield dwelling price in capital cities, \$2010



Source: Urbis (2011)

¹⁰⁵ Australian Government (2013) p.129

3.4 Use existing transport infrastructure better, and make better decisions on what new infrastructure to build

The NSW government needs to improve transport networks by using existing transport infrastructure more efficiently and building more effective transport projects. This will make fringe suburbs a more attractive alternative to established suburbs closer to CBDs.

The government should consider **congestion charging**.¹⁰⁶ Charging drivers a fee to drive on congested roads would reduce congestion; a congestion charge needs to discourage only a small proportion of people from driving to enable a big increase in traffic speed.¹⁰⁷ The government should also consider changing public transport pricing to encourage patrons to shift their travel to off-peak periods.

Finally, the **government needs to improve how it decides on transport infrastructure investments**. Commonwealth and state governments have spent unprecedented sums on transport infrastructure in the past decade. But mostly, they have not spent wisely (Figure 23). They have tended to favour projects in swing states and marginal seats, rather than projects with the highest benefit-cost ratios.¹⁰⁸ Governments should commit money to a transport infrastructure project in NSW only if Infrastructure NSW or Infrastructure Australia has assessed it as high priority, and the business case has been tabled in parliament.¹⁰⁹

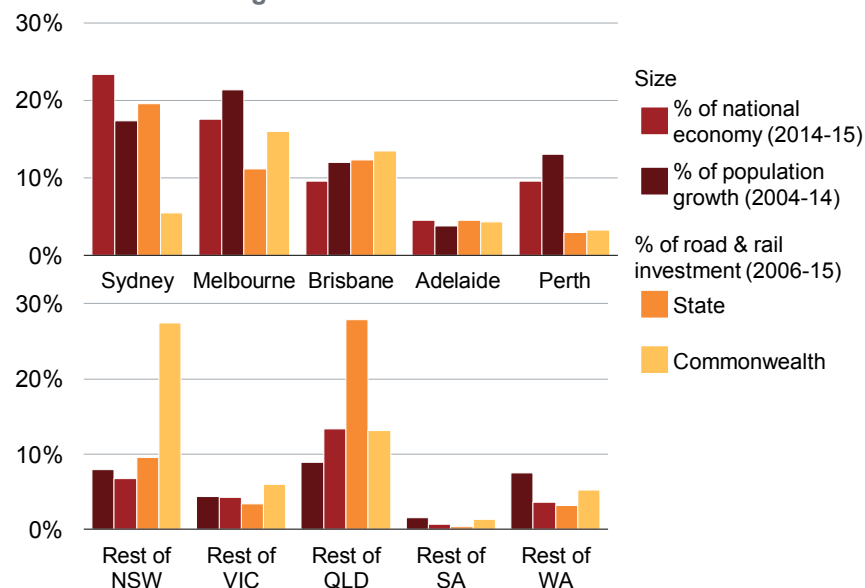
¹⁰⁶ Daley, *et al.* (2016)

¹⁰⁷ Kelly and Donegan (2015), p.172

¹⁰⁸ Terrill, *et al.* (2016)

¹⁰⁹ Governments should be wary of the likelihood of cost overruns when assessing or announcing an infrastructure project, see Terrill and Danks (2016).

Figure 23: Governments have spent disproportionately on transport infrastructure in regional areas



Notes: The percentage of the national economy is based on the 2014-15 financial year. Population growth is over the 10 years from June 2004 to June 2014. Road and rail investment is over the 10 years from 2005-06 to 2014-15. Road and rail investment does not include the private sector contribution to public-private partnerships. If this were included, the proportion of spending in urban areas would be slightly higher.
Source: Terrill, Emslie and Coates (2016).

3.5 Avoiding the distractions of politically easier, but ineffective options

There are plenty of other policy changes that can be promoted as improving housing affordability.¹¹⁰ For a forthcoming report, we have analysed dozens of housing affordability measures. We find that they will have much less long run impact than the planning regimes improvements outlined in this submission (Figure 24).

