Final Report

Peer Reviewed

Delivering diverse and affordable housing on infill development sites

authored by

Steven Rowley and Peter Phibbs

for the

Australian Housing and Urban Research Institute

Western Australia Research Centre
UNSW-UWS Research Centre

August 2012

AHURI Final Report No. 193

ISSN: 1834-7223
ISBN: 978-1-922075-10-9

AHURI
Australian Housing
and Urban Research Institute

Authors	Rowley, Steven Phibbs, Peter	Curtin University University of Western Sydney
Title	Delivering diverse and affordable housing on infill development sites	
ISBN	978-1-922075-10-9	
Format	PDF	
Key words	Residential development, infill housing, development feasibility, finance	
Editor	Anne Badenhorst	AHURI National Office
Publisher	Australian Housing and Urban Research Institute Melbourne, Australia	
Series	AHURI Final Report, no.193	
ISSN	1834-7223	
Preferred citation	Rowley, S. and Phibbs, P. (2012) *Delivering diverse and affordable housing on infill development sites,* AHURI Final Report No.193. Melbourne: Australian Housing and Urban Research Institute.	

ACKNOWLEDGEMENTS

This material was produced with funding from the Australian Government and the Australian states and territory governments. AHURI Limited gratefully acknowledges the financial and other support it has received from these governments, without which this work would not have been possible.

AHURI comprises a network of universities clustered into Research Centres across Australia. Research Centre contributions, both financial and in-kind, have made the completion of this report possible.

DISCLAIMER

AHURI FINAL REPORT SERIES

AHURI Final Reports is a refereed series presenting the results of original research to a diverse readership of policy-makers, researchers and practitioners.

PEER REVIEW STATEMENT

An objective assessment of all reports published in the AHURI Final Report Series by carefully selected experts in the field ensures that material of the highest quality is published. The AHURI Final Report Series employs a double-blind peer review of the full Final Report – where anonymity is strictly observed between authors and referees.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute Limited
DoHWA	Department of Housing Western Australia
DA	Development Assessment
DAP	Development Assessment Panel
GFC	Great Financial Crisis
HCAP	Housing Construction Acceleration Plan, New South Wales
JRPP	Joint Regional Planning Panel
NRAS	National Rental Affordability Scheme
NHSC	National Housing Supply Council
SEPP	State Environmental Planning Policy
SMDA	Sydney Metropolitan Development Authority
UDIA	Urban Development Institute of Australia
ULDA	Urban Land Development Agency, Queensland
WAPC	Western Australian Planning Commission

EXECUTIVE SUMMARY

Adequate housing supply to accommodate the projected growth in Australian cities is an issue of growing significance. The National Supply Council has indicated that housing supply is unable to keep pace with demand (NHSC 2011). Previously the concern of state and local governments, in recent times the Federal Government has shown an increased interest in the issue of housing and land supply.

This increasing interest is welcome. However, as policy-makers grapple with these important issues, the policy formation process is hampered by a lack of fundamental understanding about the nature of housing supply, the relationship between land and housing supply and, in particular, the challenges of increasing supply through infill development. This is especially interesting given the important role awarded to infill development in the metropolitan planning strategies of Australia's major cities.

The development industry delivers housing in return for a profit. Without this profit development does not occur. Assessments of development feasibility take into account market demand and supply, what is permissible under planning policy, development costs, infrastructure contributions as well as finance charges, professional fees and land costs. Developers will assess many sites and reject perhaps 95 per cent of them because they are financially unfeasible. On infill development sites there are a variety of additional barriers to generating profit and therefore the delivery of infill housing of all types. The barriers to delivering diverse and affordable housing are even greater and are shown in Figure 1 below. Figure 1 uses an outline of the basic development process to illustrate the blockages in housing supply. In order to overcome these barriers the industry needs to deliver a range of innovative solutions. Identifying these solutions is the primary aim of this Investigative Panel Project.

The panel brought together around 50 experts from the public and private sectors across four panels in two cities, Sydney and Perth. Rather than just reporting the barriers to infill development, the objective of this panel was to put forward a range of suggestions from those working in the development industry designed to increase housing supply on infill sites. Consequently, this report is very much a synthesis of expert opinion rather than an academic exploration of the issues.

Sydney and Perth were chosen as the case study cities because they represent two extremes in the delivery of medium and high-density housing on infill sites. In Perth, around 80 per cent of housing supply comes from detached dwellings; the figure is closer to 60 per cent in Sydney. In Perth the new metropolitan plan, *Directions 2031 and Beyond*, seeks to double the rate of infill development to around 50 per cent of all new housing, a level already being achieved in Sydney. The Project hoped to take lessons from Sydney and apply to Perth, but it quickly become clear that there were also significant barriers to infill development in Sydney, often quite different to the challenges facing Perth.

The panels provided twelve hours of discussions. Synthesised from these discussions were 40 suggestions put forward to overcome the barriers to delivering diverse and affordable housing. Suggestions range from the simple to the ambitious, achievable to the near impossible. For each suggestion, further analysis explores the origin of the ideas, the level of opposition and the route to implementation. The aim of this report is not to analyse or promote particular suggestions but rather to provide a platform for them, to generate ideas, promote debate and hopefully elicit change.

Central to the suggestions is the role of the private sector. The vast majority of infill housing will be delivered by the private sector and a profit must be achievable in order for housing to be completed. While it became clear that making the development approval process more certain, more efficient and less costly is crucial (deemed approval at the expiry of specific time limits is one solution), the panels' identified a complex range of other interconnected issues.

The delivery of affordable housing on infill sites is a major challenge. Land prices and construction costs require revenues from developments that more often than not preclude the delivery of affordable housing. With land prices and the cost to revenue balance forcing many sizable developers out of large scale infill development in the short-term, it is left to medium-density developments to provide this housing. For the private sector to deliver diverse and affordable housing on any significant scale, there need to be partnerships with the public sector and community housing organisations, ideally on public sector land to maximise contributions. Planning agreements and inclusionary zoning requirements from re-development organisations will provide an important, but limited, quantity of housing.

The suggestions put forward in this report reflect, on the one hand, a desire for less public sector involvement to let the market operate efficiently but, on the other hand, necessary public sector intervention to secure affordable housing in what are often high value areas. Financial feasibility will drive market development but, given development costs and landowner price expectations, revenues need to be sufficient to generate the required minimum level of profit necessary to compensate for the risks of development. Therefore, without intervention within the development approval process, the market is unlikely to deliver a product considered affordable to those on low to moderate incomes in all but the lowest value areas. Planning policy could be used to intervene to make the provision of affordable housing integral to the approval process, but this can lead to market distortions and is particularly problematic when developers already own land and therefore any reduction in revenue will affect their profit.

There needs to be in place a method of incentivising private sector developers to deliver an element of affordable housing on typical, small-scale infill development sites. This could be through development incentives, such as density bonuses, but such incentives must be targeted at the developer and not inadvertently passed to the landowner in the form of land value uplift. Incentives that increase land values do nothing to enable the delivery of affordable housing. Inclusionary zoning would enable developers to pass affordable housing contributions on to land owners but it would take considerable time for policy to become embedded within planning documents and overcome the complications that stem from existing ownership issues. Additional requirements within the development approval process would also need to be administered efficiently to ensure that there are no delays as a consequence.

Construction costs, particularly labour costs, and a building industry structured to deliver a traditional single story product, at least in Western Australia, need to be addressed and banks should be more flexible in their lending practices to promote infill development by smaller developers (one of the more ambitious suggestions). Encouraging smaller developers to deliver small-scale, infill development projects such as three-storey walk up apartments was identified as the most effective way to increase housing supply. Large-scale residential towers are not the solution. However, as noted previously, securing large quantities of affordable housing in high land value areas (inner & middle suburbs) will require policy intervention.

In many ways the decline in affordability, for first home buyers in particular, may force developers to provide a different type of product, and we are already seeing evidence of this in Perth. Smaller lot sizes, smaller houses and generally a greater diversity of dwelling is starting to be developed delivering a lower priced product to the market at price points where demand is greatest; below $400 000. The success of such housing demonstrates how profits can be made from non-traditional products and this is the most effective way to increase the number of developers delivering such housing. In combination with partnerships with the public sector, more intense use of publicly-owned land, a more efficient and less political development approval process, and better coordinated and funded infrastructure provision, medium-density development within inner and middle suburbs provides the best opportunity to increase the supply of diverse and affordable housing.

A consistent theme from the discussions was the degree of consensus between the private and public sectors. The majority of public officials agree with the private sector that increasing the supply of infill development is a crucial strategy for Australia’s cities. Both the private and public sector agree that the issue of leadership is very important: leadership promoting the benefits of infill development, coordinating infrastructure provision and driving public acceptance of higher density development and affordable housing.

Figure 2 below presents a summary of the suggestions, synthesised from the panel discussions, which could apply at various stages of the development process. One of the key findings is the contradiction between decreasing government intervention in the market and the delivery of non-subsidised affordable housing. Many of the 40 suggestions pertain to simplifying the development approval process and allowing developers to meet the requirements of the market. By removing levels of intervention it will be almost impossible to secure affordable housing as developers would not be maximising profits by adding an element of affordable housing to market developments in the vast majority of infill locations. The only way affordable housing will be supplied in infill locations is through agreements within the development approval process or partnerships on the back of land transfers. Alternatively, affordable housing is sometimes an attractive option within a weak market but market conditions will dictate when this occurs.

Subsidised affordable housing requires an additional level of market intervention. Usually such housing is delivered on sites owned by the public sector where they have leverage when negotiating with developers over the sale of the site. A position of profit maximisation would see such sites sold at their highest and best use to the private sector and therefore result in no affordable housing. Therefore the role of government is absolutely vital in delivering diverse and affordable housing.

Figure 1: Barriers to infill development

→ supply of suitable sites → land values → existing, prescriptive zoning system → public land availability.	SITE IDENTIFICATION
→ lack of demand for infill housing products → high construction costs above three storeys → extent of revenue required to make development feasible given land values and construction costs → unrealistic land value expectations → height and density restrictions → developer contributions to infrastructure both cost and uncertainty → cost and availability of finance.	FEASIBILITY APPRAISAL
→ fragmented ownership → difficulties in redeveloping strata developments → owners refusing to sell → contamination → land speculation.	SITE ASSEMBLY
→ duration and uncertainty of approval process → complexity of approval process → community opposition at strategic and development approval stages → extent of environmental approvals → infrastructure cost and capacity → uncertainty when dealing with infrastructure providers.	DEVELOPMENT APPROVAL
	Marketing for pre-'sales'
→ required loan to value ratios → lack of funds available, particularly to smaller developers → banks' risk mitigation strategies → securing necessary pre-'sales' to prove to banks there is a market for the product → structure of joint venture agreements not providing an exit strategy for banks → buy back clauses increasing risk.	DEVELOPMENT FINANCE
→ construction costs especially when building over three storeys → availability of labour—competition from other sectors → flexibility of labour—lack of skills to deliver projects above two storeys → infrastructure contributions—charging structures.	CONSTRUCTION
→ state of the residential market—owner purchaser, investor and private rental market → strength of overseas demand—particularly for new apartments and pre-'sales' → general economic conditions.	COMPLETION

Figure 2: Suggestions to enable the delivery of diverse and affordable housing

SITE IDENTIFICATION

- identify ownership of key vacant sites and promote benefits of development
- state development agencies identify and assemble sites and coordinate development
- efficient use of public land assets to deliver affordable housing
- use of alternative land sources e.g. above shops.

FEASIBILITY APPRAISAL

- strong leadership promoting the need for infill development and affordable housing
- maximise opportunities for small-scale, medium-density infill development—three-storey walk up apartments, townhouses, villas, terraces, etc.
- certainty in the approval process
- incentives to developers at the DA stage.

SITE ASSEMBLY

- increased delivery of affordable housing on public sites through development by state development agencies
- encourage operation of small developers developing small sites
- utilise public private partnerships
- fund Community Housing Organisations to develop small sites.

DEVELOPMENT APPROVAL

- streamline development approval system
- deemed approvals if statutory time limits expire
- codification for those delivering standard product, merit-based for more innovative schemes
- fast track approvals for those operating within strategic planning parameters
- community consultation at strategic phase and not DA phase
- de-politicise the DA process
- better coordination of infrastructure authorities and pricing should reflect future revenue generation
- development Incentives on DA to avoid increasing land price.

Marketing for pre-‘sales’

DEVELOPMENT FINANCE

- ensure joint ventures are structured in a way that is acceptable to financiers
- banks should reduce their pre-‘sales’ requirements and encourage smaller developers
- use public agencies to de-risk schemes by providing an exit strategy for banks.

CONSTRUCTION

- more flexibility in the workforce—ability to work on multiple project types
- standardised building types familiar to existing trades
- increase the training of a skilled workforce
- efficiencies through relationships
- maximise smaller scale projects and the number of small-scale developers.

COMPLETION

- smaller-scale projects increase pool of potential investors
- encourage alternative tenure options such as shared equity, land trusts etc.

1 INTRODUCTION

Adequate housing supply to accommodate the projected growth in Australian cities is an issue of growing significance. The National Supply Council has indicated that housing supply is unable to keep pace with demand (NHSC 2011). Previously the concern of state and local governments, in recent times the Federal Government has shown an increased interest in the issue of housing and land supply.

This increasing interest is welcome. However, as policy-makers grapple with these important issues, the policy formation process is hampered by a lack of fundamental understanding about the nature of housing supply, the relationship between land and housing supply and, in particular, the challenges of increasing supply through infill development. This is particularly interesting given the important role that infill development has in the metropolitan planning strategies of Australia’s major cities (Table 1). The focus of this Project is two of those cities: Perth and Sydney, although the findings are applicable to towns and cities throughout Australia.

This report approaches the issue of residential development from an economic perspective; discussing the economic and financial factors that need to be in place for residential development to occur. The focus is on practical solutions to overcome the barriers to infill development and we concentrate on reporting the suggestions of key industry stakeholders to improve the supply of diverse and affordable housing on infill sites. Consequently, this report is very much a synthesis of expert opinion rather than an academic exploration of the issues.

Table 1: Infill development targets

City	Strategic planning document	Timeframe	Total number of dwellings	Proportion from infill development
Sydney	*City of Cities: A Plan for Sydney’s Future*	2005–31	640,000	60–70
Melbourne	*Melbourne 2030: A Planning Update—* Melbourne @ 5 million	2009–30	600,000	53
South-East Queensland	*South East Queensland (SEQ) Regional Plan*	2009–31	754,000	50
Perth	*Directions 2031 Spatial Framework for Perth and Peel*	2009–31	328,000	47
Adelaide	*The 30-Year Plan for Greater Adelaide*	2010–40	258,000	50–70

Source: National Housing Supply Council 2010, p.112.

Infill development is defined in various ways. The NHSC (2010) define infill development as ‘housing development sites within existing urban areas (as opposed to Greenfield sites)’ (p.223). Infill development includes brownfield and greyfield sites. Brownfield usually refers to large scale, previously developed sites. Newton et al. (2011) discuss the concept of greyfield development with development focusing on:

> precinct scale rather than piecemeal infill, new housing typologies such as low-rise high-density development; new partnerships that involve community participation'; new modes of constructing the built environment of the future; and the establishment of new nimble 'regen' organisations capable of stimulating greyfield regeneration. (p.13)

Greyfield precincts are defined thus:

> Under-utilised property assets located in the middle suburbs of large Australian cities. Greyfields are usually occupied and privately owned sites typical of urban development undertaken from the 1950s to the 1970s' (Newton et al. 2011, pp.1–2)

There are numerous housing forms that can be developed on infill sites: brownfield sites, often publicly-owned land or perhaps disused industrial land, and greyfield precincts as defined above. These range from very high-density, residential towers, medium-density apartment developments, three-story walk up apartments (i.e. no lift), townhouses, and simple villas on battleaxe subdivisions. It also includes ancillary dwellings in gardens, granny flats and student accommodation. Infill housing is distinct from the traditional detached houses prevalent on greenfield sites; usually referred to as the 'four by two' in Western Australia, i.e. four bedrooms and two bathrooms. As such, infill development tends to offer more housing diversity. One and two-bedroom apartments, sometimes as small as $40m^2$, two and three-bedroom houses and even large three or four-bedroom apartments are typical infill products. With diversity often comes affordability, although this is certainly not always the case. One-bedroom apartments are usually the most affordable product and accessible to those on moderate incomes in the majority of locations; apartments with river and city views excluded. However, as the product becomes larger or the location more desirable, housing of any type becomes less affordable. In good quality locations, even one-bedroom apartments are unaffordable to those on low–moderate incomes in many cities.

The key challenge for Australian cities is to increase the quantity of infill development and ensure a sufficient supply of affordable housing to meet the need of those on low–moderate incomes, which of course include many key or essential workers. Ideally a suburb would include a range of housing types at a variety of price points to enable a household to move through their housing career within the same suburb, or at least within proximity to that suburb. This is impossible in a suburb containing only detached housing. Potential Infill development sites tend to be located on quality transport networks, at least compared to many greenfield locations, so are ideal for those on low incomes to enable access to employment opportunities. A supply of subsidised affordable housing i.e. social housing, is vital within inner and middle suburbs.

The recent release of *Directions 2031 and Beyond* by the Department of Planning and Western Australian Planning Commission (WAPC) highlighted the need to dramatically increase the quantity of infill development in the Perth Metropolitan region. Estimates by the National Housing Supply Council (2010) and the *Directions 2031* report (Department of Planning & Western Australian Planning Commission 2010) calculate the number of dwellings required to meet population growth forecasts in the Perth and Peel regions of Western Australia at 328 000 dwellings over the next 20 years. This is an increase of around 50 per cent on the current number of households. The *Directions 2031* report seeks a 50 per cent increase on current rates of infill residential development as a response. The report sets a target of 154 000 dwellings to be delivered through infill development; 47 per cent of the total requirement (Table 1). The report also recommends a 50 per cent increase in the current average residential density rate of 10 dwellings per gross urban zoned hectare of land in new development areas. Both are ambitious targets given current patterns of residential development in the two regions.

These are significant challenges for those groups involved in delivering housing in the Perth metropolitan area. Reaction to the *Directions 2031* report from the housing and development industries has already highlighted the barriers to infill development. The development industry cites planning delays, infrastructure costs and limitations, construction costs and labour shortages as the main barriers. The Urban Development Industry of Australia believes that there should be incentives available to developers to facilitate infill development (UDIA 2011).

Perth does not have a great history when it comes to infill development and housing diversity. A recent Australian Bureau of Statistics (ABS) report on housing density in Perth (ABS 2010) reported figures from the 2006 census showing 78 per cent of dwellings as separate houses, 12 per cent as semi-detached, row or terrace houses and townhouses, and 10 per cent as flats, units or apartments. In comparison, ABS data show a very different dwelling breakdown for Sydney with 62 per cent of dwellings as separate houses, 12 per cent as semi-detached, row or terrace houses and townhouses, and 26 per cent as flats, units or apartments. Indeed, data for the whole of Western Australia show that the proportion of non-house development is now under 20 per cent, compared to 25 per cent in the mid-1990s and around 30 per cent in the early part of the 1980s (ABS 2012). Table 2 below shows how the proportion of non-house development first increased and then decreased in Perth during the last decade. The pattern is very much linked with house price growth in the Perth metro region.

