Confidential

Landcost: the impact of land costs on housing affordability

Second Edition

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ACIL Tasman

Economics Policy Strategy

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Executive summary

This report is an update of the 2002 report*: Landcost: The impact of land costs on housing affordability*. It has been written to co-incide with the 2003 National Congress. The report found that there was little change in both housing trends and issues from 2002. The major areas of change were in the number of housing developments (Section 2.2) which have risen sharply over the past four quarters; and in the complexity of approvals processes which have added to delays in government approvals processes (Section 5) and therefore the cost of housing.

The rising cost of residential land continues to reduce housing access for many Australian families (Section 3). The 2002 report found that for every $10,000 increase in the cost of developing residential land, 240,000 Australian households (4 percent of income earning households) are no longer able to afford a basic house/land package.

Government requirements, charges and levies related to infrastructure provision are significant contributors to the high cost of developing land. Government directly contributes to the cost of land through taxes and charges. The public sector continues to dominate the provision of urban infrastructure. In areas where infrastructure and other services have been privatised, householders have benefited in the form of lower prices and improved service standards. The provision of urban infrastructure has not benefited from competition to any significant extent as it has remained predominantly in the hands of monopoly public sector providers. Moreover, developers have to bear an increasing share of the costs of establishing urban infrastructure.

Government also has a direct and indirect impact on the costs of developing urban land. This is through their policies in relation to the release of land for urban development, the standards that they impose on developers and the timeliness in which they administer the approvals process. Stricter standards have major implications for affordability, particularly in low income and first home buyer segments of the market for new housing. There is compelling evidence, as detailed in this report from information collected in 2002, that new home buyers are subsidising the costs of infrastructure and social facilities that benefit the broader community.

The timeliness of the government approvals process was a common concern amongst developers Australia-wide. All States were of the opinion that the growing number of regulations and their increasing complexity adding to the delays in the approvals process. In turn, these delays added to the cost of

development and increased the uncertainty of current and future developments.

Despite the growing costs, 2002 recorded a sharp increase in the number of dwelling commencements from 2001. This increase has resulted in a trend of just over 150,000 new commencements per annum for the past 10 years which suggests we can expect around 3 million new dwellings to be constructed by 2020. It is therefore essential that the UDIA stay abreast of issues that affect the cost of land development and in particular, the role all levels of government have in that process.

The report is structured as follows:

- Section 2 considers the outlook for housing demand to 2020. This indicates that demand for housing grow at rates comparable to the past two decades. This will mean continued strong demand for land and associated infrastructure. The rate at which new land is released for development and linked to urban infrastructure along with the requirements paced on developers will determine the rate of increase in the costs of developed land and housing affordability.
- Section 3 examines trends in development costs and their impact on housing affordability. There has been a significant increase in the costs of developing land, mainly associated with increasing requirements placed on developers by regulations and approval processes. These costs can have a dramatic effect on affordability because a high proportion of Australian households is clustered in income brackets close to the affordability threshold.
- Section 4 examines trends in public sector spending on infrastructure. This demonstrates a long-term decline in public investment spending as a share of GDP throughout Australia. Spending on urban infrastructure has also fallen in most States. There has also been a significant shift from public to private provision of infrastructure.
- Section 5 examines a range of issues related to the regulations governing urban land development. The regulations have tended to force developers to incur significantly higher costs in developing land and these costs are passed on to homebuyers. Some regulations are in effect imposing minimum standards in terms of amenities and community facilities, which can significantly reduce the range of housing options available to lower income families.

1 Introduction

Declining public funding of infrastructure has contributed to a situation where more of the costs of developing residential land (including a wide range of infrastructure requirements) are being passed on to developers of broad hectares and urban in-fill projects. Moreover, there is a growing tendency for some of these costs to be charged up-front rather than recovered over time. This is having an adverse impact on the cost of developing land and results in increased affordability pressures.

Increasingly, governments are attempting to widen the infrastructure net by requiring developers (who pass on the increased costs to new home buyers) to pay for infrastructure and facilities which may not be directly related to the lots created and is likely to benefit and be used by the wider community. Some of the infrastructure and facilities are clearly of a social nature and should be funded by the wider community through the tax system. State and local authorities are also imposing an expanding range of demands for social infrastructure and setting stricter and more onerous development standards. Buyers of new developments are meeting this increasing cost, often to compensate for deficiencies and impacts of existing settlements and activities, for example, urban stormwater drainage systems.

2 The Housing Environment

Any discussion of land cost, infrastructure and affordability issues, as well as associated policy options, needs to be considered against the background of developments in the housing market. In particular, projections for the demand and type of new housing will assist in determining the associated requirements for residential land and urban infrastructure.

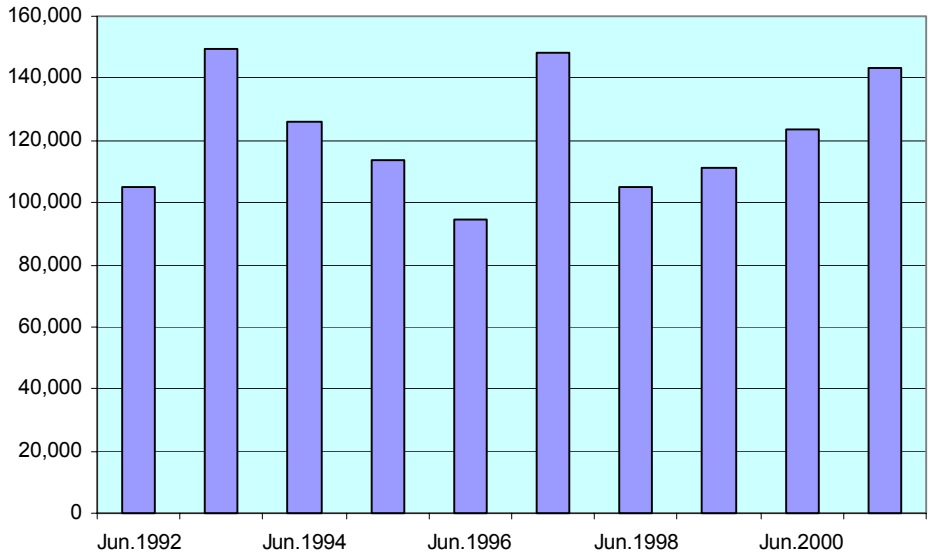
One factor influencing the housing environment over the next twenty years will be the change in a number of characteristics of Australian households. For example, the ageing of the population and more single person households and their preferences for different types of housing (the 'traditional' detached versus medium to high density, inclusions, infrastructure and social amenities)

2.1 Growth in the number of households

Demand for housing is directly related to the rate of population growth, and in particular the rate at which the population forms new households. At June 2001 there were 7.4 million households in Australia compared with 6.3 million

in 1992. On average about 122,000 new households are formed each year, although this has fluctuated considerably from year to year. The Australian Bureau of Statistics[1] projects that there will be between 9.4 and 10.0 million households in Australia by the year 2021.[2] Taking the mid point of this projected range, this implies a 31 percent growth in the number of Australian households over the next twenty years, or 115,000 new households per year. This is only moderately below the average annual rate of household formation over the past decade. Therefore, over the next twenty years, around 2.3 million households will be formed consisting of about 6.4 million persons (assuming the number of persons per household is the same as at present). The urban construction task for the next twenty years is therefore the equivalent of adding another Sydney and another Melbourne.