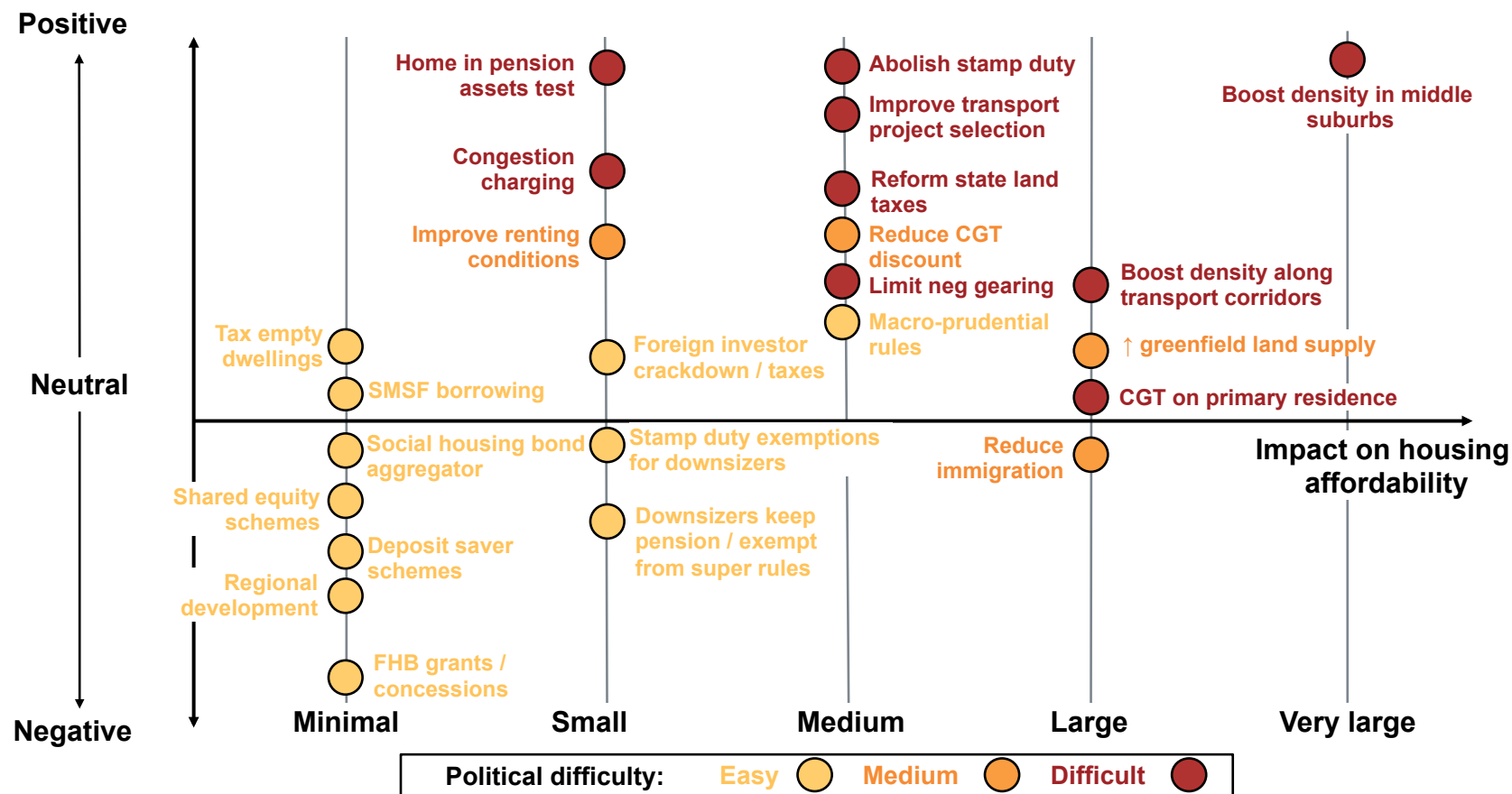
In the past governments around Australia have often preferred the politically easier options, even though they were unlikely to make much difference in the long run.

These choices were politically understandable, but they have left Australia with today's housing affordability mess. Fewer young people own their own homes. Housing affordability for lower income households is evaporating. Social mobility is at risk because home ownership increasingly depends on parental resources. Economic growth is crimped because many people cannot reasonably get to the high productivity jobs increasingly created in the centre of our cities. Sydney is increasingly divided geographically between prosperous inner and middle suburbs, with high access to jobs, education levels, incomes, and workforce participation, and outer suburbs which lack these advantages.

If NSW wants different outcomes, different policy decisions will be needed.

¹¹⁰ Daley, et al. (2017a)

Figure 24: Only some policies will actually have any impact in improving housing affordability, and these are politically difficult
Summary of social, economic and budgetary impacts



Notes: Prospective policies are evaluated on whether they would improve access to more affordable housing for the community overall, assuming no other policy changes. Assessment of measures that boost households' purchasing power includes impact on overall house prices. Our estimates of the economic, budgetary or social impacts should not be treated with spurious precision. For many of these effects there is no common metric, and their relative importance depends on the weighting of different political values. Consequently our assessments are generally directional and aim to produce an informed discussion.
Source: Grattan analysis.