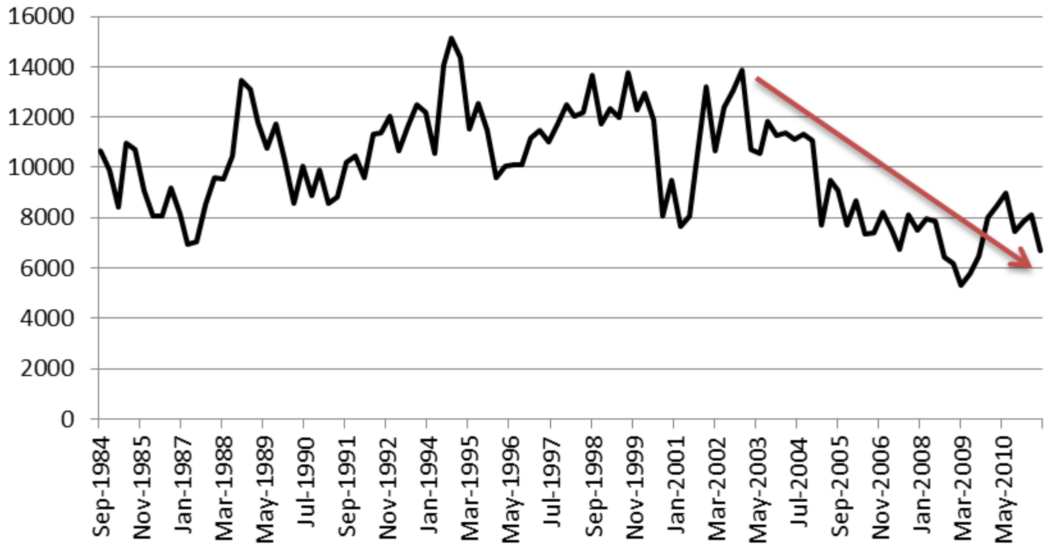
Table 2: Dwelling commencements in the Perth metro area

	Detached houses	Other (flats, units, apartments, townhouses, etc.)	Total	Proportion other
2001/02	11,824	2,338	14,162	17%
2002/03	12,435	2,649	15,084	18%
2003/04	13,359	2,974	16,333	18%
2004/05	12,845	3,611	16,456	22%
2005/06	14,864	3,130	17,994	17%
2006/07	13,360	3,787	17,147	22%
2007/08	11,615	4,442	16,057	28%
2008/09	10,335	3,116	13,451	23%
2009/10	13,979	3,545	17,524	20%
2010/11	11,760	2,811	14,571	19%

Source: Housing Industry Forecasting Group, October 2011.

Although there are significant issues relating to infill development in Sydney, the city has a much better record of higher density and infill development when compared to Perth. However, there is growing concern about the sharp slowdown in residential construction in the city (e.g. UDIA 2011). While no ABS figures are available for Sydney alone, Figure 3 below describes New South Wales building commencements highlighting this declining trend.

Figure 3: Building commencements, NSW 1984–June 2011



Source: Australian Bureau of Statistics, 2011, cat no. 8750.0.

Barriers to infill development have been identified by a number of organisations, notably the National Housing Supply Council (NHSC 2010). The aim of this Project is not to repeat such analysis but to identify a range of solutions to overcome these barriers and increase the supply of diverse and affordable infill development. This report identifies numerous suggestions based on the outcome of four Investigative Panels with leading industry representatives in Sydney and Perth. The suggestions come directly from those working in the industry; some are straightforward and some are radical, but it is our aim to put forward any idea that could offer a solution to a potential barrier. Although the panels were based in Perth and Sydney, the ideas put suggested in this report are applicable throughout Australia.

During the panel process, the Project investigated the following broad themes:

- increasing the supply of all housing through infill development
- delivering a range of diverse housing products within infill developments
- delivering affordable housing on infill developments
- overcoming land supply and ownership issues preventing development
- delivering infrastructure to support infill development.

The second Chapter of the report provides some background to the issue of infill development and reviews a reasonably sparse literature on the issue. The third Chapter provides some detail of the Investigative Panel research method, while the fourth Chapter outlines the findings of the Project. The last Chapter provides a conclusion to the report and outlines future research directions.

2 BACKGROUND

Adequate housing supply to accommodate the projected growth in Australian cities is an issue of growing significance. The National Housing Supply Council indicated in their Second state of supply report that housing supply is unable to keep pace with demand (NHSC 2010). The Council had a particular view on infill housing (p.xv):

> Metropolitan plans for Australia's major cities include targets for the proportion of new housing to be provided through infill development of between 50 per cent and 70 per cent. The Council's demand projections indicate increasing demand for attached and medium-density housing over the next 20 years. The Council has explored the likely increase in supply over the next 10 years from infill development as well as greenfield development.
>
> The Council has noted the barriers to infill development and difficulties that planners and developers face in adding to housing supply in this way. In particular, housing is generally more expensive to build in infill developments than in greenfield ones. For example, in all major cities except Sydney, it costs more to build a two-bedroom unit in an infill development than a comparable three-bedroom house with a backyard in a greenfield development.

It would be relatively easy for government to increase housing supply through large-scale greenfield land release, but there are issues relating to infrastructure, sustainability and urban sprawl that make such a policy undesirable. Additionally, land release does not equal housing supply in the short term with greenfield sites taking many years to be built out. Other options for supply include increasing residential densities on the fringe, or to take substantial steps to facilitate infill development. The Metropolitan development plans highlighted in Table 1 above show how all regions are seeking to increase the proportion of new housing supply on previously developed land. However, such an approach is not without its problems.

The NHSC identified the following barriers to infill development:

- higher construction costs for medium and high-density dwellings compared with those for detached dwellings, including land acquisition and demolition costs for infill
- difficulties aggregating and preparing land for construction
- delays in securing development finance
- lengthy and sometimes uncertain planning and development assessment processes
- securing legal title for flats, units or apartments
- community opposition to infill and to medium to high-density dwellings (NHSC 2010, p.113).

Planning approval and (DA) processes generally add time, uncertainty and costs to the development process regardless of location. However, there are particular challenges in many infill locations. Development approval uncertainty is one of the factors alongside higher construction and raw land costs that make it generally more expensive and commercially risky to build infill rather than greenfield dwellings. Community opposition is often a significant barrier to infill and medium-density development and adds further uncertainty to the process. The additional risks and uncertainty also make it more difficult to borrow the funds required to finance development. With the vast majority of residential development being debt funded, the appetite of banks to fund development is fundamental to housing supply.

In attempting to generate some solutions to this issue, it is important to accurately assess the barriers to the generation of additional housing supply. This Project builds on the work of the NHSC (2010) and Productivity Commission (2011) but also includes additional barriers identified during this Project. Barriers to development occur at various stages of the development process. The barriers may be so serious that many developers will not even look at infill development as a viable development option. Barriers may prevent or delay development if they occur at or before the development approval stage, or reduce profits if they occur at the construction or disposal phase. Barriers can stop development in its tracks, for example, an inability to obtain finance. Importantly, barriers add uncertainty throughout the process and uncertainty means risk. Developers seek to minimise risk and if the risk profile is considered too high, development will not occur.

To understand the stage at which barriers arise, and at what stage solutions are required, an understanding of the development process is necessary. A conceptual framework for this process is identified in Figure 4 below. Figure 4 uses a simplified model of the development process (see Harvard 2008 & Wilkinson et al. 2008 for examples) and identifies the stage of the process where major barriers have the greatest impact. The report is structured around this process by dealing with each stage in turn, identifying barriers and providing suggestions to overcome these barriers.

Up until recently, the only major AHURI research on the development process has been the work of Gurran et al. (2009); Planning, government charges, and the costs of land and housing (Project 70393). This Project builds on some of the issues highlighted in that Project specifically in terms of infrastructure costs and charges.

The recently completed AHURI Investigative Panel *Towards a new development model for housing regeneration in greyfield precincts* (Newton et al. 2011, Project 50593) provided a comprehensive exploration of re-development options for inner and middle suburbs. The Project concentrated specifically on Melbourne. In terms of Project scope, the greyfields Investigative Panel is a subset of this Project—regeneration of middle suburb precincts is only one opportunity to increase the supply of infill housing. Nevertheless, the findings of the greyfield project are particularly interesting and its identification of the broad range of changes needed to foster regeneration is very relevant to this investigation. Note, however, that the approach of the greyfields project is different than this one: the authors had identified a development model that they wanted to test. In this Project, the proposition is a much broader one: the authors are seeking ways of increasing infill housing supply by identifying barriers to development and seeking suggestions about overcoming these barriers from a variety of informed stakeholders.

Figure 4: Barriers to infill development

- supply of suitable sites
- land values
- existing, prescriptive zoning system
- public land availability.

→ SITE IDENTIFICATION

- lack of demand for infill housing products
- high construction costs above three storeys
- extent of revenue required to make development feasible given land values and construction costs
- unrealistic land value expectations
- height and density restrictions
- developer contributions to infrastructure both cost and uncertainty
- cost and availability of finance.

→ FEASIBILITY APPRAISAL

- fragmented ownership
- difficulties in redeveloping strata developments
- owners refusing to sell
- contamination
- land speculation.

→ SITE ASSEMBLY

- duration and uncertainty of approval process
- complexity of approval process
- community opposition at strategic and development approval stages
- extent of environmental approvals
- infrastructure cost and capacity
- uncertainty when dealing with infrastructure providers.

→ DEVELOPMENT APPROVAL

Marketing for pre-‘sales’ →

- required loan to value ratios
- lack of funds available, particularly to smaller developers
- banks’ risk mitigation strategies
- securing necessary pre-‘sales’ to prove to banks there is a market for the product
- structure of joint venture agreements not providing an exit strategy for banks
- buy back clauses increasing risk.

→ DEVELOPMENT FINANCE

- construction costs especially when building over three storeys
- availability of labour—competition from other sectors
- flexibility of labour—lack of skills to deliver projects above two storeys
- infrastructure contributions—charging structures.

→ CONSTRUCTION

- state of the residential market—owner purchaser, investor and private rental market
- strength of overseas demand—particularly for new apartments and pre-‘sales’
- general economic conditions.

→ COMPLETION

Newton identified potential impediments to greyfield development:

- assembling adequate land
- financial disincentives that exist for current landowners considering redevelopment
- the need to decouple political processes from metro planning strategies
- lack of good quality demonstration projects illustrating the individual and community benefits of higher density precincts. (Newton et al. 2011)

The report also delivered a number of recommendations and suggestions for developing greyfield area. Many of these recommendations are supported in Chapter 4 of this report.

> Most of the innovation needed is organisational and institutional—there are strong path dependencies that need to be redirected. The scale of the technological innovations required is not as pronounced; however, both aspects will require attention. The Investigative Panels identified multiple arenas ... where major transformation could occur to achieve a development model for greyfield precincts, as follows:
>
> **Urban policy**
>
> The limited uptake of new housing in greyfield residential sites represents a major failure of recent urban policy. As long as a suitable supply of brownfield land exists and outer greenfield land supply remains unlimited, the greyfield areas will struggle to attract major property developers in anything other than a piecemeal fashion. New planning and policy frameworks and infrastructures will need to be established to reduce the risk and uncertainty associated with larger scale redevelopment in the middle suburbs.
>
> **Urban renewal organisation**
>
> To undertake greyfield precinct development, a new regional body or authority responsible for urban renewal (equipped with financial, statutory & planning power) would need to be established. This may be via coordination of existing public funding for the region, or the direction of new capital accrued through development contributions.
>
> **Construction and labour force innovations**
>
> While the construction industry is an important driver in housing delivery, it is not often at the forefront of change. Greyfield residential precincts, positioned as they are between large-scale commercial construction, volume residential construction and small-scale infill housing, have potential to act as a catalyst for innovative practices.
>
> A shift away from conventional domestic construction practices is needed.
>
> **Proactive community engagement**
>
> Greyfield precinct regeneration offers opportunities to engage citizens as ‘partners’ in development, in both planning/design and finance aspects. This requires a radical departure from the established ‘placatory’ or ‘adversarial’ models of engagement that are often employed with populations targeted for redevelopment.

Regen code

> The limitations of current planning prevent the uptake of greyfield precinct redevelopment and unless otherwise convinced, developers will continue to pursue well-tested 'safe' approaches. Therefore, there is a need for a robust planning instrument or code (Regen Code) for the redevelopment of greyfield residential precincts.

A major strength of the Newton project is the way it demonstrates how a range of barriers at different parts of the development process are important. While there has been work that identifies the barriers associated with the planning process (Productivity Commission 2011; NHSC 2010), there is very little work that identifies a broad range of barriers to infill supply and even less that advocate specific solutions. In particular, the role of development feasibility and development finance appears to be under-researched. What existing research fails to understand is that developers need to make a profit and without profit there is no development. New regeneration codes, a more efficient approval process and new methods of community engagement are all important. But, if the revenue generated by the sale of a completed development does not exceed the total costs of development by a sufficient margin to leave an acceptable profit for the developer, no development will take place. Initiatives may reduce costs and delays for a developer, but the revenue cost balance and the risk needs to be acceptable. This economic feasibility approach forms the basis for much of the analysis presented in Chapter 4.

An example of a Project focusing on planning issues is a current AHURI Project, *Metropolitan planning governance in relation to affordable housing supply* (Project 96002). This Investigative Panel is jointly funded by Australand and the Residential Development Council (RDC). It commenced in 2010 and is yet to report. It is very similar to this Project in method, but it is focused on planning and governance issues rather than the broad barriers to infill housing addressed in this report. It is expected to report in 2012 and should build on the findings reported here.

In addition to AHURI research, the recent work of the Cities program within the Grattan Institute in Melbourne has made a significant contribution to the debate about infill housing supply. In 2010, in a major report on urban governance, the Institute identified the need for sustained engagement with urban communities and the need for strong and consistent leadership (Grattan Institute 2010). In 2011, through a large household survey, they analysed in detail the housing preferences of a range of Australian households and identified a number of findings that differed sharply from the stereotype of Australia's fixation on the separate house and land package (Grattan Institute 2011a). In their most recent report (Grattan Institute 2011b), they recommended the formation of Neighbourhood Development Corporations, 'new organisations which would increase the amount and choice of housing while ensuring that residents have a real say in the future of their neighbourhoods'. Such organisations would be partnerships between government, developers and communities designed to facilitate the delivery of housing outcomes acceptable to all parties. Such corporations would focus on specific neighbourhoods or large developments and, if administered appropriately, could produce a more efficient and acceptable DA process.

In addition to this work, there have been a number of reports prepared by industry peak bodies that have highlighted the barriers to infill (and other development), highlighting the negative role of the planning system (e.g. Urban

Taskforce 2010). While these reports are useful in providing an insight into industry issues, they often suffer from lack of a comprehensive evaluation of the barriers to development and are sometimes little more than lobbying ‘brochures’. This report provides a balanced discussion of the issues.

3 METHOD

The method selected to explore the issue of infill development is the AHURI Investigative Panel. This is a reasonably new approach in the AHURI portfolio. One of the aims of this panel is to facilitate a detailed discussion between a variety of stakeholders through use of a structured group method designed to explore a range of research questions.

The research method used is one of brainstorming. The technique is probably most used in marketing and was originally developed by Alex Osborn, an advertising executive in the 1940s (Boddy 2012). In brainstorming, groups are structured in nature, while focus groups are often more unstructured (Boddy 2008). The aims of the session are explained in advance to participants so that they can start to think about the issues before the meeting. They are also told that the focus is on generating ideas or suggestions and not to analyse them in detail. Criticism of suggestions is not allowed since it reduces the engagement of participants (Morgan 1997). During the group brainstorming session itself, participants are also encouraged to enjoy themselves.

Brainstorming sessions usually have two parts: the brain dump, which gets all the ideas out there, and a process where some relative evaluation of the ideas is considered.

In this Project, four brainstorming groups were held; two in Sydney and two in Perth. Given the tone of the debate on the barriers to infill development, it was considered a more honest discussion between stakeholders would result if the private sector were separated from public sector stakeholders, particularly the peak organisations. This is related to the need in brainstorming to focus on the generation of ideas and not criticism. We did not want a situation where debate was dominated by industry representatives seeking to forcefully present their views to senior public sector decision-makers. This policy was adopted in both cities, although we did incorporate at least one member of the public sector in each private sector panel and vice versa, to put across an alternative viewpoint.

Each panel ran for approximately three hours. Participants worked through some broad questions which were structured to try to generate suggestions to the broad issue of what is needed to stimulate infill development. Rather than undertaking a detailed evaluation of every suggestion at the end of the session, participants were asked: ‘What is the one change you would most like to occur to increase the supply of diverse and affordable housing?’ Or, in other words, the participant was asked to select the ‘best’ suggestion.

Notes from the panel were supplemented by specific quotes from the recordings. This data provides the material for Chapter 4. The panel were told when agreeing to participate that no quotes would be attributed to individuals to ensure confidentiality.

In total, there were about 50 participants across the four panels. Participants were from the following groups:

- public sector urban planners
- planning consultants
- architects
- infrastructure providers
- ABS

- community housing providers
- peak organisations for the development industry
- peak organisations for the housing industry
- Planning Institute of Australia
- Australian Property Institute
- valuers
- development consultants
- developers
- property financiers
- state development companies
- academics.

A background paper was circulated to participants about a week before each group outlining the research questions, a list of key assumptions/definitions, and a short background discussion (see Appendix 2). The broad research questions identified were:

- How can the private sector be encouraged to deliver diverse and affordable housing on infill development sites on a scale that will meet published housing targets?
- Is the availability of development finance a barrier to infill development and, if so, how can appropriate finance be made accessible?
- What impact do land ownership issues play in preventing infill development and how can these issues be addressed?
- Is there a role for the public sector, through planning, land assembly and joint ventures, in facilitating the delivery of diverse and affordable housing on infill sites?
- Is there an optimum strategy for the delivery of infrastructure to support infill development?

Professor Peter Phibbs facilitated each of the sessions which were recorded with the participants' permission. A note taker was also used at each session.

The analysis determined 40 suggestions to improve the delivery of diverse and affordable housing. After the discussion group, each suggestion was further analysed to provide additional information under the following headings:

- Classification: type of intervention
- Target: authority subject to intervention
- Origin: which group; private sector, public sector or both, was the source of the particular suggestion?
- Level of agreement: was there any opposition to the suggestion within the panels?
- Timeframe for implementation: would the intervention be short, medium or long term?
- Ease of implementation: what action would be required by the target authority if the suggestion were to be implemented?

Throughout the report, each suggestion is reported along with details under the six headings. A summary of the classification type and target authorities are provided in Tables 3 and 4 below. Planning authorities were considered to have the major role in facilitating infill housing delivery followed by State government land agencies. Almost half of the suggestions related to a required change in policy or process with the next most common suggestion relating to an increase in resources.

Table 3: Summary of classification types

Classification type	Number
Process/policy	18
Resources	6
Advocacy	4
Information	4
Operational	2
Process	2
Incentives	2
Incentive/disincentive	1
Incentives/process	1

Table 4: Summary of target organisations

Target	Number of suggestions
Planning authorities	11
State government land agencies	4
Infrastructure agencies	3
Lending agencies	2
Local government	2
State government	2
All government land agencies	1
All stakeholders	1
Commonwealth and state National Rental Affordability Scheme (NRAS) agencies	1
Community housing providers	1
Community housing sponsors	1
Construction sector/architects	1
Education agencies and developers	1
Government agencies	1
Government treasuries	1
Public/private/NFP developers	1
State government agency dealing with strata titles	1
State housing authorities	1
State treasuries	1
Title agencies	1
Training agencies and construction industry	1

4 FINDINGS

In the main section of this report we detail the findings of the four Investigative Panels. We focus on reporting suggestions discussed in the panel designed to overcome the main barriers to infill development. Although the focus of the report is on delivering diverse and affordable housing, it quickly became clear that the delivery of any housing at all was problematic.

The Chapter is organised around the simplified development process discussed in Chapter 2 and shown diagrammatically in Figure 4. Starting with the identification of a site, we then move through an assessment of the feasibility of a development. If the development is considered feasible, the site will be assembled and purchased, or an option taken. The developer will then move on to apply for development approval which requires engagement with the planning system, infrastructure providers and the community. Once approval is obtained, which may be months or years, finance must be secured which will often require an element of pre-‘sales’. Construction can commence when funds are available and, when complete, any remaining units can be sold and pre-‘sales’ settled. This is a very simplified development process but identifies the main stages where barriers to development occur and potential solutions could be applied. The development process diagram is repeated in Chapter 5, but this time with the suggested solutions replacing the barriers.

This Chapter presents a range of ideas; some realistic and others less so, but all potential solutions add to the debate.

4.1 Site identification

The first stage in the development process is the identification of suitable sites for development. Larger development organisations will have their own departments responsible for identifying opportunities and all developers will have a network of industry contacts alerting them to potential development sites. It is important to note major differences in the way different types of developers operate. Some may identify a site, take it through the development approval process, construct the buildings and then sell to the end users. Others may identify a site, achieve land value uplift through gaining development approval and then sell to another developer who specialises in delivering the built form. Whatever the model, the identification of a development opportunity is still the first step.

There was a consensus within the panels that the sites were ‘out there’ to deliver the housing targets set in metropolitan plans. The trouble was actually getting units on the ground. There are many vacant sites within inner and middle suburban locations; sites that have been vacant for many years. Often such sites are held by developers or investors speculating on land value uplift within an area. In other cases, sites may be owned by individuals unaware of the development potential or perhaps without the knowledge to develop themselves.

