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Davis Langdon 

## *Infrastructure charges and new house affordability*

*The cost of development in Australia's  
growth centres*

*Prepared for the Residential Development Council (RDC)*

*A division of the Property Council of Australia (PCA)*

*Centre for International Economics  
Canberra & Sydney*

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## Summary

Despite the Global Financial Crisis, lower economic growth, a moderation in house prices and falls in interest rates, housing affordability remains a fundamental concern. Housing remains unaffordable for many Australians and servicing housing debt places a significant burden on many more Australian families that have been able to purchase their own home. Traditional concerns such as competing pressure from investors, supply constraints and shortages of construction labour and rising construction prices have dissipated or do not fully explain continued problems and poor housing affordability.

Studies into housing affordability have noted that increases in government taxes and compliance costs have been a major contributor to the lack of housing affordability (Urbis JHD, 2006). Many industry leaders say that a key factor is the rapid escalation in the size and scope of taxes, charges and contributions collected in the name of paying for public infrastructure provision.

This study has been sponsored by the Residential Development Council of Australia (RDC). It seeks to investigate the drivers of housing development costs in Australia. It reports on detailed research undertaken to analyse the cost components of residential development. It examines costs from actual housing developments in cities in Australia, drawing on what can be learnt from real housing projects, building real homes.

The study examines housing in the major residential growth markets as identified in the Residential Development Council's *Australia on the move* study, prepared by Bernard Salt. This study therefore spans developments in the following cities:

- Sydney;
- Melbourne;
- Brisbane;
- Perth;
- Adelaide;
- Canberra-Queanbeyan;
- Hobart;
- Darwin;
- Newcastle;
- Tweed;
- Sunshine Coast;
- Gold Coast;
- Ipswich;
- Redland; and
- Mandurah.

The focus is upon new housing in 'greenfields' or broad hectare developments in the new growth areas of the major cities.

The analysis examines all of the major cost components in order to place infrastructure charges into context. Information about costs and house prices has been provided by Davis Langdon. This reflects their research drawing upon sources in business, government, and their own experience from involvement in major housing development projects around Australia. Details collected for developments in each location are aggregated into 5 main components:

- land costs;
- construction costs;
- compliance costs and government taxes and charges;
- sales and marketing; and
- other costs.

Infrastructure charges are measured as a subcomponent of government taxes and charges.

The main results of the study point to significant problems inherent in infrastructure charges adding to the cost burden of paying for many government interventions in housing developments.

Reflecting increases in infrastructure charges and other measures, Government taxes, charges and compliance costs have risen to substantial amounts. These costs now amount to over \$160 000 for a typical house in a broadhectare development in Sydney.

Further, government taxes, charges and compliance are now more expensive than the cost of land in all capital cities in Australia. In some cases government taxes and charges and compliance costs are more than 2 to 3 times higher than the cost of land for new houses.

Infrastructure charges in 2009 form a significant part of the cost of government taxes, charges and compliance applied to new houses in broadhectare developments. They account for between a quarter or a fifth of such costs in the cities studied throughout Australia. These costs are also a significant burden in their own right. They are largest in Sydney, where broadhectare new house development is assessed as facing costs of around \$55 000 per house lot even after recent measures to reduce these costs. Similar charges amount to around \$20 000 to \$30 000 in broadhectare development areas in Brisbane, the Gold Coast, Redland, Ipswich and the Tweed.

Concerns about the adverse impact on housing affordability arising from infrastructure charges appear to have some foundation. Study findings show that cities where infrastructure charges are high also have high new house prices in

broadhectare developments. This relationship can be observed in the data and statistical analysis suggests that the relationship is significant.

The results discussed above provide insights into the nature of problems being posed to the affordability of new houses in broadhectare development in areas that government planning expects to be Australia's fastest growing areas.

This study takes the additional step of assessing if it is worth changing infrastructure charges. The results of this analysis provide an emphatic yes. Substantial gains could be achieved with different arrangements.

Moving to a more consistent national approach to infrastructure charges would improve housing affordability. Using the arrangements introduced for the new growth centres in Melbourne this year as a benchmark and applying them to areas where charges are currently higher would:

- reduce development costs in many if not most cities;
- drop costs, in Sydney for example, by around \$38 000 per house – this is more than 1.8 times the value of the First Home Owners Boost (FHOB); and
- reduce mortgage repayments in most cities – reducing repayments by more than \$2 000 per annum in Sydney, which is equivalent to an increase in average household annual income of around 3.7 per cent.

Substituting infrastructure charges with more efficient means of raising funds would improve economic outcomes. Using conservative approaches it is estimated that this would:

- raise GDP by around 0.3 per cent; and
- add around \$3 billion to output each year.

Clearly there are good reasons to reconsider and restructure infrastructure charging arrangements in the areas slated for further growth in Australia's cities.

# 1 *This study*

Governments in Australia are increasing the use of charges upon development to pay for planned infrastructure services. At the same time housing affordability in Australia has been deteriorating reflecting periods of rising house prices and high interest rates. This study explores the pressures on housing affordability added by infrastructure charges on top of other government taxes and charges.

Developer charges take a variety of forms. They are applied by State as well as local governments. These charges have many names. Some are termed 'developer charges'. Others are viewed as levies or contributions. The terms 'infrastructure charges', 'infrastructure levies', 'development contributions', 'developer levies' and 'developer contributions' are used interchangeably throughout this report where they relate to a charge that is applied by government to contribute towards infrastructure or general government revenue.

The Centre for International Economics (CIE) has been commissioned to undertake this study by the Residential Development Council (RDC). The aims of the study are to:

- identify and clarify the costs of infrastructure charges in the context of the overall cost of developing new housing;
- conduct the analysis over as many urban areas as is practicable given data constraints; and
- identify the extent to which infrastructure charges add to the cost of new houses and contribute to lower affordability.

This report is structured as follows:

- Chapter 2 reviews developments in housing affordability in Australia. It looks at trends in affordability and the factors that are driving change.
- Chapter 3 examines how infrastructure charges work in practice and how they are changing.
- Chapter 4 introduces the methodology used to assess the impact of infrastructure charges and other factors that shape housing development costs.
- Chapter 5 reports on the study findings regarding real housing costs in real developments in Australia's cities.
- Chapter 6 reports on a case study reviewing the use of infrastructure charges for infill development.

- Chapter 7 examines how things could be different if less reliance were made of infrastructure charges.

## 2 *The housing market environment and affordability*

Discussion of infrastructure costs and affordability issues should benefit from consideration of background developments in the housing market. This should look in particular at what has happened to housing affordability and the forces behind it.

### *What has happened to housing affordability?*

Despite the recent softening in the Australian housing market reflecting adversity in global capital markets and deterioration in economic performance, house prices in Australia's capital cities remain at relatively high levels.

This largely reflects a long ramp up period where rapid increases in average prices were sustained over the last decade or more. Median house prices in all of Australia's major cities exhibit a similar pattern. Rises in prices accelerated in the early years of this century. This was most marked in Sydney, but the acceleration in price rises is a noticeable feature in all capital cities. Even after what appears to have been a relatively mild 'correction' in prices, with the increases stabilising, and in some cases falling, especially in Sydney, the average prices over the Australian market appears to have settled upon a relatively high plateau (chart 2.1)<sup>1</sup>

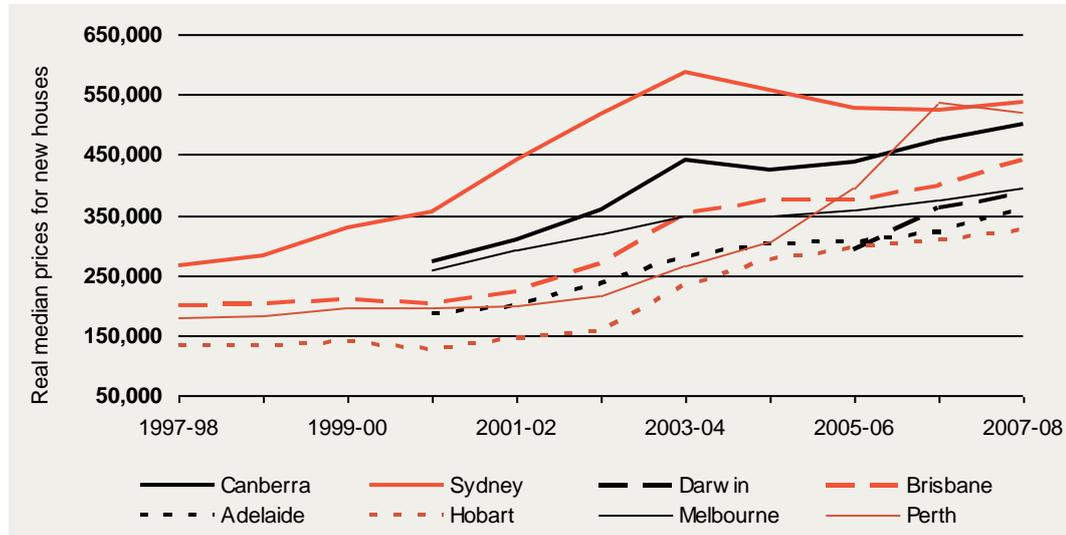
The sustained rise in prices appears to have contributed to low housing affordability in most Australian capital cities. Indeed, as shown in chart 2.2, the median multiple for the median Australian household in major capital cities increased considerably during the last 16 years and was above the generally accepted ceiling of 3.0 in the financial year 2007-08.<sup>2</sup>

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<sup>1</sup> Overall, housing prices in Australia softened over 2008 by around 3 per cent (RBA 2009).

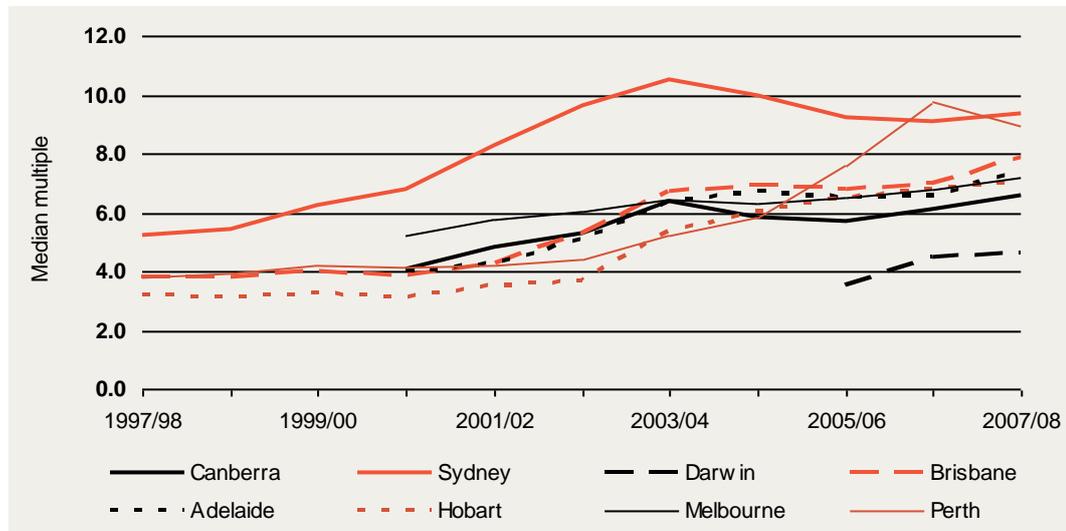
<sup>2</sup> The median multiple (or house price to income ratio) is a measure widely used to evaluate affordability in different housing markets. The median multiple reflects the 'years of gross income' required to purchase a house within individual markets. A generally accepted definition of affordability is that house prices should not cost more than 3 times the median household gross income to be affordable.

**2.1 Real annual median prices for new houses, selected urban centres 1992-93 to 2007-08, constant 2007-08 dollars**



<sup>a</sup> Adjusted using the CPI for each relevant city.  
Data source: RP Data.

**2.2 Median multiple trend for new houses, major capital cities 1992-93 to 2007-08**

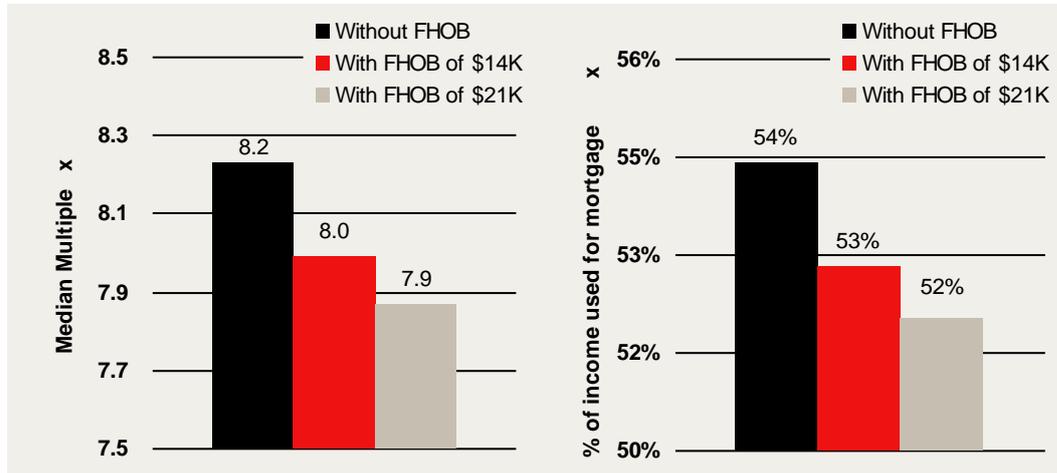


<sup>a</sup> Based on the median household income (ie the midpoint when all people are ranked in ascending order of income).  
Data source: CIE estimates using income data from ABS and price data from RP Data.

Recently, housing affordability has improved due to lower house prices, interest rate reductions and Government assistance (mostly for first home buyers). Nonetheless, even considering lower house prices and the highest level of the Australian Government’s First Home Owners Boost (FHOB), the median house price in Australia is still equal to almost 8 times the gross median household income (see chart 2.3). Further, even considering the recent interest rate reductions, annual mortgage repayments for the median Australian household are above 50 per cent of household income. This is in contrast to the commonly accepted measure of

affordability where mortgage repayments should not exceed 30 per cent of annual gross income.

### 2.3 Affordability measures for the median Australian household, February 2009



<sup>a</sup> Calculated using the median household income in Australia as at November 2008 (approximately \$58 000 pa), median value of houses in Australia as at February 2009 (\$478 715) sourced from RP Data (2009) and the following mortgage assumptions: standard loan, 5 per cent deposit, standard variable rate of 4.9 per cent p.a. and a 25 year repayment period.

Note: FHOG= First Home Owners Grant.