References

- Abelson, P. and Chung, D. (2005) 'The real story of housing prices in Australia from 1970 to 2003', *Australian Economic Review*, 38(3), p 265-281
- ABS (2011) *Household Expenditure Survey, Australia: Summary of Results, 2009-10*, from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6530.0Main+Features12009-10?OpenDocument>
- ABS (2013) *Population Projections, Australia, 2012 (base) to 2101*, Australian Bureau of Statistics, accessed 1 February 2016, from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3222.0>
- ABS (2015a) *Household Income and Wealth, Australia, 2013-14*, Australian Bureau of Statistics from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6523.0>
- ABS (2015b) *Housing Occupancy and Costs, 2013-14*, Australian Bureau of Statistics from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4130.0>
- ABS (2016a) *Australian National Accounts: National Income, Expenditure and Product, March 2016*, accessed 3 April 2016, from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5206.0Mar 2016?OpenDocument>
- ABS (2016b) *Australian System of National Accounts, 2015-16*, Australian Bureau of Statistics, accessed 25 January 2016, from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/5204.0>
- ABS (2016c) *Census of Population and Housing*, Australian Bureau of Statistics
- ABS (2017a) *6345.0 - Wage Price Index, Australia, June 2017*, Australian Bureau of Statistics from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6345.0>
- ABS (2017b) *6416.0 - Residential Property Price Indexes: Eight Capital Cities*, Australian Bureau of Statistics from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6416.0Mar 2017?OpenDocument>
- ABS (2017c) *Australian National Accounts: National Income, Expenditure and Product, March 2017*, accessed 3 August 2017, from <http://www.abs.gov.au/ausstats/abs%40.nsf/mediareleasesbyCatalogue/C9973AC780DDFD3FCA257F690011045C?OpenDocument>
- ABS (2017d) *Average Weekly Earnings, Australia, May 2017*, Australian Bureau of Statistics from <http://www.abs.gov.au/Ausstats/abs@.nsf/0/14CDB5CD59F6A075CA2575BC001D6157?OpenDocument>
- ABS (2017e) *Consumer price index, Cat. 6401.0*, Australian Bureau of Statistics
- ABS (2017f) *Regional Population Growth, Australia, 2016*, Australian Bureau of Statistics from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3218.0Main+Features12016?OpenDocument>
- ABS (multiple years-a) *ABS Survey of Income and Housing, Australia*, Australian Bureau of Statistics
- ABS (multiple years-b) *Household Expenditure Survey and Survey of Income and Housing, Australia*, Australian Bureau of Statistics

- Adams, R. (2009) *Transforming Australian Cities*, Commissioned by the Victorian Department of Transport and the City of Melbourne from <http://www.transformingaustraliancities.com.au/wp-content/uploads/Transforming-Australian-Cities-Report.pdf>
- Adams, R. (2010) *Transforming Australian Cities*, from <http://www.transformingaustraliancities.com.au/wp-content/uploads/Transforming-Australian-Cities-Report.pdf>
- Australian Government (2013) *Housing Supply and Affordability Issues 2012–13*, from http://www.treasury.gov.au/~media/Treasury/Publications_and_Media/Publications/2013/NHSC/Downloads/PDF/housing_supply_affordability_report_2012-13.ashx
- Australian Property Monitors (2017) *Australian Property Monitor, December 2016 Quarter Median Price and Statistics*,
- Bank for International Settlements (2017) 'Long series on nominal residential property prices', from http://www.bis.org/statistics/pp_long.htm
- Barrett, G., Cigdem, M., Whelan, S. and Wood, G. (2015) *The relationship between intergenerational transfers, housing and economic outcomes*, AHURI Positioning Paper No. 163 from https://www.ahuri.edu.au/_data/assets/pdf_file/0021/2847/AHURI_Positioning_Paper_No163_The-relationship-between-intergenerational-transfers,-housing-and-economic-outcomes.pdf
- Blanchflower, D. and Oswald, A. (2013) *Does high home-ownership impair the labor market*, NBER Working papers: 19079
- Burke, T., Stone, W. and Ralston, L. (2014) *Generational change in home purchase opportunity in Australia* AHURI Final Report No 232
- Buxton, M., Hurley, J. and Phelan, K. (2015) *Melbourne at 8 Million: Matching Land Supply to Dwelling Demand*, RMIT University, accessed 5 May 2017, from https://gallery.mailchimp.com/b38874b25e686137780eb836e/files/Melbourne_at_8_Million_Matching_Land_Supply_to_Dwelling_Demand1.pdf
- Clayton Utz (2015) 'Strategic Planning for NSW: the Greater Sydney Commission and a new Part 3B', from <https://www.claytonutz.com/knowledge/2015/november/strategic-planning-for-nsw-the-greater-sydney-commission-and-a-new-part-3b>
- Coffee, N. T., Lange, J. and Baker, E. (2016) 'Visualising 30 years of population density change in Australia's major capital cities', *Australian Geographer*, 47(4), p 511-525
- CommSec (2016) *US overtakes Australia to build biggest homes* from https://www.commsec.com.au/content/dam/EN/ResearchNews/Eco_Insights31.10_US_overtakes_Australia_to_build_biggest_homes..pdf
- CoreLogic (2016) *Housing Affordability Report - December 2016*,