With so many sites ripe for development in prime locations but being held off the market by investors or developers, the panel were asked if there was a role for the public sector in acquiring such sites. The public sector will only use its compulsory purchase powers to acquire sites preventing development of regional significance. The panels thought it would be going ‘too far’ for the public sector to use compulsorily acquisition powers to acquire sites with development potential unless the development was of ‘maximum community benefit’. A softer option considered potentially fruitful by the panel would be for state development organisations, such as Landcom or Landcorp, to identify and contact landowners of vacant lots to discuss the development potential of the sites. Opportunities could be opened for partnerships between the landowner and state development organisations. These organisations could provide a resource, making available information to facilitate the private development of sites perhaps stimulating development from landowners lacking the skills to do it themselves but unwilling to sell to developers and lose out on potential value. This resource could be available to any landowner looking to develop infill sites; a ‘How to develop your site’ one-stop shop, with important information available online but with further, face-to-face advice available for a modest fee.

Suggestion 1: Establish an information service within a state’s development organisation to facilitate the development of private land by providing advice and expertise to help those without the necessary skills to develop themselves. This could stimulate the development of sites sitting vacant and being held by landowners lacking the necessary expertise to develop but unwilling to sell to private sector developers.

Classification:	Information
Target:	State government land agencies
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislative change

In Western Australia, Landcorp already play a role in assembling land parcels for industrial development. Extending their role to small–medium-sized residential development in suburban areas, where perhaps there are opportunities to combine vacant land and adjoining dwellings into a single development site, could help increase the availability of land. There may be a number of owners looking to develop but unsure how to maximise their land value. Amalgamating such sites would provide much higher dwelling yields and allow more strategic redevelopment of an area. The newly-established Perth Metropolitan Redevelopment Authority has a huge role to play in delivering infill development within its jurisdiction.

State development organisations could also offer landowners a service by providing expertise to take a site through the development approval process. Again this may stimulate development by landowners unsure of the approval process and the public sector could share in the land value uplift created through development approval. Of course, such organisations would need to be appropriately resourced.

The Sydney Metropolitan Development Authority (SMDA) was established by the New South Wales Government in late 2010. The purpose of the SMDA is to drive housing and employment opportunities in specific areas serviced by public transport and infrastructure and build economies of urban centres (SMDA 2011). It is still not yet clear how the authority will operate but such an organisation could offer the services described above.

Suggestion 2: State development companies and other appropriate organisations such as redevelopment authorities, assemble land parcels within infill areas and undertake the development approval process in partnership with landowners and/or private sector partners. State organisations could share in the land value uplift or secure an element of affordable housing on such sites in return for their expertise.

Classification:	Operational
Target:	State government land agencies
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislative change

Facilitating development is unlikely to have any impact on land speculators; those holding land for value uplift in areas located in activity corridors planned for future development, for example. There were a number of suggestions to encourage such speculators to sell or develop. Increasing the holding costs of such land by imposing land tax at a rate that would be higher than the tax liability from developed land was one such idea. Another option could be to provide landowners with incentives to develop e.g. density bonuses if appropriate. Offering alternative development models where the landowner retains an interest in the land was another suggestion. For example, land rent schemes where purchasers rent the land from the landowner and build their house upon the lot, could encourage landowners that do not want to dispose of their interest in the land. Such schemes have proved successful in the ACT and other states, including Western Australia, are starting to trial similar innovations. Such Community Land Trusts are perhaps more suited to public land ownership but perhaps could be structured to work in the private sector[1].

Suggestion 3: Encourage the development of land held for speculative purposes through the use of alternative taxation arrangements or use of development incentives.

Classification:	Incentive/disincentive
Target:	Government Treasuries
Origin:	Public sector
Level of agreement:	Private sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Controversial; requires further research and debate; requires legislation.

Identifying alternative sources of supply, such as using the vacant space above shops in many suburban areas, could provide affordable accommodation options. At present, there is a disincentive for owners to prepare such space as 'their rates go up when they are occupied and there is the risk of having vacant

[1] For an excellent recent review of Community Land Trusts, see Crabtree et al. (2011).

space and higher rates'. Incentivising owners to realise such space is an interesting option. Development above shopping centres and supermarkets is becoming increasingly popular in Europe. Such developments are usually located in areas well served by public transport and could provide a range of accommodation options, if it were physically possible to deliver such redevelopment. Planning new retail developments with a residential element above would seem a sensible and achievable option and mixed use schemes are increasingly becoming the norm within CBD locations.

Suggestion 4: Provide incentives to utilise existing accommodation above retail space or develop mixed use schemes incorporating residential above retail premises at all scales.

Classification:	Planning authorities
Target:	Incentives/process
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Requires new government guidance

Redevelopment of strata sites presents a number of problems. In order to redevelop a strata site a certain proportion of those owning units within the strata have to agree to sell. Once that proportion is reached, often 85 per cent but sometimes 100 per cent, depending upon the state and/or strata agreement, the remaining units must also be sold. This makes it very difficult for a developer to redevelop what could be a prime site if a few individuals decide they do not want to sell and/or decide to hold the developer to ransom. It was reported in a panel that developers sometimes purchase units within a strata to prevent redevelopment in proximity to one of their sites, thus avoiding supply competition. This is clearly not a favourable practice for redevelopment.

With many strata developments ripe for development in Sydney this is a significant issue, and is becoming more and more of a problem in Perth. Developers will often refuse to tackle such developments because the risk of one person holding them to ransom, demanding an excessive price and delaying development is too great. Lowering the proportion of owners that need to agree to a redevelopment, developers offering existing owners units within the new development and independent dispute resolution were suggested solutions.

Suggestion 5: Make it easier for the redevelopment of strata titled property by reducing the proportion of owners that need to agree to a sale for redevelopment to become possible. Developers should offer existing owners discounts on units within the new development as an incentive to sell.

Classification:	Process/policy
Target:	State government agency dealing with strata titles; private sector developers
Origin:	Private sector
	No opposition

Level of agreement:	Short
Timeframe for implementation:	Controversial; requires further research and debate
Ease of implementation:	

The private sector panels highlighted land price as one of the key issues preventing infill development. Almost all landowners were reported to have unrealistic price expectations, often based on a failure to understand the development process and a belief that land prices never fall. Land prices are dealt with in more detail in the next Chapter.

4.2 Feasibility appraisal

The concept of development feasibility is absolutely crucial to the delivery of diverse housing on infill sites and is discussed in detail in this Chapter. Development needs to be profitable to stimulate housing supply. If revenue does not exceed total cost by a margin sufficient to provide the developer with a level of return that adequately compensates for the risk involved in the Project, development will not occur. If, at the feasibility stage, the analysis suggests a profit cannot be made, the scheme will be abandoned. Demand must create revenues sufficient to generate returns otherwise nothing else matters. In some cases a subsidy, such as discounted land provided by the public sector, can replace revenues. The vast majority of development projects do not proceed past the feasibility appraisal stage. When referring to residential development schemes, a Perth developer commented that ‘about 1 in 20 is worth a second look’.

The four panels identified a number of differences between the Perth and Sydney housing markets, but the greatest contrast was the public attitude towards higher density development as an accommodation option.

4.2.1 Demand for infill development

Only in Perth was the demand for infill development raised as an issue. Public sector representatives on the Perth panels commented time and time again on how it is necessary to promote the benefits of infill development within the metropolitan area. It was felt that there was a pressing need to explain why higher density living is required in the city and how apartment living is a viable housing option. In Sydney, higher density living is more widely accepted as an alternative to the detached house. This is reflected in the much greater housing diversity within Sydney’s suburbs. However, in some areas there is widespread opposition to any increases in density.

There was strong disagreement between panel participants regarding the extent of demand for higher density living. Some developers thought the market was still ‘not there’ and people did not want to live in apartments within densely populated areas. There was a perception, in Perth, that apartment living was an option only if you could not afford to purchase a detached house. Other participants vehemently disagreed pointing to the rapid increase in CBD population in recent years. However, it was agreed that there was fundamental opposition within the community, many local councils, and even within some areas of state government, towards moving to higher density development within the suburbs. This was largely attributed to the failure of high-density schemes in the past such as Observation City in Scarborough and erroneous perceptions of medium–high-density development.

Chapter 2 discussed how housing supply in Perth is still dominated by detached dwellings; traditionally the four-bedroom, two-bathroom house (the four-by-two) on a $500m^2$+ lot. This is the product that many young people grow up in and aspire to own as a first home. This demand is perpetuated by real estate agents 'insisting you need a fourth bedroom for re-sale value'. When comparing the relative affordability of a CBD apartment and a four-by-two house in a typical suburb a 30-minute drive from Perth, the detached house is often more affordable, costing around $450 000; the combined cost of purchasing the land and building a single storey house. A new two-bedroom two-bathroom unit in the CBD would start at around $500 000. In Perth, in stark contrast to Sydney, there are very few areas where apartments are available. Suburbs such as Subiaco, Leederville and East Perth, close to the city with good transport links, have median unit prices in excess of $500 000 (REIWA 2011). The City lacks the housing diversity available in Sydney. In Sydney there are numerous CBD style locations containing high-density residential developments and offering residents some sort of choice. In Perth there are plans to develop various activity centres to offer alternatives served by quality amenities, attractive to potential residents, but currently large scale residential precincts do not exist to anywhere near the same extent as other cities in Australia.

When new households seek to form, affordable choices are not in two-bedroom apartments in inner city areas, but in four-bedroom houses in some of the outer suburbs such as Gosnells, Armadale, Rockingham, Wanneroo, etc. Until the price balance changes, it is difficult to see a significant shift in buying activity from those seeking to purchase based on a perceived value for money i.e. price per m^2. Those purchasing new CBD apartments are seeking access to specific city living lifestyle advantages such as the convenience of the location; usually CBD based workers.

The price balance also prevents downsizing. A couple owning a large $700 000 home in the suburbs and seeking to downsize would have limited options available if they wanted to pocket a significant proportion of the house sale proceeds. Moving into one of the cheaper two-bedroom inner city apartments will cost $500 000+ leaving only around $150 000 after stamp duty and fees are taken into account. Therefore there is little incentive. If there were options available sub $400 000 such a move would be more desirable. At the moment, such an option would involve moving to Mandurah, 70km south of Perth.

The current lack of diverse and affordable housing within inner city locations in Perth is one reason why many Western Australians don't consider higher density living as an option. There is little doubt, however, if affordable housing within medium and high-density developments could be brought on to the market for under $400 000 it would sell very quickly simply due to its relative affordability. The decline in housing affordability has made many potential purchasers more receptive to alternative housing products. In Ellenbrook, around 20km to the east of the CBD, developers have brought onto the market smaller houses with 5–6m frontages and delivered two-bedroom houses for under $300 000. These houses sold very quickly in a flat market. Housing market experts on the panel were of the opinion that in the current market if the product is 'affordable' it will sell quickly, whatever the characteristics of the development. This has promoted a certain amount of innovation within the, traditionally, very conservative Perth residential development industry, although much of this innovation has been led by the state's Department of Housing. House and land packages are becoming more available and popular as they offer quicker access to housing when compared to the traditional route of land purchase and building contract. Such innovation will hopefully spread from greenfield to infill sites. Additionally, the flow of migrants from the eastern states and overseas migration from Asia and Europe, where higher density living is more accepted, is also likely to increase the demand for apartments.

Suggestion 6: Infill housing needs to be delivered at a price that attracts buyers who would traditionally opt for a detached house in the outer suburbs. In certain states the industry needs to sell the benefits of infill housing; quality of amenity, transport network, etc. However, the price of the product will be the key to demand and developers should be incentivised to provide a range of infill products at a variety of price points.

Classification:	Process
Target:	All stakeholders
Origin:	Public sector
Level of agreement:	Some private sector opposition
Timeframe for implementation:	Short
Ease of implementation:	Innovative; Requires further research and debate; requires new government guidance and powers for local authorities; requires a shift in institutional thinking.

In Perth, and to a lesser extent in Sydney, there is a lack of understanding of what medium–high-density living actually offers in terms of product and lifestyle. Current perceptions of higher density living in Perth are of large scale, luxury apartment developments. The development of smaller, medium-density units in Ellenbrook showed that an alternative product is popular if priced correctly. The public sector panel in particular, emphasised the need to educate the population about the different housing products that can be delivered on infill development. 'Three-storey walk up' apartments, townhouses, triplexes and villas are all products that could be developed on infill sites, increasing existing densities. Innovative products delivered by developers help demonstrate what can be achieved in the market.

In Perth, the majority of existing high-density developments in the city have been delivered at fairly high price points due to the costs of constructing such developments and have, as a result, produced little in the way of affordable housing options. In terms of diversity, there are one, two and three-bedroom offerings, but with one-bedroom apartments starting at $350 000, this diversity is not generating affordable options for a large portion of the population; families for example. This is unlikely to change given the costs of constructing at height within the city (see below). Alternatives are required. Small-scale, medium-density developments within inner and middle suburbs could provide much of the infill development required in both Sydney and Perth. Such 'greyfield' development was discussed by Newton et al. in a recent AHURI report (Newton et al. 2011).

The aim of infill development should be to offer a range of diverse housing options within inner and middle ring suburbs so a household has a number of alternative housing options to support their requirements throughout their housing careers. A new household should have housing options available that would allow them to access small, affordable housing as a first home option close to their chosen employment location and then progress into different types of housing as their incomes increase. These options do not exist within the vast majority of established suburbs in the Perth metro area.

Suggestion 7: Developers need to deliver a range of affordable housing options. In areas where the land values will only support the development of larger, high revenue generating products such as townhouses and luxury apartments, there need to be incentives offered by the public sector to encourage the delivery of alternative products within the development; density bonuses for example.

Classification:	Incentives
Target:	Planning agencies
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Requires new government guidance and powers for local authorities.

The issue of leadership was continuously highlighted within the Perth panels: leadership to educate the public of the need for and benefits of infill development and leadership to promote alternatives to the traditional housing products that dominate the market. Organisations such as the Committee for Perth are starting to take on such a role. Highlighting successful infill development schemes is one way of successfully promoting medium–high-density development. This issue will be discussed in more detail in the Section on community opposition.

Suggestion 8: The benefits of infill development and the type of housing products that can be delivered on such sites need to the 'sold' to the Perth public. There needs to be strong leadership from within government to promote and support increased densities within existing suburbs.

Classification:	Advocacy
Target:	Government agencies
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislative change; requires a shift in community thinking.

House prices in suburbs with good public transport options, ideal for significant infill development, tend to be unaffordable for even median income households. The consensus across all the panels was the requirement for some sort of public sector intervention if infill development was to produce diverse and affordable housing on any significant scale.

4.2.2 Investment potential

The panel reported around 60 per cent of CBD apartments in Perth are owned by investors. The majority of investors are small, 'mum and dad' operations who have limited capital and borrowing capacity although there is evidence of increasing levels of overseas investment activity. To maximize demand from small investors housing needs to offer adequate rental returns and the potential for capital growth. Infill locations often offer both due to locations within decent transport networks. A diverse supply of infill housing will lead, through investors, to an increase in the supply of rental accommodation. Investors are often vital in ensuring developers secure the necessary pre-sales required to obtain project funding. Consequently infill products must be attractive to investors.

There are already tax concessions for investors in residential property such as negative gearing. There could be scope for revisiting tax provisions to encourage investors to invest in new rather than existing units. This would increase supply and reduce competition with first time buyers for existing properties. Overseas investors are very active within the new apartment market being excluded from the existing dwelling market. However, overseas investors do not always look to rent such properties preferring instead to leave them vacant thus reducing availability within the private rental market. Ways to reduce the number of empty investment properties and bring them into the rental market should be explored.

Institutional investors have demonstrated little appetite for direct residential investment due to management costs, low-income returns and the reputational risk attached to residential tenancies. The investment market remains small scale with investors buying individual units. Schemes guaranteeing investors a rental income could be successful in attracting more investors. The defense housing model has proved successful and there are signs that the private sector is starting to develop a product along similar lines in partnership with the resources sector in Perth. This could have significant potential to increase investment demand.

A supply of affordable, private rented accommodation is vital for those on low–moderate incomes. However, it is unlikely that market driven infill development will produce a supply of affordable rental accommodation. Traditional products priced around $500 000 would need to generate a rental income of around $500 per week to provide a competitive level of return, and investors would need to take advantage of negative gearing to make the returns more attractive. Such rents are not affordable to those on low to moderate incomes. Therefore, intervention is required in order to provide affordable accommodation for those that cannot afford the prevailing market rents for such products. One solution would be extending an NRAS type scheme which would result in more affordable rental accommodation and encourage investment in new infill products.

4.2.3 Feasibility of infill development

Residential development rarely produces the profit margins that many believe. Of course, in the right market and with the right site there are profits to be made, but such sites are rare, and the 2012 market is showing few signs of delivering the returns that stimulated speculative development in the last decade. In Perth and Sydney, many large scale developers previously involved in delivering residential projects were pulling out of the sector and moving into the commercial property where the revenue to cost balance was more favourable. Developers usually seek a profit of around 10–25 per cent ‘on costs’ (profit as a percentage of total development costs) as a return for undertaking the development risk. If that profit is not achievable the scheme will not proceed. The actual return required will depend upon a number of risk factors such as the quality of the location, the demonstrable ability of the location to support the specific type of development (e.g. high-density), the state of demand, general economic conditions, the developer’s equity requirement and the level of uncertainty surrounding the development approval. Simply put, if anticipated return does not compensate the developer for the assessed risk of the project, the development will not proceed past the initial feasibility assessment phase.

Table 5 below provides a very simple, hypothetical example of development feasibility. Consider a medium-density development of 15 units on an infill site. The landowner is determined to secure $1m for the site. The developer has assessed demand in the local market, calculated the cost of developing the units including the finance, and discussed with the local planning authority the potential contributions required towards infrastructure. Table 3 describes three potential scenarios. Construction costs, finance and developer contributions are unchanged between the three developments, the only variable that changes is the revenue the developer could secure from each of the 15 apartments. This revenue will vary depending upon demand for the apartments. In the situation where the developer could only secure $350 000 for each apartment, the development is not feasible given the landowner’s demands. Such a development would certainly not proceed.

The second scenario would also not be viable as the developer could only secure a 10 per cent profit on costs; an insufficient return to cover risk. Only where $450 000 per unit is obtainable would the developer’s profit be sufficient for the development to proceed. Given development costs are relatively consistent across metropolitan areas, with the possible exception of infrastructure contributions; feasibility is mainly determined by the land price and the revenue that can be generated in a given location. In the second of the scenarios, the landowner would have to adjust their price expectations if development was to proceed; a price of $500 000 might stimulate the development. In the first scenario the land would need to be provided for free for development to occur.

Table 5: Development feasibility: Impact of revenue

	$350k per unit	**$400k per unit**	**$450k per unit**
Net development revenue	$5,250,000	$6,000,000	$6,750,000
Construction costs	$3,750,000	$3,750,000	$3,750,000
Developer contributions and infrastructure charges	$500,000	$500,000	$500,000
Finance including land holding costs	$200,000	$200,000	$200,000
Land costs	$1,000,000	$1,000,000	$1,000,000
Total costs	$5,450,000	$5,450,000	$5,450,000
Developer's profit	-$200,000	$550,000	$1,300,000
Developer's profit on costs	-4%	10%	24%

Source: Authors

In Sydney, the panel viewed the price of the land as the biggest impediment to infill development. In Perth it was the cost of construction, particularly labour costs. In Perth, developers on the panel were very negative about the short term future of large scale apartment development in the metro area, with construction costs and weak prices preventing profitable development. It Sydney it was considered a challenge to 'get a building out of the ground' because of the development approval (DA) process. Developers in both cities were more positive about the profitability of smaller scale infill development projects, three storeys and under, where construction costs were much lower and land prices weren't dramatically affected by the area's zoning or height allocations. It was the approval to build at height in Sydney that increased landowner price expectations to unrealistic levels ruling out profitable development, especially in some designated centres such as Penrith.

The impact of planning on land values is significant. Once land is zoned for high-density development of significant height, the land value uplift is dramatic because of the potential to deliver a large number of units. What landowners often do not take into account is the cost of delivering at such height and density, believing the cost of constructing at three storeys to be the same as constructing at ten. A land value is calculated far in excess of that achievable through residential development, unless the site has certain characteristics such as river views etc. which can support extremely high revenues. In addition, developers commented how landowners have the same price expectations now as at the peak of the boom. Greater realism on the part of landowners could increase the supply of infill development; whether this is likely is questionable. 'Landowners must be educated about the realities of the market' was the view of developers on both panels.