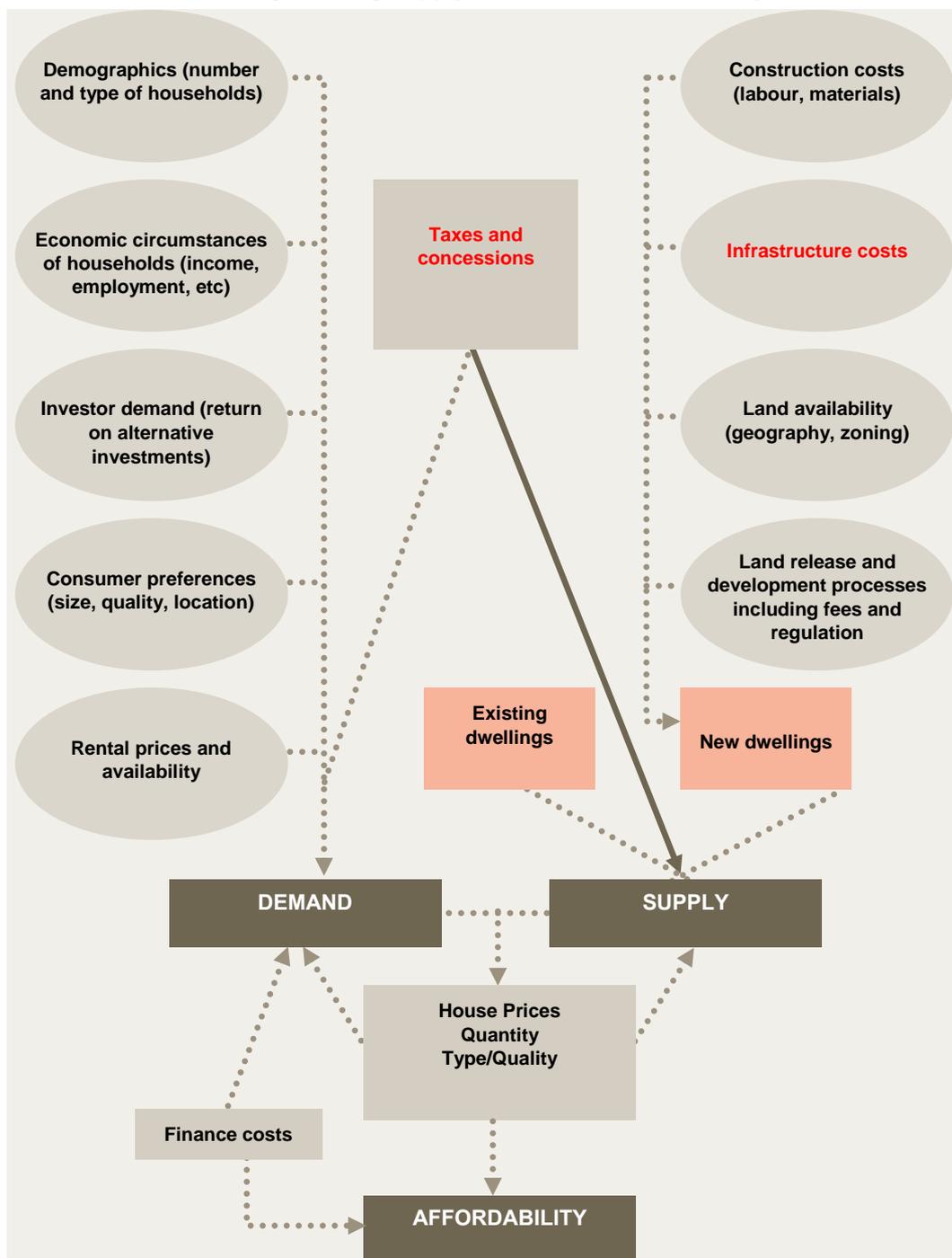
Data source: CIE estimates using ABS and RP Data.

## *What influences affordability and why infrastructure charges matter?*

At face value, the affordability of home ownership is calculated as the product of house prices, the cost of housing finance and income levels. But underlying this ostensibly simple concept is a complex set of forces (PC 2004). The National Housing Supply Council (NHSC, 2009) recently reviewed the interplay of forces acting in the housing market. The factors identified by the NHSC and their general relationship in shaping the bottom line of housing affordability are illustrated in chart 2.4.

As shown in chart 2.4, factors influencing the cost of supply include government taxes and infrastructure costs imposed on residential developments.

2.4 Factors influencing housing supply, demand and affordability



Data source: NHSC (2009) p. 6.

There is a wide variety of taxes and charges that are applied to residential developments in Australia. These are levied at all three levels of government in Australia as well as by agencies of governments and government owned businesses providing utility and other services (chart 2.5).

The red entries in chart 2.5 relate infrastructure specific charges. Local government infrastructure contributions are levied by local governments in many if not most local government areas throughout Australia. Infrastructure charges at the state level relate to existing charges in NSW and a proposed arrangement in Victoria.<sup>3</sup>

## 2.5 Taxes and charges imposed on residential developments

<b>LOCAL</b>	<ul style="list-style-type: none"> <li>▪ Council rates</li> <li>▪ Council Application Fees (BA, DA, Strata application)</li> <li>▪ <b>Section 94 contributions</b></li> </ul>	<b>TOTAL CONTRIBUTION</b>
<b>STATE</b>	<ul style="list-style-type: none"> <li>▪ State infrastructure contribution (NSW only)</li> <li>▪ Infrastructure bonds (Tasmania &amp; NT)</li> <li>▪ <b>Stamp duty (on land &amp; house purchase)</b></li> <li>▪ <b>Land tax (except NT)</b></li> </ul>	
<b>UTILITIES</b>	<ul style="list-style-type: none"> <li>▪ <b>Wastewater developer charges</b></li> <li>▪ <b>Water developer charges</b></li> <li>▪ <b>Capital contribution charge (electricity)</b></li> <li>▪ <b>Gas charges</b></li> </ul>	
<b>FEDERAL</b>	<ul style="list-style-type: none"> <li>▪ <b>GST</b></li> <li>▪ <b>Company tax</b></li> </ul>	
<b>OTHER (if applicable)</b>	<p>Examples:</p> <ul style="list-style-type: none"> <li>▪ Retention of Low Cost Rental Housing</li> <li>▪ Affordable Housing Schemes</li> <li>▪ Charges for out of sequence areas</li> <li>▪ Six Cities levies</li> </ul>	

Data source: CIE.

## Key Points

- Despite a recent moderation in house prices falls in interest rates and government assistance for first home buyers, there are lingering challenges to housing affordability in Australia.
- Government taxes and charges, including infrastructure charges are factors that can be expected to shape housing affordability.

<sup>3</sup> In December 2008, the Victorian Government announced a Growth Areas Infrastructure Contribution (GAIC). The GAIC will apply from December 2008 but take effect from 2009 following the passage of necessary legislation and the finalisation of the new Urban Growth Boundary.

### 3 *Infrastructure charges*

This chapter reviews the nature and purpose of infrastructure charges. Some general ideas and observations about how they are being developed in practice are also provided.

#### *The purpose of infrastructure charges*

Urban infrastructure includes sewerage, drainage, water, electricity, roads, public transport networks and facilities such as parks and libraries. It is fundamental to the wellbeing of communities and also contributes to the performance of Australian businesses (Chan et al, 2009). What makes public infrastructure different from, say large scale investments in business and commerce, is that there are many barriers (or market failures) preventing market delivery of the optimal amount of public infrastructure. Intervention by government is often intended to combat market failures.

Many justifications are advanced for the use of infrastructure charges. Those that are regularly cited include the capacity of infrastructure charges to:

- capture the windfall gains that result from changes in planning restrictions or rezoned land – this is closely related to the idea of a ‘betterment tax’;
- obtain a contribution from the beneficiaries of the provision of new infrastructure;
- provide a price signal and remove cross-subsidisation that would exist if infrastructure costs were spread across the community (eg through rates); and
- provide a source of revenue to government.

Many of the arguments advanced for the use of infrastructure charges rely upon notions of what is fair. Critics of these views note aspects of infrastructure charges that seem unfair. They ask how it is it fairer to make current users pay, not future users, and how is it fair to shift from spreading the cost of previous infrastructure widely through the community through broadly based taxes, while asking new arrivals to a community to pay similar taxes *plus* developer charges? (noted in SCHAA, 2008).

Other arguments revolve around the scope to improve economic efficiency through a user pays approach. Other analysts note that developer charges lead to gold plating, where excessively expensive infrastructure is mandated by government because others are paying (SCHAA, 2008). Other studies show that relative to other means

that could be used to raise funds to pay for public infrastructure, developer charges are likely to induce distortions that subtract from economic efficiency (CIE, 2009).

The quest for the definitive and incontrovertible rationale for the use of infrastructure charges remains unfulfilled at present.

### *Developer contributions at work*

State and local governments in Australia can require developers to contribute to basic infrastructure as a condition of receiving planning approval (Chan et al, 2009). Developer contributions are legally enforceable up-front contributions towards the cost of new or upgraded infrastructure. They usually take three forms:

- transfer of land – land ‘gifted’ to government for roads, public open space, primary school sites, etc;
- work-in-kind – infrastructure works & facilities constructed by developers and transferred to government on completion; and
- monetary charges.

### *Legislative frameworks*

The power to mandate contributions varies considerably between the Australian States and Territories reflecting differences in enabling legislation. A summary of the legislative frameworks bestowing the powers to collect developer contributions is provided in the box on the following pages.

Two fundamental insights arise from examination of the different bases that apply to developer contributions. The first is that the arrangements for developer contributions in most jurisdictions are complicated. The second is that the arrangements are profoundly different from state to state. Clearly, developer contributions, as currently structured, involve meeting complex arrangements and fragmenting Australia’s market into many small pieces.

### 3.1 Legislative authority for development contributions

*New South Wales* – Sections 94 to s.94EC of the *Environmental Planning and Assessment Act 1979* and s.64 of the *Local Government Act 1993* bestow authority on local councils to mandate local infrastructure contributions. Local councils are required to have a development contribution plan in place as a prerequisite for levying development charges. In 2007, the NSW Premier announced reforms to development contribution arrangements. These introduced the power to collect development contributions by a range of state government authorities and a requirement that contributions are explicitly restricted to infrastructure and land requirements to support land developments, rather than infrastructure requirements driven by population growth. This and other changes are set out in various NSW Department of Planning circulars and amendments to the EPA Act.

*Victoria* – Part 3B of the *Planning and Environment Act 1987*, as amended by the *Planning and Environment (Development Contributions) Act 1995* and the *Planning and Environment (Development Contributions) Act 2004*, provides local councils with the authority to specify contributions on the basis of development contribution plans, conditions on planning permits, or voluntary agreements between councils and developers.

*Queensland* – The *Integrated Planning Act 1997*, as amended by the *Integrated Planning and Other Legislation Amendment Act 2003*, enables local councils to require development contributions for ‘development’ infrastructure. The basis for charges is a priority infrastructure plan which identifies an infrastructure charges schedule for eligible development contributions. This plan also outlines the anticipated infrastructure needs for the community as a whole.

*Western Australia* – The *Town Planning and Development Act 1928* allows government to require contributions for on-site physical infrastructure and the ceding of land for primary schools and open space. The scope of contributions is guided by Western Australian Planning Commission policies.

*South Australia* – Development contributions in South Australia are dictated by the *Development Act 1993* and the *Local Government Act 1999*. The *Development Act 1993* allows councils to require basic subdivision infrastructure (access roads, hydraulic connections) and the dedication of open space (s.50A). Section 146 of the *Local Government Act 1999* allows the levying of separate rates, service rates and service charges which can be used as indirect development charges.

(Continued on next page)

### 3.1 Legislative authority for development contributions (continued)

*Tasmania* – Part 5 of the *Land Use and Approvals Act 1993* allows planning authorities (the local council) to ‘negotiate’ agreements with developers that specify development contributions for infrastructure as a condition of a permit, a planning scheme provision or a special planning order (s.73A). Section 70 of the Act defines infrastructure as the ‘... services, facilities, works and other uses and developments which provide the basis for meeting economic, social and environmental needs’.

*Australian Capital Territory* – Although there is no statutory power to specify development contributions, s.184A of the *Land (Planning and Environment) Act 1991* provides for the levying of a ‘change of use charge’ (CUC) for any variation of a Crown Lease that increases the value of the lease. Developers can also be asked to provide infrastructure as a condition of the initial release of land under a Crown Lease with the cost of that infrastructure being offset against the amount paid to government for the lease. The CUC is effectively a ‘betterment tax’ assessed at 75 per cent of the increase in value from a variation of a lease which aims to give back to the community some or all of the added value of a lease that results from the changes to that lease. Funds from the CUC go into consolidated revenue rather than a separate infrastructure fund.

*Northern Territory* – Part 6 of the *Planning Act* allows a local service authority (a local council) to make a contribution plan which mandates contributions towards infrastructure external to the development as a condition of a development permit. As at September 2007, car parking, roads and drainage were the only infrastructure for which authorities could demand contributions. Public utilities, including power and water, are able to make a contribution plan that requires land owners to make a contribution for connection to services.

*Source:* Chan et al, 2009 and The CIE.

### *Arrangements in NSW*

Developer contribution arrangements and announcements about plans to apply developer contributions proliferate in NSW. Given that the state is currently playing a leading role in the use of developer contributions it is insightful to review the approaches that are being applied there.

The Property Council of Australia (2008a) reviewed the developer contribution arrangements in NSW late last year. The following summary draws upon the findings of that review.

- *State Infrastructure Contributions levied in Sydney's Growth Centres* – when announced these were set at a fixed \$355 000 per ha (residential) and \$150 000 per ha (industrial). A similar model has also been under consideration for the West Dapto new land release areas.
- *Voluntary Planning Agreements* – these are funding agreements negotiated development-by-development between the applicant and the council and state agencies without limitation on the costs being imposed and without certainty of process.
- *Utility infrastructure charges levied by water and energy authorities* – in the case of Tillegra Dam in the Hunter region, the government has proposed that 60 per cent of the cost of the dam would be paid through levies on new development in the Hunter (while the development industry notes that the primary purpose of the dam was announced as being to secure the Central Coast's water supply).
- *Yet to be specified charges* – the PCA notes that all of the regional planning strategies released in recent years note an intent to apply a range of unspecified, unquantified regional infrastructure levies to fund planned infrastructure.
- *Six Cities levies* – these were introduced through the work of the Six Cities Taskforce and represented up to threefold increases in levies in regional cities to fund local and regional infrastructure using the following methods:
  - Wollongong CBD: 3 per cent of construction cost of any development type beyond \$250 000. This is comprised of 2 per cent as a s94 levy plus a 1 per cent special contribution s94EE levy. A \$130 million list of infrastructure is to be funded in this way.
  - Parramatta CBD: 3 per cent of construction cost of any development type above \$250 000. A list of items with a value of \$169 million is to be funded from these means.
  - Gosford CBD: 4 per cent of construction cost of any development type greater than \$250 000. There is a \$160 million list of projects to fund.
  - Liverpool CBD: 2 per cent of residential projects of \$250 000 or more and 3 per cent for commercial projects greater than \$250 000. There is a list of \$73 million list to fund.
  - Penrith CBD: 1 per cent administration levy plus a one off charges of \$7 700 per dwelling, \$4 800 per seniors housing, plus \$148 per sq m Gross Floor Area for other construction and \$17 500 per car space in commercial if not provided on site. There is a list of projects with a value of \$115 million to be funded from this source.
  - Newcastle CBD: 3 per cent of construction cost of any development type with a value of more than \$250 000. This is based on a 1 per cent s94 levy and a 2 per cent special contribution levy.

- *Redfern Waterloo Authority* – a flat percentage levy was established under the Redfern Waterloo Authority Act and has been set by regulation at 2 per cent of construction cost in addition to a further affordable housing levy.
- □ *The North Sydney railway station upgrade* – a levy imposed at \$55 per square metre of additional floor space constructed in the North Sydney CBD.

In addition to the existing and emerging contribution and levies collected by the NSW State Government or its agencies, there is a range of local government development contributions. These take the following forms:

- *Traditional section 94 levies* – where a council prepares a contributions plan identifying the additional community infrastructure which will be required as a result of new development and then apportions these costs to new individual developments.
- *Flat percentage levies* – set by regulation at 1 per cent of construction cost as an alternative to section 94 levies.
- *Local government discretion* – an additional option inserted into the EP&A Act in the June 2008 amendments allows councils to seek approval from the Planning Minister to levy for additional items beyond the definition of community infrastructure.
- *Affordable housing* – levies or contributions in kind are imposed by a number of councils.

Industry groups are critical of the overall nature and mix of developer contributions in NSW. Based on its review of developer contributions in NSW the Property Council of Australia wrote:

‘As this list demonstrates, there is no consistent policy approach to the quantum, mechanism or governance of such levies. Policy has developed in a highly ad hoc and opportunistic manner with little evidence of thought given to their economic incidence.’ (PCA, 2008a, p.8).