- CoreLogic-Moody's (2017) 'CoreLogic-Moody's Analytics Australian Home Value Index Forecast, Q1 2017', from <https://www.corelogic.com.au/news/corelogic-moodys-analytics-australian-home-value-index-forecast-q1-2017-.Wa4LAbIjGUk>
- Daley, J. (2015) 'Inner City v Outer Suburbs: where you live really does determine what you get', *The Guardian*, from <https://grattan.edu.au/news/inner-city-v-outer-suburbs-where-you-live-really-does-determine-what-you-get/>
- Daley, J. (2016) 'Productivity and geography', Productivity Commission Conference, Canberra, from <https://grattan.edu.au/wp-content/uploads/2017/01/Productivity-and-geography-Productivity-Commission-Dec-2016.pdf>
- Daley, J. (2017) 'AAA housing for older Australians', COTA National Policy Forum 2017, from <https://grattan.edu.au/wp-content/uploads/2017/06/COTA-seniors-housing-2017-June-16-9-original.pdf>
- Daley, J., Coates, B. and Wiltshire, T. (2017a) *Options for housing affordability: the good, the bad and the cosmetic*, Inside Story from <http://insidestory.org.au/options-for-housing-affordability-the-good-the-bad-and-the-cosmetic/>
- Daley, J., Coates, B. and Wiltshire, T. (2017b) *What comes after the housing boom?*, Inside Story from <http://insidestory.org.au/what-comes-after-the-housing-boom/>
- Daley, J., Coates, B., Wood, D. and Parsonage, H. (2015) *Super tax targeting* accessed 22 November 2015, from <http://grattan.edu.au/wp-content/uploads/2015/11/832-Super-tax-targeting.pdf>
- Daley, J., Duckett, S., Goss, P., Minfie, J., Norton, A., Terrill, M. and Wood, T. (2016) *Orange Book 2016: Priorities for the next Commonwealth Government*, Grattan Institute from <https://grattan.edu.au/report/orange-book-2016-priorities-for-the-next-commonwealth-government/>
- Daley, J., McGannon, C., Savage, J. and Hunter, A. (2013) *Balancing budgets: Tough choices we need*, Grattan Institute from http://grattan.edu.au/wp-content/uploads/2014/03/801_Balancing_Budgets.pdf
- Daley, J., Wood, D., Weidmann, B. and Harrison, C. (2014) *The wealth of generations* Grattan Institute, accessed 13 February 2015, from <http://grattan.edu.au/report/the-wealth-of-generations/>
- Demographia (2017) *13th Annual Demographia International Housing Affordability Survey: 2017*, from <http://www.demographia.com/dhi.pdf>
- Dimasi., P. C. o. A. a. M. (2015) *Missing the mark - an audit of housing targets*, from https://www.propertycouncil.com.au/Web/Content/Submissions/NSW/2015/NSW_Housing_Target_Report_-_Missing_the_Mark.aspx
- Ellis, L. (2015) *Property Markets and Financial Stability: What We Know So Far*, <http://www.rba.gov.au/speeches/2015/sp-so-2015-09-08.html>