Suggestion 9: Landowners need to be more realistic in their price expectations. An open database containing evidence of past sales would provide a reliable picture of land values in a particular area given prevailing zoning and height allocations.

Classification:	Information
Target:	Government land authority
Origin:	Private and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislative changes; requires a shift in institutional thinking.

Development profits only come at the end of a development process e.g. the last 10 apartments sold within a development of 200. Because development cash flows are negative for almost the entire duration of the development, developers need to be certain that positive cash flows will be generated by a certain date in order to pay off debt finance and secure returns. Anything that adds to the uncertainty of generating the predicted cash flow adds to the risk of the development. Infrastructure and other developer contribution requirements imposed at a late stage completely alter cash flow projections and predicted returns. Contributions that are clear before the DA stage and can be factored into the feasibility offer far more certainty and are much more likely to be accepted by a developer, particularly if they can be passed on to the landowner.

Delays in the development approval process add to the costs of the development through holding costs of land (through interest payments if the land is debt funded, opportunity cost if equity is tied up in land, plus relevant rates & taxes) and can alter the delivery point of the development in the market cycle which may reduce revenues. Fixed and certain timelines in the approval process, and within the strategic planning phase e.g. re-zoning, reduce uncertainty and would produce more development activity.

However, some developers actually base their operations around this uncertainty; purchasing land before it is re-zoned or has development approval and securing the uplift in value. Some developers may dispose of the land to a developer that specialises in delivering the built form. Increasing certainty in the process would reduce opportunities for developers to benefit from land value uplift; this uplift would go to the landowner but this presents opportunities for betterment taxation.

Suggestion 10: Developers crave certainty. The development approval process should be structured in such a way that offers increased certainty for developers. Enforceable approval timelines and clear contribution requirements would help the supply of infill development.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector
Level of agreement:	Strong public sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires legislation; controversial; requires more research and debate.

Table 4 below provides a simplistic example of how delays and developer contributions can affect development profits. If the development went smoothly and expected costs and revenues eventuated, the developer would make 19 per cent profit; an acceptable return. If there was an unexpected 20 per cent increase in required infrastructure contributions during the development approval stage, profit would fall to 16 per cent. The feasibility would be marginal and the project may or may not proceed. The later the stage in the development, the less chance there is for the developer to recoup the cost. The developer may try to pass the cost on to the end user but it would depend upon whether the market was prepared to absorb the cost through paying a higher price for the end product. In a rising market, the developer is more likely to be able to pass on these costs. Scenario 3 assumes a 12-month delay in planning approval. The delay increases costs through interest payments on the land and land holding costs. The scenario also assumes prices for this type of product have dropped by 5 per cent over the 12 months, reducing revenue by $250 000. Construction costs have also increased over the duration of the delay by 5 per cent. The resulting predicted profit is just 8 per cent. Such a profit would mean that the development would not be regarded as feasible by either the developer or any potential financier and would not go ahead as a consequence. The site would remain undeveloped.

Table 6: Development feasibility examples

	Predicted scenario	20% increase in developer contributions	Delay in planning approval
Net development revenue	\$5,000,000	\$5,000,000	\$4,750,000
Construction costs	\$2,500,000	\$2,500,000	\$2,625,000
Developer contributions and infrastructure charges	\$500,000	\$600,000	\$500,000
Finance including land holding costs	\$200,000	\$200,000	\$260,000
Land costs	\$1,000,000	\$1,000,000	\$1,000,000
Total costs	\$4,200,000	\$4,300,000	\$4,385,000
Developer's profit	\$800,000	\$700,000	\$365,000
Developer's profit on costs	19%	16%	8%

Source: Authors

Unexpected costs or delays may result in a reduction in profit to the developer, additional costs being passed on to the consumer or no development at all. This is the worst possible outcome as the DA delay has prevented housing supply of any kind. Ways to improve the efficiency and certainty of the development approval process are discussed later in the Chapter.

4.2.4 Feasibility and strategic planning

As detailed above, the balance between revenue and costs needs to offer a return for the developer and the landowner. The land value is the residual i.e. what is left after costs and profits are removed from revenue. The higher the land value, the higher the potential for development as it means that there is sufficient margin for both the landowner and developer to make a profit. Conversely, low land value areas are unlikely to be able to support development that incurs a high cost. Strategic planning often does not take into account the potential of a site or location to deliver profitable development and therefore housing. Zoning for high-density development in an area that could not produce the necessary developers' profit or land value is not going to lead to development.

Height and density do not automatically lead to higher land values; it is often quite the opposite. It may cost up to \$5000 per m^2 to construct a 10-storey apartment whatever the location; construction costs are fairly consistent across Sydney for example. In a location with quality public transport, river views and quality amenities, a development may generate revenue of \$8000 per m^2. If the area was zoned for high-density development, the cost to revenue balance may result in development. However, if an area was similarly zoned, but the market would only deliver a revenue of \$5000m^2 because of a poor location or an oversupply of similar properties, no development would occur. The area may be able to support development at a much lower density where construction costs are \$3000m^2 but this would be a very different type of infill development. Table 5 above sets out a simple example showing how a high value area could support the type of development that would be marginal in a medium value area and not profitable in a low-value area. If the developer required a fixed profit based on the costs of the development, what is left after total costs are deducted from revenue is the residual; the amount left over to purchase the land. If the land value left over is enough to stimulate the sale of the site there would be development. In the low- value area, the landowner would need to pay the developer $1m for the developer to generate the required profit. In that area, an alternative form of development could be profitable but it would be a much more modest scheme.

Table 7: Land values and development

	High-value area	Medium-value area	Low-value area	Alternative for low-value area
Net development revenue	$10,000,000	$8,500,000	$7,000,000	$3,000,000
Construction costs	$5,000,000	$5,000,000	$5,000,000	$1,700,000
Developer contributions	$500,000	$500,000	$500,000	$200,000
Finance	$750,000	$750,000	$750,000	$200,000
Developer's profit	$1,750,000	$1,750,000	$1,750,000	$400,000
Land value	$2,000,000	$500,000	-$1,000,000	$500,000

Source: Authors

The panels were aware that strategic planning does not take into account development feasibility. Zoning high-density in a low-value area, as shown above, will not lead to development. Some panel members were of the opinion that it was not the role of strategic planners to assess the feasibility of development, but others argued that there should be careful consideration of the implications of re-zoning, for example, as that may preclude development. A market assessment of the type of development an area could sustain would be a sensible approach. This is a fairly straightforward exercise of mapping potential revenues that could be generated in an area against generic development costs. This would add another layer to strategic planning and avoid a situation where sites have ‘beautiful planning but will never get built’ because nobody can make the required profit. The panel referred to a number of cases in Sydney where the height allocations in an area were totally unrealistic and meant that no development would occur in those areas because it was simply not profitable given the revenue to cost balance.

Suggestion 11: Strategic planning should incorporate an assessment of the type of development that would be feasible given prevailing values in the housing sub-market. Markets change over time so a regular re-assessment of the type of development an area could sustain would be necessary.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private and public sector
Level of agreement:	Minor public sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires new government guidance; innovative, requires further research and debate.

‘Denser development does not have to mean height,’ Given the direct relationship between development costs and height, smaller apartments, at a higher density can lead to more feasible developments and also provide an opportunity to deliver a more affordable product. There was overwhelming support for a significant proportion of infill development to be delivered through three-storey apartment development because:

- The cost to revenue balance 'stacks up'.
- There are more builders capable of constructing the product leading to more price competition.
- Such development is more readily accepted by the community as it has a lower impact on the surroundings.
- There is a greater pool of small investors willing to fund such a development when compared to a $200m residential tower.

Facilitating this type of development was seen as vital in both Sydney and Perth in developing a strategy to deliver diverse and affordable infill housing.

4.2.5 Delivering diverse and affordable housing

Given current house prices are unaffordable for many households on low to moderate incomes (Burke et al. 2011), various types of housing at price points below the median need to be delivered on infill sites. According to the panels, development within inner suburbs, around transport nodes and within the CBD is not going to produce significant quantities of affordable housing without some sort of intervention, be it through the planning system or through tax incentives.

In Sydney, one or two-bedroom units delivered on the ground floor of a larger residential development have been available below $400 000. In Perth, the developers Finbar have been able to deliver one-bedroom units within the CBD for around $400 000. However, there is a limited supply of such accommodation and it is unlikely to be suitable for families. The key is to make sure that the delivery of affordable housing is profitable for the developer; that may be through offering density bonuses or fast-tracking developments with an element of affordable housing through the development approval process delivering cost savings.

Subsidised housing such as the National Rental Affordability Scheme is an option for delivering affordable housing. This scheme was viewed with some scepticism by developers on the Perth panel at least, who were frustrated with the timeframes and the complexity of the application process. It was thought that the scheme had potential but was in need of refinement. It was considered that the 20 per cent discount on market rents was deemed insufficient to provide affordable accommodation in many infill areas.

Panel members agreed that in order to deliver diverse and affordable housing on any significant scale would require policy intervention. Land values within infill areas offering good transport links were simply too high to allow developers to provide a product considered affordable to low–moderate income groups. Such incentives need to be tied to the development approval process and not through strategic planning e.g. up-zoning, as the incentives simply increase land values and uplift is captured by the landowner. This is considered in more detail in Section 4.4.

The use of alternative tenures, such as shared equity, has potential to allow access to areas previously unaffordable to those on moderate incomes. The Western Australian Government's SharedStart, administered through the successful KeyStart program, has opened home ownership to those on moderate incomes (up to $90 000 for a couple/family). Promoting the success of shared equity programs could encourage other organisations, including private sector developers, to provide this tenure of property. It has proved very successful in the UK with significant community housing sector involvement.

Suggestion 12: The National Rental Affordability Scheme has potential to deliver relatively affordable units on some infill sites and the scheme should be extended with the application process made simpler and more efficient.

Classification:	Process
Target:	Commonwealth and state NRAS
Origin:	Private sector and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Simple, no legislative change; additional Commonwealth and state funding.

Suggestion 13: Shared equity schemes have proved successful in Western Australia and should be adopted more widely in Australia. Such schemes offer developers access to households that could not afford to purchase within the traditional private market. Community housing associations in partnership with private sector developers could provide significant quantities of shared equity units on infill sites.

Classification:	Operational
Target:	Community housing providers
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Innovative; requires further research and debate in some states; requires new government guidance.

Suggestion 14: The delivery of affordable housing on infill sites in high land value locations will require policy intervention. This intervention should be structured in a way that incentivises the developer to deliver units rather than simply rewarding the landowner.

Classification:	Incentives
Target:	Planning authorities
Origin:	Private and public sector
Level of agreement:	No opposition (but no landowners commented)
Timeframe for implementation:	Medium
Ease of implementation:	Controversial; Requires further research and debate; requires new government guidance and local authority powers.

4.2.6 Joint ventures, Community housing organisations, leading the market

The use of surplus government sites and an efficient DA process could provide a supply of affordable housing where public land was used to subsidise the delivery of housing. Joint ventures between the public and private sector are being successfully utilised where public land is sold to the private sector at a price that permits the private sector to deliver affordable housing. This housing is then transferred to the public sector or community housing sector to manage.

The Department of Housing in Western Australia (DoHWA) has completed a number of joint venture developments. DoHWA is very highly regarded by the development industry, mainly because they take time to consult with industry and actively seek partnerships with developers. The Stella Orion development within the City of Cockburn, a 20-minute train journey into the city, was developed on land prepared and assembled by Landcorp then sold to the private sector. DoHWA partnered with a private sector developer by agreeing to purchase a number of units which made it possible for the developer to obtain finance for the project. Out of 130 units, DoHWA purchased 70, the majority of which they sold on the private market, retaining 22 for affordable housing provision. The development itself was medium-density, three-storey walk up apartments (Figure 5) released to the market at a price below $400 000. DoHWA subsequently won a UDIA award for medium-density development. By agreeing to purchase a significant number of units, DOHWA reduced risk for the developer by guaranteeing a cash flow.

Figure 5: Joint venture development: Stella Orion, Cockburn Central, WA

DoHWA have been involved in a number of other schemes where they provided this certainty for the developer making it easier for the developer to obtain finance by reducing the risk of the project to a level that the developer and financier can accept. By doing this, DoHWA is able to purchase units at a discount by buying in bulk, but they can also have an input in terms of the type of product delivered. Such partnerships are very effective provided there is the funding available to the public sector to participate in these joint ventures. The schemes are also an excellent way of leading the market by demonstrating the type of product delivered (in the case of Stella Orion, one, two & three-bedroom apartments in a medium-density development) actually has a market thereby encouraging other developers to deliver such a product. The development industry is not the risk-taking entity many like to believe, rather it is a conservative industry where the majority of developers are happy delivering the same type of product; low in risk, but with a high certainty of return. There are very few innovators in the industry due to the risks involved and the problems in obtaining funding. Indeed, the panels highlighted that many developers actually have an aversion to the built form and would much prefer to concentrate on land subdivision because the built form requires a much greater exposure to debt. This is problematic when trying to increase the capacity of the industry to deliver infill development.

Suggestion 15: The public sector should be properly resourced to enable joint ventures with the private sector that deliver diverse and affordable housing. Such schemes can lead the market by demonstrating the profitability of various forms of infill housing development.

Classification:	Resources
Target:	State Treasuries
Origin:	Private and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires state government funding; requires shift in institutional thinking.

The industry often needs to be led by demonstration projects and the public sector and the community housing sector have an important role to play, provided they are allocated the necessary funding. For example, demonstrating there is a market for apartments located next to transport nodes with limited or no parking provision. A community housing representative summed up nicely: ‘Let the not-for-profit sector lead the market. There is not the sales risk as the units are held as affordable housing. Let us develop a prototype for the area and let the market follow. De-risk by creating the market’.

Suggestion 16: The community housing sector has a vital role to play in delivering diverse and affordable housing. The sector needs to be properly resourced to enable competition with the private sector for the acquisition of infill sites. These not-for-profit organisations don’t require the same level of return as the private sector, enabling them to offer a different type of product to the market and maintain a supply of affordable housing through on-going management of these units. The sector should be helped to grow as quickly as possible through public stock transfers and public/private sector funding.

Classification:	Resources
Target:	Community housing sponsors
Origin:	Public sector
Level of agreement:	No opposition

Timeframe for implementation:	Medium/long
Ease of implementation:	Requires funding for Commonwealth and state government; requires a shift in institutional thinking.

There was also the view that organisations such as Landcom in Sydney and Landcorp in Perth should not be hamstrung by the requirement to make a profit. This limits scope to use land to subsidise affordable housing provision. There was the view that the organisations should be allowed to focus on the provision of affordable housing and community outcomes. To a certain extent, Landcorp achieve this through the transfer of land to DoHWA at below market value, but relaxing the profitability requirements of such organisations could permit the delivery of affordable housing on a much greater scale. They could be innovators and in partnership with the Departments of Housing and community housing organisations provide a range of diverse and affordable housing on public sector sites.

Suggestion 17: State development organisations should be allocated the task of delivering diverse and affordable housing on publicly-owned land. They should operate for the benefit of the community and not the state Treasury.

Classification:	Resources
Target:	State government land agencies
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires state government funding; requires a shift in institutional thinking; requires legislation.

4.3 Site assembly

Infill development sites are held in a variety of ownerships. Investors large and small, public authorities, trusts, individuals, etc. will all own sites with potential for development. Some landowners are easier to identify than others and some more eager to realise land values. Developers may speculate and purchase land with the hope it will be up-zoned at some point in the future. Individuals may purchase sites and leave undeveloped in the hope that they benefit from infrastructure improvements in the local area over time. In a standard development model, once a site has been identified and a development upon that site assessed as feasible, the developer will look to acquire the site. This may be a complex process if the potential development site is in multiple ownership.

Newton et al. (2011) describe how infill sites can come in all shapes and sizes; large, brownfield sites, or small, fragmented sites within urban areas. To deliver the infill targets set within metropolitan plans, sites of all descriptions need to be used. The panels highlighted how the public tend to view infill development as large, residential towers and it quickly became clear, from the views of both the private and public sector, such development would only account for a small proportion of new infill units. The panel regarded small sites within inner and middle ring suburbs as providing the greatest opportunities for development. A significant challenge is the assembly of these sites into parcels that can deliver medium-density development (for a discussion see Newton et al, 2011). There are also ample opportunities to develop large, single residential lots into multiple dwellings, not just subdivision into two units which is the development model prevalent in many inner Perth suburbs.

Some of the issues relating to site assembly were addressed in 4.1 under site identification and will not be repeated here. However, there are a number of issues that are worth noting. Often it is just too difficult and costly to amalgamate a number of small, fragmented sites. Importantly, for smaller scale infill development, there is often no need to amalgamate sites. Where older houses on large lots are subdivided, there needs to be a significant net increase in housing. In Perth, for example, subdivision of large lots 800m^2 and greater result in the net addition of only a single dwelling. This sub-division tends to occur in the higher value areas where a three-bedroom house, often a public housing unit, is replaced by two four-bedroom houses. This certainly does not increase the supply of diverse and affordable housing although it is a profitable development process.

In the panel discussion, it was argued that such public housing sites should be producing a greater number of units targeted at those on low–moderate incomes.

> There are potentially 330 000 homes in public ownership sitting on potentially 1m blocks on land. Redevelop existing sites, relocate existing tenants and build new, higher density homes.

There were other suggestions that public land was simply not being used in the most efficient and productive manner. The development of three or four villas on such sites, with one being managed as an affordable unit, was one solution.

Suggestion 18: The sale of public housing in high value areas should result in a significant net increase in dwellings on those sites and/or the delivery of affordable housing options within the local area.

Classification:	Process/policy
Target:	State housing authorities
Origin:	Public sector
Level of agreement:	Some public sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; controversial; requires research and debate.

The Urban Land Development Agency (ULDA) in Queensland was cited as an example of good practice:

> They are an organisation that find surplus government land and develop it. They have a ‘can do’ attitude and there needs to be more of that to deliver results.

Generally it was agreed that there is a lot of underdeveloped land in public ownership that is capable of producing significant quantities of infill housing. Local authorities should be supported when they want to develop their own land and be allowed to borrow funds to support development. Government must be proactive to ensure that land is developed in such a way to produce a range of housing types at a range of price points. This would include using public land to subsidise the development of affordable housing. This could be achieved by selling the land at a discount to the private sector under the condition that a portion of the final development is affordable, preferably units managed by a community housing organisation.

One key issue is the scale and timing of redevelopment: 'Do you allow piecemeal development or develop in a more progressive pattern over time?' The panel member was referring to a policy that allowed the development of townhouses in the middle of a suburban street:

> Eventually the whole of the street will be redeveloped, but in the meantime the development doesn't fit the rest of the area and you get community opposition even though at some point the rest of the area is likely to go like that.

At the other end of the spectrum was criticism of the large-scale redevelopment of certain strategic sites in Perth. The City Link scheme:

> …is 13.5ha of land and they [Government] want one developer to take the whole lot. There are lots of very large sites and the government is bringing all this land on to the market at once.

This reliance on large-scale developers to bring these significant sites to the market is problematic if there are competing options within the city. It then becomes difficult to find enough developers to develop on that scale. 'A developer pulled out of Water Bank because Waterfront was coming up'. The developers on the panel were of the opinion that large sites should be divided to allow competition and open up development to a range of organisations. There was agreement from members of the public sector: 'If it [the land] goes to one developer they are in control of the timeframe so it is more difficult to get the outcomes required'.

Smaller sites offer opportunities for smaller developers to deliver diverse housing products. Smaller projects also require less finance from banks. One panel member thought that there should be more recognition of the role of smaller developers and policy should be responding to these small players given their capacity to deliver numerous projects on small, infill sites.

> We should be responding to the lower end of town, smaller developers, so there is no need to amalgamate sites. The dominant voice is the big end of town but the smaller end is much happier with smaller infill sites which are easier to do.

Suggestion 19: Government should consult closely with the development and housing industries to ensure public land of all sizes is released in a way that maximises the delivery of diverse and affordable housing from all types of developers.

Classification:	Process/policy
Target:	All government agencies involved in development
Origin:	Private sector and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short

Ease of implementation:	Simple, no legislation required; requires a shift in institutional thinking.

4.4 Development approvals

Development cannot occur without securing the necessary development approvals. The planning system is often cited by the private sector as the biggest barrier to development. During the panel sessions, a senior planner was quick to point out that planning is only one of the necessary approvals required for development to proceed. Approvals are required from a number of different organisations to cover environmental issues, infrastructure delivery, transport provision etc. The development industry needs to be careful when singling out the planning system for the perceived failures of the approval process. The Productivity Commission describe the approval process in volume two of their report on planning, zoning and development assessment (Productivity Commission 2011).