### ***Emerging arrangements in Victoria***

The Victorian Government has announced plans to apply additional developer contributions relating to infrastructure needs in new growth areas in the urban fringe of Melbourne. The Growth Areas Infrastructure Contribution (GAIC) was outlined in the Victorian Government’s *Melbourne @ 5 million* publication. The government has made many policy announcements about the GAIC and provided many comments to raise clarity about the plan. Statements have also acknowledged that arrangements to deal with the circumstances of many different landholders in the new growth areas complicate the CAIC arrangements. Based on fact sheets released by the Government in May 2009, the key elements of the GAIC appear to be as follows.

- A charge of \$80 000 per hectare will be applied to land brought within Melbourne's Urban Growth Boundary (UGB) in 2005, and land brought within the UGB before 2005 will have a previously announced contribution removed.
- A charge of \$95 000 per hectare will be applied to land brought within Melbourne's Urban Growth Boundary (UGB) in or after 2009.
- The charge will be incurred on the first relevant property transaction usually the sale or subdivision of the land, and is payable only once.
- It will be indexed annually.
- The charge will not apply where the individual property is less than 0.4 hectares, or where prior planning permits have been granted, or to land that is not zoned or suitable for development.

Funds raised by the GAIC are intended to be used to pay for infrastructure in the growth areas of Melbourne. It is expected to contribute about 10-20 per cent of the cost of providing infrastructure. The remainder will be met by state and local governments. These appear to be general statements about the intent of government in using the funds. The GAIC does not appear to involve revenue hypothecation or a formal nexus between specific infrastructure projects or investments to be developed and the funds to be raised.

The Victorian Government has announced that it intends to reform local government infrastructure charges in the growth areas, but has given no indication about what this would entail.

### *Developer contributions and house prices*

The expansion and extension of developer contributions and infrastructure charges, particularly arrangements being pursued by State Governments is raising concerns in industry and the community. Indeed, various stakeholders point to links between the charges, lower levels of building lots and dwelling production and higher house prices.

Industry leaders draw attention to the alarming rate of growth in development contributions and the implications this has for higher home prices.

As a result of the introduction of state infrastructure levies, development levies have increased by more than five fold over the past decade. In Liverpool for instance, total development levies and charges will add over \$68 000 to the cost of a new home today compared to a cost of \$12 000 in 1995. Half of this new cost is because of NSW Government levies and the remainder is made up of local council charges which have trebled in the last ten years. (PCA, 2008a, p. 10)

Drawing out the theme between higher infrastructure charges and higher prices the Urban Development Institute of Australia (UDIA) noted in its 2007 report into affordable housing that:

These charges have a direct impact on the cost of new houses, and through the impact on the market, also on established houses. Whereas historically it may have been possible to provide residential dwellings at urban fringes at prices lower than the prevailing rates for accommodation closer to employment and commercial centres, the dramatic increase in infrastructure charges has made this less realistic in many markets. This can directly elevate prices in what was traditionally the lower priced sector of the market, which can, in turn, also drive up prices in more desirable locations.

Following further observation of developments in 2008 UDIA submitted to the Senate Select Committee on housing affordability that:

In recent years, a significant change to the cost of owning a home has been the ever increasing series of taxes, charges and levies that have been added to the cost of land. This has arisen, in part, due to a philosophy that infrastructure provided for new homes should be paid for up front, by the private sector, rather than over time through ongoing charges such as property rates. These charges are passed on directly to the consumer through increased prices.

Consistent with this, the Urban Taskforce wrote that:

The cumulative impact of state and local government developer charges simply adds to the cost of developing of land. It means new home owners, unlike previous generations, must fund the cost of infrastructure up-front. As a consequence, the cost of new land and housing in the growth centres would be higher than the market for houses in the same region. The cost of new land and housing is now unaffordable for a large segment of the potential first home buyers (Urban Taskforce NSW 2007, p. 3)

There are also concerns that while government policy is intended to raise funds to provide infrastructure which in turn is required to release land that will contribute towards easing shortages of new housing, in practice the developer contributions is having the opposite effect. The UDIA has raised this concern on a number of occasions.

The widespread expansion of development levies to fund local and state infrastructure has played a significant role in constraining dwelling production...The application of charges at local, state, and federal level have combined with inefficient regulatory and approval processes and a lack of commitment to long term strategic priorities to compromise development feasibilities and constrain the industry's capacity to deliver new housing at prices within the market's capacity to pay (UDIA NSW 2008, p. 2).

In many instances the lack of transparency and the rapid increases in...[developer] charges have not allowed these charges to be adequately considered at the time of conducting feasibility studies and purchasing land, leaving little option but to raise house and land prices. In select instances these charges have caused projects to be abandoned altogether, further constraining supply (UDIA 2007, p. 18).

While there is an argument that infrastructure charges and levies may be justified on the basis that they contribute towards the cost of infrastructure, there is concern that there is no check upon state and local governments over-servicing when they can find someone else to pay, in contrast to arrangements where governments pay from their own budgets and such spending is subject to oversight (in parliaments, councils

and the media). Industry groups such as the Australian Chamber of Commerce and Industry (ACCI), warn about the risk that developer charges are over-recovered:

Developer charges should only recoup the direct costs of infrastructure and are not used for general revenue raising. In some areas developer charges are well in excess of the actual costs of infrastructure ... It is also important to prevent 'gold plating' of infrastructure (unnecessarily high expenditure on infrastructure). This can be prevented by measures to control the costs of building infrastructure and other activities that are subject to user charges (ACCI 2008, pp. 7-8).

Industry leaders also express concerns that developer contributions lack transparency and that they are not proportional to the underlying or substantive infrastructure needs. For instance, the Housing Industry Association (HIA) recently wrote that:

The list of charges state and local governments levy on new homebuyers is extensive and continually expanding...HIA has no opposition to new developments paying for specific infrastructure that provides essential access and service provision and without which the development could not proceed...To date, however, there has been little transparency in the calculation of development levies and an insufficient nexus between the programmed investment, location of the investment and the benefit derived by the broader community, relative to where and who this revenue is collected from (HIA 2008, pp. 6-7).

While the claims of industry bodies and leaders have been put in strong terms there is generally a paucity of actual evidence. Very few hard facts about the magnitude of developer contributions and infrastructure charges have been tabled in the debate to date. There is also little information about the relative magnitude of such costs and how they compare to the overall cost of housing. In addition it is not clear if the issues really only relate to a few key places, or are the issues more general?

Clearly this is a need to obtain more facts and to undertake dispassionate analysis.

### *Key points*

- **There is a complex mix of state and local government frameworks and arrangements applying developer contributions and infrastructure charges.**
- **Developer charge arrangements are being broadened and the amounts collected increased especially through arrangements being introduced by State Governments.**
- **Industry leaders flag many concerns about developments in the application of developer contributions and charges. The most important are that the rapid rise in contributions is adding to the cost of developing new homes which is being passed on in terms of higher prices.**
- **There is a need to ascertain the facts about the size of developer contributions and the extent of an association with higher new house prices in areas where new housing is being provided.**

## 4 *Measuring costs*

Measurement is the first step that leads to control and eventually to improvement. If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it. (H. James Harrington)

Harrington's catchphrase linking measurement to performance in businesses is just as relevant to policy. This chapter sets out the approach used in this study to measure and compare developer contributions and infrastructure charges.

### *Typical housing development projects*

A good way of measuring the relative costs involved in housing is to examine actual housing development projects. This should enable assessment of the real costs of real housing in specific parts of Australia.

Different housing types and qualities will involve different development costs and infrastructure needs. Government planning generally draws a distinction between:

- 'greenfields' or 'broadhectare' development providing the release of mainly lower density stand alone housing on the fringe of existing cities which requires the extension of infrastructure facilities; and
- 'infill' development which typically provides higher density housing in areas already largely serviced by urban infrastructure facilities.

It seems natural to distinguish between these types of new housing development in Australia in this study.

### *Broadhectare housing*

Davis Langdon has drawn upon its experience and expertise in building projects to provide information about specific developments in major urban areas around Australia.

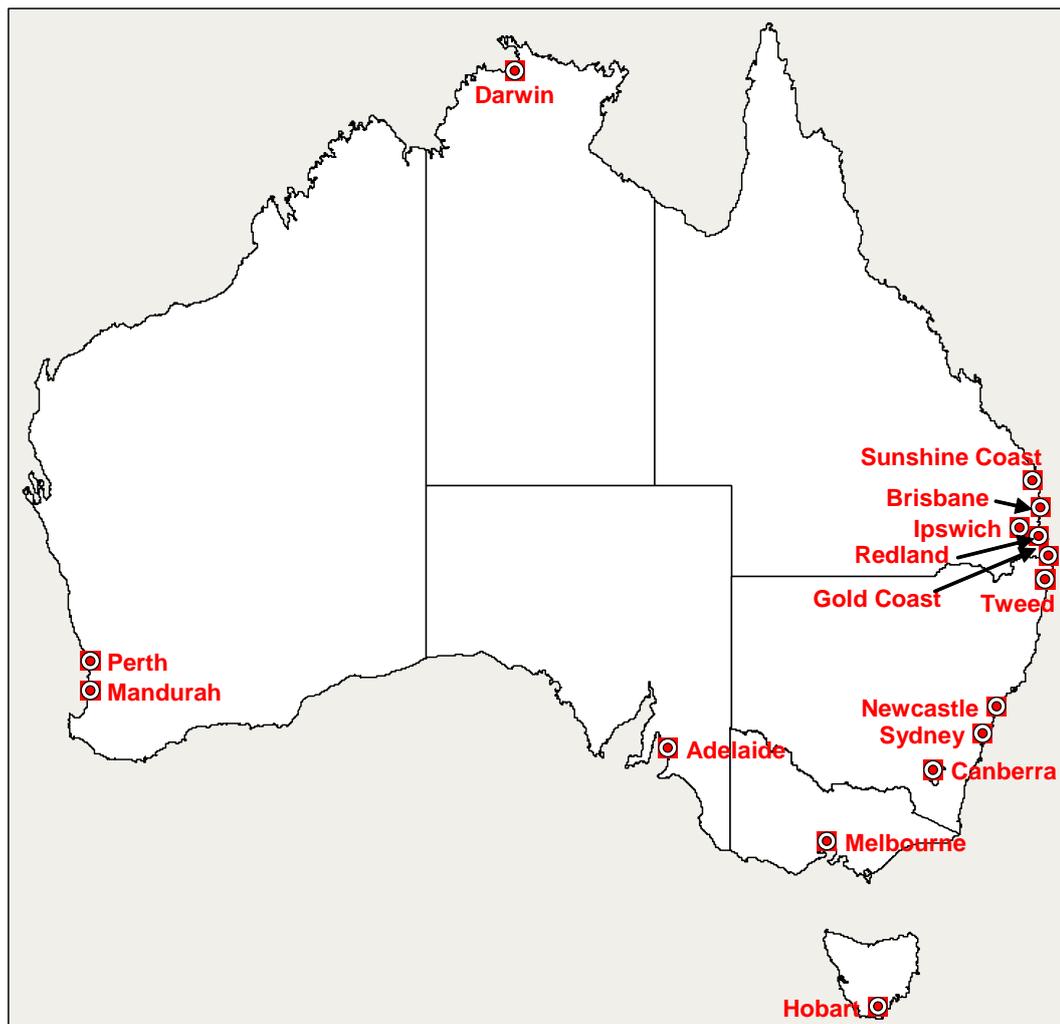
Broadhectare housing development typically involves the construction and sale of a relatively large number of houses in a development lot. To facilitate comparison the study has sought to look at developments of a reasonable scale and which are broadly consistent in house numbers per lot. In practice this not straightforward. Housing developments reflect a range of physical and market constraints, with residential lot numbers per development in some cities generally being larger than

others. The parameters used in selecting development examples for use in the study are as follows.

- Average costs per dwelling are based on the development of a generic four bedroom project home of medium quality.
- A reasonably large scale development is examined with between 50 or 150 residential lots being developed.
- Building costs and other costs relate to projects undertaken or analysed in the 2009 calendar year (and 2008 in some cases reflecting recent policy changes).

The urban centres studied were selected on the basis that these areas account for most large scale urban housing development in Australia or are expected to experience high growth in residential development in the future according to the RDC's recent *Australia on the Move* study. As a result the geographical coverage of new house development projects spans much of urban Australia (Chart 4.1).

#### 4.1 Development locations



Data source: The CIE

Cities studied are listed below for reference:

- Sydney;
- Melbourne;
- Brisbane;
- Perth;
- Adelaide;
- Canberra-Queanbeyan;
- Hobart;
- Darwin;
- Newcastle;
- Tweed;
- Sunshine Coast;
- Gold Coast;
- Ipswich;
- Redland; and
- Mandurah.

The analysis of residential developments covers the following tasks:

- Development of a cost template that includes data for each of the following categories:
  - land costs – the cost of the acquisition of raw land suitable for residential development in that location and the costs of holding that land (land holding costs that are taxes such as council rates are included in other categories below);
  - construction costs – including costs for the preparation of land for development and building costs (minus the cost of compliance with government environmental and other regulation which is included in another category) and dwelling construction costs;
  - compliance costs and government taxes and charges – includes Australian, state and local taxes and charges, and duties as well as the incremental cost of complying with arrangements such as the BCA, BASIX and other environmental requirements and obtaining planning approvals etc. This category also includes details about infrastructure charges including those applied by State Governments, local governments and utilities (such as water, sewerage, gas and electricity);
  - sales and marketing – including marketing costs and costs associated with sales; and
  - other costs – mainly those relating to developers return on capital (shareholder returns and the cost of debt).
- Based on actual projects and their expertise, Davis Langdon ‘filled in’ the template details and provided individual cost components for broadhectare developments. Project development costs are calculated on a full project basis and also separated to average per lot costs.
- Analysis of how housing infrastructure costs have affected different housing markets in Australia, including:
  - comparing how the infrastructure charges vary across the studied urban areas;

- estimating the infrastructure charges as a share of total dwelling cost; and
- identifying the extent to which infrastructure charges add to the cost of new houses and contribute to lower affordability.

Information about some items in the analysis was incomplete or it has been necessary to use generic values in order to make the information in the development templates more reflective of a typical development. Key factors where such adjustments have been necessary include the following:

- Holding time – land holding costs including rates and land taxes depend upon the length of time a developer has to hold land during the process of development. This has been assumed to be a period of 3 years. The experience of many developers shows considerable variability around holding time, with some developer reporting delays in obtaining Development Approval and other factors that result in holding time of 5 years, but such delays are more likely in regard to the larger capital cities and holding times in other cities can be faster.
- Interest on land – this reflects an estimate of typical land holding and development times and assumptions about the interest rates likely to be faced by typical developers.
- Developer's return – the total cost of development typically includes a return for capital (reflecting their use of capital, their own efforts and market outcomes). This study has used information available from the ABS and industry sources to guide this estimate.

The above analysis leads to the production of estimates about the total costs involved in broadacre housing development for each development. When divided by the numbers of residential dwellings in each development an estimate of the average cost per dwelling can be produced. When the transaction taxes paid for by buyers is included this can provide an estimate of the buyers' end costs which is useful for analytical purposes. The cost analysis can be thought of as an estimate of the economic resources absorbed or extracted (through 'transfers' applied by government such as taxes and charges and private sector debt servicing) in the production of housing.

In addition, the study has also examined market prices of houses sold in the developments analysed in each city. Naturally, the prices achieved for houses within a large development vary reflecting different sizes and many qualitative factors. The analysis has examined the high and low prices in developments as well as reporting an estimate of the typical price for the typical house in each development. This requires some judgement as precision is impossible.

Market prices can (and do) differ from producers costs and the estimate of buyers' end costs. This reflects the effect of the interaction of a wide range of factors that influence the supply and demand for housing. The result is volatility in market outcomes, particularly in terms of prices paid. The end price can therefore be higher

than costs (suggesting that the developer makes a larger than expected profit) or lower (where the developer makes a financial loss).

### *Infill housing development*

Additionally, a case study identifying the costs components of a medium density (infill developments) unit is provided.