- Ellis, L. (2017) *Opening Remarks to Plenary Panel at the Australasian Housing Researchers Conference*, <https://www.rba.gov.au/speeches/2017/sp-ag-2017-02-16.html>
- Eslake, S. (2014) *Why is Australian housing so expensive* Bank of America/Merrill Lynch
- Eslake, S. (2017) *No place like home: the impact of declining home ownership on retirement*, Prepared for the Australian Institute of Superannuation Trustees from http://www.aist.asn.au/media/20734/AIST_Housing_affordability_and_retirement_incomes_FINAL_21032017.pdf
- Fox, R. and Finlay, R. (2012) 'Dwelling Prices and Household Income', *RBA Bulletin* December 2012 p13-22
- Fox, R. and Tulip, P. (2014) *Is Housing Overvalued?*, Reserve Bank of Australia from <http://www.rba.gov.au/publications/rdp/2014/pdf/rdp2014-06.pdf>
- Ganong, P. and Shoag, D. W. (2017) *Why Has Regional Income Convergence in the US Declined?*, National Bureau of Economic Research
- Gillitzer, C. and Wang, J. (2015) *Housing Wealth Effects: Cross-sectional Evidence from New Vehicle Registrations*, from <https://www.rba.gov.au/publications/rdp/2015/pdf/rdp2015-08.pdf>
- Glaeser, E. L. and Gyourko, J. (2017) 'The economic implications of housing supply', *Journal of Economic Perspectives*,
- Greater Sydney Commission (2016) *Towards Our Greater Sydney 2056 (Draft Amendment to A Plan for Growing Sydney)*, from https://gsc-public-1.s3.amazonaws.com/s3fs-public/towards_our_greater_sydney_2056.pdf?x6WAV8GT8h51mtA5dWliCB6SlCvJuyhw
- Gurran, N., Gallent, N. and Chiu, R. L. (2016) *Politics, Planning and Housing Supply in Australia, England and Hong Kong*, Routledge
- Home loan experts (2017) *LMI Calculator*, Home Loan Experts, accessed 4 September 2017, from <https://www.homeloanexperts.com.au/lenders-mortgage-insurance/lmi-calculator/-lmiCalcForm>
- Hsieh, C.-T. and Moretti, E. (2017) 'Housing Constraints and Spatial Misallocation',
- Hsieh, W., Norman, D. and Orsmond, D. (2012) *Supply-side Issues in the Housing Sector*, Reserve Bank of Australia from <https://www.rba.gov.au/publications/bulletin/2012/sep/pdf/bu-0912-2.pdf>
- IPART (2012) *NSW Independent Local Government Review Panel: IPART Submission on Consultation Paper*, Independent Pricing and Regulatory Tribunal of New South Wales, from https://www.ipart.nsw.gov.au/files/sharedassets/websi te/trimholdingbay/ipart_submission_-_nsw_independent_local_government_review_panel_-_september_2012.pdf

- IPART (2016) *Review of the Local Government Rating System. Local Government — Draft Report* from https://www.ipart.nsw.gov.au/files/sharedassets/websi/te/shared-files/investigation-section-9-legislative-review-of-the-local-government-rating-system/draft_report_-_review_of_the_local_government_rating_system_-_august_2016.pdf
- Kelly, J.-F. (2010) *Cities: who decides?*, Grattan Institute from <https://grattan.edu.au/report/cities-who-decides/>
- Kelly, J.-F., Breadon, P., Mares, P., Ginnivan, L., Jackson, P., Gregson, J. and Viney, B. (2012) *Tomorrow's Suburbs: Building flexible neighbourhoods*, Grattan Institute Melbourne
- Kelly, J.-F., Breadon, P. and Reichl, J. (2013) *Getting the housing we want*, Grattan Institute, accessed 1 November 2015, from http://grattan.edu.au/wp-content/uploads/2014/04/117_report_getting_the_housing_we_want.pdf
- Kelly, J.-F. and Donegan, P. (2015) *City Limits: Why Australia's cities are broken and how we can fix them*, Melbourne University Press
- Kelly, J.-F., Hunter, J., Harrison, C. and Donegan, P. (2013) *Renovating Housing Policy*, Grattan Institute from https://grattan.edu.au/wp-content/uploads/2014/03/800_Renovating_Housing.pdf
- Kelly, J.-F., Mares, P., Harrison, C., O'Toole, M., Oberklaid, M. and Hunter, J. (2013) *Productive cities: opportunity in a changing economy*, Grattan Institute, accessed October 2013, from http://grattan.edu.au/static/files/assets/c422f26b/188_productive_cities.pdf
- Kelly, J.-F., Weidmann, B. and Walsh, M. (2011) *The housing we'd choose*, Grattan Institute, accessed 1 November 2013, from <http://grattan.edu.au/publications/reports/post/the-housing-we-d-choose/>
- Kent, C. (2013) *Recent Developments in the Australian Housing Market*, Address to The Australian Institute of Building Reserve Bank of Australia accessed 14 March 2013, from <http://www.rba.gov.au/speeches/2013/sp-ag-140313.html>
- Kent, J. and Phibbs, P. (2017) *Three charts on: crane-spotting, a way to tell which Australian cities are growing and where*, The Conversation from <https://theconversation.com/three-charts-on-crane-spotting-a-way-to-tell-which-australian-cities-are-growing-and-where-76776>
- Knoll, K., Schularick, M. and Steger, T. (2017) 'No price like home: global house prices, 1870–2012', *The American Economic Review*, 107(2), p 331-353
- Kohler, M. and van der Merwe, M. (2015) 'Long-run Trends in Housing Price Growth', *RBA Bulletin* September 2015, p 21-30