In this Section we assess how the development approval process could be improved to facilitate the delivery of diverse and affordable housing.

4.4.1 Efficiency of the approvals process

Both the public and private sectors represented on the panels in both cities wanted a more efficient approvals process; efficiency in both strategic planning and the development approval (DA) stage. The longer the DA process is, the greater the uncertainty and potential for increased costs. A more efficient development process would reduce development risk and increase the number of infill projects considered feasible.

Planning documents such as the R-Codes and multi-unit development codes in Perth and State Environmental Planning Policy (SEPP) documents in Sydney are designed with the intention of increasing efficiency by providing guidance on what developers can and cannot do. However, there is a broader debate about just how the DA system should work.

> The planning system can either be a rules-based system that says they are the rules and there is no variation or discretion and if you want a five-day turn around then use that. On the other hand. there is maximum flexibility; here is the general set of principles and then there is discretion around that if the developer can prove the merits of a scheme. The real dilemma is where to build the system as when we go down the rules-based path the development industry say they want flexibility and the moment we offer flexibility they want more certainty. R codes say here are the limits and you know if you do that people will go right up to the limits. With flexibility, comes uncertainty and delay and then you add community consultation. We could make a completely rules-based system and you are either in and out and we can streamline it.

There was some debate among the developers about just what they wanted from the planning system. The outcome was somewhere between a rules-based system and a merit-based approach; flexible certainty. If developers want to build a standard scheme consistent with local planning documents they should be able to opt for a rules-based approach; a tick box exercise with a quick decision. For more innovative development there could be a merit-based approach which rewards quality design and housing diversity.

> If you come with a good design solution you can get rewarded, there needs to be that flexibility.

> Move planning away from a prescribed model. Whether you can have cluster housing, dual occupancy, etc.—they are all just houses. If dwellings are permissible they are permissible and then you stay within a height plane e.g. four-storey area, two-storey area and then the market delivers the appropriate house type.

> I would like to see levelling of the playing field between individual houses and other types of small development. If building a house on a single lot you can bypass the planning system and go straight to building approval. You are deemed to comply. I don't see a huge problem extending that to group and multiple housing on a relatively modest scale—small apartment building providing it ticks correct boxes.

SEPP 65 and the Affordable Housing SEPP in Sydney certainly had an impact on the delivery of medium-density infill development, and in Perth the move towards permitting the development of ancillary dwellings in certain areas was welcomed. The multi-unit codes in Perth are also starting to have an impact:

> Multi-unit code through the R codes made things interesting. Zoned R30, we would have got 16 units on the site, but under the new code when building apartments we managed to get 37.

A planning system that treats small scale apartment building the same as project homes could increase the supply of medium-density apartments allowing developers to:

> ...develop a range of standard apartment types and locations that can be constructed on the same 'as of right' basis as project houses and avoid the DA process.

> …work with the land development industry to produce more 'standard' lots that match 'standard' pattern-book apartments and building types, and develop 'standard' pattern-book apartments and building types that fit with typical existing lot sizes. (Malcolm Mackay, Mackay Urban Design, personal communication)

Suggestion 20: Developers should be able to opt for a rules-based decision if their development is fully compliant with local planning documents. This should result in a quick decision. Developers should also be able to opt for a merit-based approach where required, particularly where the development is perhaps innovative or seeks variation from the planning policy documents. Recognising standard apartment types and treating such apartments in the same way as project homes could increase the supply of delivery of medium-density units.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector
Level of agreement:	Some public sector opposition
Timeframe for implementation:	Medium
	Controversial; requires research and debate;

Ease of implementation:	requires new government guidance.

It is not only developers that are frustrated by delays in DA decisions. Planners often face frustrating waits when dealing with developers and statutory consultees.

> You don't hear back from some within the required timeframes and developers submit incomplete information so you end up chasing them so all sides are to blame.

The zoning system was a source of frustration for both the private and public sector:

> Look at how zoning operates. The level of prescription second guesses the market. You have to create a broad brush planning feel establishing heights and imposing as few minimum standards as possible so you can be creative.
>
> Given the time taken to update strategic planning documents, zoning and height allocations are often out of date and can no longer be supported by the market.

The private sector were keen on moving to a system of deemed approval where development applications to local government be deemed approved if a decision has not been provided within the specified time frame. Within the current situation they are deemed declined. An argument was put forward that planning departments would need to be properly resourced if deemed approvals were adopted in order to minimise the number of schemes falling under this process.

The introduction of Joint Regional Planning Panels (JRPP) in Sydney and Development Assessment Panels (DAP) in Perth to determine decisions on larger scale developments received a largely favourable response by both the private and public sectors. JRPP were seen to be less politicised but did not seem to speed up the process. DAP have only recently been introduced in Perth, so actual performance has yet to be evaluated, but the only concern from industry is the level at which assessments become mandatory. The benchmarks of $15m in the City of Perth and $7m in the rest of the state were considered too high and would capture only a very small number of developments so offering limited benefit to the vast majority of developers.

Suggestion 21: Developments should be deemed approved if applications are not determined within scheduled time limits. Such a policy would need careful consideration as delays in DA can be caused by a variety of organisations such as planners, utilities, environmental organisations and the developers themselves.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector
Level of agreement:	Strong public opposition
Timeframe for implementation:	Medium
Ease of implementation:	Controversial; Requires research and debate;

requires new government guidance and local authority powers; requires legislation.

4.4.2 Modernising planning: strategy and culture

The issue of car parking provides a good example to illustrate the issues surrounding strategy and culture.

> Car parking drives everything—basement car parking costs $100 000 per bay and if you need 1.5 bays [per unit] across the development then it just doesn't stack up. You speak to the redevelopment authority and say we want to offer some of the apartments with no parking spaces near a train station and they say that's great but you are never going to get it through the local council so you may as well just suck it up and put the car bays in.

Although $100 000 is at the top end of the cost spectrum it illustrates the impact that parking provision can have on feasibility.

This lack of flexibility prohibits the development of diverse housing and can, in fact, prevent the development of any housing at all if the cost of providing parking pushes the development into the unprofitable pile. The ability to offer developments with no parking near transport nodes opens up a different type of market. Reduced parking provision not only reduces costs but can also increase the density of development. Avoiding the need for basement parking could make profitable schemes that would previously not have been financially viable. Under the current system, households that do not want parking spaces have little choice but to pay for them. It can, of course, work the other way with developers (& councillors) wanting to offer two parking spaces to attract a certain type of purchaser; two singles for example, but are prevented from doing so by maximum parking standards. Flexibility was considered key. Standard parking provision for standard apartments but developers and local councils could request variations when considered necessary.

Minimum lot sizes were also considered by some to be an outdated practice.

> Why are there minimum lot sizes as they are creating a price hurdle? Maybe have maximum lot sizes. Let the market decide what can be sold. Then demand drives lot sizes. Councils need to see exactly what would be developed on a small site before they would be allowed to subdivide.

'Let the market decide' was a term used by both private sector developers and the not-for-profit industry. There was general consensus that most planners did not, and some argued should not be expected to, know the market. Within strategic planning, a failure to understand development feasibility often leads to zoning or height decisions that the market could never sustain. Zoning areas with low land values to high-density codes will simply mean that the area will not be developed. Of course, the market can change quickly and what was once feasible can quickly become undeliverable and vice versa. Given the length of time it takes to prepare strategic planning documents, it is almost impossible to predict the state of the market when the planning documents take effect. This is another reason for flexibility and a move away from a rigid zoning system.

> Clause 40 [within WA] gives council every power to vary. It is used sparingly but enables areas to deal with a number of large developers. The department of planning is hesitant to allow that overall discretion but the TPS is set in stone and clause 40 allows flexibility. The development industry wants to know what they can do but what is set in the TPS in 2001 is not relevant 10 years later. We need scope to make sensible decisions.

Suggestion 22: Let the market decide. If a developer wants to reduce minimum parking standards and can provide evidence that there is good reason for doing so, there should be sufficient flexibility built into the DA system to allow that to happen. If a developer wants to deliver lots under a prescribed minimum size, there should be the flexibility to permit this to occur. Any variation that will deliver an increase in diverse and affordable housing should be encouraged.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector
Level of agreement:	Some public sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; requires new government guidance and local authority powers.

The private and public sector agreed that they needed to work together to facilitate planning outcomes that would actually deliver housing on the ground. Planners need to understand that development was often high risk and few developers are willing to take on such risk. The majority prefer to repeat a well-defined development model delivering the same product. The key is to ensure that low-risk product becomes medium-density housing on infill sites. Developers need to understand the intense political pressure planners often face when it comes to infill development and are constrained by planning documents and limited in the scope of their decision-making powers.

Younger planners were viewed by the panel as being particularly under pressure. They enter the system with the best of intentions but:

> ...eventually give up because they get sick of being abused in council meetings if they provide something that does not meet the views of the councillors.

Planners may discuss a scheme with developers at the DA stage and follow what they believe are appropriate guidelines, only to be contradicted later in the process by a more senior colleague’s interpretation of the scheme shaped by the politics of the local authority. This frustrates not only the young planner but the developer as well. Developers always argue for certainty and consistency in planning, and if that consistency cannot be ensured within a single local authority how can it be ensured across a region or state? The argument of consolidating local authorities to provide more consistency, as well as maximising the skills of the best planning staff, was put forward in both Sydney and Perth. Such consolidation, it was argued, would make it easier to deliver a coordinated infill strategy across a region: 'Properly resourced regional councils' increasing standards de-risks developments'.

Fast-tracking development that includes an element of affordable housing or meets housing diversity requirements is another option. It was argued that, by guaranteeing a quicker DA process, many developers would be prepared to include an element of affordable housing i.e. smaller units at a lower price or perhaps shared equity. Early pre-DA discussions with developers could identify this option as a possibility and the DA application could be dealt with as a priority saving the developer money and providing social benefit through more diverse and affordable housing options. Fast tracking is an option already being explored by a number of local authorities.

Suggestion 23: Provide local planning authorities with the resources to fast-track the DA process for developments that include an element of affordable housing.

Classification:	Resources
Target:	State government
Origin:	Private and public sectors
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires funding from state governments; requires new government guidance and local authority powers.

4.4.3 Political influence and community opposition

'We are not against councils but against councillors.' This quote from a developer summed up the attitudes of the Sydney and Perth private sector panels and even some of those on the public sector panels.

> Councillors don't understand planning issues and listen to the loudest groups at the meetings. Every one objection is 10 votes at election time.

To counter community opposition, developers admitted to trying to bring more people along to the council meetings to 'shout louder'.

The extent of community opposition to infill development is well known. Community groups tend to oppose any increase in density because it could adversely affect their property value by increasing traffic congestion, by placing pressure on infrastructure and by changing the characteristics of the area. There is often the perception that property values will be negatively affected by increased density; in reality up-zoning often has the opposite effect. The private sector panels thought the majority of such opposition tends to come from baby-boomers but these are also the same people on local councils taking the planning decisions. There needs to be a dislocation between DA and political interference.

Many developers and planners thought there should be community consultation at the strategic planning stage, but if a development is consistent with planning documents there should be no further opportunity for public objection. This would significantly increase certainty as developers know they would gain DA if their scheme met a set of pre-defined guidelines. Developers also felt it was left to them to sell the benefits of the development where really this should be the responsibility of the council that approved the strategic planning documents.

Suggestion 24: Remove political interference from the development approval stage of the process. Councils should support development that fits within the strategic plan for the area.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector
Level of agreement:	Strong public sector opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; controversial; requires further research and debate; requires a change in community thinking.

As discussed in Chapter 2, a recent report by the Grattan Institute (Grattan Institute 2011b) recommended the formation of Neighbourhood Development Corporations, 'new organisations which would increase the amount and choice of housing while ensuring that residents have a real say in the future of their neighbourhoods'. This would be a step forward as many community objections were considered by the panels to be based on preconceived perceptions of infill development.

> The biggest challenge is unpicking the fear of what the community are saying. We pick the top 20 things the community says and most of what the community are saying is based on preconceptions that are not real for the site. The first thing is to unpick this to identify differences between perceptions and reality and then narrow it down to the real issues. Planners need to educate the community about those concerns. When you spend a bit of time outlining what is allowed then it is not so bad.

This consultation needs to be undertaken early in the process so the developer does not have to fight objections at the DA stage. Unfortunately, developers tend to go:

> ... barging in and explain what they are going to do rather than explain why they are doing it and why it needs to be this way. Who is going to live there? Need to overcome the community angst.

Councillors driving this community angst were thought quite common. The whole politicisation of the DA process was deemed problematic.

There was thought to be an important role for academics, practitioners and policy-makers in explaining the benefits of infill development, particularly in Perth.

> We [planners] must have dialogue with rate payers—it shouldn't be up to the developers to do that. It has to happen again and again on individual sites. The community needs to understand they don't have to move into these places.

Explaining why infill development is necessary and how it can be achieved through a variety of different development approaches, not just huge tower blocks, was considered a huge part of the battle. In areas with existing good quality higher density development, even in Perth, the task is much easier.

Suggestion 25: Government at all levels should highlight the benefits of infill development and try to overcome the preconceived ideas many in the community hold about higher density housing.

Classification:	Advocacy
Target:	Local government
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, requires no legislation.

Community opposition is even more intense when an element of affordable housing is included within a development. It doesn't matter what form this affordable housing may take; smaller market units for example, as soon as the phrase is attached to a development application community concerns are multiplied. The council and community want to know who is going to live in the affordable homes because there is still the perception that all affordable housing means social housing and problem tenants. Objections are often overcome when there is a:

> more human definition so people can understand and that their children might benefit. Explaining it is to provide housing for low income people; you can then get some support if people understand what it is.

Changing the definition of affordable housing to avoid the stigma attached to the term and using language such as 'essential' or 'key' workers when discussing 'market' affordable housing would overcome some resistance.

Local authorities need a strong evidence base to present to councillors to secure support for the provision of affordable housing. Evidence from housing needs studies could be used to support market and affordable housing targets for a local government area. Such needs studies would be based on population and household growth projections, demographics, household incomes, existing stock by tenure, house prices, rents and land values. Quantifying housing need and reporting the findings to the local community could ease community concerns. If housing targets are reported in a way that describes why the housing is needed e.g. to keep existing residents connected to their community, this puts the human face on affordable housing discussed earlier. Housing needs studies should be used to quantify the demand for various types of housing; social, private rental, owner purchaser etc., and need should be reported specifically by tenure rather than through generic 'market' and 'affordable' terms.

Suggestion 26: Revisit the definition of affordable housing and/or educate communities about the various types of housing that currently lie within that definition.

Classification:	Advocacy
Target:	Local government
Origin:	Private sector and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Simple, no legislation required; requires change in community thinking.

4.4.4 Incentivising developers and land value uplift

Given the marginal profitability of infill development in many areas, and especially large scale development, any housing affordable to those on low–moderate incomes is going to require some sort of incentive. Providing affordable housing within a market development is likely to reduce the revenue from the scheme because, by definition, the units are likely to generate less revenue per m^2 for the developer than normal market units. Incentives need to be used in a way that will at least replace that lost revenue by allowing the developer to deliver additional, or more profitable, units in the overall scheme. Incentives could include height or density bonuses for example.

The main problem with incentives relates to the land value. Any up-zoning, for example, will immediately go to the landowner, although often this is also the developer. Even density bonuses, if identified in strategic planning documents, could be captured by the landowner. Table 6 above provides a simple example illustrating which party would benefit from a density bonus incentive. In the first scenario, the landowner has discussed a potential development with the planning department and has been told that 12 apartments would be appropriate for the site. The landowner has estimated the land value for such a scheme would be around $1.275m and that would deliver an appropriate profit to a developer. The local planning authority announce density bonuses for schemes incorporating an element of affordable housing, in this case two ground floor units to be sold for $350 000 compared to the $500 000 generated for normal market units. The bonus in this case is two additional market apartments. This adds $1.7m to revenue but also adds to costs. The landowner, aware of the scheme, calculates the land value under the new scheme and estimates a land price of $1.64m is now reasonable. In this case, the bonus goes to the landowner in the form of land value uplift. In the final scenario, the bonus is negotiated at the DA stage directly with the developer, who has already purchased the land for the original price of $1.275m. All additional profit from the density bonus passes to the developer and profit increases. By allocating the bonus at the DA stage, the additional profit passes to the developer and not the landowner incentivising the developer to provide an element of affordable housing. The developer is responding to what the local council want and all parties are happy (except maybe the landowner). This assumes that the developer does not sell on the land once DA has been granted.

Table 8: Incentives and land values

	12 Apartments	14 Apartments + two affordable	14 Apartments + two affordable
Net development revenue	$6,000,000	$7,700,000	$7,700,000
Construction costs	$3,000,000	$3,940,000	$3,940,000
Developer contributions	$500,000	$550,000	$550,000
Finance	$280,000	$359,200	$359,200
Developer's profit	$945,000	$1,212,300	$1,575,800
Land value	$1,275,000	$1,638,500	$1,275,000
Developer's profit on cost	19%	19%	26%

Source: authors

If a developer already owns the land, any requirement imposed that negatively affects overall revenues will reduce final profit, potentially destroying the feasibility of development. In such cases, incentives would, as a minimum, have to replace any lost revenues. If no incentives were offered, development is unlikely to go ahead unless there were sufficient margins to absorb any revenue falls. An incentive such as a density bonus may not be appropriate in all areas, and may also make no difference in an area where commercial development happens to be the highest and best use.

Suggestion 27: Any incentives tied to the provision of diverse and affordable housing should be negotiated with the developer at the development approval stage, otherwise incentives will be reflected in increased land values. There would be no benefit to the developer and therefore no reason to include an affordable housing element. The increased land value may actually prevent the developer from delivering the scheme or may add to the price of the end product.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Private sector and public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires new government guidance and local authority powers; innovative; requires further research and debate; requires a change in institutional thinking.

Developers were receptive to adding an element of non-subsidised affordable housing to a development, partly because the market is so strong for housing priced below $400 000. This could enable pre-‘sales’ and make it easier to secure finance. Such units could be delivered on the ground floor of three-storey walk up apartments. It is more difficult to incentivise the development of non-market forms of affordable housing because of the perceived impact that social housing has on market housing values and also the management issues associated with such units. Additional incentives would need to be offered to replace the reduced revenues.

The concept of land value uplift provides an interesting dilemma relating to planning policy. If there is total certainty within planning, and developers know exactly what they are able to develop on a given site before land purchase e.g. as a result of a blanket zoning policy, there is limited scope for profits. Many developers will speculate by purchasing land that may gain development approval in the future. In this way they can purchase land without planning approvals, submit re-zoning applications or DA, and deliver significant land value uplift. They can then sell on the land with development approvals for a significant profit without actually building anything. This is often the mode of operation of smaller developers that make their money by purchasing potentially difficult sites without development approvals and generating value uplift by ‘knowing the local planning system’. Planning certainty in this sense would mean landowners benefiting from uplift and developers being forced to generate their profits from the built form.

> Small developers achieve uplift because they know the local planning system. Uplift goes to landowner where there is more certainty as risk is taken away from the developer. If there is going to be an uplift then the uplift needs to be used to fund community outputs.

4.4.5 Planning agreements and inclusionary zoning

Inclusionary zoning refers to planning policy that requires the inclusion of an element of affordable housing within a development undertaken on any site within the inclusionary zone. For example, there may be a requirement to deliver 15 per cent affordable housing within a development. There are a number of advantages and disadvantages with the policy and it is generally unpopular within the housing and development industries. The primary reason for its unpopularity is the potential impact on land values and development revenues. If a developer has already purchased a site, and the site is subsequently included within an inclusionary zone, the revenue that can be generated from the site is reduced as a portion of the site has to be given over to affordable housing. This lost revenue could, however, be replaced through the use of density bonuses in some cases as described above. For a landowner, land within an inclusionary zone will have a lower price due to the reduced revenue available to the developer.

The uplift in land value generated by the right to develop can be used to fund social infrastructure. If the inclusionary zoning policy is clearly embedded within planning documents, a developer purchasing the land can factor into the land price the affordable housing requirement. The landowner therefore subsidises the delivery of affordable housing.