[The infill case study requires detailed commercial information of the sort that can only be provided by a developer who is also willing to share this information in this report.]

### *Practical insights about information regarding developer contributions*

While the above tasks seem relatively straightforward, the analysis of infrastructure charges (especially the collection of infrastructure charges data) presented many unexpected challenges and delays.

The following factors are at play when seeking information about developer contributions.

- The framework is complex – information about developer contribution arrangements is spread out through complex frameworks including legislation, regulations, planning circulars, government announcements and discussion papers, as well as planning documents. Different governments at state and local levels take very different approaches. Arrangements appear to be changing quickly in some jurisdictions and the documentation seems to lag announced policy changes.
- Utilities often adopt their own approach – they take approaches that differ from local and state governments to issues such as the nature and extent of cost recovery and support for in-kind or cash contributions.
- Negotiated contributions and voluntary agreements add uncertainty, reduce transparency and remove nexus – information about contributions paid following one negotiation does not necessarily carry over to other projects, and generally involve provision for funding infrastructure that is additional to that which is strictly necessary to support the development.
- Written rules are incomplete and officials don't know or won't say – it is not feasible in many cases to assess what contribution is payable from the written information alone. Queries made to officials are not fully answered, in part because they have to be provided with full information of the sort included in a full development application.

- There are significant incentives for secrecy – Governments seek to maximise contributions in every negotiation and developers seek to ensure that other developers do not know what they have paid or offered.

The experience in collecting information about developer contributions indicates that it is not feasible for them to provide a useful price signal to encourage development in less costly areas (where infrastructure needs and therefore infrastructure contributions are lower). This is because it is very difficult and expensive, particularly in terms of lost time, to actually obtain information about the development contribution price in different locations.

### *Key Points*

- **This study involves development of a framework for measurement of the drivers of new house prices and costs.**
- **The framework looks at the overall costs and the components that contribute towards costs.**
- **It also looks at actual costs in actual housing development projects in all of Australia's capital cities and in other cities exhibiting rapid growth.**
- **Difficulties in collecting information about developer contributions highlights that state and local government charging regimes are complex, they are not transparent, raise investor costs and uncertainty and do not function well in providing a price signal about the relative cost of development.**

## 5 Broadhectare housing development

This chapter reports the cost information obtained from the nation wide sample for broadhectare housing developments.

### Capital cities

Results from the analysis of costs in capital cities are summarised in the table below. The table reports on total end costs and the 5 component groups that add to the total. Total end costs in this case means the sum of development costs and taxes that could be passed through to the final purchaser of a house.<sup>4</sup>

#### 5.1 Comparison of broadhectare housing development costs, capital cities (\$ 2009)

	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Perth</i>	<i>Canberra</i>	<i>Adelaide</i>	<i>Hobart</i>	<i>Darwin</i>
Land Costs	157 733	75 448	36 265	36 265	61 775	73 530	18 633	12 050
Construction Costs	285 675	302 432	314 262	226 435	277 162	216 869	222 987	283 893
Government taxes, charges & compliance	163 009	115 064	104 641	87 957	94 156	89 315	76 357	74 268
Sales and Marketing Costs	23 150	20 675	19 685	15 281	18 200	15 050	17 012	13 712
Other costs	33 897	27 472	25 729	19 833	24 256	21 193	18 131	20 617
Total end cost	663 464	541 091	500 582	385 770	475 548	415 958	353 119	404 540

<sup>a</sup> Other costs mainly represent the developer's post tax return.

Note: Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

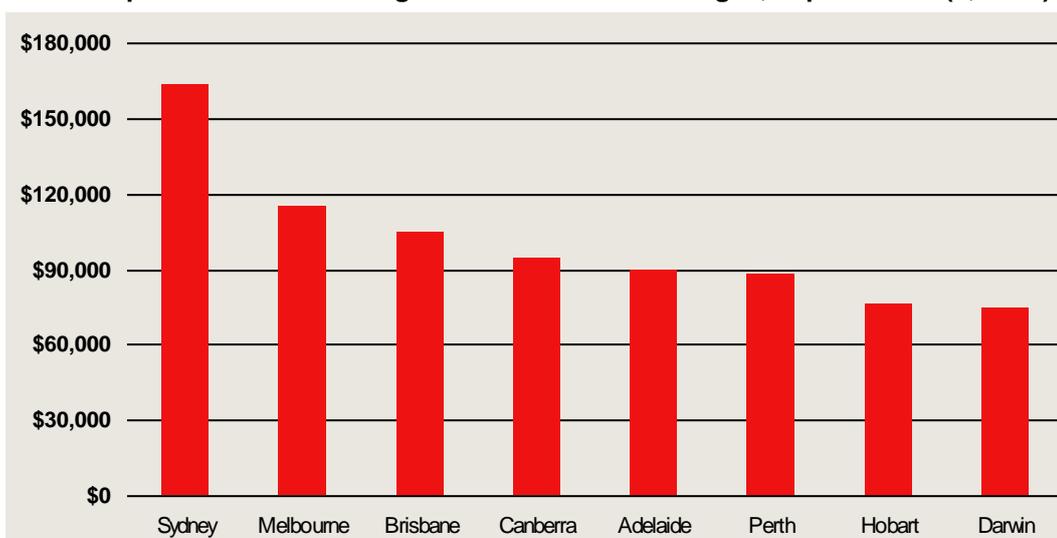
It is hard to draw insights from just looking at the 'raw' numbers from the analysis. It is better to highlight aspects of the data through a range of charts that isolates key relationships. Compliance costs and the cost of total government taxes and charges in the capital city developments studied are illustrated in chart 5.2.

While there is clearly some variation in these costs between the capital city developments studied a few broad points can be drawn from chart 5.2.

<sup>4</sup> End costs in this context do not necessarily equate to the market price of a house. Prices that are finally paid reflect a mix of market factors. Market prices may be higher than costs, or may not in fact be sufficient to cover costs.

- Compliance costs and government taxes and charges paid for new developments are very high for new houses in the growth areas of Australia’s capital cities.
- These costs are highest in the case of Sydney. There the costs amount to around 163 000 in the example studied.
- Even in the lowest cost capital cities (Hobart and Darwin) these costs exceeded \$74 000 per house.

**5.2 Compliance costs & total government taxes & charges, capital cities (\$, 2009)**

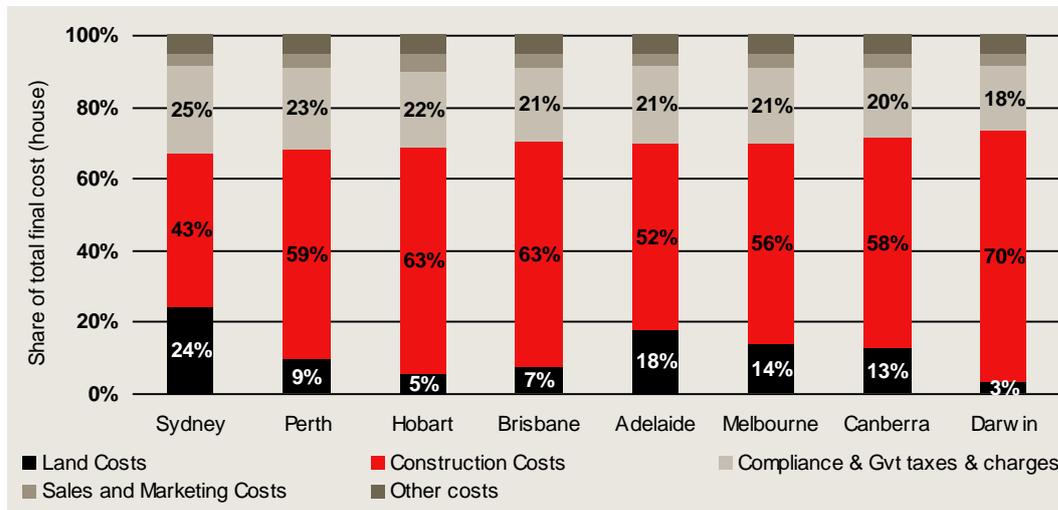


<sup>a</sup> Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

It may be helpful to view the cost of compliance and government taxes and charges in proportion to the other costs of housing development. Results from the developments studied in Australia’s capital cities are reported in chart 5.3.

### 5.3 Comparison of broadacre housing development costs, share of final house cost (per cent, 2009)



<sup>a</sup> Other costs mainly represent the developer's post tax return, which has been assumed to be around 5 per cent.

Note: Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

Chart 5.4 shows that the costs of compliance and government taxes and charges:

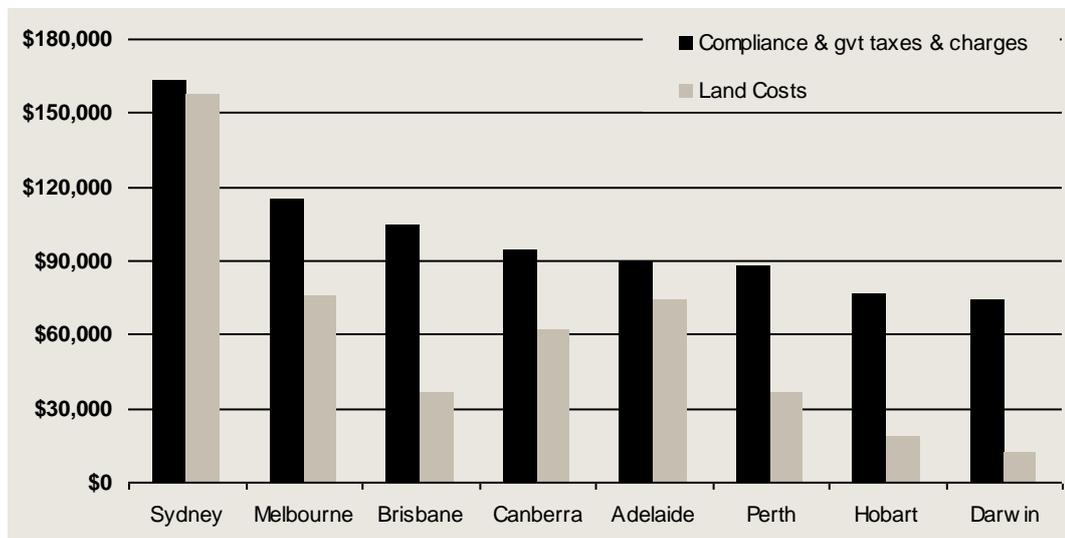
- range between 18 to 25 per cent of the cost of a new house in the Australian capital city development projects studied;
- are highest in Sydney and Perth, where they account for about a quarter of the cost of a new home; and
- account for around a fifth of the total costs of development of a new house in the other capital cities.

Chart 5.4 also provides some insight about the relative importance of different costs.

- In every capital city the largest cost category is the cost of construction (materials and labour etc).
- The cost of compliance and government taxes is the second largest category of costs in every development studied in the capital cities.
- Compliance and government taxes and charges as a category accounts for a higher share of total development costs than land costs in every capital city.

Buyers of stand alone houses, who generally see the land on which their home stands as a key part of the value of their new home, would probably be surprised to learn that government charges and compliance costs are in fact a larger part of the cost of their home. This is so even in Sydney, where the cost for land is nearly twice that of any other capital city and many times larger than some other capital cities (chart 5.4).

5.4 Comparison of selected cost components, broadhectare (\$ 2009)

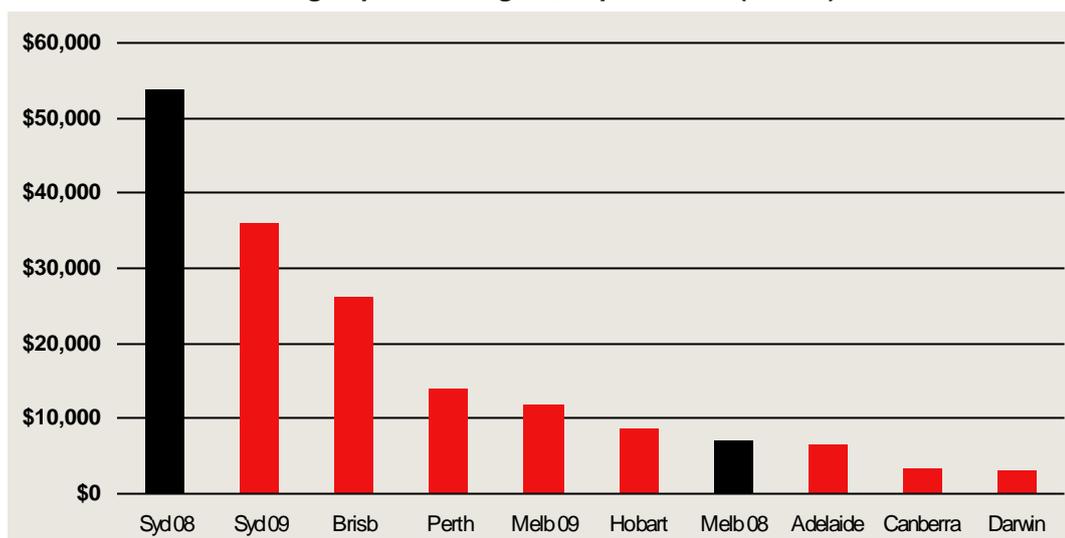


<sup>a</sup> Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

The focus of this study is upon developer contributions and infrastructure charges. Chart 5.5 reports the amount collected per housing lot. The data is from 2009, but because of recent announcements regarding new growth centres in Sydney and Melbourne, data for 2008 is also provided for these cities.

5.5 Infrastructure charges per housing lot, capital cities (\$ 2009)



<sup>a</sup> Infrastructure charges include Section 94 contribution, utilities levies, State infrastructure charges (NSW and Victoria 2009 only) and infrastructure bonds (Tasmania and NT only).

Data Source: Davis Langdon.

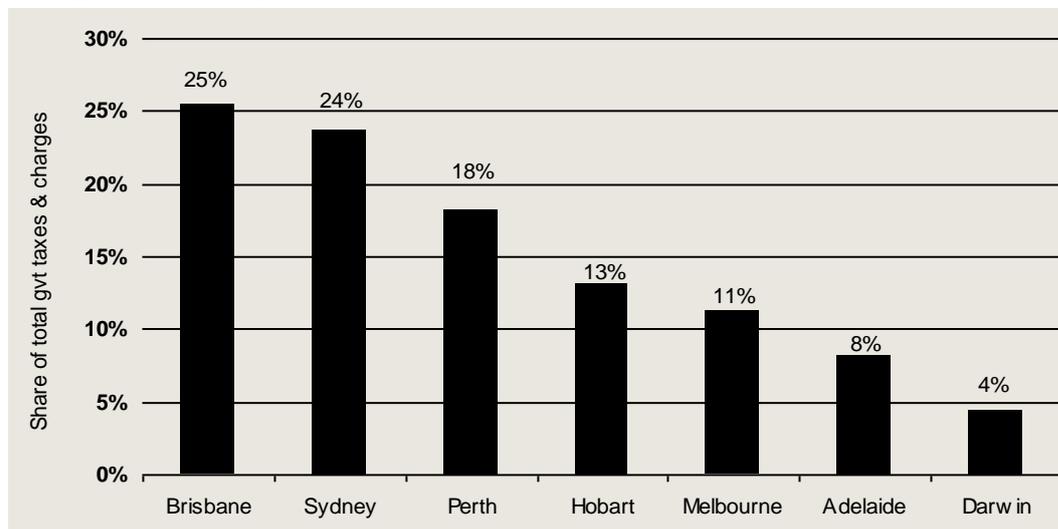
Some key points able to be drawn from the data reported in chart 5.5 are as follows:

- Sydney has the highest infrastructure charges in the sample. The charges for the development examined in Sydney average around \$35 000 to \$36 000 per housing lot.
- The amount collected per housing lot in Sydney is the highest in capital cities even after the reductions in developer contributions announced in December 2008 (which were to apply in 2009).
- There is a wide range of variation in developer contributions in Australia's capital cities. Developments in four capital cities required contributions of greater than \$12 000 per housing lot in 2009, while four required less than that.