- Koukoulas, S. (2016) 'Millennials should stop moaning. They've got more degrees and low rates', *The Guardian*, 4 April 2016, from <https://www.theguardian.com/commentisfree/2016/apr/04/millennials-should-stop-moaning-theyve-got-more-degrees-and-low-rates>
- La Cava, G., Hughson, H. and Kaplan, G. (2016) *The Household Cash Flow Channel of Monetary Policy*, Reserve Bank of Australia from <https://www.rba.gov.au/publications/rdp/2016/2016-12.html>
- Leichhardt Municipal Council (2014) *Attachment 2: Floor Space Ratio Review - Background Report*, from <http://www.leichhardt.nsw.gov.au/Planning---Development/Planning-Controls--DCPs--LEPs--VPAs-/Planning-Studies>
- Lowe, P. (2015) *National Wealth, Land Values and Monetary Policy*, <https://www.rba.gov.au/speeches/2017/sp-gov-2017-05-04.html> from <http://www.rba.gov.au/speeches/2015/sp-dg-2015-08-12.html>
- Lowe, P. (2017) *Household Debt, Housing Prices and Resilience*, <https://www.rba.gov.au/speeches/2017/sp-gov-2017-05-04.html> from <http://www.rba.gov.au/publications/bulletin/2012/mar/pdf/bu-0312-9.pdf>
- Mills Oakley (2016) 'Good news for NSW developers – bigger (and better!) buildings can still be approved under clause 4.6 of the Standard LEP', from <http://www.millsoakley.com.au/good-news-for-nsw-developers-bigger-and-better-buildings-can-still-be-approved-under-clause-4-6-of-the-standard-lep/>
- Mills Oakley (2017) 'More convoluted, expensive and risky planning laws for NSW? Mills Oakley's review of the Environmental Planning and Assessment Amendment Bill 2017', from <http://www.millsoakley.com.au/more-convoluted-expensive-and-risky-planning-laws-for-nsw-mills-oakleys-review-of-the-environmental-planning-and-assessment-amendment-bill-2017/>
- NSW Department of Planning and Environment (2014) *A Plan for Growing Sydney*, from <http://www.planning.nsw.gov.au/~media/Files/DPE/Plans-and-policies/a-plan-for-growing-sydney-2014-12.ashx>
- NSW Department of Planning and Environment (2015) *Apartment Design Guide*, Tools for improving the design of residential apartment development from <http://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/~media/7ED8E40113064120AE53432457390171.ashx>
- NSW Department of Planning and Environment (2016) *Draft Medium Density Design Guide*, from <http://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/~media/B31C0E2610F04D95AE0F4149A82DC513.ashx>

NSW Department of Planning and Environment (2017a) 'Granny flats', from <https://www.planningportal.nsw.gov.au/building-or-renovating/do-i-qualify-fast-track-approval/granny-flats>

NSW Department of Planning and Environment (2017b) 'IHAPs to be introduced for all Sydney councils', from <http://www.planning.nsw.gov.au/News/2017/IHAPs-to-be-introduced-for-all-Sydney-councils>

NSW Department of Planning and Environment (2017c) 'Legislative Updates to the Environmental Planning and Assessment Act', from <http://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Legislative-Updates-to-the-Environmental-Planning-and-Assessment-Act>

NSW Department of Planning and Environment (2017d) 'Medium Density Housing', from <http://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/Medium-Density-Housing>