Figure 1 **Growth in the number of households in Australia: 1992 to 2001**



Data source: Australian Bureau of Statistics (2002), Australian Demographic Statistics, Cat No 3101.0

2.2 Demand for new dwellings

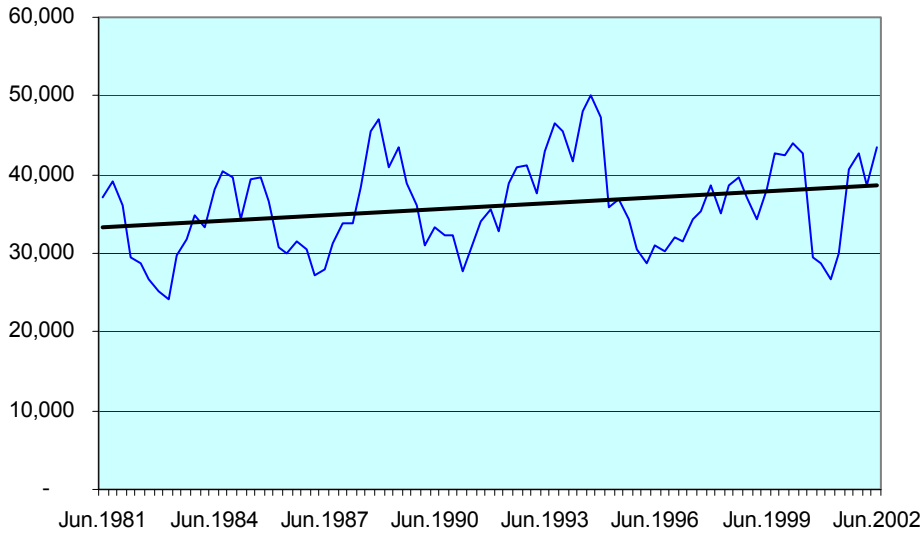
A longer-term perspective on dwelling construction is provided in Figure 2, which summarises dwelling commencements over the past two decades by quarter. While there have been regular and quite sharp cycles in building

1 Australian Bureau of Statistics (1999), Household and Family Projections, Australia: 1996-2021, Catalogue number 3236.0.

2 Household growth is projected to be faster than population growth (24%) over the projection period (1996 to 2021).

activity, the overall trend in dwelling commencements has shown a moderate but steady increase to reach just over 150,000 per year. If this trend continues, we would expect around 3 million new dwellings to be constructed by 2020. Over the past decade average annual dwelling commencements were 151,067 while average annual growth in households was 121,987. This gives a ratio of about 1.24 dwelling commencements per new household, reflecting retirement of dwellings from the housing stock. These figures represent a slight increase from previous years and are a reflection of the sharp increase in unit commencements over 2002 compared to 2001.

Figure 2 **Dwelling Unit Commencements: Quarterly June 1981 to June 2002**



Data source: Australian Bureau of Statistics (2002), Building Activity, Australia: Dwelling Unit Commencements, Preliminary, Cat No8750.0.

Australians have traditionally had strong preference for detached dwellings. This is likely to continue to be the case in most parts of Australia, particularly for those families with children. According to the 1999 Australian Bureau of Statistics Housing Survey (as in the previous Housing Survey conducted in 1994), 79 percent of homes across Australia were detached houses (see Table 1).[3] There has not been an increase in the relative importance of semi-detached houses and flats for Australia as a whole. The proportion of owners was also identical, at 70.1 percent of households. However, in Sydney and Melbourne there have been strong trends toward the majority of new dwellings being some form of medium density/high density housing. In Sydney, about 60 percent of new dwelling construction is some form of medium/high density housing. This is also occurring in other States, albeit at a much slower rate.

[3] Australian Bureau of Statistics (1999), Housing Survey 1998-99.

Table 1 **All Households: Tenure and Private Dwelling Structure — 1994 and 1999**

Selected characteristics	1994		1999	
	'000	%	'000	%
Owners				
Owner without a mortgage(a)	2 793.9	41.8	2 800.3	38.8
Owner with a mortgage(a)	1 890.3	28.3	2 256.1	31.3
Total owners	4 684.2	70.1	5 056.4	70.1
Renter		70.1		70.1
State housing authority	414.8	6.2	368.8	5.1
Private landlord	1 271.4	19.0	1 463.2	20.3
Total renters(b)	1 845.1	27.6	1 966.6	27.3
Total(c)	6 677.9	100.0	7 216.9	100.0
Private dwelling structure				
Separate house	5 300.7	79.4	5 735.4	79.5
Semidetached	527.9	7.9	641.4	8.9
Flat	832.5	12.5	798.5	11.1
Total(d)	6 677.9	100.0	7 216.9	100.0

Note: (a) Note: Care should be taken when comparing the data for owners with and without a mortgage from the 1994 and 1999 surveys as the methodology for collecting these data differed between the two surveys.

(b) Includes other renter.

(c) Includes rent free and other tenure.

(d) Includes other private dwelling structure.

Source: Australian Bureau of Statistics (2000), Australian Housing Survey Housing Characteristics, Costs and Conditions 1999, catalogue no. 4182.0

According to the ABS Housing Survey (2000), the majority (57 percent) of separate houses had three bedrooms while a further 29 percent had four or more bedrooms. In contrast, 58 percent of semi-detached homes and 86 percent of flats had only one or two bedrooms. The type and size of dwelling varied considerably across different life-cycle groups. For example:

- Households comprising young single persons were most likely to live in semi-detached dwellings or flats (53 percent), and in dwellings with one or two bedrooms (63 percent);
- Young couple only households were most likely to live in a separate house (68 percent), and in dwellings with three or more bedrooms (60 percent);
- Almost all couples with both dependent and non-dependent children, lived in a separate house (97 percent), and in dwellings with at least three bedrooms (99 percent);
- Older persons living in a couple only household (where the reference person was aged 65 or over) were more likely to live in separate dwellings than households containing a single person aged 65 or over (87 percent compared to 65 percent); and
- One parent households with dependent children were less likely to live in separate dwellings than couples with dependent children (76 percent

compared to 92 percent) and were also less likely to live in dwellings with at least three bedrooms (77 percent compared to 90 percent).

These characteristics suggests that the aging of the Australian population and other demographic changes may contribute to a rising share of medium and high density dwellings in the demand for new dwellings, but that detached housing will continue to be the major form of housing for the foreseeable future. In forecasting housing demand, ACIL Tasman assume that by 2020 only 75 percent of households will live in detached houses and 25 percent will live in semi-detached houses and flats.

Table 2 **Forecast new dwelling requirements: 2000 to 2020**

Dwelling type	2000		2020		Additional units	Plus 20 % for replacement	Average annual dwellings
Separate house	5,792,679	80%	6,790,000	75%	1,482,321	1,778,785	84,704
Semi-detached	645,242	9%	1,358,000	11%	421,758	506,110	24,100
Flat	804,740	11%	1,552,000	14%	553,260	663,912	31,615
Total	7,249,911	100%	9,700,000	100%	2,457,339	2,948,807	140,419

Note: Assumes 1.2 dwellings are required for each additional household to allow for retirement of dwellings from the stock of dwellings. In the 1990s this ratio was 1.25.

Source: ACIL Tasman forecasts.

The critical issue for land supply, infrastructure provision and affordability is that over the next 20 years Australia will require around 2.9 million additional dwellings to accommodate the projected increase of 2.5 million households. This is projected to consist of 1.8 million separate houses, 506,110 semi-detached houses and 663,912 flats or units.[4] The average rate of construction of new dwellings, at 140,419 per year, will be somewhat lower than the average during the 1990s of 150,089 new dwellings a year.