In Western Australia, regeneration bodies such as the, now defunct, East Perth Redevelopment Authority (EPRA), and Landcorp use a form of inclusionary zoning within their sites. EPRA had a 12.5 per cent affordable housing requirement and Landcorp aim to transfer a proportion of their residential development sites to the department of housing (DoHWA). The proportion is around 15 per cent, but varies from site to site. The Western Australian Government’s Affordable Housing Strategy (Department of Housing 2011) states that land and housing development agencies will dedicate ‘a minimum of 15% of project yields to affordable price points, targeted to low–moderate-income households’ (Department of Housing 2011, p.36). However, the strategy ruled out wider use of inclusionary zoning.

Additional encouragement, in the form of bonuses, can be used to secure certain types of affordable housing. If there is certainty for the developer i.e. they know of the contribution well in advance of securing the site, inclusionary zoning should not be a barrier to development, provided the land value can support the affordable housing requirement. In a falling market, the affordable housing element of a site can provide the only cash flow for a developer.

In Sydney, planning agreements are used at a local level to capture the uplift in value resulting from planning approval. Such agreements are negotiated with the developer and could be in the form of in-kind contributions or a financial payment. The developer is usually the landowner by the time of the negotiation so is aware of the level of contribution acceptable before it starts reducing profits below the minimum requirement. The negotiation of affordable housing contributions on a site-by-site basis follows the successful UK model. The UK model is embedded at a national, regional and local level, providing a level of certainty to the developer allowing the developer to pass the cost of the affordable housing on to the landowner at land purchase (Crook & Monk 2011). In Perth, there are mandatory contributions towards open space, either provision of open space on site or a cash contribution. This is effective because developers know exactly what they need to deliver. Whatever approach is adopted, it must offer this certainty or possibly prohibit development.

As stated throughout this report, if affordable housing is going to be generated on any scale from infill sites a policy intervention is required. Planning policy requiring housing diversity or an element of affordable housing, structured in a way that still delivers the necessary profit for the developer and landowner to stimulate development, is a potentially powerful tool. Introducing such a policy when land is re-zoned, at the point where initial uplift occurs, would have the greatest impact. Allowing increased densities within infill areas with a requirement for diverse and affordable housing allows developers to plan how they could incorporate such housing into a development and also how much they could pay for the land and meet this requirement. In areas where feasibility is marginal there would need to be flexibility to ensure that development occurs.

Suggestion 28: A form of inclusionary zoning should be adopted on infill development sites above a certain size threshold. Targets should be introduced when land is re-zoned in order to capture the value uplift. Targets should be set within local government areas using housing market assessments to justify these targets. The final contributions should be negotiated with the developer and will need to take into account the feasibility of development, land ownership issues and the characteristics of the scheme itself to ensure the policy does not prevent the delivery of housing by undermining feasibility.

Classification:	Process/policy
Target:	Planning authorities
Origin:	Public sector
Level of agreement:	Strong opposition from private sector
Timeframe for implementation:	Medium
Ease of implementation:	Requires new government guidance and local authority powers; innovative; requires further research and debate; requires a change in institutional thinking.

4.4.6 Leadership

The issue of leadership has already been discussed in relation to selling the benefits of infill development. It is also critical that local councils sell planning policies designed to increase densities or offer alternative strategies to increase diverse housing supply. For example:

> …the City of Fremantle got on the front foot with their strategy. They identified 5000 lots of land that could increase density by developing in back yards. They got lots of support which surprised them.

In Perth, the panels identified the lack of a communication strategy as a major issue. This was not considered much of an issue in Sydney. There was a perceived lack of communication between state and local government and the community.

> We [WA] have a Premier who doesn't believe there is an affordability issue. Why would the community then believe the reasoning behind higher density? The whole communication strategy needs to be looked at.
>
> There is an absence of leadership in promoting infill, but lots of political representation against infill development. In public meetings you have a planner and a Landcorp representative with tomatoes being thrown at them. We have suburbs with virtually no diversity choice and the reaction is completely over the top and what it needs is someone with a calm voice to explain the situation. In the absence of any leadership, it will be very difficult, and someone advocating the future of the suburbs would be welcomed.

Leadership extends to the coordination of infrastructure agencies to ensure that transport, power and water infrastructure can support a significant increase in infill housing (next Section). The issue of tax was also raised and how the current structure of land tax and stamp duty act as an impediment to the development of units in a number of cities. In Perth and Sydney, apartment purchases incur stamp duty based on the price of the end unit at transfer; this includes land and unit costs, in contrast to project home purchase. In Melbourne, if buying a unit off the plan, stamp duty only applies to the value of the property at the time of exchange which could be a saving of $17 000 on the purchase of a $400 000 unit. This certainly has an impact on investment demand for such units. Stamp duty is also an impediment to non-first time buyers and households downsizing. Victoria offers stamp duty relief to pensioners up to $440 000. In New South Wales there are stamp duty concessions (50%) for new dwelling purchases by non-first time buyers under the New South Wales Housing Construction Acceleration Plan (HCAP). The Henry review identified stamp duty as an inequitable tax in need of reform (see Wood et al 2012 for a discussion).

Suggestion 29: There needs to be strong leadership at the highest levels of government to promote the benefits of infill development and ensure the coordination of all public sector bodies with an interest in residential development.

Classification:	Advocacy
Target:	All government

Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislation required.

Suggestion 30: There should be a review of stamp duty taxation as it is currently a disincentive to downsizing and affects demand for infill development products.

Classification:	Resources
Target:	State government
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires legislation.

4.4.7 Infrastructure

The provision of necessary infrastructure can have major implications for infill development. The cost of provision can affect the feasibility of a development and the uncertainty around developer contributions adds to the risk of a development. Gurran et al. (2009) provide an excellent discussion of the issues surrounding infrastructure contributions in Australia.

The panels uncovered significant differences between the two cities. Infrastructure was not considered a significant issue on infill sites in Sydney, but was a major constraint on the development of greenfield sites. The opposite was true in Perth. Section 94 plans in Sydney and State Planning Policy 3.6 Development Contributions for Infrastructure in Perth provide varying degrees of certainty for a developer when assessing potential infrastructure contributions. For example, Perth's SPP 3.6 simply sets out the likely infrastructure requirements and not the costs, which need to be determined through discussion with the relevant public bodies such as Western Power and the Water Corporation. The only certainty is in respect to open space with a standard requirement of 10 per cent of gross subdividable area or cash in lieu based on a formula. Developers on the panel had no issue with this contribution because of the certainty.

The time taken by utilities to respond to requests for information was considered a major issue. Developers could be forced to wait months for a response from a utility company delaying the DA process. Planners were also frustrated in delayed responses from the statutory consultees.

Section 94 charges were reported in Sydney to average around two to four thousand per dwelling. For greenfield sites, the costs were in the tens of thousands, although contributions have been capped in an effort to improve affordability. In Perth, no-one could quantify average charges per dwelling due to the uncertainty and there was no way of estimating the costs until detailed discussions were held with the organisations involved. This could mean considerable expenditure only to find the infrastructure costs are at a level that prevents profitable development.

> Because you don't know what the contributions are up front, you can't pass it on to the landowner. Service authorities won't even talk to you unless you have a DA so you are that far down the track that there is no way it can be passed on to the landowner.

Suggestion 31: There needs to be far greater certainty in the costs of infrastructure contributions on infill sites. Such costs need to be identified as early as possible in the DA process, ideally in pre-DA discussions. There should be a single contact point at the DA stage to provide a reliable estimate of infrastructure contributions for a development scheme. Infrastructure providers need to be properly resourced to deal quickly and efficiently with infrastructure enquiries from developers and local authorities.

Classification:	Information/resources
Target:	Infrastructure agencies
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; requires funding from state government.

The charging policies of utilities in Perth were subject to considerable criticism. Sydney Water charge upfront costs for the provision of water infrastructure but the majority of the cost of provision is funded by the organisation and recouped, over time, through charges to the end users i.e. through the rate base. This was considered by panel members in Sydney and Perth to be an excellent model. In Perth, there is a requirement to pay not only the headwork charges but then for any upgrades required in the surrounding area. Developers are unaware of the need for upgrades until a very late stage. The provision of power infrastructure was viewed as an even greater issue.

> We go to Western power and say we are doing this development here and it will be in the tens of thousands and then do a development a bit further down the street and it will be hundreds of thousands and you say what happened and they reply your project was at the tipping point of the capacity of the street so you bear the brunt of the cost. They charge you more up front and if you are the person who tips it over they still charge you more. There is no revenue offset.

This uncertainty is a major impediment to infill development. The costs of infrastructure are inevitably passed on to the end consumer. If they cannot be passed on, then the development would simply not be feasible in many cases.

This marginal method of costing could have significant implications for development in infill areas. If small sites are developed in a piecemeal fashion throughout a suburb, eventually a development will bring infrastructure up to capacity and the next development would have to fund an upgrade for the whole area. That next development would never be feasible and redevelopment of the area stopped in its tracks.

Suggestion 32: Utilities should be funded to deliver necessary infrastructure and then recoup the cost of provision through charges to the end user. The current system of developer contributions on infill sites provides too much uncertainty and adds to the cost of the end product. One development funding the upgrade of infrastructure for the whole area is inequitable and threatens the redevelopment of greyfield areas.

Classification:	Process/policy
Target:	Infrastructure agencies
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; requires funding from state government.

Cost shifting was an issue raised by the utilities. Developments providing their own power through solar and water treatment/capture systems and encouraging public transport usage place less pressure on existing infrastructure with less chance that the development is required to fund the upgrade of the whole area.

The provision of education infrastructure was a major issue for infill development in Sydney. Many schools are at capacity and the education authority is forced to use two-storey demountables and apply different programs for different groups of children so not all the children are in the school at the same time. ‘Schools meant for 50 kids now have 300.’ The education authority is working hard on strategies to secure schools through infill development in partnership with developers e.g. using the ground floor of developments for the school with aged care and residential above.

> Infill is a real issue. Most of the schools in the metro area have a heritage constraint so are pretty restricted. Many are at the end of their lifecycle and need redevelopment. We are working with councils to look at shared sporting facilities and open space. Schools and aged care fit well and above that you have residential and the residential funds the other.

Quite often public opposition to infill development is centred on the lack of capacity within the local school system.

Suggestion 33: Developers and education authorities work together with local councils to develop a range of innovative solutions to delivering educational facilities within infill areas, many of which will require a significant increase in capacity as densities increase. Infill development should not mean development with no families.

Classification:	Process/policies
Target:	Education agencies and developers
Origin:	Public sector
Level of agreement:	No opposition

Timeframe for implementation:	Short
Ease of implementation:	No legislation required.

Transport infrastructure is obviously an issue within infill development. Flexibility to provide developments with limited or no parking when located on good transport networks is essential. The panel considered coordination across infrastructure providers (including transport authorities) essential. Utilities are all working to different timeframes and to different population and household projections meaning there is no consistent infrastructure plan for an area, despite the efforts of state infrastructure committees. A clear, strategic plan incorporating all utilities at a fine grained spatial level to prepare areas for increases in density is essential if infill targets are to be achieved.

Suggestion 34: There needs to be much greater coordination between infrastructure providers to ensure infill areas have the necessary infrastructure in place for development. These organisations should base their household growth projections on the same data sets and provide a coordinated approach to service delivery at a local authority level.

Classification:	Information
Target:	Infrastructure agencies
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, no legislation required; requires state government funding.

4.5 Development finance

The vast majority of development is debt funded and without this funding there is no development, large or small. Banks and other lenders to residential development usually like a DA in place before finance is arranged, although there may be agreements in principle before DA is finalised. The development needs to offer returns to both the developer and lender. The lender will scrutinise a potential loan deal very closely to ensure that the risk return balance is favourable to the institution. If it is not, there will be no loan and the developer would have to seek an alternative source of funds or the scheme will not proceed. Development finance is therefore critical to housing supply.

This Section discusses the importance and availability of finance and, in particular, solutions to ensure that funds are available to deliver diverse and affordable development on infill sites.

4.5.1 Availability of finance

There has been a significant change in the availability of finance since the Global Financial Crisis (GFC). During a panel session, a senior economist from a major bank commented that the easy, cheap credit period of 2002–07 was over, 'probably never to be repeated'. The GFC led to a reduction in the number of institutions funding property transactions. Overseas lenders dropped out of the market and home lending institutions consolidated with the big four banks now the only option for major schemes. The big four banks:

> …have moved back to policy, not tightened. Banks take acceptable risks they can understand and mitigate and price accordingly.

Funding is available provided the scheme 'stacks up', risk can be managed and developers have an appropriate exit strategy. The main problem is the cost of obtaining funds for those developers seeking to re-finance. A developer may have secured short-term funds from an overseas bank that was subsequently unwilling/unable to extend the finance. That leaves the developer to secure funds in a much tighter market at a far greater cost. If they were unable to secure such funds, the development project would collapse and result in a distressed asset which would need to be sold to pay back the original debt.

Banks in Sydney were very keen to fund infill development because such sites were considered lower risk than greenfield sites. Greenfield sites were clouded with the uncertainty surrounding the DA process, timeframes and the developer contribution requirements of local authorities. The infrastructure requirements for infill projects were much smaller and more certain, allowing the banks to predict with more confidence the potential returns from a development. In Perth it was a different story. Although banks were prepared to lend to development on infill sites, greenfield development was considered less risky. The uncertainty surrounding infrastructure requirements on infill sites coupled with the construction costs on larger projects is currently producing unsupportable development margins.

Banks are looking for schemes offering the right product at the right price points; they will assess the market and if the development is not right for the given location it will not be funded. The development must also be appropriate in terms of living space. For example, banks are unlikely to fund developments offering apartments under $40m^2$ because it is not a proven product and may not sell thus adding additional exit risk to the loan. 'Deals that diminish the certainty of payback are more difficult to do.'

Banks require genuine equity commitments from a developer. Around 50–60 per cent equity (the developers own funds), a proportion of which, maybe 20 per cent, achieved through the uplift in the land value gained through development approval. The residual would be funded through more costly mezzanine finance. In addition, there must be enough profit margin in the scheme to cover unforeseen events. Banks are currently lending up to around 65 per cent of the final valuation or 80 per cent of total development costs. Profit levels of a minimum 15 per cent, if the bank had an established relationship with the developer, but ideally no less than 20 per cent profit on total cost would satisfy the bank. In addition, the bank would want a 'bit of liquidity behind the borrower' so if something did go wrong, the developer would have the funds to cover payments before the next draw down of funds.

The relationship with the borrower is crucial. If the developer has a history of delivering successful developments of the type in question, there is every chance of securing funds. If a small developer approaches a bank looking to borrow funds to develop an eight-storey residential tower, but only has a track record of delivering two storeys, the bank is not going to fund the development. This makes it very difficult for smaller developers with no track record to break into new markets. Interest rates charged on the loan will reflect the level of risk to the bank. A developer with a good track record delivering the type of product subject to the loan, in an area with a history of supporting similar, successful developments, will require a lower margin than a project with a higher level of risk. A low-risk project around $30–40m may attract a margin of 2.5 per cent. For smaller projects, it all depends upon the characteristics of the developer and the development. Table 9 below summarises banks' lending requirements.

The situation was summed up succinctly by one finance expert: 'If you are not a big player you are screwed'.

Table 9: Securing development finance: key lending criterion

Variable	Level
Developer's profit	Minimum 15%, usually 20%+
Loan amount	Lesser of 65% of completion valuation or 80% of total development cost
Equity contribution	Minimum 20% of total development costs. 50% developer's own funds, 20% through land value uplift, remainder mezzanine finance
Track record	Success in delivering similar developments
Pre-sales	Cover 80% of bank debt net of GST and selling costs
Innovative product	Higher than normal requirements to reduce bank risk
Exit strategy	Water-tight exit strategy to ensure debt repaid
Developer liquidity	Must have sufficient funds behind the developer to deal with short-term funding issues
Interest rate	$30–40m project, around 2.5% above base rate if developer has a good relationship with the bank and a strong track record

Source: Authors

4.5.2 Pre-leasing and pre-sales requirements

One of the biggest issues in securing funding is a bank's requirement for pre-sales. Developers need to expend funds to take the development through the approval process and get to a stage where consumers can 'purchase' the product 'off the plan', through a contract based on a deposit, usually 10 per cent of the final sales price. The units within the development are not actually sold; there is no title to transact, but buyers commit to the sale.

The risk to a developer of taking the development through DA, to a stage where pre-sales can occur, is extremely high given the costs involved. However, banks want a demonstration that the market exists for the product and that demonstration is in the form of pre-'sales'. If insufficient pre-'sales' are secured, the bank will not fund the development and the developer has wasted funds and time in getting the development to that stage.

In the current lending climate, banks require pre-'sales' covering around 80 per cent of debt funding, net of GST and sales costs. This represents a significant hurdle in a stagnant or falling market and a barrier to the development of medium and high-density development. To sell, for example, 80 out of 100 units before the development has commenced requires considerable marketing expenditure, something smaller developers may not able to meet out of their own funds. Until banks relax their pre-'sales' requirements, it is going to make it very difficult for the development of medium and high-density apartment developments unless the demand for the final product is very strong and pre-'sales' can be guaranteed. These additional risks add to developer's required profit margins and reduce the chances of a development being feasible. With an innovative product, pre-'sales' are even more important to the bank and the risk even greater for the developer.

Although it was argued that banks have, first and foremost, a responsibility to shareholders, others argued that they should also have a certain social responsibility and should encourage development of social benefit. However, it would be very difficult to convince banks that they should relax their lending criteria, and by definition increase their risk exposure, in order to fund marginal developments that deliver diverse and affordable housing.

Suggestion 35: Banks should relax their pre-'sales' requirements for developments on infill sites, particularly those that contain an element of affordable housing. Banks should also encourage lending to smaller builders seeking to deliver innovative products on infill sites.

Classification:	Process/policy
Target:	Lending agencies
Origin:	Private sector and public sector
Level of agreement:	Opposition from lending agencies
Timeframe for implementation:	Long
Ease of implementation:	Requires a shift in institutional thinking; requires a re-evaluation of lending practices and lender's risk:return assessments.

4.5.3 Funding joint ventures

One solution to encourage bank lending for certain types of development is the use of joint ventures. An example would be where a Department of Housing agrees to purchase a number of units within a development, satisfying the pre-'sales' requirement, or agrees to purchase any units that remain unsold at a given date. This ensures that the bank receives a guarantee on revenue and therefore debt repayment. This model has been successful in Perth, but there are problems. One is the valuation placed on units purchased by a state government department. If a number of units are purchased in a single transaction by an organisation, valuations will reflect the price agreed for purchase. This would include any discount negotiated which may then be reflected in the end valuation of the whole development. This reduces the final revenue estimated by the bank which might mean that the scheme does not generate a profit margin sufficient for the institution to proceed with the loan. Banks tend to view joint ventures as beneficial for risk because they provide an exit strategy. However, they need to be structured in such a way that would not affect the end revenue or leave the bank exposed in the event of one participant not fulfilling their obligations. A banker on the panel cited examples where the joint venture was structured in way that did not provide the bank with an acceptable exit strategy and was not funded.

Suggestion 36: Joint ventures between the private sector, government and the not-for-profit sector can significantly reduce the risk of the development from the lenders perspective, if carefully structured to provide a clear exit strategy for the developer. Joint ventures have also been successful in delivering diverse and affordable housing. The public, private and not-for-profit sectors should seek to form joint venture schemes wherever possible.

Classification:	Process/policy
Target:	Private, public and not-for-profit developers
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple; requires no legislation; requires state government funding to ensure public sector adequately resourced; requires new government guidance and local authority powers.

Banks had no issue funding not-for-profit providers or developments including an element of affordable housing as long as the risk profile and return available for the institution were considered acceptable. There is generally no allowance for development of social benefit, but the banks represented at the panel didn't accept there was a stigma to affordable housing. However, if valuers instructed by banks reduce the valuation of market units in a development containing an element of subsidised affordable housing, this could affect the ability of the bank to fund that development because that development may no longer meet the banks strict funding criteria e.g. loan to value ratios or interest to credit ratios.

One issue highlighted was the funding of development on land containing buy back clauses in the event of a developer failing to commence a development within a set timeframe. The clauses often allow the development agency to buy back the land at the original sales price, less costs. If a developer did default on a loan, the bank would be unable to claw back some of the debt through the sale of the land at a price reflecting value uplift or any capital growth in the interim period. This increases the bank's risk and again is an issue that may prevent a bank lending on a specific scheme.