NSW Department of Planning and Environment (2017e) *Planning Legislation Updates - Summary of proposals January 2017*, from <http://www.planning.nsw.gov.au/~media/Files/DPE/Other/summary-of-proposals-2017-01-09.ashx>

NSW Department of Planning and Environment (2017f) 'Refining the planning system - The Housing Code', from <http://www.planning.nsw.gov.au/Policy-and-Legislation/Exempt-and-Complying-Development-policy/Refining-the-planning-system>

NSW Department of Planning and Environment (2017g) 'Review of Complying Development in Greenfield Areas', from <http://www.planning.nsw.gov.au/greenfield>

NSW Government (2013) *North West Rail Link Corridor Strategy*, from <http://www.planning.nsw.gov.au/~media/Files/DPE/Reports/north-west-rail-link-corridor-strategy-2013-09.ashx>

NSW Government (2017a) 'A fair go for first home buyers', from <https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/first-home-buyers/>

NSW Government (2017b) 'A fair go for first home buyers - policy in detail', from <https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/first-home-buyers/policy-detail/>

NSW Government (2017c) *Housing Affordability: report to the Premier*, Sydney, accessed 1 September 2017, from <https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/first-home-buyers/housing-affordability-report-to-the-premier/-annex-i-proposed-measures-provided-by-department-of-premier-and-cabinet>

NSW Independent Local Government Review Panel (2013) *Revitalising local government: Final Report of the NSW Independent Local Government Review Panel*, from <http://www.localgovernmentreview.nsw.gov.au/documents/LGR/Revitalising Local Government - ILGRP Final Report - October 2013.pdf>

Phan, T., Peterson, J. and Chandra, S. (2008) 'URBAN INFILL: EXTENT AND IMPLICATIONS IN THE CITY OF MONASH', *People and Place*, 16(4), p 23-31

- Productivity Commission (2011) *Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments*, Productivity Commission from <http://www.pc.gov.au/inquiries/completed/regulation-benchmarking-planning/report/planning-volume1.pdf>
- Productivity Commission (2014) *Public infrastructure*, Productivity Commission from <http://www.pc.gov.au/projects/inquiry/infrastructure>
- Property Council of Australia (2016) 'Delays costing new homebuyers', from https://www.propertycouncil.com.au/Web/Content/Media_Release/QLD/2016/Delays_costing_new_homebuyers.aspx
- RBA (2017a) *Financial Stability Review - April 2017*, Reserve Bank of Australia
- RBA (2017b) 'Statistical Tables, Household Finances – Selected Ratios – E2', from <http://www.rba.gov.au/statistics/tables/>
- Rider Levett Bucknall (2017) *RLB Crane Index, Q2 2017*, from <http://assets.rlb.com/production/2017/04/12001856/RLB-Crane-Index-Australia-Q2-2017.pdf>
- Robertson, J. (2017) 'Sydenham to Bankstown redevelopment study: developers could add 25,000 more homes', *Sydney Morning Herald*, 14 September 2017, from <http://www.smh.com.au/nsw/sydenham-to-bankstown-redevelopment-study-developers-could-add-25000-more-homes-20170913-gygrxk.html>
- Sheppard, J., Gray, M. and Phillips, B. (2017) *ANU Poll 24, Attitudes to Housing Affordability: Pressures, Problems and Solutions* Australian National University from <http://politicsir.cass.anu.edu.au/sites/politicsir.anu.edu.au/files/ANUpoll-24-Housing-2017.pdf>
- Shoory, M. and Rosewall, T. (2017) *Houses and Apartments in Australia*, RBA Bulletin from <https://www.rba.gov.au/publications/bulletin/2017/jun/pdf/bu-0617-1-houses-and-apartments-in-australia.pdf>
- Simon, J. and Stone, T. (2017) *The Property Ladder after the Financial Crisis: The First Step Is a Stretch but Those Who Make It Are Doing OK*, Reserve Bank of Australia from <http://www.rba.gov.au/publications/rdp/2017/pdf/rdp2017-05.pdf>
- Sloan, J. (2016) 'Housing affordability: price fall neither likely nor desirable', *The Australian*, from <http://www.theaustralian.com.au/opinion/columnists/judith-sloan/housing-affordability-price-fall-neither-likely-nor-desirable/news-story/dacd5b762cc519557358e9c910f4586a>
- Spiller, M. and Anderson-Oliver, M. (2015) *Revisiting the economics of inclusionary zoning*, SGS Economics & Planning from <https://www.sgsep.com.au/assets/Occasional-Paper-Revisiting-the-economics-of-Inclusionary-Zoning-April-2015.pdf>