3 Development Costs and Affordability

3.1 Infrastructure and housing costs

To illustrate the importance of land costs to affordability, UDIA completed a detailed analysis of the costs of bringing on to the market residential lots in major growth corridors in Sydney, Brisbane, Perth and Adelaide. In each area,

[4] The projections for detached housing are very sensitive to trends in the density of housing demand. If there is a stronger trend to medium and high density housing (that is by 2020, 70 percent of housing is medium and high density housing), the number of detached houses required over the period will be around 1.2 million compared to 1.8 million under the assumption we have made (75 percent share of detached housing in total dwellings).

a typical home being built in the area was chosen for illustrative purposes. The results for 2002 are then compared with an earlier survey undertaken in 1992. [5] These results are summarised in the Tables 3 to 6.

There is significant variation in land costs across capital cities. There is also significant variation in housing prices. These variations are due to a range of factors such as the different price levels in the metropolitan markets, reflecting the influence of demand and supply, but also difference in land and housing quality between the suburbs in each city. What is of more interest is the composition of land costs and how these differ both across cities and over time. The major costs of developing land are described as follows.

Acquisition costs include value of raw land and legal fees associated with purchase. These costs vary significantly, due to different supply and demand conditions in each city and also due to different times at which the land was purchased by developers. In 2002, acquisition costs per block were lowest in Perth, at $10,500 and highest in Sydney, at $73,300. The raw land in Perth has been held by the owners for over twenty years so this understates the current market value of the land. The current market value is difficult to determine due to the lack of recent sales of broad-hectare land in the area.

[5] The costs refer to a typical house/land package sold in each location in each of the two years. A number of observations can be made before considering the data. The typical house built in the development corridors was about double the size of the typical house of ten years ago and there were more inclusions (such as ensuites, landscaping and garages).

Table 3 **Residential land costs ($ per lot) – Perth (Clarkson/Butler)**

Item	1992* Amount	1992* Percent of land cost	2002* Amount	2002* Percent of land cost	Real percent change
Acquisition	10,050	29%	10,700	20%	-14%
Direct Servicing	7,256	21%	20,790	39%	133%
External & Indirect Authority Requirements	2,735	8%		0%	
Government Taxes and Charges	6,780	20%	9,070	17%	9%
Financial & Management	5,588	16%	3,500	7%	- 49%
Selling Costs	1,690	5%	9,770	18%	369%
Total Development Costs	34,099	100%	53,830	100%	28%
Net Selling Price	37,000		64,600		
GST (remitted to ATO)	na		3,400		
		% of package		% of package	
Gross Land Price	37,000	47%	68,000	42%	49%
House Price	41,700	53%	95,399	58%	86%
House and Land Package	78,700	100%	163,399	100%	69%

(*) The Lawson at 125 square metres.

(**) The "Deakin" built by Dale Alcock Homes. Total area of 236m2. 4 bedrooms, study, 2 bathrooms, family and games room with integrated double garage.

Table 4 **Residential land costs ($ per lot) – Adelaide**

Item	1992 (Noarlunga) * Amount	1992 (Noarlunga) * Percent of land cost	2002 (Parafield Gardens) ** Amount	2002 (Parafield Gardens) ** Percent of land cost	Real percent change
Acquisition	9,530	32%	15,150	36%	29%
Direct Servicing	9,780	32%	17,460	42%	45%
External & Indirect Authority Requirements	2,464	8%	900	2%	- 70%
Government Taxes and Charges	1,470	5%	3,000	7%	66%
Financial & Management	4,533	15%	2,550	6%	- 54%
Selling Costs	2,395	8%	2,925	7%	- 1%
Total Development Costs	30,172	100%	41,985	100%	13%
Net Selling Price	33,000		55,000	31%	
GST (remitted to ATO)	na		2,600	1%	
		% of package		% of package	
Gross Land Price	33,000	40%	57,600	32%	42%
House Price	49,700	60%	120,000	68%	96%
House and Land Package	82,700	100%	177,600	100%	74%

* The Eureka at 116 square metres.

** The "Brighton 220" built by AV Jennings. Total area of 217.3m2, 3 bedrooms, 2 bathrooms, Family room and integrated double garage.

Table 5 **Residential land costs ($ per lot) – Sydney (Blacktown)**

	1992*		2002**		
Item	Amount	Percent of land cost	Amount	Percent of land cost	Real percent change
Acquisition	30,035	38%	73,700	46%	99%
Direct Servicing	13,068	17%	25,250	16%	57%
External & Indirect Authority Requirements	1,490	2%	2,000	1%	9%
Government Taxes and Charges	19,348	25%	31,750	20%	33%
Financial & Management	10,725	14%	18,800	12%	42%
Selling Costs	4,236	5%	7,880	5%	51%
Total Development Costs	78,902	100%	159,380	100%	64%
Net Selling Price	83,000		191,256	57%	
GST (remitted to ATO)	na		11,795	3%	
		% of package		% of package	
Gross Land Price	83,000	54%	203,051	60%	99%
House Price	72,000	46%	135,000	40%	52%
House and Land Package	155,000	100%	338,051	100%	77%

* The Sunrise at 120 square metres.

** The "Owen" built by New Harvest Homes. Total area of 177.8m2, 4 bedrooms, 2 bathrooms, family room and an integrated double garage.

Table 6 **Residential land costs ($ per lot) – Brisbane (Redlands)**

	1992*		2002*		
Item	Amount	Percent of land cost	Amount	Percent of land cost	Real percent change
Acquisition	18,052	34%	37,700	43%	70%
Direct Servicing	13,048	24%	22,845	26%	42%
External & Indirect Authority Requirements	3,466	6%	2,300	3%	- 46%
Government Taxes and Charges	5,938	11%	11,600	13%	59%
Financial & Management	9,100	17%	7,250	8%	- 35%
Selling Costs	3,960	7%	5,450	6%	12%
Total Development Costs	53,564	100%	87,145	100%	32%
Net Selling Price	65,000		107,500	46%	
GST (remitted to ATO)	na		6,800	3%	
		% of package		% of package	
Gross Land Price	65,000	51%	114,300	49%	43%
House Price	61,500	49%	120,000	51%	58%
House and Land Package	126,500	100%	234,300	100%	50%

* The Helidon at 124 square metres.

** The "Tamawood Hawker" built by Tamawood. Total area of 201 m^2, 4 bedrooms, 2 bathrooms, single storey and double garage.

Table 7 **Residential land costs ($ per lot) – Melbourne**

Item	1992* Amount	1992* Percent of land cost	2002** Amount	2002** Percent of land cost	Real percent change
Acquisition	8,350	**23%**	24,040	29%	134%
Direct Servicing	7,625	**21%**	28,720	35%	206%
External & Indirect Authority Requirements	1,490	**4%**	1,640	2%	-11%
Government Taxes and Charges	9,242	**26%**	16,535	20%	45%
Financial & Management	10,725	**30%**	4,400	5%	-67%
Selling Costs	4,236	**12%**	7,450	9%	43%
Total Development Costs	35,855	**100%**	82,785	100%	87%
Net Selling Price	40,000		92,000		
GST (remitted to ATO)	na		9,200		
Gross Land Price	40,000	**38%**	101,200	37%	105%
House Price*	64,500	**62%**	175,000	63%	120%
House and Land Package	104,500	**100%**	276,200	100%	115%

Note: * Eureka, 120 sqs/3.
** 24 sqs/3 bedroom/single garage

Direct servicing costs[6] include all land development works associated with the estate. Major cost components here are earthworks and retaining walls, landscaping (estate), storm water drainage, water, sewerage, underground power installation, road works and professional fees. Governments can influence the extent of these costs through setting requirements and standards. For example, stricter environmental controls have added to the costs of meeting direct service requirements for land. Direct servicing costs were broadly similar across the cities in 2002, being highest in Melbourne (at $28,720) and lowest in Adelaide (at $17,460). The higher costs in Melbourne were mainly explained by environmental controls on stormwater and roadworks. Perth and Melbourne recorded an alarming rise in the cost of direct servicing over the period from 1992 to 2002 being 133 and 206 per cent respectively.