Developer charges now appear to form a significant proportion of the total cost of government compliance costs, taxes and charges. Chart 5.6 illustrates the cost of developer charges as a share of the total cost in developments in Australia's capital cities. This shows that:

- There is considerable variation in the share of government compliance costs, taxes and charges raised through developer contributions with proportions spanning a range of between 4 and 25 per cent.

#### 5.6 Infrastructure charges as a share of total taxes & charges, capital cities (per cent, 2009)



<sup>a</sup> Infrastructure charges include Section 94 contribution, utilities levies, State infrastructure charges (NSW and Victoria only) and infrastructure bonds (Tasmania and NT only). Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

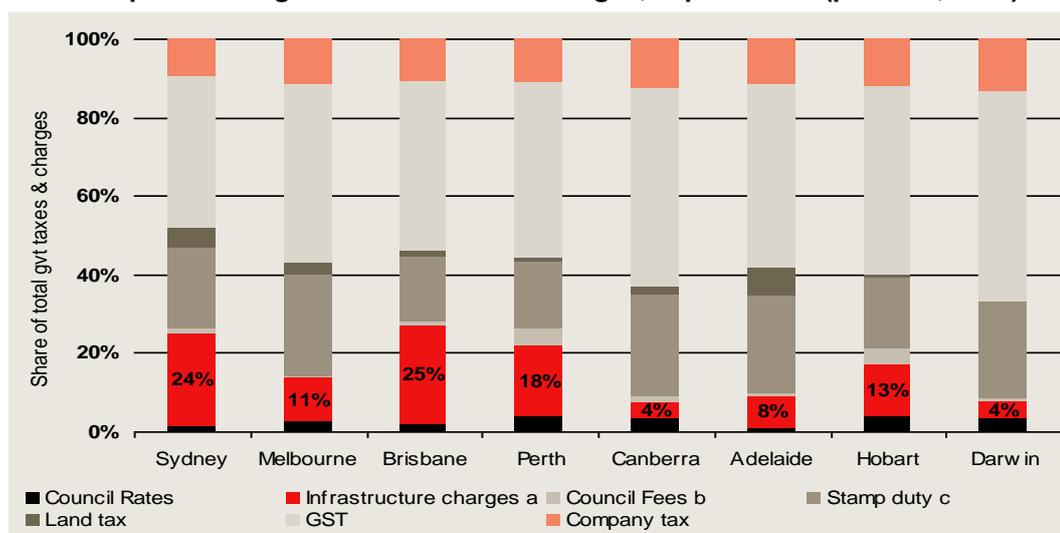
Data Source: Davis Langdon.

- Infrastructure charges or developer contributions as a share of the total taxes and charges paid for a new house are highest in Brisbane. While the cost of developer contributions required in Brisbane are not the highest in the capital cities studied, this cost is a large share of the resources that Government in Brisbane obtains from new broadhectare housing development. This may form an indicator of the relative importance that Government authorities there place upon infrastructure provision or suggest that the authorities in Brisbane are not raising other taxes and charges to keep pace with the needs of the community.

More information about the relative share of various charges and compliance costs is provided in chart 5.7.

A key issue is the extent to which infrastructure charges or developer contributions contribute towards higher house prices. This can be tested by looking at actual house prices and infrastructure charges. Information obtained from analysis of recent broadhectare housing projects in Australia’s capital cities is reported in the chart 5.8.

**5.7 Composition of government taxes & charges, capital cities (per cent, 2009)**



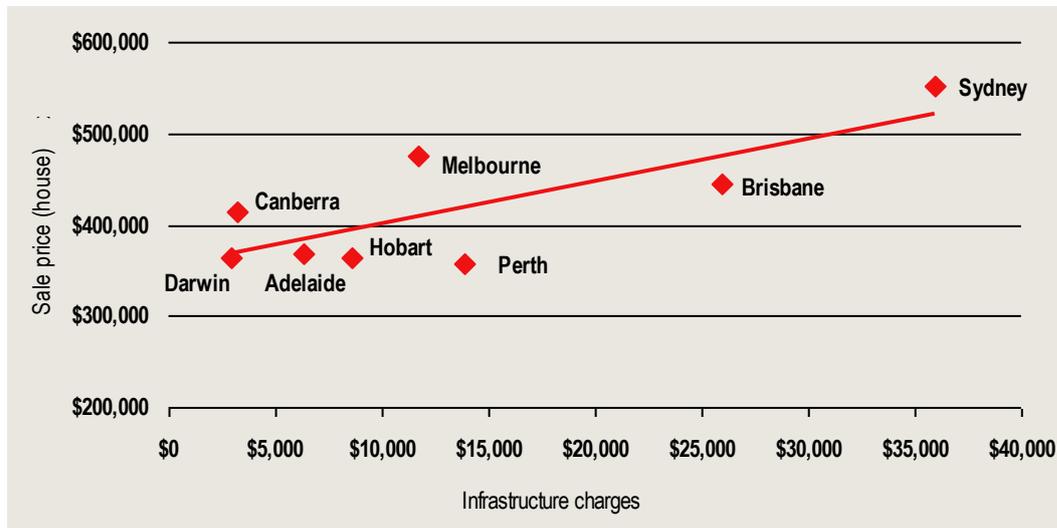
<sup>a</sup> Includes Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only) and infrastructure bonds (Tasmania and NT only).

<sup>b</sup> Council fees include building application, development application and strata application fees.

<sup>c</sup> Includes stamp duty on purchase of land and house

Data Source: Davis Langdon.

### 5.8 Comparison of infrastructure charges & house sale prices, capital cities (\$, 2009)



<sup>a</sup> Final house cost includes stamp duty paid for the purchase of the house. Infrastructure charges include Section 94 contribution, utilities levies, State infrastructure charges (NSW and Victoria only) and infrastructure bonds (Tasmania and NT only).

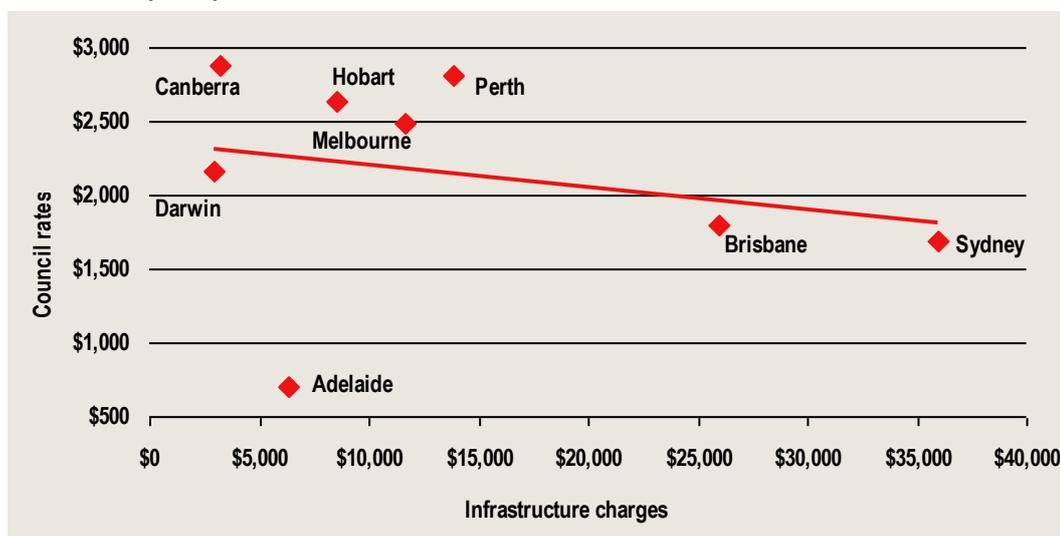
Data Source: Davis Langdon.

The above chart suggests that there may be relationship between infrastructure charges and house prices. That is, using the data from the sample of developments in Australian capital cities, those cities with higher infrastructure charges appear to have higher prices while those with lower infrastructure charges appear to have lower prices. With such a small sample, however, it is not helpful to attempt to determine the level of confidence able to be held in this observation using the normal statistical tools.

Another perspective that is often raised by industry is that infrastructure charges are essentially a substitute for deficiencies in other taxes and charges. That is, governments are resorting to infrastructure charges where they have not been able or willing to collect funds from traditional taxes and charges.

It is possible to test the substitution theory using data from the sampled developments in Australia's capital cities. The chart below (chart 5.9) plots the amount of money paid as council rates in development projects against the amount of funds obtained from infrastructure charges. The chart seems to indicate a downtrend. That is, developments in cities with higher infrastructure charges appear to have paid less council rates, while those with higher rates seem to have paid less infrastructure charges.

5.9 Relationship between infrastructure charges and council rates paid, capital cities (2009)



Data Source: Davis Langdon.

It is possible that the relationship between infrastructure charges and council rates paid in the sample is being skewed by outliers or other sample error issues. Limitations in the data do not permit robust statistical tests that would enable quantification of the confidence able to be held in the apparent trend in the capital cities sample.

*Other Australian cities*

The costs involved in the production of houses in broadhectare developments in other major urban areas around Australia have also been examined. The results from this analysis are summarised in table 5.10.

5.10 Comparison of broadhectare housing development costs, other cities (\$ 2009)

	<i>Tweed</i>	<i>Newcastle</i>	<i>Redland</i>	<i>Ipswich</i>	<i>Sunshine Coast</i>	<i>Gold Coast</i>	<i>Mandurah</i>
Land Costs	32 326	47 020	36 265	32 326	41 143	23 510	36 265
Construction Costs	290 525	239 663	317 497	285 265	307 450	318 500	228 332
Government taxes, charges & compliance	107 017	98 396	108 708	99 314	106 208	107 521	75 095
Sales and Marketing Costs	19 670	17 294	19 472	16 337	18 218	20 561	17 096
Other costs	24 273	21 752	26 112	23 482	25 630	25 472	19 345
Total end cost	473 812	424 125	508 054	456 724	498 649	495 564	376 133

<sup>a</sup> Other costs mainly represent the developer's post tax return.

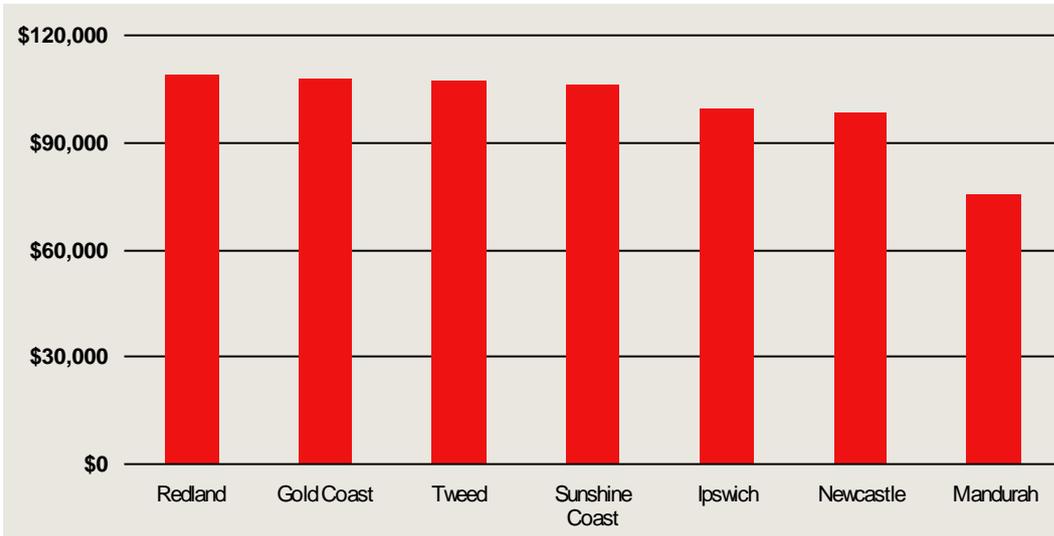
Note: Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

It is easier to assess the incidence of compliance and government taxes and charges in the chart below. Such costs amount to significant amounts in all of the cities

examined, exceeding \$100 000 or more for 6 of the cities studied. Even in Mandurah, where these costs were lowest, the cost exceeded \$75 000.

5.11 Compliance costs & total government taxes & charges, other cities (\$ 2009)



<sup>a</sup> Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

Similarly to the results for capital cities, the largest cost component in other cities is construction costs. Compliance and government taxes and charges are the second largest cost component and they account for between 21 and 23 per cent of costs in the group of other cities studied.

5.12 Comparison of broadsheet development costs, share of final house cost, other cities (per cent 2009)



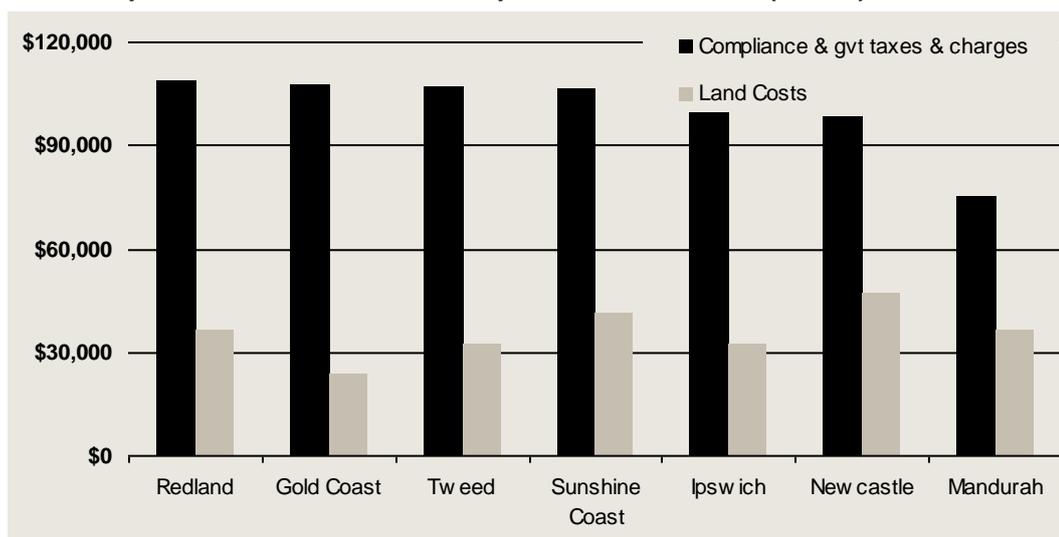
<sup>a</sup> Other costs mainly represent the developer's post tax return, which has been assumed to be around 5 per cent.

*Note:* Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

*Data Source:* Davis Langdon.

Again, compliance costs and the cost of government taxes and charges exceeds land.

**5.13 Comparison of selected cost components, other cities (\$ 2009)**

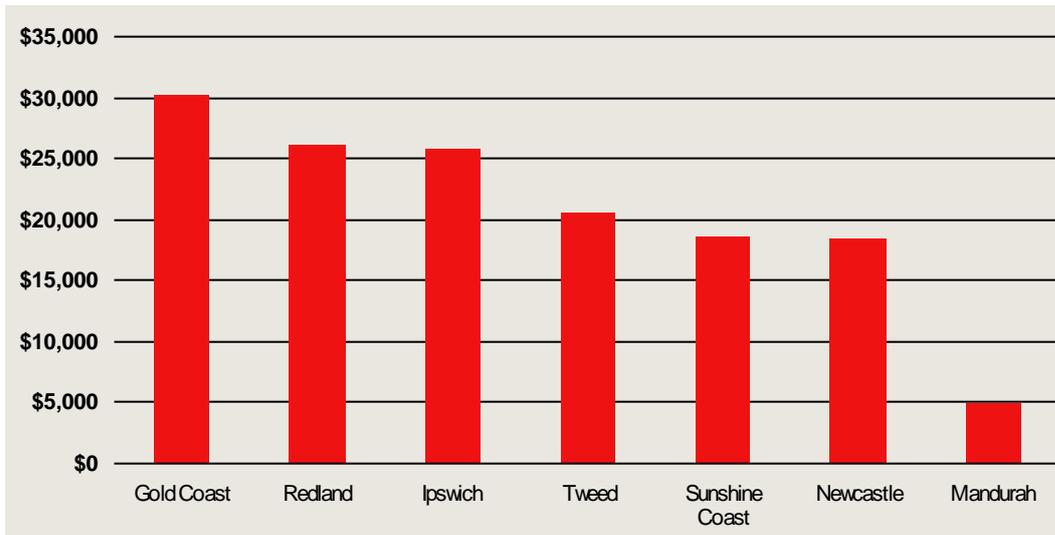


<sup>a</sup> Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

*Data Source:* Davis Langdon.