- Spiller, M., Spencer, A. and Fensham, P. (2017) *Value capture through development licence fees*, SGS Economics & Planning from https://www.sgsep.com.au/application/files/1614/8903/7077/Value_capture_through_development_licence_fees.pdf
- Sweet, M. (2010) 'Why medium density housing is a health issue', from <https://blogs.crikey.com.au/croakey/2010/04/11/why-medium-density-housing-is-a-health-issue/>
- Tan, S.-L. (2017) 'Applying Melbourne standards, Sydney apartments would be \$150,000 cheaper', *Australian Financial Review*, from <http://www.afr.com/real-estate/applying-melbourne-standards-sydney-apartments-would-be-150000-cheaper-20170619-gwu0s6-ixzz4szHfKNcX>
- Terrill, M. and Danks, L. (2016) *Cost overruns in transport infrastructure*, Grattan Institute
- Terrill, M. and Emslie, O. (2017) *What price value capture?*, Grattan Institute from <https://grattan.edu.au/wp-content/uploads/2017/03/888-What-price-value-capture.pdf>
- Terrill, M., Emslie, O. and Coates, B. (2016) *Roads to riches: better transport investment*, Grattan Institute, accessed 10 May 2016, from <http://grattan.edu.au/wp-content/uploads/2016/04/869-Roads-to-Riches.pdf>
- Thomas, K. (2016) *Housing Supply Soutcomes From Codification in Sydney*, The University of Sydney from https://sydney.edu.au/halloran/publications/THOMAS_HousingSupplyOutcomes.pdf
- Treasury NSW (2016) *Budget Paper No. 5 - Intergenerational Report*, NSW Government from https://www.treasury.nsw.gov.au/sites/default/files/2017-01/Budget_Paper_5_-_Intergenerational_Report_2016_-_full_report.pdf
- UDIA (2017a) *2017 State of the Land*, Urban Development Institute of Australia from <http://www.udia.com.au/news/2017-state-of-the-land>
- UDIA (2017b) *2017/18 Pre-Budget Submission*,
- UDIA NSW (2017) *Making Housing More Affordable*, from http://www.udiansw.com.au/uploads/docs/Housing_Affordability_Report.pdf
- Urban Taskforce Australia (2011) *Reforming the Standard Instrument - Ensuring that the comprehensive local environmental plans work*, A submission to the NSW Government and the Local Planning Panel
- Urbis (2011) *National Dwelling Cost Study, Prepared for the National Housing Supply Council*, from https://www.treasury.gov.au/~media/Treasury/Publications_and_Media/Publications/2011/National_Dwelling_Costs_Study/Documents/PDF/nhsc-residential-cost-analysis-urbis.ashx
- Victorian Government (2017) *Plan Melbourne: 2017-2050*, from http://www.planmelbourne.vic.gov.au/_data/assets/pdf_file/0007/377206/Plan_Melbourne_2017-2050_Strategy_.pdf

- Visentin, L. (2017) 'Housing affordability lessons from Vancouver for the City of Sydney', *Sydney Morning Herald*, 11 September 2017, from <http://www.smh.com.au/nsw/housing-affordability-lessons-from-vancouver-for-the-city-of-sydney-20170911-gyf7hn.html>
- Windsor, C., Jaaskela, J. and Finlay, R. (2013) *Home Prices and Household Spending*, from <https://www.rba.gov.au/publications/rdp/2013/pdf/rdp2013-04.pdf>
- Wu, S., Asher, A., Meyricke, R. and Thorp, S. (2015) *Age Pensioner Profiles: A Longitudinal Study of Income, Assets and Decumulation*, ARC Centre for Excellence in Population Ageing Research, accessed 10 June 2015,
- Yates, J. (2011) *Housing in Australia in the 2000s: On the Agenda Too Late?*, The Australian Economy in the 2000s from <http://www.rba.gov.au/publications/confs/2011/pdf/yates.pdf>
- Yates, J. (2015a) 'Living income- and asset-poor in retirement', in *The super challenge of retirement income policy*, Committee for Economic Development of Australia, Ed. CEDA, p 65-81
- Yates, J. (2015b) *Submission to the Senate Economic References Committee on Affordable Housing*,
- Yates, J. (2016) 'Why does Australia have an affordable housing problem and what can be done about it?', *Australian Economic Review*, 49(3), p 328-339