External and indirect authority requirements are those costs incurred to undertake the development but are not directly or exclusively for the benefit of those who purchase housing in the estate. For example, the extension of roads and major road intersection work, main outfall sewer, main drain outfall and external electricity supply. These costs were generally only a few percent of the total cost of developing land. [7]

[6] In the 1992 Landcost report, the direct servicing costs were called development costs.

[7] There were no external and indirect costs for Perth because of the nature of the land chosen for the study – it is an immediate frontal development. As such, no external works

Government taxes and charges [8] include 'direct' charges imposed by local government and other Government bodies. For example, stamp duty on purchase of land, levies, public open space (POS) contributions and land tax. In 2002, government taxes and charges ranged from $31,750 per block in Sydney (20 percent of the cost of developed land) to $3,000 in Adelaide (17 percent of the cost of developed land). The main contributor to the higher costs in Sydney were developer contributions for local infrastructure (Section 94) [9] and higher stamp duty and land tax because of the higher land value. Costs were low in Adelaide because of the absence of government charges in relation to sewer, drainage and water. These costs were very significant in the case of Perth and Brisbane, and were also significant in Sydney.

Financial management costs include project management fees, interest incurred on purchase and development and a project contingency. Financial and management charges were much higher in Sydney, at $18,800 than in the other cities, due to development approval delays of up to and exceeding 5 years.

Selling costs include all costs associated with the sale of lots, including advertising, agent's commissions, legal and settlement fees and the cost of "incentives" provided to purchasers. In 2002, selling costs were highest in Perth, at $9,770. This reflected the inclusion of incentives to purchasers, such as landscaping and fencing. Agent's commissions varied significantly, but were highest in Sydney.

The most striking aspect of the composition of land costs is the high proportion attributable to development costs, excluding acquisition and selling costs. For all development corridors, the development costs exceed the costs of the raw land. In Perth and Melbourne, development costs account for 60 percent of total land cost, in Adelaide 57 percent and around 50 percent in both Sydney and Brisbane (see Figure 3).

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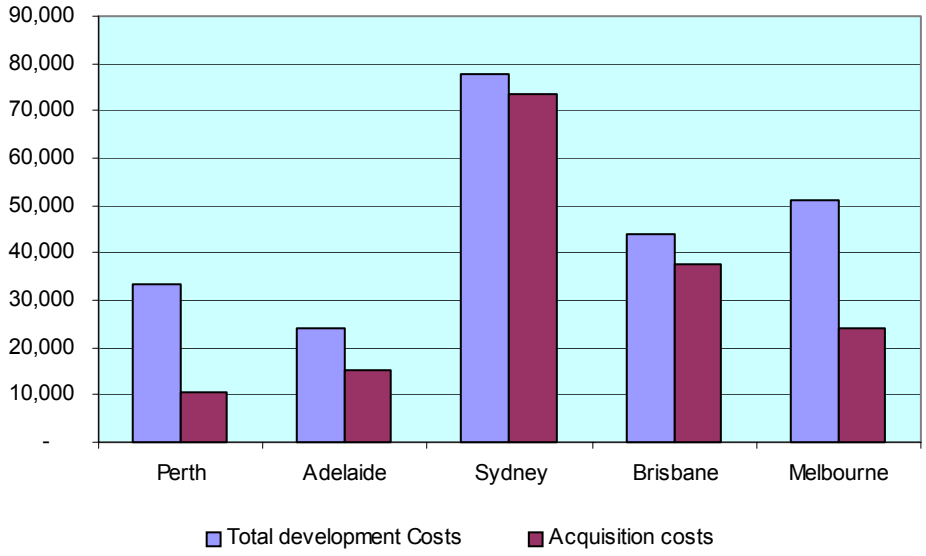
were necessary. External & Indirect costs for Sydney is difficult to determine accurately because of its relationship with Authority Costs. Government includes the majority of these costs as direct authority costs, though they may not be directly related to the development.

8 These costs were called authority costs in the 1992 report.

9 Includes all costs the local authority determines in accordance with their S.94 contributions plan for the area, for example, open space acquisition and embellishment, community facilities, environmental and conservation provision.

Figure 3 **Total development costs and acquisition costs**

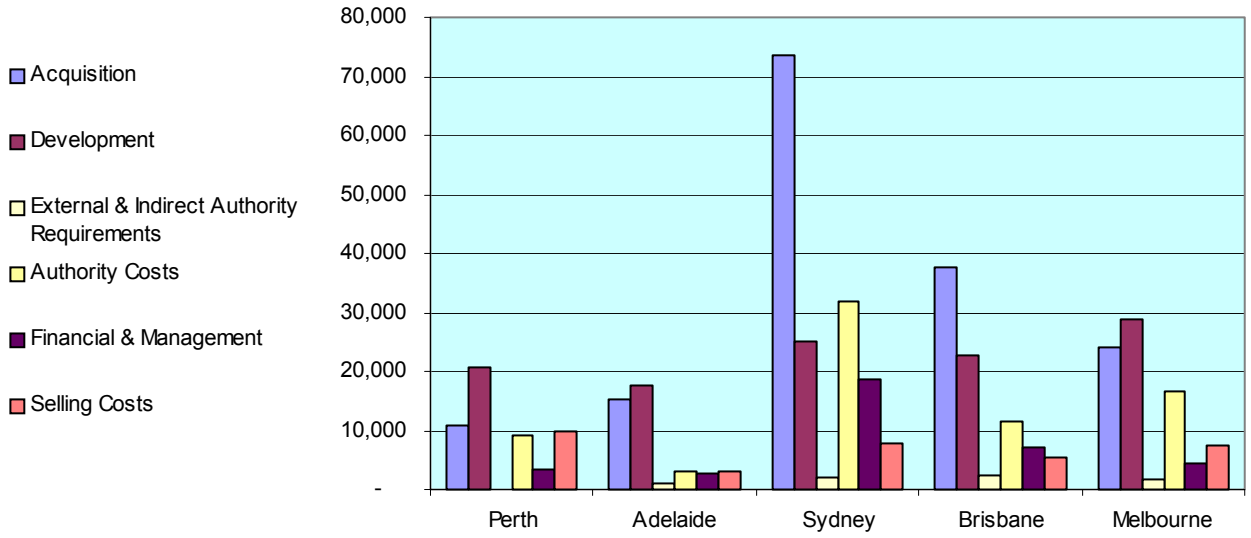


In real terms development costs (excluding acquisition and selling costs) rose in all cities over the period 1992 to 2002. Development costs, excluding acquisition and selling costs, rose by 21 percent in Perth between 1992 and 2002, by 41 percent in Sydney, 43 percent in Melbourne, by 13 percent in Brisbane and by 6 percent in Adelaide. The contribution to this increase in development costs of the various components of costs varied significantly:

- Financial and management costs fell significantly in real terms in all cities except Sydney, reflecting lower interest rates and also increased competition with developers having to contain, and in many instances reduce, their margin to remain competitive;
- External and indirect authority requirement costs fell by 70 percent in Adelaide, 11 percent in Melbourne and by 46 percent in Brisbane. These costs rose by only 9 percent in Sydney;
- Direct servicing costs rose substantially in real terms in all cities; the increase ranged from 206 percent in Melbourne and 133 percent in Perth to 42 percent in Brisbane; and
- Government taxes and charges rose by 9 percent in Perth, by 66 percent in Adelaide, by 33 percent in Sydney 45 percent in Melbourne and by 59 percent in Brisbane.