The infrastructure charges per house are quite substantial. They amount to \$30 000 per housing lot in the Gold Coast, and range between \$18 000 to \$25 000 in many other cities. The charges are relatively modest in Mandurah at just under \$5 000 (chart 5.14). The charges collected in non-capital cities are generally higher than those collected in the sample of capital city developments. The average for the 7 major cities is \$20 548 while it is \$13 566 for the capital cities.

## 5.14 Infrastructure charges per house, other cities (\$ 2009)



<sup>a</sup> Infrastructure charges include Section 94 contribution and utilities levies.

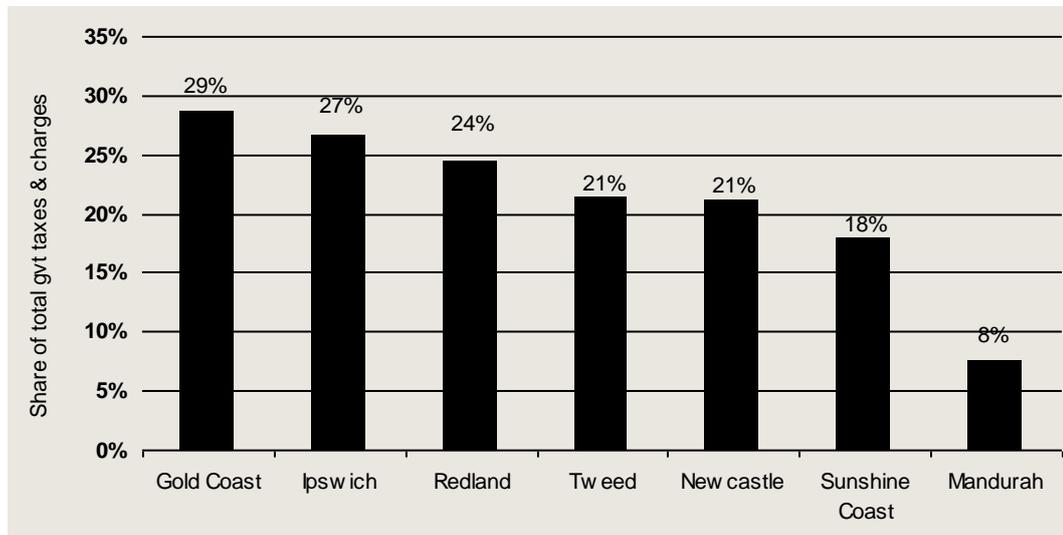
Data Source: Davis Langdon.

Infrastructure charges as a share of total taxes and charges are analysed in the next two charts.

Infrastructure charges in the other cities represent a relatively large share of the total taxes and charges extracted in developments in these cities. In the Gold Coast, for example, infrastructure charges account for 29 per cent of total taxes and charges, which is higher than in any other city studied. Five of the other cities studied extract developer charges which represent 20 per cent or more of total taxes and charges, (while in only 2 of the 8 capital city developments did developer charges account for more than 20 per cent).

The overall impression is that developer charges form a high proportion of total taxes and charges in the fastest growing cities of Australia, particularly those in Queensland and in Northern NSW.

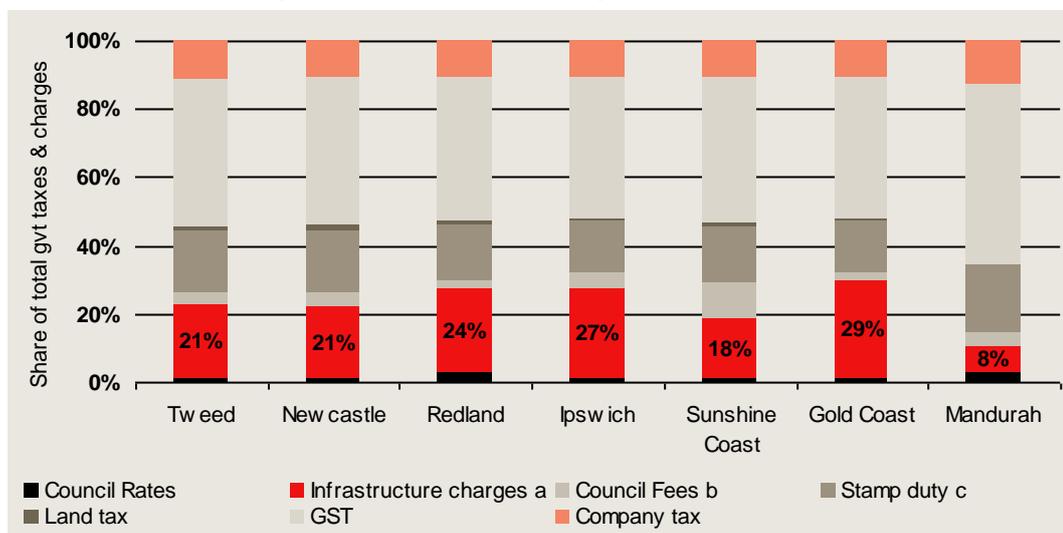
**5.15 Infrastructure charges as a share of total taxes & charges, other cities (per cent 2009)**



<sup>a</sup> Infrastructure charges include Section 94 contribution and utilities levies. Government taxes and charges include Section 94 contributions, utilities levies, council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

Data Source: Davis Langdon.

**5.16 Composition of government taxes & charges, other cities (per cent 2009)**



<sup>a</sup> Includes Section 94 contribution and utilities levies.

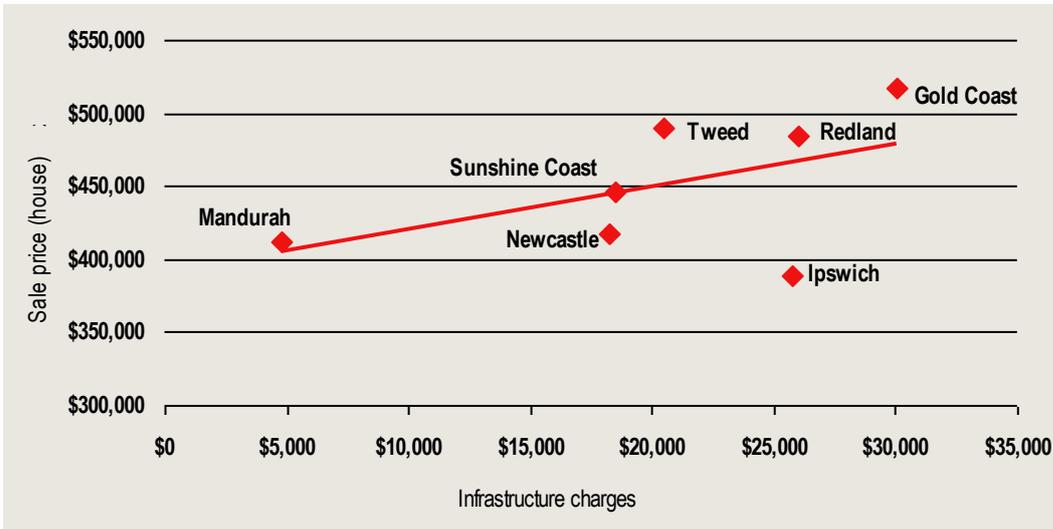
<sup>b</sup> Council fees include building application, development application and strata application fees.

<sup>c</sup> Includes stamp duty on purchase of land and house

Data Source: Davis Langdon.

Simple ‘eyeballing’ of measured developer contributions and house sale prices in the data collected for developments in the other cities suggests that these factors are related (chart 5.17). The fitted trend line in the chart suggests that higher infrastructure charges are related to higher sale prices.

### 5.17 Comparison of infrastructure charges & house sale prices, other cities (\$ 2009)



<sup>a</sup> Final house cost includes stamp duty paid for the purchase of the house. Infrastructure charges include Section 94 contribution, utilities levies, State infrastructure charges (NSW and Victoria only) and infrastructure bonds (Tasmania and NT only).

Data Source: Davis Langdon.

Use of sophisticated statistical tools is necessary to assess how robust this apparent relationship is. It is not feasible to obtain robust results using a sample size of 7 cities alone.

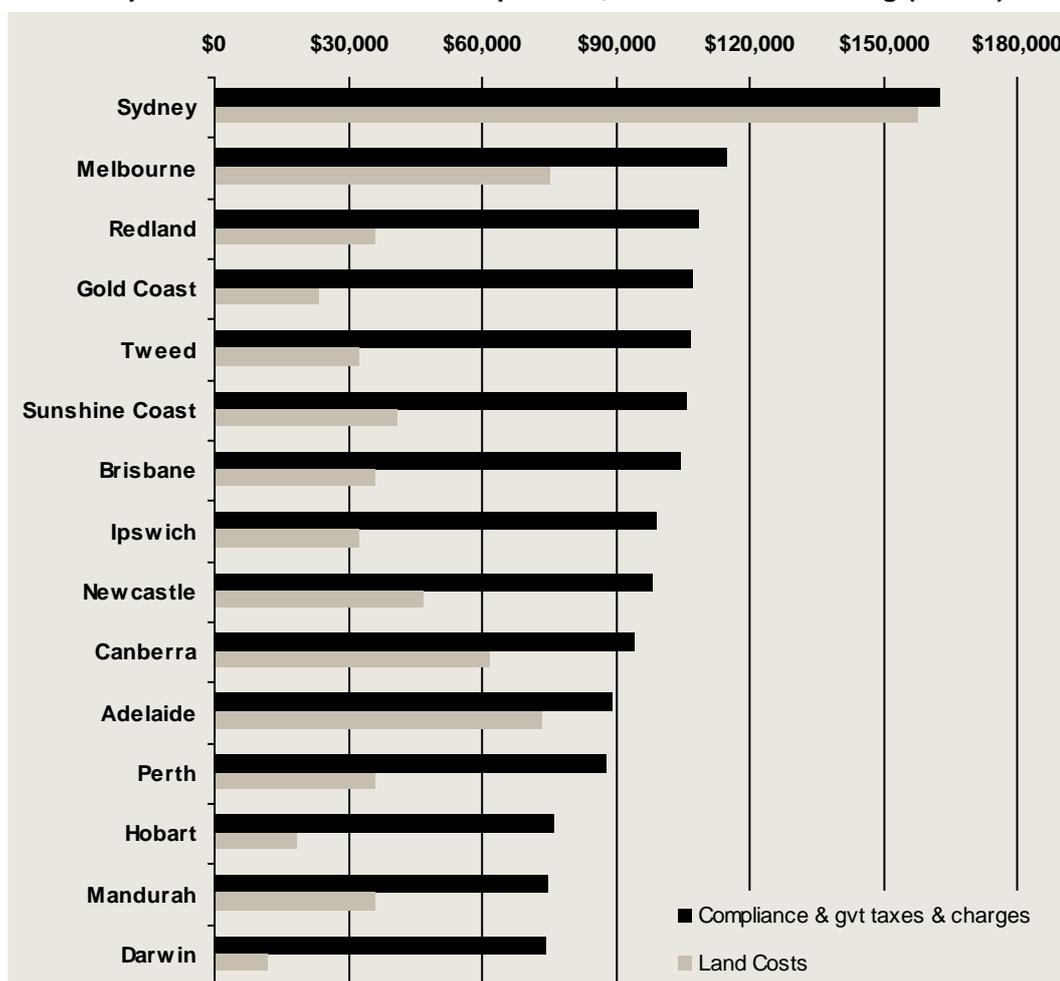
### *The overall picture*

Some points can be made about the overall picture, looking at costs in all major cities in Australia.

#### *Government imposed costs in context*

Government taxes and charges and the cost of compliance has increased in Australia to the point where these costs are higher than the cost of land in every one of the 15 cities studied in 2009. This is most extreme in Sydney where the costs have increased to over \$163 000, but in many if not all cities studied these costs are 2 or 3 times or more the cost of land.

5.18 Comparison of selected cost components, broadhectare housing (\$ 2009)



<sup>a</sup> Compliance costs include BCA compliance, BASIX compliance and compliance with local regulations. Government taxes and charges include Section 94 contribution, utilities levies, state infrastructure charges (NSW and Victoria only), infrastructure bonds (Tasmania and NT only), council rates, council fees (Building Application, Development Application and Strata application fees), land tax, stamp duty (for land and house purchase), GST and company tax.

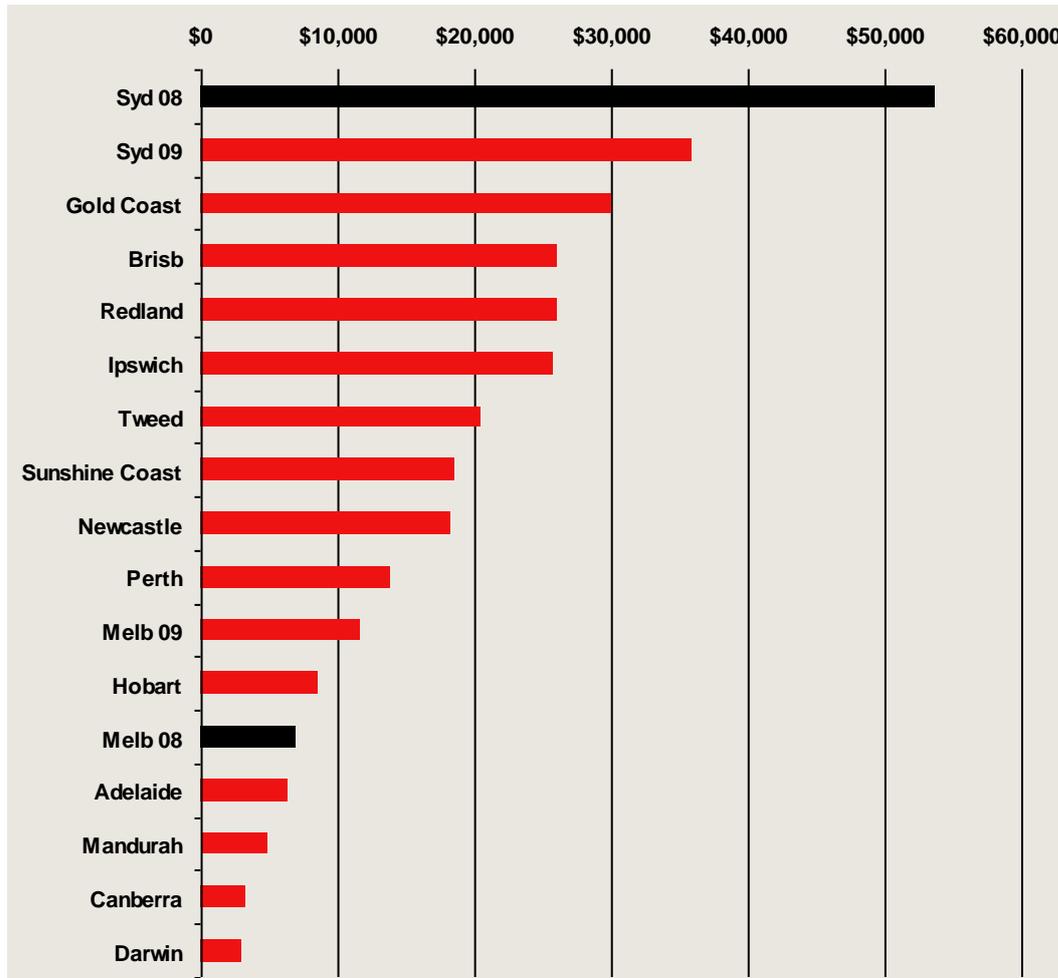
Data Source: Davis Langdon.