The not-for-profit sector is absolutely vital in delivering affordable housing in infill areas. The sector needs funding to grow as quickly as possible and be in a position to develop housing on a much larger scale. With growth and scale comes a large loan book, and therefore cash flow, and the ability to attract funds from the private sector, in a manner similar to the UK model. Bank funding to the UK community housing sector has traditionally been regarded as very low risk offering acceptable returns for that level of risk. Private sector funds combined with government grant funding allowed the UK sector to grow very quickly. Funding institutions need to look at community housing organisations as a low-risk lending opportunity in Australia which would open up development opportunities for a range of organisations who could develop and manage housing as affordable in perpetuity.

Suggestion 37: Lending institutions should regard the community housing sector as a low risk lending opportunity and provide these organisations with the funds to grow as quickly as possible. The not-for-profit sector needs to be in a position to develop infill sites on a significant scale to provide a supply of affordable housing in perpetuity.

Classification:	Process/policy
Target:	Lending agencies
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; requires a re-evaluation of lending practices and lender's risk:return assessments.

4.6 Construction

Once development approval has been granted and the bank has been persuaded to fund the development, construction can finally commence. This usually involves the developer sub-contracting a builder to construct the dwellings or apartments. The developer will take on the project management role and coordinate all the professions required to deliver the project. Some developers will have a relationship with a single builder that will deliver their projects, some may go out to tender to find the contractor offering the best value. The following Section discusses the issue of construction costs and how high costs tend to preclude the development of affordable units.

Design is an important issue as well designed buildings coupled with innovative construction methods have the potential to reduce costs, and increase quality and demand. However, the panels did not think that new, innovative construction methods were likely to have an impact in the short term. Design was not an issue discussed in detail. The AHURI report by Newton et al. (2011) discusses these issues in more depth.

4.6.1 Construction costs and feasibility

The NHSC (2010) published evidence on the costs of developing infill sites (Table 10). The study identified key differences between Perth and Sydney; the high cost of land, professional fees and infrastructure charges (on greenfield sites) in Sydney and the high cost of construction in Perth. Development costs in both cities were well above Melbourne and these additional costs can be the difference between feasible development and a project being abandoned. In the Sydney panel, discussion focused on the cost of land and securing development approvals. In Perth the main subject was the prohibitive cost of construction. Construction cost comparisons using the David Langdon Blue Book (2011) show few differences between per m^2 costs in the two cities. Overall building rates per m^2 for a medium-density, low-rise multi-unit development were $1960 in Perth and $1970 in Sydney. For high quality high-rise apartments, the figure was $2990 in Perth and $3000 in Sydney. Developers on the panel took a different view suggesting that the Perth figure exceeded the $4000 mark. The key difference in construction costs between the two cities was considered to be the cost of labour (discussed below). Over the last five years, costs in Perth have increased by 43 per cent compared to 27 per cent in Sydney (Rawlinsons 2011). The difference in growth was attributed to competition from the resources sector in Western Australia.

Table 10: The cost of developing infill sites

	Sydney	Melbourne	Perth
Raw land	85,000	32,184	60,000
Government taxes and charges	91,486	83,177	75,861
Professional fees	24,071	16,609	16,904
Construction	282,137	301,846	308,073
Development costs and interest	70,927	55,707	59,903
Total cost	553,621	489,523	520,741

Note: Figures are rounded to the nearest $. Numbers may not sum to totals due to this rounding.
Source: National Housing Supply Council (2010, p.118).

Costs were considered much less of an issue for medium-density development, with land costs still the major barrier in Sydney. It is height that really adds to building costs because of additional building regulations and 'a scarcity of contractors able to build at such height'. The UDIA (2011) estimate that it costs the same to construct a detached dwelling; a three-storey walk up; or a 42m^2 apartment in a building over 10 storeys; around $250 000. This equates to $800m^2, $2400m^2 and $6000m^2 respectively. Clearly, to make development feasible, the revenue necessary from the apartments would need to be significantly in excess of the revenue from the detached dwellings. Construction costs were cited as the main reason why high-density development in apartment towers would not provide a supply of affordable housing; the developments are simply not feasible. Even with density bonuses, unless the additional units are all penthouses sold at a significant premium, the development is unlikely to be feasible. For a $6000m^2 construction cost, a developer would need a revenue of at least $10000per m^2 to cover land, profit, infrastructure and interest costs which equates to a price of $420 000 for a 42m^2 apartment; hardly affordable or appropriate for families on median incomes.

Reducing building costs through the use of prefabricated building elements making construction more of an 'assembly' process would potentially increase the profitability of development and hence housing supply.

4.6.2 Labour costs

Some developers are able to deliver a high-density product profitably and offer a range of price points accessible to those on moderate to median incomes. In Perth, one development company have developed successfully within the CBD with a proportion of units delivered below $400 000. The primary reason for their success is the ability to deliver units at a cost around 20 per cent below their competitors. They have an established relationship with a very efficient builder who uses innovative building methods, a streamlined project management process and non Enterprise Bargaining Agreement (EBA) labour.

Material costs are similar throughout the country, although there are some differences if the materials have to travel to remote areas. The biggest difference between Sydney and Perth is the cost of labour. In Perth the availability of labour is a critical issue.

> We are at the mercy of the North West. We are up against the mining sector dragging labour up North. They can earn one and a half to two times more and are not coming back. When housing construction picks up buildings costs won't go up in a line they will go up in steps.

This competition is not limited to trade workers, but also to white collar workers.

> Young people in the residential construction industry trying to jump across to the mining sector where engineers and project managers can earn 30 per cent more.

Builders are also starting to offshore services such as estimating where everything can be done online. The housing industry is lobbying hard for support in training more apprentices, but would also like the resources sector to contribute to these training costs given the high proportion of labour initially trained in the building industry ending up in the mining sector.

Developers on the Perth panel reported a lack of flexibility in the workforce. The building trades have traditionally worked only on single-storey housing with a growing proportion familiar with two-storey construction. When builders tender for a project above a single storey they:

> …get costs and put a margin on it. It is all about how efficient the trades are and the trades see to go from two to three-storey reduces efficiency so they put a bigger margin on it. Builders can do two-storey as they are used to it but go up to three storeys and the trades look at it and think it is an extra set of staircases to travel so I'll put a 50 per cent mark up on that.

A supply of labour familiar with three-storey developments means lower margins and lower construction costs. The industry should develop standard pattern-book apartments and building types that can be repeated, using regular domestic trades. This will increase the availability of labour to deliver medium-density development and lower costs.

Suggestion 38: Government and all industries using construction labour should fund the training of a skilled workforce capable of delivering a variety of built form products. It is essential that the capacity of the construction industry is increased to satisfy the requirements of the residential building industry and the resources sector so both industries can meet demand.

Classification:	Resources
Target:	Training agencies and the construction industry
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking; requires state government funding; requires legislation.

4.6.3 Medium-density development

Alternative products are required to deliver diversity and affordability. The panels were very positive about medium-density development; three-storey walk up apartments in particular. In Sydney, there is a supply of labour to deliver such a product. What is required are realistic land values and a development approval process that supports such development. In Perth, the requirement is for an increase in the number of small developers able to deliver this medium-density product. The development of corner lots and the amalgamation of greyfield sites to provide the volume for medium-density apartments would deliver significant quantities of infill housing.

> Change the language from subdivide to amalgamate. What could you achieve if you actually put together two lots rather than split one into two?

Such housing can provide one, two and three-bedroom units offering diversity and, depending on the location, a range of price points. In addition to traditional subdivisions and battle-axe developments, greyfield sites have potential to deliver the quantities of housing required outside major activity centres and the CBD.

Less height means lower construction costs and the approval process for such development could potentially be codified to speed up the process. The multi-unit codes in Perth and SEPPs in Sydney provide the tools to make the development process more efficient and therefore add a level of certainty to the process. In Perth, the challenge is securing the labour and meeting infrastructure costs. In Sydney, the challenge is securing the sites for a realistic price.

Suggestion 39: All parties with an interest in infill development should do everything possible to enable the efficient delivery of medium-density housing within inner and middle suburbs. Such housing will produce a variety of housing products at a range of price points and could also contain an element of subsidised affordable housing. This could include utilising construction methods familiar to existing trades for the delivery of three-storey apartments, new innovative construction methods for quicker project completion including the use of pre-fabricated construction methods for larger scale developments.

Classification:	Process/policy
Target:	Construction sector/architects
Origin:	Public sector
Level of agreement:	No opposition
Timeframe for implementation:	Medium
Ease of implementation:	Requires a shift in institutional thinking.

4.7 Completion

Once the buildings have been completed most developers will seek to dispose of the asset, although some will retain the whole or a part of the development within their property asset portfolio. Even after completion, there remain issues that add to development costs or prevent developers from disposing of the property in a timely manner, so adding to development risk.

4.7.1 Disposal

The state of the property market is key to the ability of the developer to dispose of the development, even when pre-'sales' are involved. A positive cash flow is only achieved with the sale of the final few units within the development so the longer the units take to sell, the longer the developer has to wait to achieve the profit. Interest costs are also at their highest just prior to disposal so anything preventing final settlement on pre-sold units or new sales adds to development costs.

In order for a built strata sale to be finalised and revenue received, the developer must obtain a Form 7 in Western Australia. For a title to be issued, this Form 7 is lodged at Landgate by a land surveyor who has received an endorsed form from a building surveyor. The complexity of the Form 7 process and the delays that can eventuate were highlighted by the Perth developers on the panel. A more efficient process would ensure that titles are available on completion and developers can secure revenue as soon as a building surveyor is satisfied. This would reduce costs and certainty, possibly encouraging more, smaller scale developers into the unit market.

Suggestion 40: Titles should be issued as efficiently as possible to prevent delays in the sale of completed units. Delays add to the cost of development, reduce profit margins and the potential of a developer to repeat the development in another location. Potential delays also add to risk and therefore required returns, raising the feasibility hurdle.

Classification:	Process/policy
Target:	Title issuing agencies
Origin:	Private sector
Level of agreement:	No opposition
Timeframe for implementation:	Short
Ease of implementation:	Simple, requires no legislation; requires state government funding to increase resources.

5 SUMMARY AND CONCLUSIONS

Chapter 4 sets out 40 suggestions for overcoming the barriers to the delivery of diverse and affordable housing on infill development. These suggestions come directly from those working within the development industry, both public and private sectors. As such, these are practical suggestions that vary dramatically in scope; some simple to implement, some requiring a massive shift in thinking and process. These suggestions are designed to promote debate. Further analysis of each suggestion is provided within the report including the origin of the suggestion, the level of opposition and what would need to happen for each suggestion to be implemented. Figure 6 below presents a summary.

During each of the panel sessions, the panelists were asked to state one thing they would like to see change in order to encourage the delivery of diverse and affordable housing on infill sites. Table 11 below sets out the results for the public and private sectors organised by broad themes.

Changes to the planning system and overcoming community opposition were considered the most important ways to increase the supply of diverse and affordable infill development. The private sector were very strongly in favour of deemed approval to add more certainty to the DA process and speed up decisions. Strong leadership was identified as vital in Perth to drive the necessary shift in public perceptions of higher density development. Without strong leadership within government and the community, opposition groups would continue to dominate local debates on increasing the supply of housing on infill development. Making the DA process less political and more objective would ensure developments consistent with the strategic plan for an area were not rejected.

The delivery of affordable housing on infill sites is a major challenge. Land prices and construction costs require revenues from developments that preclude affordable housing. With land prices and cost to revenue balances forcing many sizable developers out of large scale infill development in the short term, it is left to medium-density developments to provide this housing. For the private sector to deliver on a large scale, there need to be partnerships with the public sector and community housing organisations, ideally on public sector land to maximise contributions. Planning agreements and inclusionary zoning requirements from re-development organisations will only provide so much. There needs to be in place a way of incentivising private sector developers to deliver an element of affordable housing on typical, small scale infill developments. This could be through development incentives, but such incentives must be targeted at the developer and not inadvertently passed to the landowner in the form of land value uplift. Incentives that increase land values do nothing to enable the delivery of affordable housing. Inclusionary zoning would enable developers to pass affordable housing contributions on to land owners, but it would take considerable time for policy to become embedded within planning documents and overcome the complications that stem from existing ownership issues.

Table 11: What is the one change you would most like to occur to increase the supply of diverse and affordable housing?

Planning system	Deemed approval. This would be a quantum shift to remove uncertainty. Certainty around timeframes in planning. Discretion in town planning scheme so if you put in a quality scheme the DAP would be able to approve it. No minimum lot sizes. Set time limits for rezoning and provide rights to appeal. Level the planning system to ensure that modest group or apartment dwellings are treated the same way as single houses. Apply a base code of R30 across the city, but with a maximum house size to encourage infill development of smaller dwellings. Give everyone the right to develop bonuses for those developing dwelling under a certain size. Better education of planning in respect to the options for redevelopment. Minimum instead of maximum densities. Incentives to developers to provide affordable housing.
Infrastructure	Better delivery of infrastructure. Improved coordination between the state's infrastructure agencies.
Community opposition	Strive to inform the community of the benefits of quality infill development through strong leadership and a quality communication strategy. Overcoming community resistance to infill development at a state and local level. If you have right to develop under strategic planning and the development is within those parameters, the local community should not have the right to prevent development. Solid evidence base around housing need to justify the inclusion of affordable housing within developments. Lose the term 'affordable' to overcome some of the stigma attached to affordable housing. Remove consultation and enforce development rights.
State development organisations	State government development agencies to sell the benefits of higher density development at the highest level of government. Small group of experts available to help local government and private landowners to facilitate development. Expertise in development approval and physical development.
Governance	Consolidation of local government to improve the skills base. Take politics out of planning by removing determination powers from councillors. Align all levels of government to ensure a consistent message is presented. Aligned and reliable projections for housing need and infrastructure requirements, including transport, to ensure better coordination.

	Mandate *Directions 2031* so it is less of a guide and more an enforceable policy.

Source: Authors

In many ways the decline in affordability, for first home buyers in particular, may force developers to provide a different type of product, and we are already seeing evidence of this in Perth. Smaller lot sizes, smaller houses and greater diversity are being produced to deliver a lower priced product to the market where demand is greatest; below $400 000. The success of such housing demonstrating that profits can be made from non-traditional products is the most effective way to increase the number of developers delivering such housing. This will not overcome the difficulties of delivering affordable housing in high value areas; revenues are too low, but as more developers become competent in delivering a higher density product, costs and margins will fall (labour availability permitting) allowing more diverse housing to spread into higher value areas. In combination with partnerships with the public sector, more intense use of publicly owned land, a more efficient and less political development approval process and better coordinated and funded infrastructure provision, medium-density development within inner and middle suburbs provides the best opportunity to increase the supply of diverse and affordable housing.

The suggestions put forward in this report reflect, on the one hand, a desire for less public sector involvement to let the market operate efficiently but, on the other hand, necessary public sector intervention to secure affordable housing in what are often high value areas. Financial feasibility will drive market development but, given development costs and landowner price expectations, revenues need to be sufficient to generate the required minimum level of profit necessary to compensate for the risks of development. Therefore, without intervention within the development approval process, the market is unlikely to deliver a product considered affordable to those on low to moderate incomes in all but the lowest value areas. Planning policy could be used to intervene to make the provision of affordable housing integral to the approval process, but this can lead to market distortions and is particularly problematic when developers already own land and therefore any reduction in revenue will affect their profit. When intervention does occur, it must be in the form of a clear, well established and efficiently managed policy that is linked to the fast-tracking of developments to ensure that developers are incentivised to deliver affordable housing.

Figure 6: Suggestions to enable the delivery of diverse and affordable housing

- identify ownership of key vacant sites and promote benefits of development
- state development agencies identify and assemble sites and coordinate development
- efficient use of public land assets to deliver affordable housing
- use of alternative land sources e.g. above shops.

→ SITE IDENTIFICATION

- strong leadership promoting the need for infill development and affordable housing
- maximise opportunities for small-scale, medium density infill development—three-storey walk up apartments, townhouses, villas, terraces etc.
- certainty in the approval process
- incentives to developers at the DA stage.

→ FEASIBILITY APPRAISAL

- increased delivery of affordable housing on public sites through development by state development agencies
- encourage operation of small developers developing small sites
- utilise public private partnerships.
- fund Community Housing Organisations to develop small

→ SITE ASSEMBLY

- streamline development approval system
- deemed approvals if statutory time limits expire
- codification for those delivering standard product, merit-based for more innovative schemes
- fast track approvals for those operating within strategic planning parameters
- community consultation at strategic phase and not DA phase
- de-politicise the DA process
- better coordination of infrastructure authorities and pricing should reflect future revenue generation
- development incentives on DA to avoid increasing land price.

→ DEVELOPMENT APPROVAL

Marketing for pre-‘sales’

- ensure joint ventures are structured in a way that is acceptable to financiers
- banks should reduce their pre-‘sales’ requirements and encourage smaller developers
- use public agencies to de-risk schemes by providing an exit strategy for bank.

→ DEVELOPMENT FINANCE

- more flexibility in the workforce—ability to work on multiple project types
- standardised building types familiar to existing trades
- increase the training of a skilled workforce
- efficiencies through relationships
- maximise smaller scale projects and the number of small scale developers.

→ CONSTRUCTION

- smaller scale projects increase pool of potential investors
- encourage alternative tenure options such as shared equity, land trusts etc.

→ COMPLETION

5.1 Suggestions for further research

A number of the suggestions contained in the previous Chapter highlighted the need for additional research and debate. Such additional research should determine the feasibility of the suggestions, the practicality of implementation and the appetite of policy-makers. The table below sets out five key topics for further research which would help define future options for ensuring the delivery of diverse and affordable housing on infill sites.

Table 12: Future research

Research	Comments
Reform of land tax to encourage development of sites held for speculative purposes.	Reform mentioned under the Henry Tax review. Reforms should encourage affordable housing development perhaps offering tax relief while proposals pass through the development approval stage. This should be explored in more detail.
Incentivising private sector developers to provide diverse and affordable infill housing.	Explore the use of bonuses through planning policy to make the provision of affordable housing at lease revenue neutral. Research is required on the best way to achieve this and whether fast tracking of projects containing affordable housing would act as an incentive to developers.
Remove political involvement in the development approval process.	Research should explore ways in which the development approval process can maintain community input, but avoid lengthy delays caused by vested interests after the strategic planning process. Methods of preventing local council's restricting the type of affordable housing tenure within a development should also be explored.
Rules/code-based versus merit planning approval process. Speed and certainty versus flexibility.	There needs to be research exploring the most efficient and beneficial planning approval process on infill sites and whether developers should have the option to choose.
Deemed development approval when time limits for decisions lapse.	Research should explore the relative merits of such an approach examining outcomes from other countries and potential implications for Australia.

REFERENCES

Australian Bureau of Statistics (ABS) 2012 Building Activity, Australia, March 2012 Cat. No. 8752.0, Table 36

Australian Bureau of Statistics (ABS) 2011, Dwelling unit commencements, Australia, Preliminary, June 2011, cat no. 8750.0, Canberra.

Australian Bureau of Statistics (ABS) 2010 A View of Housing Density in Perth, 2005-2009. Cat. No.1367.5 - Western Australian Statistical Indicators, 2010

Boddy, C 2012, 'The nominal group technique: An aid to brainstorming ideas in research', Qualitative Market Research, vol. 15, no. 1, pp. 6–18.

—— 2008, 'Focus group discussions and brainstorming: What's the difference?,, Australasian Journal of Market and Social Research, vol. 16, no. 1, pp. 27–25.

Burke, T, Stone, M & Ralston, L 2011, The residual income method: A new lens on housing affordability and market behaviour, Final Report No. 176, Australian Housing and Urban Research Institute, Melbourne.

Crabtree, L, Phibbs P & Milligan, V 2011, Community Land Trust in Australia, Research Report, Australian Housing and Urban Research Institute, Melbourne.

Crook, ADH & Monk, S 2011, 'Planning gain, providing homes', Housing Studies, vol. 26, no. 7–8, pp. 997–1018.

Davis Langdon 2011, The Blue Book 2011, Davis Langdon, Australia.

Department of Housing 2011, Affordable housing strategy 2010–2020. Opening doors to affordable housing, Department of Housing, WA.

Department of Planning and Western Australian Planning Commission 2010, Directions 2031 and beyond; Metropolitan planning beyond the horizon, WAPC, WA.