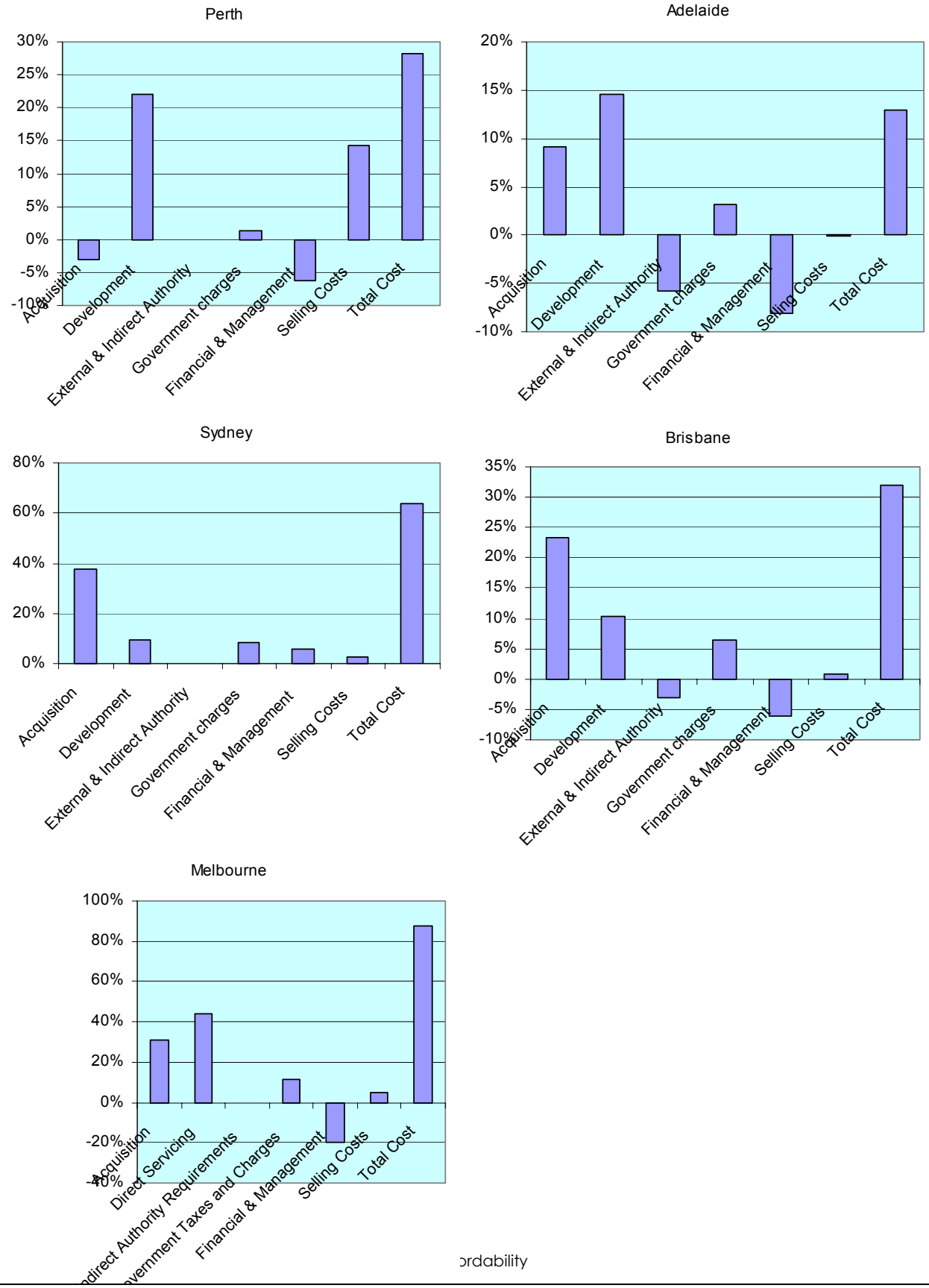
The main contributions to the increase in real land prices are illustrated in Figure 4.

Figure 4 **The major components of the cost of developing urban land in 2002**



In Perth, direct servicing costs and selling costs have contributed most to the increase in real land costs. In Adelaide and Melbourne, most of the increase in land costs was due to an increase in acquisition costs and direct servicing costs. In Sydney, over half of the cost increase was due to higher costs of acquiring undeveloped land. Direct servicing costs and government taxes and charges costs each accounted for about ten percent of the total increase. A similar situation applied in Brisbane.

Figure 5 **Contributions to increase in total land development costs in selected capital cities**



In these charts we have taken the total increase in costs of developing land and apportioned that increase in costs to each of the components. The height of the bars indicates the percentage point contribution on each category to the total percentage point increase in total development costs.

The following general conclusions can be drawn from the cost comparisons:

- The most important factor, in all cases but Perth [10] was the cost of acquiring land. The cost of raw land is driven by supply and demand conditions in land markets. State and local government policies can impact on the supply of land and any unnecessary constraints on the release of government owned land or approval for development of privately owned land need to be identified and assessed.
- Direct Servicing costs were the second most important factor in driving up land costs. Direct Servicing costs include all land development works associated with the estate. Major cost components here are earthworks and retaining walls, landscaping (estate), stormwater drainage, sewerage, water, underground power installation, roadworks and associated professional fees etc. More onerous standards set by State and local authorities and increased environmental controls also contributed to rising direct servicing costs.
- External and indirect authority costs either fell in real terms or remained unchanged. This was a relatively minor category of land development costs.
- Government taxes and charges directly accounted for a relatively small proportion of the increase in real costs. This understates the importance of state and local governments in driving up costs because of the impact of government policies, regulations and other requirements on direct servicing costs.
- Financial and management costs fell significantly in all capitals, except Sydney, reflecting lower interest rates. In Sydney, the increase was due to increased interest payments for holding land, caused by longer development approval times.
- Selling costs (agents' fees, advertising and marketing, legal fees) either fell or rose slightly in all cases except Perth. The increase in the latter was due to inclusion in this category of inducements to purchasers.

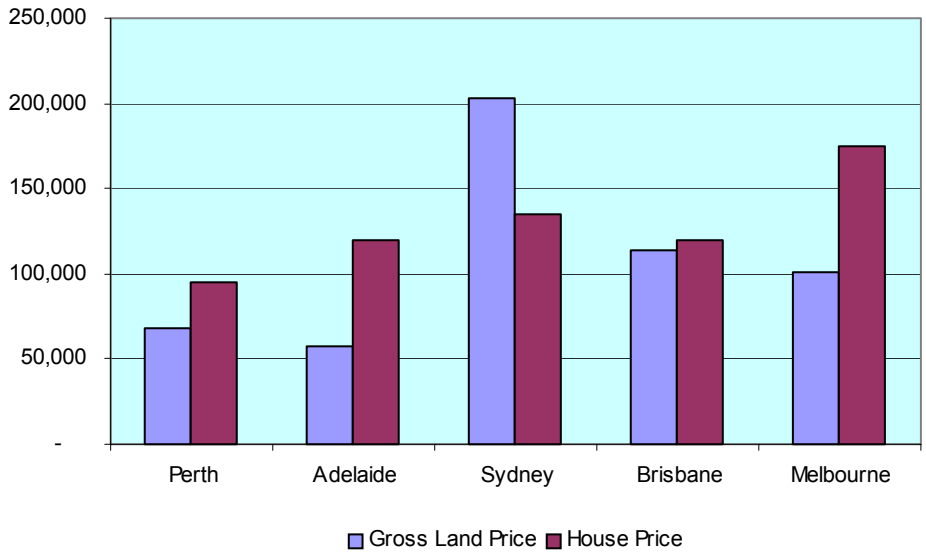
3.2 Land costs and affordability

Residential infrastructure costs and government charges and fees constitute a major part of the cost of land and therefore have a significant impact on housing affordability, particularly for those on modest incomes. Further moves to charge more of the full capital cost of infrastructure items up-front and reduced government provision of infrastructure will exacerbate the situation. Land accounts for a large proportion of the price of a typical house/land

[10] In Perth, the land was purchased long ago and it was not possible to obtain a current market valuation of the land.

package. In Sydney land accounted for 60 percent of the house/land package. Brisbane was somewhat lower at 49 percent.