The cost of developer contribution or infrastructure charges are unevenly spread through Australia’s major cities. There is a group of 6 or 7 cities where it is assessed that such costs approach or exceed \$20 000 per housing lot in typical broadhectare developments. This group includes Sydney, Gold Coast, Brisbane, Redland and Ipswich, and the Tweed. As a group, most of these regions are characterised by high growth and rising need for new infrastructure. The odd one out in this group is Sydney, which is not growing as fast as the others.

There is then another group of cities with infrastructure charges extracting medium levels of costs say greater than \$5 000 per lot up to around \$20 000. This includes Newcastle, Perth, Melbourne and Hobart.

The remainder of the cities examined have relatively low infrastructure charges, extracting \$5 000 or less per house lot. This includes Mandurah, Canberra and Darwin.

### 5.19 Infrastructure charges, broadhectare housing (\$ 2009)



<sup>a</sup> Infrastructure charges include Section 94 contribution, utilities levies, State infrastructure charges (NSW and Victoria 2009 only) and infrastructure bonds (Tasmania and NT only).

Data Source: Davis Langdon.

### *House prices in broadhectare developments*

In addition to examining costs, final house prices were also reviewed in each of the broadhectare development areas. Information was collected in terms of minimum and maximum prices and a price was selected to represent the price of the typical house that facilitates comparison within and between developments.

Results from this analysis are provided in table 5.20. Results for each development is placed in typical market price order, descending from the highest price (which is Sydney 09 with a typical price of \$553 000). It is interesting to see the extent to which

prices in non-capital cities in fast growing regions have higher prices than many capital cities.

### 5.20 New house prices, broadhectare developments, capital and other cities, 2009

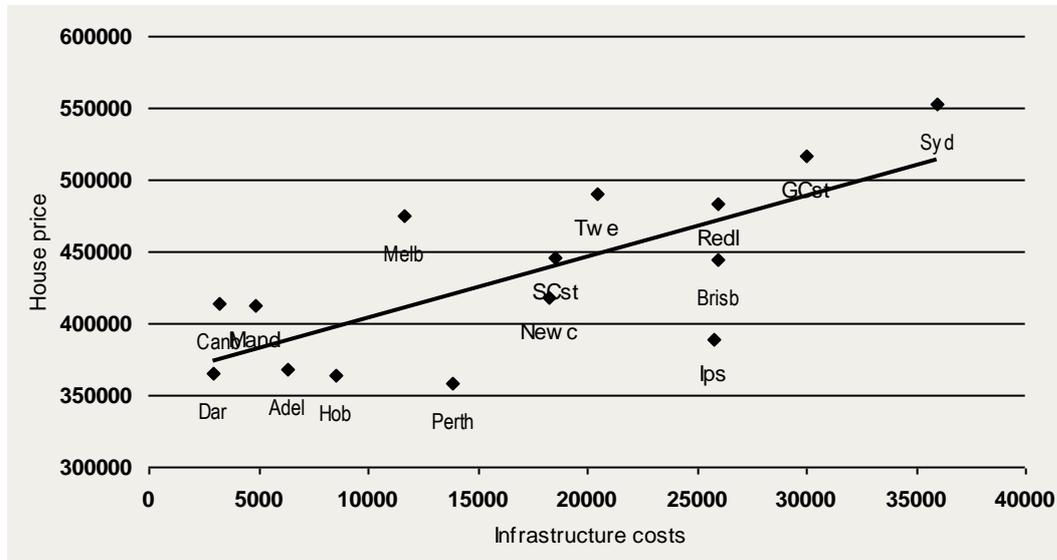
	<i>Typical Market price (\$)</i>	<i>Minimum market price (\$)</i>	<i>Maximum market price (\$)</i>
Sydney 09	552 573	480 000	665 000
Gold Coast	516 667	440 000	560 000
Tweed	490 000	435 000	585 000
Redland	484 000	399 000	599 000
Melbourne 09	475 000	475 000	475 000
Sunshine Coast	445 500	417 000	465 000
Brisb	445 000	400 000	560 000
Newcastle	418 250	345 000	480 000
Canberra	413 584	365 000	575 000
Mandurah	412 000	350 000	449 000
Ipswich	388 333	365 000	415 000
Adelaide	367 667	359 000	385 000
Darwin	365 000	350 000	380 000
Hobart	364 000	350 000	380 000
Perth	357 667	345 000	379 000

Source: Davis Langdon

### *Infrastructure charges and new house affordability*

Results regarding house prices in new development areas and infrastructure charges across Australia's capital cities and some regional centres are reported in the chart below. The spread of the results is suggestive of a relationship between these two factors, and moreover that that relationship is *positive*. That is, from the chart below, it appears that the greater are infrastructure charges and contributions, the greater is the final house price in the cities studied. A trend line has been plotted through the data points to better illustrate this relationship.

### 5.21 House prices and infrastructure charges



Data source: Davis Langdon.

How robust this relationship is cannot be determined without conducting appropriate tests for statistical significance. Testing for statistical significance is especially important here because of the small sample size used to produce the chart.

An ordinary least squares (OLS) estimation (sometimes called an OLS regression) can provide a measure of the robustness of a relationship. An OLS estimation will essentially estimate the trend line depicted in the chart above, and it will do this while accounting for a multiple of other variables. More formally, an OLS regression estimates the relationship between the variance in a dependent variable, and the variance in a set of independent variables.

For the purposes of this study, an OLS regression has been used to estimate the following:

$$\text{Price} = \beta_0 + \beta_1 \text{inf} + \beta_2 D + \varepsilon$$

Where: Price denotes house price; inf denotes infrastructure costs; D is a 'dummy' variable equal to 1 if the data point refers to a regional centre;  $\varepsilon$  is the residual error term; and  $\beta$  represents the respective coefficients for the constant and independent variables. The  $\beta$  terms provide a measure of the partial change generated in the dependent variable (house price) from an increase in the independent variables (infrastructure costs and the regional dummy). The variance in house prices not captured by changes in the available data is represented by the residual error term,  $\varepsilon$ .

The OLS was conducted using two specifications. The first (Model 1) is as suggested in the equation above, where the OLS is performed using the dollar values of house prices and infrastructure costs. The second specification (Model 2) is a slight variant on this and is conducted using the natural logs of housing prices and infrastructure

costs. This is a technique employed to assist with the interpretation of the coefficients. The results of both specifications are reported in table 5.22. In both specifications the estimate of the coefficient on infrastructure costs was found to be both positive and significant at the 5 per cent level. This means that the positive relationship observed in chart 5.21 above is robust. Notably, the dummy variable was found to be insignificantly different from zero. Or in other words, whether or not a house development is located in a capital city or another city, the relationship between infrastructure costs and house prices is the same.

The key difference between the two specifications lies in the interpretation of estimated coefficients. In Model 1, the estimated coefficient for infrastructure costs reports that a \$1 increase infrastructure costs leads to a \$4.15 increase in the house price. In Model 2, the coefficients can be interpreted as the proportional change induced. That is, Model 2 estimates that a 10 per cent increase in infrastructure costs leads to a 1.3 per cent increase in house prices. Both specifications suggest that house prices are responsive to infrastructure charges.

## 5.22 Regression analysis

<i>Variable</i>	<i>Model 1</i>	<i>Model 2</i>
	<i>Cost</i>	<i>Ln(Cost)</i>
Constant	361 271** (22 831)	11.99** (0.38)
Infrastructure costs	4.15** (1.21)	
Ln(Infrastructure costs)		0.10** (0.04)
Regional dummy (regional city = 1)	4 325 (24 661)	0.02 (0.06)
Observations	15	15
R-squared	0.53	0.41
Adjusted R-squared	0.46	0.31

Note: Coefficients that are statistically significant at a 5 per cent level are indicated with \*\*; and coefficients that are statistically significant at a 10 per cent level with \*.

Source: CIE estimates

## Key points

- Infrastructure charges add to the cost of developing new housing in broadhectare developments.
- Reflecting increases in infrastructure charges and other measures, Government taxes, charges and compliance costs have risen to very high amounts:
  - they now amount to around \$160 000 in a typical development in Sydney; and

- these are now more expensive than the cost of land in all capital cities in Australia.
- Cities where infrastructure charges are high also have high new house prices in broadhectare developments.

## 6 *Infill development costs: a case study*

## 7 *What if things were different?*

Adopting a different approach to paying for infrastructure could make a material difference to home affordability in key cities in Australia and contribute towards better economic outcomes.

### *Improving new house affordability*

A challenge in thinking about different infrastructure contribution arrangements is in ensuing that any comparison also takes into account a level of infrastructure provision that is associated with a certain level of contributions. To do this it is worthwhile to establish a benchmark in terms of infrastructure contributions and infrastructure provision.

A benchmark proposed in this study is the arrangements that apply in Melbourne in 2009. Developer contributions for the new growth areas in Melbourne extract an average of around \$12 000 per house in the development analysed in this study. Regarding the level of infrastructure services provision, the Victorian Government has flagged a level of service provision that meets the expectations of the community that are probably little different to that of any prospective buyer in new housing release areas in any Australian city.

Using Melbourne as a benchmark it is possible to calculate some outcomes if similar charges were applied in other cities. The difference between existing infrastructure charges and new charges for each city studied are reported in chart 7.1.

A key point is that infrastructure charges in most of the cities studied would fall if they were aligned to those applying to meet the needs of the Melbourne benchmark.<sup>5</sup>

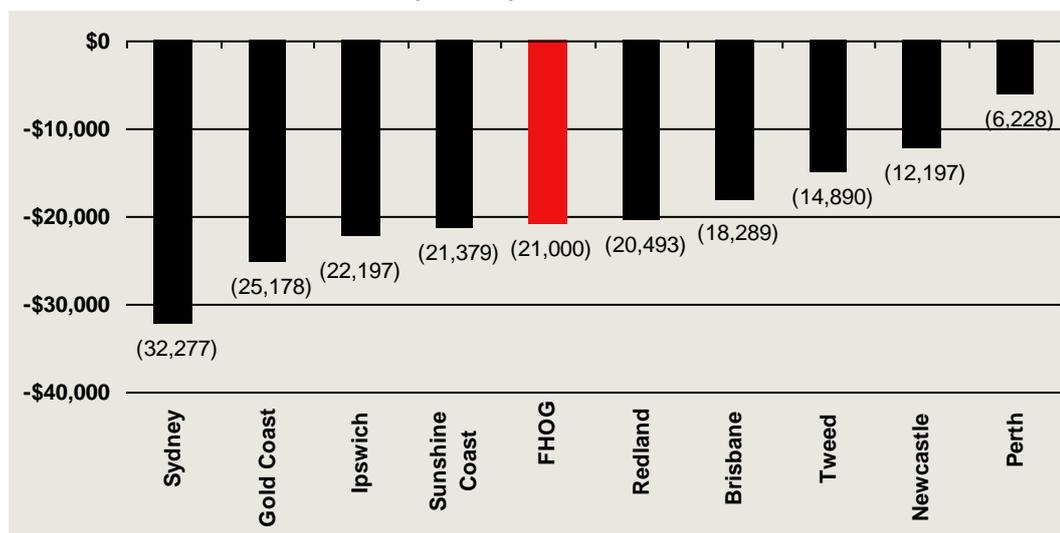
In Sydney, for example, a family purchasing a new house would pay around \$38 000 less than they do now. This is equivalent to 1.8 times the First Home Owners Boost (FHOB) that a household may obtain from the Australian Government. It is likely that, in a competitive market, reducing the cost of supply would translate into clear cut cost savings for buyers, while there is some concern that measures that mainly

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<sup>5</sup> The chapter does not examine the need to raise infrastructure charges in cities where current charges are slightly below the Melbourne benchmark. This includes Canberra, Adelaide and Darwin, cities that are not characterised by a chronic lack of infrastructure provision.

work by stimulating demand for housing, such as the FHOB, leak into higher prices for vendors.

**7.1 Difference in final house cost if infrastructure charges were equal to those in Melbourne, selected cities (\$, 2009)**

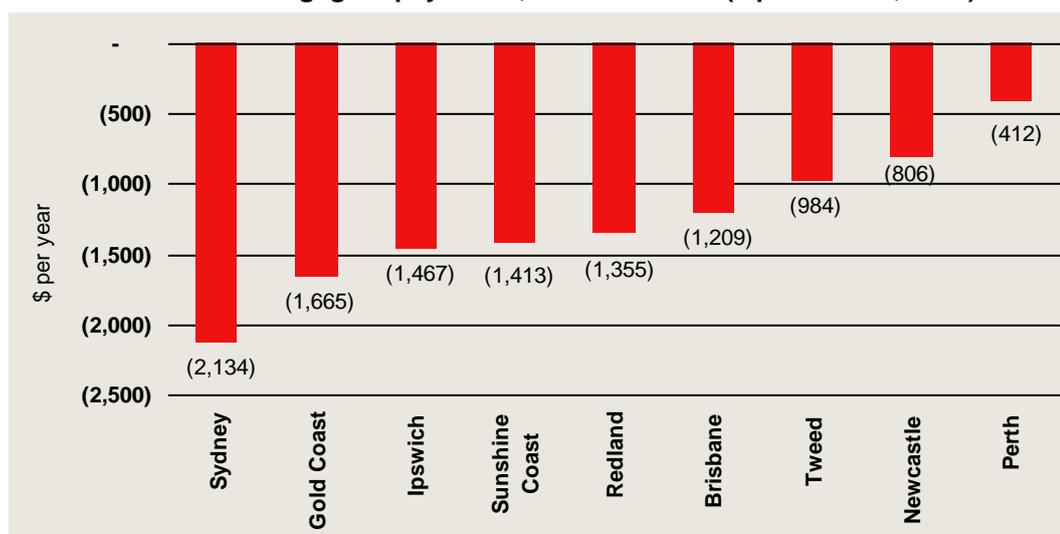


<sup>a</sup> FHOG = First Home Owners Grant.

Data Source: Davis Langdon.

It is useful to look at the same change in terms of the difference it would make to the average household's costs in servicing a new home mortgage where a negative number is a cost saving to the household (chart 7.2).

**7.2 Difference in mortgage repayments, selected cities (\$ per annum, 2009)**



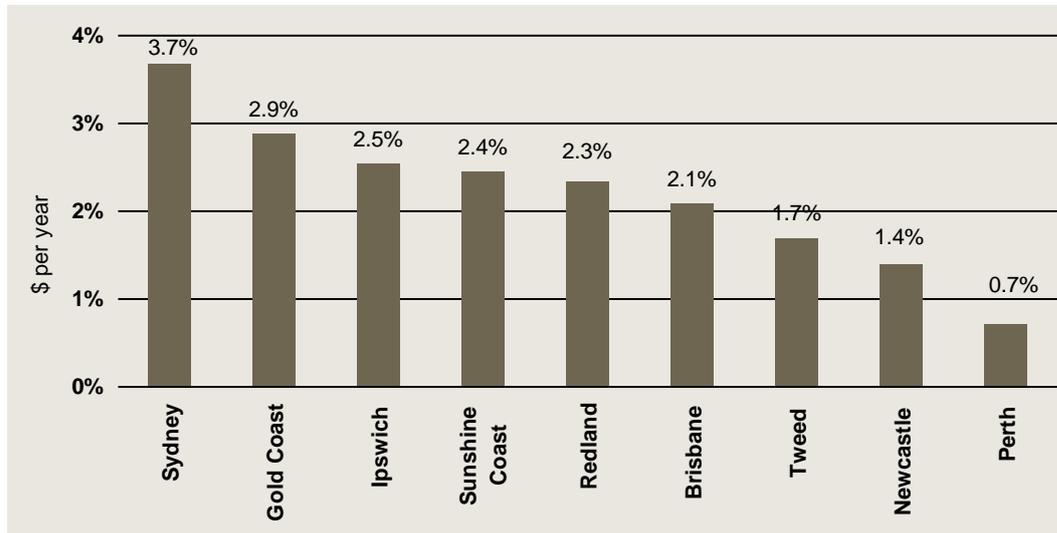
<sup>a</sup> Calculated using the median household income in Australia as at November 2008 (approximately \$58 000 pa) and the following mortgage assumptions: standard loan, 5 per cent deposit, standard variable rate of 4.9 per cent p.a. and a 25 year repayment period.