Grattan Institute 2010, Cities: Who decides?, http://www.grattan.edu.au/pub_page/report_cities_who_decides.html

—— 2011a, What matters most? Housing preferences across the Australian population, http://www.grattan.edu.au/publications/109_what_matters_most.pdf

—— 2011b, Getting the housing we want, http://www.grattan.edu.au/pub_page/117_report_getting_the_housing_we_want.html

Gurran, N, Ruming, K & Randolph, B 2009, Counting the costs: Planning requirements, infrastructure contributions, and residential development in Australia, Final Report No. 140, Australian Housing and Urban Research Institute, Melbourne.

Harvard, T 2008, Contemporary property development, 2nd edn., RIBA Publishing, London.

Housing Industry Forecasting Group 2011, Dwelling commencements in Western Australia, October 2011 http://www.planning.wa.gov.au/dop_pub_pdf/HFIG_Report_October_2011.pdf

Morgan, C 1997, 'The basics of brainstorming', Folio Magazine, vol. 26, no. 14, p.22.

National Housing Supply Council 2010, 2nd State of supply report, Commonwealth of Australia, Canberra.

—— 2011, State of supply report, Commonwealth of Australia, Canberra.

Newton, P, Murray, S et al. 2011, Towards a new development model for housing regeneration in greyfield residential precincts, AHURI Final Report No. 171, Australian Housing and Urban Research Institute, Melbourne.

Productivity Commission 2011, Performance benchmarking of Australian Business Regulation: Planning, zoning and development assessments, Vols 1 and 2, Australian Government Productivity Commission, Canberra.

Rawlinsons 2011, Rawlinsons' construction cost guide 2011, Rawlinsons, Perth, western Australia.

REIWA 2011, REIWA market update, June Quarter 2011, Real Estate Institute of Western Australia, WA.

Sydney Metropolitan Redevelopment Authority 2011 Who we are. http://www.smda.nsw.gov.au/about/who-we-are

UDIA 2011, Submission to the major cities unit national urban policy consultation, http://www.udia.com.au/resource/UDIA%20NATIONAL%20URBAN%20POLICY%20SUBMISSION.pdf

Urban Taskforce 2010, Going nowhere—How the planning system and development levies are ruining New South Wales, Sydney.

URBIS 2010, National dwelling cost study,FaHSCIA, www.urbis.com.au

Wilkinson, S, Reed, R & Cadman, C 2008, Property development. 5th edn., Routledge, London.

Wood, G., Ong, R. and Winter, I. 2012. Stamp Duties, Land Tax and Housing Affordability: The Case for Reform, Australian Tax Forum, 27(2), 331-349

APPENDICES

Appendix 1: List of panel participants

This list does not include names to ensure the confidentiality of the material presented in this report.

Sydney panels

Both panels
Associate Professor Steven Rowley
Professor Peter Phibbs
Associate Professor Nicole Gurran
Panel 1
Development consultant
Planning consultant
Affordable Housing Officer, Local Council
Strategic Planning—Affordable Housing, Local Council
Manager—Strategy, Planning and Environment, Local Council
Chief Executive Officer, Community Housing Association
Manager—Strategic and Precinct Planning, Local Council
Panel 2
Senior Director—Property Finance—A national bank
Director—Property Fund
General Manager Asset and Infrastructure—Community Housing Association
Representative—Department of Education and Communities
Representative—Sydney Water
Development Manager, Landcom
Executive Director—NSW Department of Planning & Infrastructure
Developer and Architect
Development Manager

Perth panels

Both panels
Associate Professor Steven Rowley
Professor Peter Phibbs
J-Han Ho
Panel 1
Property Valuer
Senior Development Manager
Senior Development Manager
Australian Property Institute
Senior Development Manager
Senior Economist—Major Bank

Senior Policy Advisor—Real Estate Institute of Western Australia
Landcorp representative (2)
Housing Industry Association Representative
Master Builders Association Representative
Chamber of Commerce and Industry
Property Risk Manager—Major Bank
Panel 2
Water Corporation
Senior Planner—Local Council
Senior Representative—Department of Housing
Senior Representative—Department of Planning
Curtin University/Community Housing Association Board Member
Senior Representative—Department of Planning
Senior Representative—Department of Housing
Landcorp representative (2)
Housing Strategy Manager—Local Council
Development Consultant
Urban Design Consultant
Senior Planner—Local Council
Australian Bureau of Statistics (2)

Appendix 2: Document distributed in advance of the panel session

Private sector

AHURi Australian Housing and Urban Research Institute

Delivering diverse and affordable infill housing development: An Investigative Panel

Melbourne Hotel, 942 Hay Street,

Perth, 1:30–4:30pm September 19

This Investigative Panel project, funded by the Australian Housing and Urban Research Institute (AHURI) is designed to identify the main barriers to infill development and put forward a range of solutions to overcome these barriers. The outcome of the panel will be a series of recommendations designed to increase the supply of appropriate, diverse and affordable housing on infill development sites. With the ambitious infill targets set in documents such as the *Metropolitan Plan for Sydney 2036* and *Directions 2031 and Beyond* for Perth, the industry needs direction on how to deliver the quantity and diversity of housing required to support household growth projections.

The panel will be run as a round table discussion using the questions presented in this short document as a starting point. The Chatham House rule will apply so comments will remain confidential and any quotes presented will be unattributed.

The research project will consist of four panels. The details of each panel are shown below:

Sydney—Panel 1—9:15am – 12:15pm, 31 August, Mercure Hotel

Sydney—Panel 2—1:45pm – 4.30pm, 31 August, Mercure Hotel

Perth—Panel 1—1:30pm – 4:30pm, 19 September, Melbourne Hotel

Perth—Panel 2—9:00am –12:30pm, 20 September, Melbourne Hotel.

Each city has two panels to allow questions to focus on particular issues and to reduce the number of people in the room to allow for more intense discussion.

Broad research questions:

- → How can the private sector be encouraged to deliver diverse and affordable housing on infill development sites on a scale that will meet published housing targets?
- → Is the availability of development finance a barrier to infill development and, if so, how can appropriate finance be made accessible?
- → What impact do land ownership issues play in preventing infill development and how can these issues be addressed?
- → Is there a role for the public sector, through planning, land assembly and joint ventures, in facilitating the delivery of diverse and affordable housing on infill sites?
- → Is there an optimum strategy for the delivery of infrastructure to support infill development?

Terms of Reference

Infill development

Housing development within existing urban areas. This includes brownfield sites (development surrounded by existing built up areas which tend to be larger sites), greyfield development sites (development of precincts usually within inner & middle suburbs ranging in scale from the subdivision of individual lots to consolidated precincts which could be the amalgam of a dozen or more suburban lots) and transport-orientated development (development around existing transport infrastructure nodes).

Location

This study concentrates on infill development in the Sydney and Perth Metropolitan area.

Types of infill development

High-density high-rise development (e.g. 15+ storeys, > 100 units)

High-density mid-rise development (e.g. 6–15 storeys, >75 units)

High-density low-rise (e.g. 3–6 storeys, > 50 units)

Medium-density low-rise development (e.g. 2–4 storeys, < 50 units)

Townhouses (e.g. 1–3 storeys, attached, single ownership)

Villa (e.g. 1–2 storeys, detached, single ownership)

Triplex, duplex etc. (e.g. 1–2 storeys, usually detached)

Diverse housing

A range of housing types designed to accommodate family, group and one-person households.

Affordable housing

Housing which can be consumed by those on low–moderate- incomes while leaving sufficient income to meet basic long-term living costs.

Infill housing targets

Directions 2031 and Beyond sets a target of 154 000 units (or 47% of the total) to be delivered on infill sites by 2031. *Metropolitan Plan for Sydney 2036* sets a target of over 539 000 dwellings, or 70 per cent of total new supply on infill sites.

The Investigative Panel

The aim is to identify the main barriers to delivering diverse and affordable housing on infill development and recommend a range of policy measures to overcome these barriers. The advantage of AHURI-funded research is the results are disseminated directly to the policy community through reports and seminars.

The panel itself will be a roundtable discussion facilitated by Peter Phibbs, who has considerable experience as a facilitator. We will adopt the Chatham House Rule so no comments will be attributable to individuals, ensuring confidentiality and promoting an honest and open discussion.

The panel will consist of no more than 20 stakeholders including representatives from policy, planning, the development industry, academics, development consultants, the infrastructure sector and finance. A list of participants is attached.

The Sydney panel—Key findings

Two panel sessions were run in Sydney on 31st August. Below are some of the key findings:

- New definition of affordable housing to remove stigma; lose the term 'affordable'.
- De-politicise planning decisions. Generally, local governance is failing. Need to move to a merit-based approach rather than a tick box exercise.
- Quicker approvals for smaller scale infill developments e.g. townhouses. Encourage low-rise, medium-density.
- Development industry cost efficient up to three storeys and then development gets expensive.
- Remove the requirement for minimum lot sizes.
- Infill development actually provides more certainty to developers than greenfield development. This should be exploited to encourage developers to enter market.

- Demonstration schemes; show the private sector what can work on infill sites. Not-for-profit or government departments can take the lead.
- ‘Affordable’ housing will inevitably require subsidy on the majority on infill sites.
- Joint ventures with not-for-profit organisations or government departments can complicate funding arrangements to the extent that funding is difficult to obtain. Deals need to be structured in a specific way.
- State environmental planning policies proved effective in delivering certain types of housing.
- Development viability is always going to be a problem in certain local government areas due to cost of land and building.

Barriers and solutions to infill development: Key issues for discussion

Private sector panel

Development feasibility:

- Does the demand exist to support large scale infill development?
- What are the principal reasons for the higher development costs associated with infill development; particularly higher density developments?
- Do construction costs on infill sites limit the diversity and affordability of housing products?
- Could the use of pre-fabricated construction techniques or other alternative construction methods reduce construction costs?
- Does the current planning process increase development costs and reduce certainty?
- How could smaller developers be encouraged to undertake more infill development?
- Do developer infrastructure contributions have a significant impact on feasibility?
- Is there a role for development incentives to encourage the rate of infill development e.g. density bonuses?
- Could partnerships with public sector development organisations and community housing associations increase the range of diverse and affordable housing on infill sites?

Securing development finance:

- How difficult is it to secure appropriate development finance to fund infill development?
- Does the cost of finance have a significant impact on feasibility?
- Are there specific arrangements such as joint ventures, NRAS properties etc. that are particularly difficult to finance?
- Would the onsite provision of various types of affordable housing affect the availability of development finance?
- How has the availability of finance changed in recent years?

- To what extent do joint ventures with the public sector (e.g. Housing NSW) and/or not-for-profit de-risk infill development, making it easier to secure finance?
- Is there a place for a specific investment vehicle to help finance infill projects of certain characteristics?

Securing development land:

- What are the difficulties involved in securing, aggregating and preparing land for development and how do these problems vary by type of infill development e.g. brownfield, greyfield?
- Are landowners realistic in their price expectations?
- Is there a role for public sector development organisations in preparing land parcels to facilitate development?

Planning process:

- To what extent does strategic planning take into account market demand and therefore development feasibility? Should it?
- To what extent is the planning system a barrier to infill development?
- How could the planning system introduce more certainty to the development process?
- What changes could be introduced to appropriate planning mechanisms to ensure efficient infill development?
- How can land release be made more efficient and respond more quickly to market demand?
- Ideally, when should discussions with the appropriate planning authority commence?
- Are current development codes effective?
- Is there a role for inclusionary zoning to ensure diversity and affordability?

Securing legal title for flats, units or apartments:

- To what extent is the need for corporate ownership within strata titled developments an impediment to development?
- Would reform to strata title provisions have any impact on supply?

Delivering infrastructure:

- How great a barrier is the delivery of infrastructure to infill development?
- Does the capacity exist within utility providers to service a significant increase in infill development?
- To what extent are developers able to pass on the costs of infrastructure contributions to end consumers?
- To what extent are developers able to pass on the costs of infrastructure contributions to landowners?

Community opposition to infill development?

- Can social housing be successfully delivered alongside market housing?
- How can the benefits of infill development be sold to the community?
- How much public consultation is necessary?

The role of the public sector:

- Is there a role for state development agencies in assembling land parcels for development?
- Should state development agencies supply affordable housing?
- Is there a role for community housing groups in delivering quantities of affordable housing in partnership with the private sector?

STEVEN ROWLEY

PETER PHIBBS

Public sector panel

Delivering diverse and affordable infill housing development:

An Investigative Panel

Melbourne Hotel, 942 Hay Street,

Perth, 9:00–12:30, September 20

This Investigative Panel project, funded by the Australian Housing and Urban Research Institute (AHURI) is designed to identify the main barriers to infill development and put forward a range of solutions to overcome these barriers. The outcome of the panel will be a series of recommendations designed to increase the supply of appropriate, diverse and affordable housing on infill development sites. With the ambitious infill targets set in documents such as the *Metropolitan Plan for Sydney 2036* and *Directions 2031 and Beyond* for Perth, the industry needs direction on how to deliver the quantity and diversity of housing required to support household growth projections.

The panel will be run as a round table discussion using the questions presented in this short document as a starting point. The Chatham House rule will apply so comments will remain confidential and any quotes presented will be unattributed.

The research project will consist of four panels. The details of each panel are shown below:

Sydney—Panel 1—9:15am – 12:15pm. 31 August, Mercure Hotel

Sydney—Panel 2—1:45pm – 4.30pm, 31 August, Mercure Hotel

Perth—Panel 1—1:30pm – 5:00pm, 19 September, Melbourne Hotel

Perth—Panel 2—9:00am –12:30pm, 20 September, Melbourne Hotel

Each city has two panels to allow questions to focus on particular issues and to reduce the number of people in the room to allow for more intense discussion.

Broad research questions:

- How can the private sector be encouraged to deliver diverse and affordable housing on infill development sites on a scale that will meet published housing targets?
- Is the availability of development finance a barrier to infill development and, if so, how can appropriate finance be made accessible?
- What impact do land ownership issues play in preventing infill development and how can these issues be addressed?
- Is there a role for the public sector, through planning, land assembly and joint ventures, in facilitating the delivery of diverse and affordable housing on infill sites?

- Is there an optimum strategy for the delivery of infrastructure to support infill development?

Terms of Reference:

Infill development

Housing development within existing urban areas. This includes brownfield sites (development surrounded by existing built up areas which tend to be larger sites), greyfield development sites (development of precincts usually within inner and middle suburbs ranging in scale from the subdivision of individual lots to consolidated precincts which could be the amalgam of a dozen or more suburban lots) and transport-orientated development (development around existing transport infrastructure nodes).

Location

This study concentrates on infill development in the Sydney and Perth Metropolitan area.

Types of infill development

High-density high-rise development (e.g. 15+ storeys, > 100 units)

High-density mid-rise development (e.g. 6–15 storeys, >75 units)

High-density low-rise (e.g. 3–6 storeys, > 50 units)

Medium-density low-rise development (e.g. 2–4 storeys, < 50 units)

Townhouses (e.g. 1–3 storeys, attached, single ownership)

Villa (e.g.1–2 storeys, detached, single ownership)

Triplex, duplex etc. (e.g. 1–2 storeys, usually detached)

Diverse housing

A range of housing types designed to accommodate family, group and one person households.

Affordable housing

Housing which can be consumed by those on low–moderate incomes while leaving sufficient income to meet basic long-term living costs.

Infill housing targets

Directions 2031 and Beyond sets a target of 154 000 units (or 47% of the total) to be delivered on infill sites by 2031. *Metropolitan Plan for Sydney 2036* sets a target of over 539 000 dwellings, or 70 per cent of total new supply, on infill sites.

The Investigative Panel

The aim is to identify the main barriers to delivering diverse and affordable housing on infill development and recommend a range of policy measures to overcome these barriers. The advantage of AHURI-funded research is the results are disseminated directly to the policy community through reports and seminars.

The panel itself will be a roundtable discussion facilitated by Peter Phibbs, who has considerable experience as a facilitator. We will adopt the Chatham House

Rule so no comments will be attributable to individuals, ensuring confidentiality and promoting an honest and open discussion.

The panel will consist of no more than 20 stakeholders including representatives from policy, planning, the development industry, academics, development consultants, the infrastructure sector and finance. A list of participants is attached.

The Sydney panel—Key findings

Two panel sessions were run in Sydney on 31st August. Below are some of the key findings:

- New definition of affordable housing to remove stigma; lose the term ‘affordable’.
- De-politicise planning decisions. Generally, local governance is failing. Need to move to a merit-based approach rather than a tick box exercise.
- Quicker approvals for smaller scale infill developments e.g. townhouses. Encourage low-rise, medium-density.
- Development industry cost efficient up to three storeys and then development gets expensive.
- Remove the requirement for minimum lot sizes.
- Infill development actually provides more certainty to developers than greenfield development. This should be exploited to encourage developers to enter market.
- Demonstration schemes; show the private sector what can work on infill sites. Not-for-profit or government departments can take the lead.
- ‘Affordable’ housing will inevitably require subsidy on the majority of infill sites.
- Joint ventures with not-for-profit organisations or government departments can complicate funding arrangements to the extent that funding is difficult to obtain. Deals need to be structured in a specific way.
- State environmental planning policies proved effective in delivering certain types of housing.
- Development viability is always going to be a problem in certain local government areas due to cost of land and building.

Barriers and solutions to infill development: Key issues for discussion

Public sector panel

Securing development land:

- What are the difficulties involved in securing, aggregating and preparing land for development and how do these problems vary by type of infill development e.g. brownfield, greyfield?
- Are landowners realistic in their price expectations?
- Is there a role for public sector development organisations in preparing land parcels to facilitate development?

Planning process:

- To what extent does strategic planning take into account market demand and therefore development feasibility? Should it?
- To what extent is the planning system a barrier to infill development?
- How could the planning system introduce more certainty to the development process?
- What changes could be introduced to appropriate planning mechanisms to ensure efficient infill development?
- How can land release be made more efficient and respond more quickly to market demand?
- Ideally, when should discussions with the appropriate planning authority commence?
- Are current development codes effective?
- Is there a role for inclusionary zoning to ensure diverse and affordable housing?

Delivering infrastructure:

- How great a barrier is the delivery of infrastructure to infill development?
- Does the capacity exist within utility providers to service a significant increase in infill development?
- To what extent are developers able to pass on the costs of infrastructure contributions to end consumers?
- To what extent are developers able to pass on the costs of infrastructure contributions to landowners?

Community opposition to infill development?

- Can social housing be successfully delivered alongside market housing?
- How can the benefits of infill development be sold to the community?
- How much public consultation is necessary?

The role of the public sector:

- Is there a role for state development agencies in assembling land parcels for development?
- Should state development agencies supply affordable housing?
- Is there a role of community housing groups in delivering quantities of affordable housing in partnership with the private sector?

Appendix 3: Summary of suggestions and classifications

Suggestion number	Target	Type
1	State government land agencies	Information
2	State government land agencies	Operational
3	Government Treasuries	Incentive/disincentive
4	Planning authorities	Incentives/process
5	State government agency dealing with strata titles	Process/policy
6	All stakeholders	Process
7	Planning agencies	Incentives
8	Government agencies	Advocacy
9	State government land agencies	Information
10	Planning authorities	Process/policy
11	Planning authorities	Process/policy
12	Commonwealth and state NRAS agencies	Process
13	Community housing providers	Operational
14	Planning authorities	Incentives
15	State Treasuries	Resources
16	Community housing sponsors	Resources
17	State government land agencies	Resources
18	State housing authorities	Process/policy
19	All government land agencies	Process/policy
20	Planning authorities	Process/policy
21	Planning authorities	Process/policy
22	Planning authorities	Process/policy
23	State government	Resources
24	Planning authorities	Process/policy
25	Local government	Advocacy
26	Local government	Advocacy
27	Planning authorities	Process/policy
28	Planning authorities	Process/policy
29	All government	Advocacy
30	State government	Resources
31	Infrastructure agencies	Information
32	Infrastructure agencies	Process/policy
33	Education agencies and developers	Process/policy
34	Infrastructure agencies	Information
35	Lending agencies	Process/policy
36	Public/private/NFP developers	Process/policy
37	Lending agencies	Process/policy

38	Training agencies and construction industry	Resources
39	Construction sector/architects	Process/policy
40	Title agencies	Process/policy

AHURI Research Centres

AHURI Queensland Research Centre

AHURI RMIT Research Centre

AHURI Southern Research Centre

AHURI Swinburne-Monash Research Centre

AHURI UNSW-UWS Research Centre

AHURI Western Australia Research Centre

Australian Housing and Urban Research Institute

Level 1, 114 Flinders Street, Melbourne Victoria 3000

Phone +61 3 9660 2300 Fax +61 3 9663 5488

Email information@ahuri.edu.au Web www.ahuri.edu.au