Figure 6 **Land and house prices for selected capital cities**



In Table 7 we have calculated the family incomes that would be needed to afford the typical and comparable houses in each of these development corridors. The results indicate that the typical house is most affordable in Perth and Adelaide. In these cities, the required family income is $33,689 per annum in Perth and $36,617 in Adelaide.

Table 8 **Housing affordability ($)**

	Perth		Adelaide		Sydney		Brisbane		Melbourne	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
Land Price	37,000	68,000	33,000	57,600	83,000	203,051	65,000	114,300	40,000	101,200
House price	49,700	95,399	49,700	120,000	72,000	135,000	61,500	120,000	-64,500	175,000
House Land Package	86,700	163,399	82,700	177,600	155,000	338,051	126,500	234,300	-104,500	276,200
Land Component	43%	42%	40%	32%	54%	60%	51%	49%	-38%	37%
Deposit (a)	17,340	32,680	16,540	35,520	31,000	67,610	25,300	46,860	-20,900	55,000
Loan	69,360	130,719	66,160	142,080	124,000	270,441	101,200	187,440	-83,600	221,200
Monthly repayments (b)	663	842	697	915	1,306	1,742	1,066	1,208	-881	1,414
Required Family Income (c)	26,524	33,689	27,873	36,617	52,240	69,698	42,635	48,307	-35,240	56,560

(a) Based on 20 percent deposit

(b) In 1992, calculations are based on 25-year mortgage at 12 percent. In 2002, calculations based on 25 years at 6 percent.

(c) Family income required to ensure that repayments do not exceed 30 percent of gross income.

Note:

Housing is less affordable in Brisbane. In 2002, the family income required to afford the typical house was $48,000. The typical home is least affordable in Sydney and Melbourne. In Sydney a a family income of around $70,000 is required to afford the typical home whilst in Melbourne a family income of $56,560 is required. In 2000-2001, average weekly earnings were around $34,000.

Affordability is defined in terms of not more than 30 percent of gross household income being spent on mortgage repayments. To illustrate the impact of rising land costs on housing affordability in Australia, we examine a range of house/land price packages and compare this with the distribution of household income in 1999-2000. [11]

In 1999-2000, the average gross weekly income in Australia was $961 for wage and salary earning households and $726 for all households (see Table 9). In 1999-2000, the average income-earning household could afford, in terms of our definition, a house and land package of around $225,000 (based on a deposit of 20%, a 25-year repayment period and an interest rate of 6 percent). In 1994-95, the average income-earning household had a gross weekly income of $801. In 1994-95, that household could afford a house and land package of about $132,000. This is based on the fact that the average mortgage interest rate was around 10 percent in 1994-95. For households with working members, housing has become much more affordable over the past five years. However, this is not cause for complacency as many households are unable to afford basic housing.

Table 9 **Mean gross weekly income, by principal source for all income units ($)(a)**

Principal source of income	1994–95	1995–96	1996–97	1997–98	1999-00
Wages and salaries	801	816	844	888	961
Own business	850	916	908	956	1 085
Government cash benefits	231	238	254	256	267
Other income	420	432	507	546	603
Mean gross weekly income	596	609	625	658	726

Note: (a) The survey was not conducted in 1998–99.
Source: Australian Bureau of Statistics (2001), Income Distribution Australia: 1999-2000, Catalogue No 6523.0.

Nevertheless, there remain many households in the population who are unable to afford a home in today's market. In Table 10, house and land packages are shown to increase by increments of $10,000. The gross weekly household income required to purchase each house and land package is shown along with

[11] Australian Bureau of Statistics (2001), Income Distribution Australia: 1999-2000, Catalogue No 6523.0

the percentage of income earning households that can afford to purchase that house and land package. For households with earned income (from wages and salaries or own business), 36 percent can not afford even a low priced house and land package of $150,000. The maximum that 20 percent of households could afford to pay for a house and land package is $120,000.

Current trends in infrastructure funding, specifically direct up-front charging for capital costs, and the increasing demand for land for social and environmental purposes in estates, will continue to erode affordability. For each additional cost added onto the land development process, some families will be forced to drop out of the home purchase market.

Affordability is very sensitive to increases in price, given that distribution of household income is heavily concentrated in the bottom half of the income range. If land development costs were to rise by $10,000, around 234,000 income earning households, representing 4 percent of Australian income-earning households, would be unable to afford the $150,000 house/land package.

Table 10 **Housing affordability by income group**

House/ land package	Deposit	Loan	Monthly repayment	Required monthly income income	Required weekly income	Number of working income units	% of working income units (a)
120,000	24,000	96,000	$618.53	$2,061.76	$515.44	4,692,400	80%
130,000	26,000	104,000	$670.07	$2,233.58	$558.39	4,281,815	73%
140,000	28,000	112,000	$721.62	$2,405.39	$601.35	3,988,540	68%
150,000	30,000	120,000	$773.16	$2,577.21	$644.30	3,753,920	64%
160,000	32,000	128,000	$824.71	$2,749.02	$687.25	3,519,300	60%
170,000	34,000	136,000	$876.25	$2,920.83	$730.21	3,284,680	56%
180,000	36,000	144,000	$927.79	$3,092.65	$773.16	3,108,715	53%
190,000	38,000	152,000	$979.34	$3,264.46	$816.12	2,874,095	49%
200,000	40,000	160,000	$1,030.88	$3,436.27	$859.07	2,756,785	47%
210,000	42,000	168,000	$1,082.43	$3,608.09	$902.02	2,580,820	44%
220,000	44,000	176,000	$1,133.97	$3,779.90	$944.98	2,404,855	41%
230,000	46,000	184,000	$1,185.51	$3,951.72	$987.93	2,228,890	38%
240,000	48,000	192,000	$1,237.06	$4,123.53	$1,030.88	2,052,925	35%
250,000	50,000	200,000	$1,288.60	$4,295.34	$1,073.84	1,818,305	31%
300,000	60,000	240,000	$1,546.32	$5,154.41	$1,288.60	821,170	14%
350,000	70,000	280,000	$1,804.04	$6,013.48	$1,503.37	351,930	6%

(a) Income unit: One person or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children.