Source: CIE estimates using data provided by Davis Langdon.

Broadly, households in most of the cities studied would obtain lower payments. If infrastructure charges in Sydney were as much as in Melbourne, the median Australian household buying a new house in Sydney would save an average of \$2 134 pa in mortgage repayments.

It is possible to put these changes into perspective by comparing them as a share of median household income. This is reported in chart 7.3. Thus the change could provide cost savings to homeowners in Sydney that have a value equivalent to 3.7 per cent of median household income. This would be a boost that is sustained for many years rather than just the year in which a household buys their home.

### 7.3 Difference in mortgage repayments as a share of median household income, selected cities (per cent, 2009)



<sup>a</sup> Calculated using the median household income in Australia as at November 2008 (approximately \$58 000 pa) and the following mortgage assumptions: standard loan, 5 per cent deposit, standard variable rate of 4.9 per cent p.a. and a 25 year repayment period.

Source: CIE estimates using data provided by Davis Langdon.

### *Broader economic implications of change*

One industry concern about infrastructure charges is that they are not as efficient in practice as they may appear to some economists and the governments that use them. The case that they are an aid to efficiency is based on the view that they are cost reflective. That is, that infrastructure charges are set to recover the actual cost of providing public infrastructure necessary to support new development. They then provide a price signal about the cost to the community of development in one location compared to others. As noted earlier in this study, it is very difficult in practice to obtain information in advance about the full cost of infrastructure contributions that will be required. The price signal effect cannot work in these circumstances.

There is also increasing recognition of the economic inefficiencies inherent in developer contributions in practice. This arises from the distorting influence that they provide.

In economic terms a distorting tax is one that changes economic decisions. This is easier to explain in comparison to the ideal of a non-distorting tax. In simple theory, land taxes applied evenly to all land everywhere would be non-distorting because the supply of land is fixed (although this view overlooks the fact that capital can substitute for land in the longer term, evidenced by multi-story offices and factories in some places). Changing land taxes is unlikely to change the supply of land, its relative scarcity, and therefore 'perfect' land taxation is viewed as leaving the rest of the economy largely unchanged. Developer contributions in contrast are applied to developers in the middle of a supply chain where many elements are variable, including the size of development activity (its output), its prices, its use of economic inputs such as capital and labour, which are not fixed and are able to move to other sectors or places.

Developers face many choices when they confront infrastructure charges, including passing the charge backwards to landholders, passing it on to their shareholders (in terms of lower profits), passing it on to their employees (lower wages) or passing it forward as higher prices to their customers (home buyers). There are many possibilities, but given the highly competitive nature of the property development industry with few barriers to entry (and exit), there is reason to expect that a large share of infrastructure charges will be passed forward to home buyers.

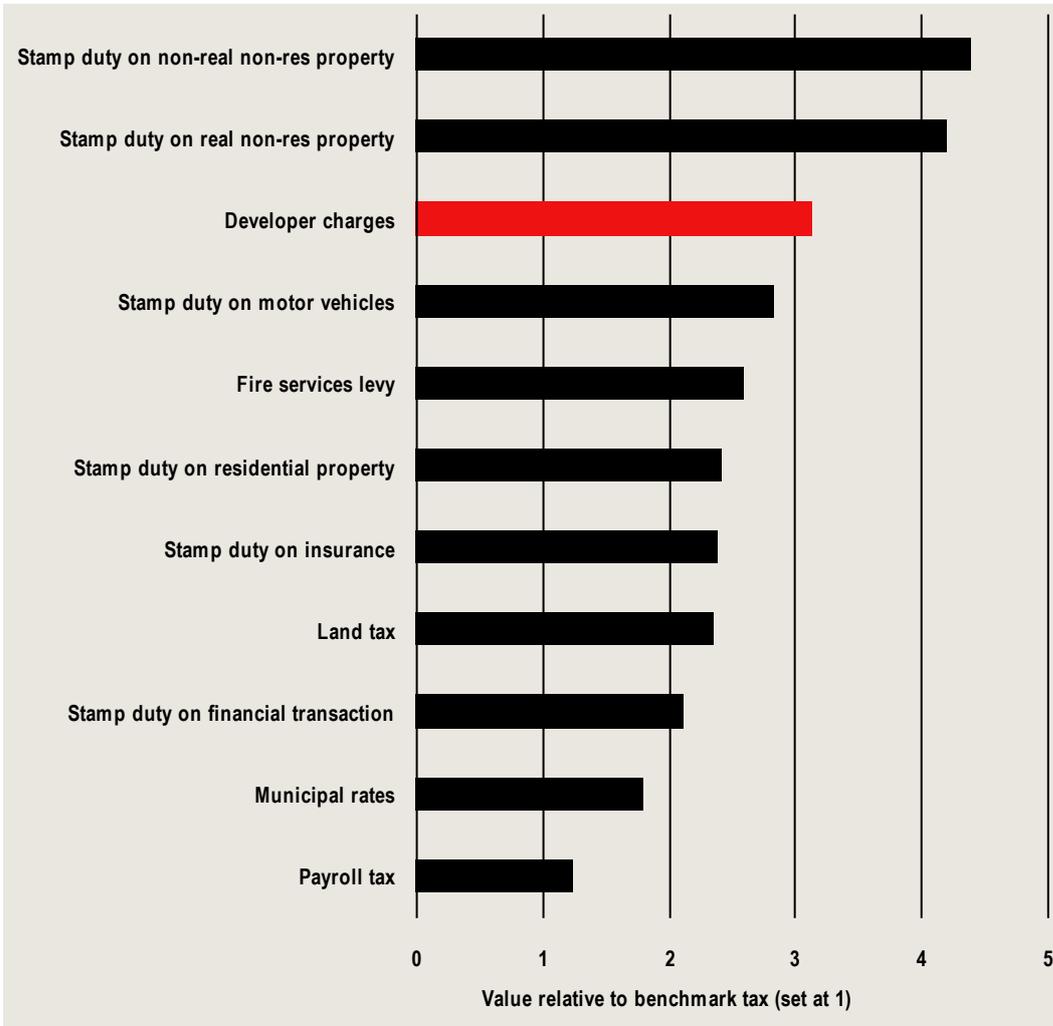
These points suggest that developer contributions and infrastructure charges will in practice introduce economic distortions. That is, infrastructure charges will lead to changes in prices faced by home buyers. Evidence provided earlier in this report suggests that there has been a relationship between higher infrastructure charges and higher house prices in the broadhectare developments provided in Australia's cities in 2009.

More recent studies assessing the relative distortions in different taxes and charges applied by state and local governments provide further reason to suspect that developer contributions involve significant distortions and that they are more distorting than alternative taxes that are available to government. An assessment of the distorting impact of taxes and charges requires examination of economic outcomes with and without changes in taxes. Governments can not afford to conduct tax experiments on the community so in practice the only way of assessing tax distortions is the use of economic models.

The Business Coalition for Tax Reform (BCTR) recently conducted a thorough review of state and local taxes which was used to form part of their submission to the ongoing 'root and branch' examination of the tax system being conducted in the

'Henry' review. Some results of this thorough economic analysis of different state taxes are provided in chart 7.4.

#### 7.4 Efficiency ranking (Index of cost to growth where benchmark tax =1)



<sup>a</sup> There are two types of non-residential property – real and non-real. Real non-residential property refers to realty property such as buildings and land. Non-real non-residential property refers to non-realty property such as copyright and intellectual property. *Data source:* CIE (2009), "State business tax reform: Seeding the tax reform debate", report for the Business Coalition for Tax Reform.

Chart 7.4 ranks different taxes according to their comparison to changes in a benchmark tax. An index score of greater than one in the chart means that a tax introduces greater distortions than the benchmark tax. The taxes at the top of the chart introduce the greatest distortions. Those at the bottom involve lower levels of distortions.<sup>6</sup>

<sup>6</sup> The benchmark tax in this analysis was the Goods and Services Tax (GST) applied by the Australian Government with revenue provided to the States. This was selected as a benchmark for technical reasons to assist in the study, including the fact that it is a tax that is levied at the same rate in every State's economy. It is notable that some state taxes are

Looking at chart 7.4 it is clear that developer charges have a high ranking in terms of taxes that induce distortions. In addition it is also clear that there are many better taxes than developer charges. Developer charges are among the worst taxes and charges used by state and local governments.

Understanding that different taxes and charges involve different economic costs is a key to raising value. Replacing bad taxes with better taxes has the potential to make everyone better off.

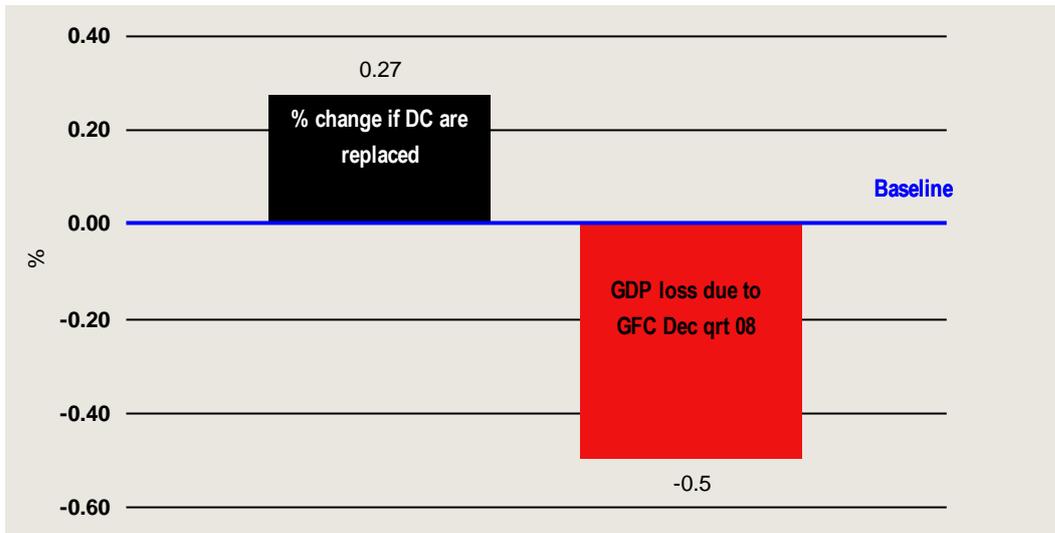
Economic analysis indicates that replacing developer contributions with better taxes would make a substantial improvement to economic outcomes. Using the same economic modelling tools used by the Business Coalition for Tax Reform recently the consulting team examined what would happen if developer contributions paid to local councils in NSW, Victoria and Queensland (which are estimated to raise around \$1.5 billion in 2005-06, the time period used in the baseline in the model) were replaced with revenue raised by the benchmark tax (the GST). The main finding from this analysis is that this change would increase GDP by 0.27 per cent.

It may help to put the potential increase in GDP from replacement of some developer contributions with better taxes into context. Chart 7.5 illustrates the increase in GDP from the change in taxes and compares this with the reduction in GDP experienced over the December quarter of 2008 when the Australian economy was feeling the effects of the Global Financial Crisis. Essentially replacing developer contributions with better taxes could recover around half the contraction felt in the GFC.

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not what they appear to be. Stamp duties are not taxes on property, but are taxes on property transactions. The actual rates applied in these transaction taxes are high relative to the value of the transactions which in part explains the high index scores for transactions taxes. Land taxes differ from municipal rates because extensive exemptions from land taxes narrow the base (and raise the distorting effect) while municipal rates are levied more universally.

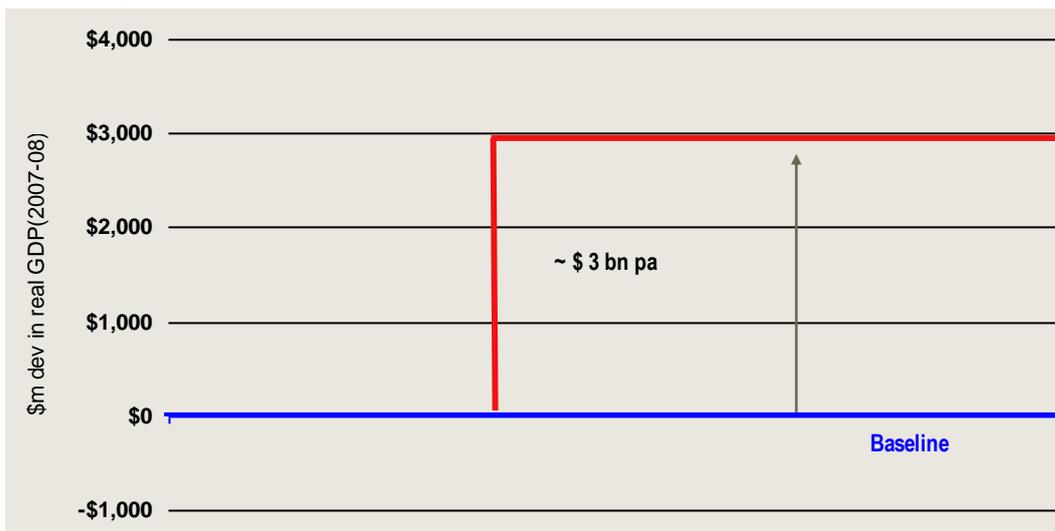
7.5 Long run impacts on GDP (per cent deviation from baseline)



<sup>a</sup> Includes developer contributions paid to Local Councils in NSW, VIC and QLD (~\$1.5 billion in 2005-06).  
 Data source: CIE estimates based on CIE (2009, report for the Business Coalition for Tax Reform).

It may also help to put the magnitude of potential gains from replacing developer contributions with better taxes into perspective by looking at the value of the gains in economic activity in dollar values. In terms of the economy today a 0.27 per cent increase in GDP has a value of around \$3 billion. That is, the measure would result in an increase in activity upon the baseline projection of around \$3 billion per annum for many years into the future.

7.6 Long run impacts on GDP (deviation from baseline, \$m in 2007-08)



<sup>a</sup> Includes developer contributions paid to Local Councils in NSW, VIC and QLD (~\$1.5 billion in 2005-06).  
 Data source: CIE estimates based on CIE (2009, report for the Business Coalition for Tax Reform).

It may be important to note that this increase is not due to the elimination of a tax or charge. What has been analysed is the revenue neutral replacement of distorting taxes and charges with less distorting taxes. Government budgets are largely

unchanged (except for the increase in revenue due to the additional growth). The community still pays the same amount in taxes, but pays taxes that involve less harm to the economy than developer contributions to pay for the infrastructure that is needed.

### *Key points*

- **Capping infrastructure contributions to a reasonable benchmark (aligning contributions to those currently collected in broadacre housing development Melbourne) would:**
  - reduce development costs in many if not most cities;
  - drop costs, in Sydney for example, by around \$38 000 — this is more than 1.8 times the value of the FHOB; and
  - reduce mortgage repayments in most cities — reducing repayments by more than \$2 000 per annum in Sydney, which is equivalent to an increase in average household income of around 3.7 per cent.
- **Replacing infrastructure contributions with a more efficient tax would improve economic outcomes for everybody. Using conservative approaches it is estimated that this would:**
  - raise GDP by around 0.3 per cent; and
  - add around \$3 billion to output each year.

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