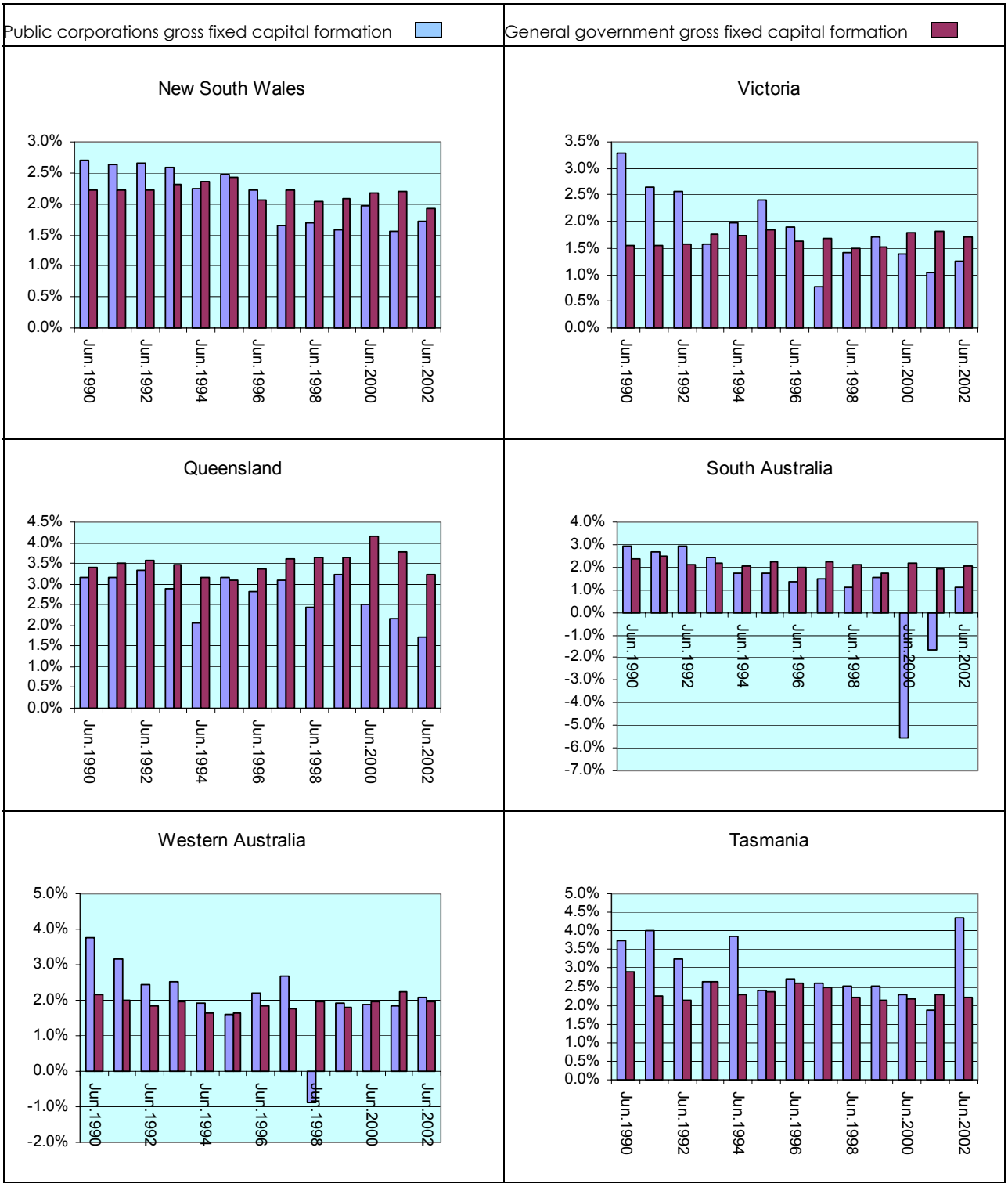
4 Public Funding of Infrastructure

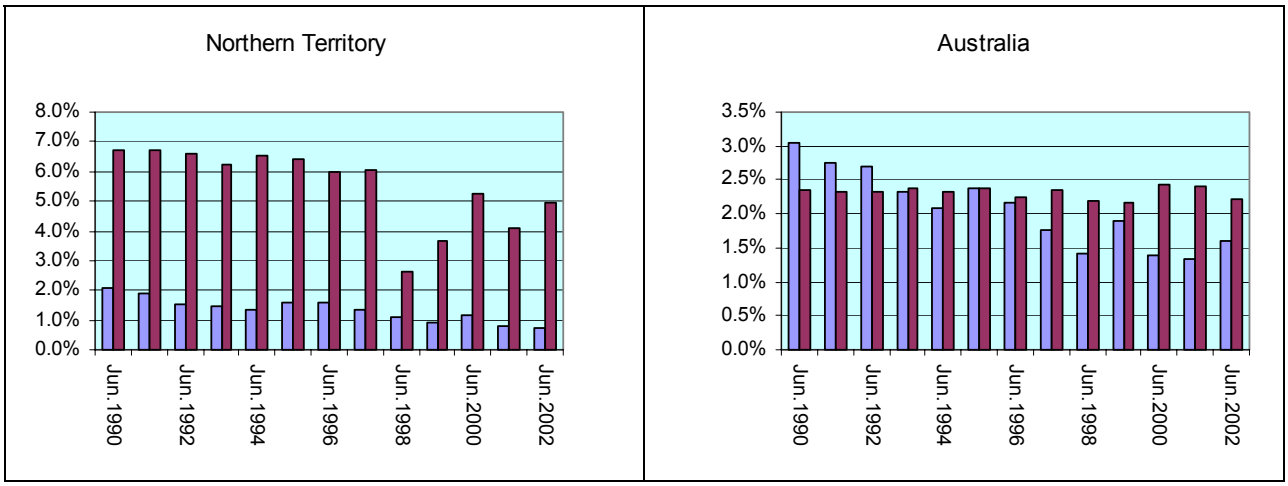
In the 1992 edition of this report, long term trends in public sector infrastructure funding were discussed. It was noted that between 1972-73 and 1990-91, real public sector outlays had almost doubled. The growth in the size of government was accompanied by a significant change in the composition of public spending. There was a major shift towards consumption spending (particularly personal benefit payments) and away from investment spending. In the 1970s, public sector investment spending accounted for around 3.8 percent of gross domestic product (GDP). In the 1980s, public sector investment averaged only 2.7 percent of GDP. Excluding public trading enterprises, general government investment spending fell 40 percent as a share of GDP over the period from 1970 to 1990. Commonwealth Government payments to the States also fell over this period, by around 14 percent as a percentage of GDP. At the start of the past decade, general government consumption expenditure accounted for 19.4 percent of GDP while investment spending was 2.5 percent.

These numbers are highly aggregate and mask a number of significant structural changes that have occurred in Australia, particularly in relation to the role of governments and the private sector in the provision of many goods and services, including infrastructure services. In the 1970s, the public sector paid for and built (with contractors or with own staff) almost all infrastructure and dominated the provision of infrastructure services such as electricity, gas, water, sewerage, roads, parks. State owned enterprises were also prominent in banking, airlines and public transport. Gathering momentum in the 1990s, there has been substantial privatisation of public trading and financial enterprises. The role of the government in market activities has shrunk back to the provision of basic economic and social infrastructure, although state governments still dominate electricity supply and urban transport in each of the four cities.

Much urban infrastructure is still the responsibility of state and local government. This includes roads, water and sewerage, parks, schools, community recreational facilities, waste removal and disposal, and urban transport in many States (rail and even buses). Table 11 presents data on investment spending by general government and by public trading enterprises at both the State and the Commonwealth level over the period 1989-90 to 2001-02. All of the data are expressed as a percentage of Gross State Product in the case of the States and Gross Domestic Product in the case of Australia as a whole.

Table 11 **Public sector spending in each state and by the Australian government 1989-90 to 2000-01 (percent of GSP/GDP)**





Source: Australian Bureau of Statistics (2002), Australian National Accounts: State Accounts, Cat No 5220.0

A comparison of public investment spending across States and Territories is presented in Table 11. In all States, and for Australia as a whole, public sector investment spending relative to GDP fell dramatically between the start and end of the past decade. This is partly a reflection of the diminishing size of the public corporations sector with privatisations at both the Commonwealth and State level. To obtain a better idea of infrastructure spending we will need to look to additional data that captures spending on infrastructure by both the private sector and the public sector (see below).

Table 12 **Trends in public sector investment spending across States and for Australia (share of GSP in 2002 and percent change since 1990).**

	NSW		VIC		QLD		SA	
	% of GSP	% fall	% of GSP	% fall	% of GSP	% fall	% of GSP	% fall
Public corporations gross fixed capital formation	2.1%	-37%	1.8%	-62%	2.8%	-46%	1.1%	-61%
General government gross fixed capital formation	2.2%	-13%	1.7%	11%	3.5%	-5%	2.1%	-13%
Total	4.3%	-50%	3.5%	-51%	6.3%	-51%	3.2%	-74%

	WA		TAS		NT		AUSTRALIA	
	% of GSP	% fall	% of GSP	% fall	% of GSP	% fall	% of GSP	% fall
Public corporations gross fixed capital formation	2.1%	-45%	3.0%	17%	1.5%	-70%	2.1%	-47%
General government gross fixed capital formation	1.9%	-9%	2.4%	-24%	3.9%	45%	2.3%	-5%
Total	4.0%	-54%	5.3%	-8%	5.4%	-25%	4.4%	-52%

Source: Australian Bureau of Statistics (2002), Australian National Accounts: State Accounts, Cat No 5220.0

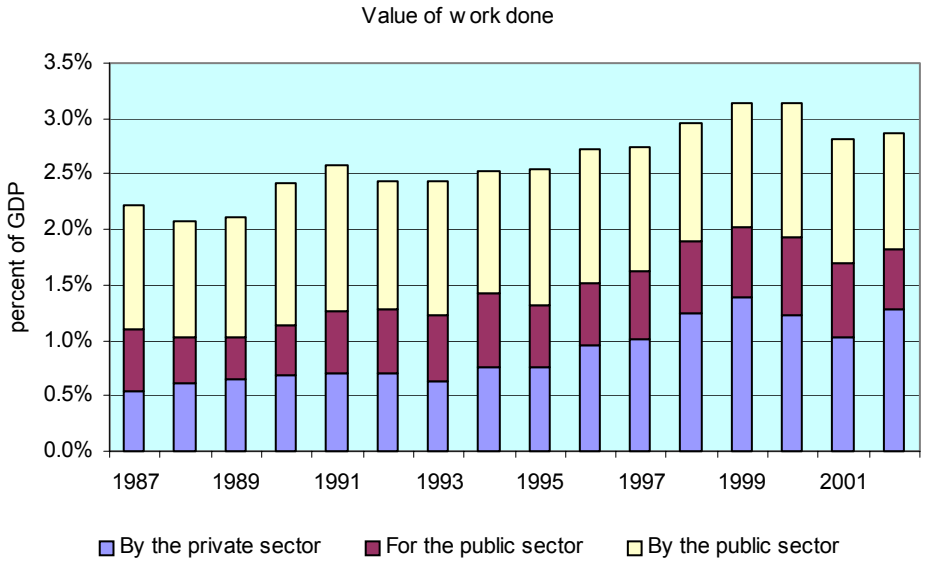
In terms of general government investment spending, figures that are less affected by privatisations, there is considerable variation between States, both in the level and trends of spending. For Australia as a whole, general government investment spending as a share of GDP, was comparable in 2001-02 to its level at the beginning of the 1990s. However, the decade average of 2.3 percent of GDP remained low relative to earlier decades. The level of investment spending by State Governments was higher at up to 3.5 percent in the rapidly growing Queensland and Northern Territory. In the mature States of Victoria and New South Wales, the level of investment spending was, relative to gross state product, much lower at 2.2 percent and 1.7 percent respectively. One would expect investment spending to be lower in the smaller States, such as Tasmania and Victoria and South Australia. However, this did not appear to be the case in Tasmania with a relatively high investment share of 2.4 percent. This was much higher than in Western Australia, where general government investment amounted to only 1.9 percent of GDP

The trend in general government investment spending also varied significantly across States. In New South Wales, Western Australia and South Australia general government investment fell slightly. In Western Australia, investment spending remained very low in comparison to other States and past decades. The perception of Western Australia as a rapidly growing economy with considerable development potential does not fit comfortably with this low level of government investment spending. A significant increase was recorded for in the Northern Territory, although the small size of the Northern Territory economy contributes to market fluctuations in spending depending on the project schedule. Government investment spending in Queensland remained the strongest of all States and, as a percentage of GST has fallen only modestly since the early 1990s. Queensland's rapidly growing population, particularly in the greater Brisbane area has placed considerable demand on their Government to fund infrastructure.

In Figure 8, construction expenditure on infrastructure as a percentage of GDP over the period 1987 to 2002 is presented. Total engineering construction expenditure has increased modestly over the period as a whole, although it has fallen off somewhat in the past two years. Most of the growth in total construction sector work has been accounted for by growth in private sector consumption. This rose from 0.27 percent of GDP in 1987 to around 1.3 percent of GDP in 2002.

Public sector construction expenditure (both by the public sector and for the public sector by the private sector) has remained fairly constant. For the public sector as a whole there does not appear to have been a significant increase in contracting out work to the private sector. Throughout the period, the private sector carried out about 60 percent of public sector construction work.

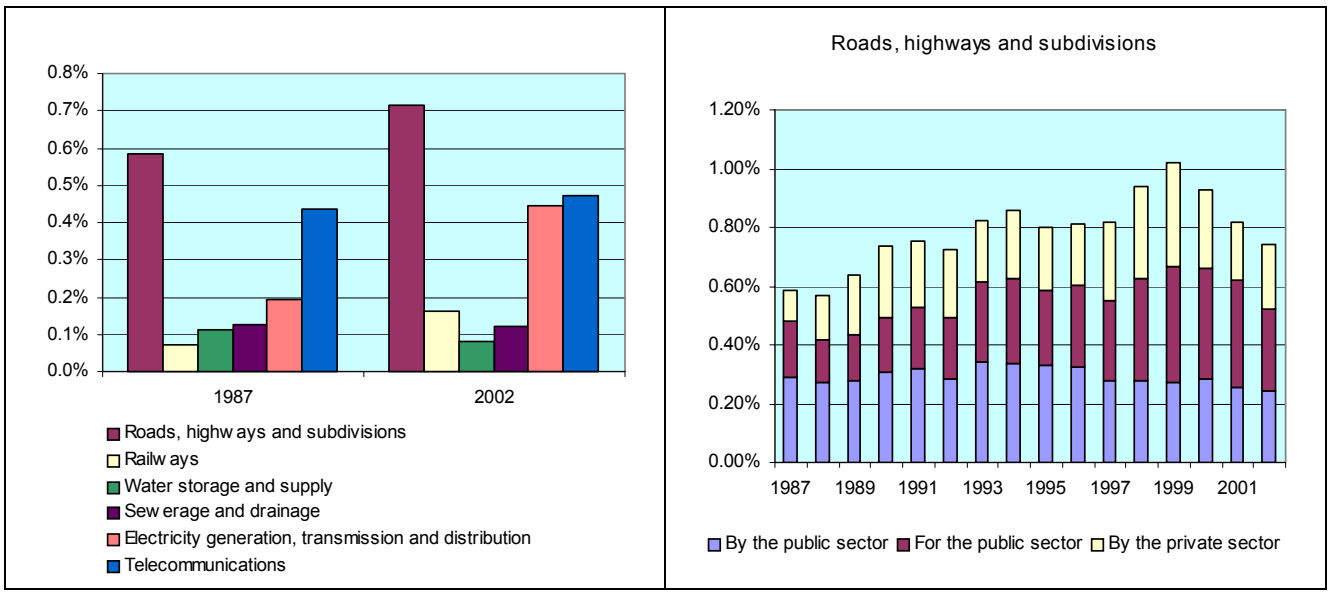
Figure 7 **Construction expenditure by the public sector, for the public sector and by the private sector (percent of GDP)**

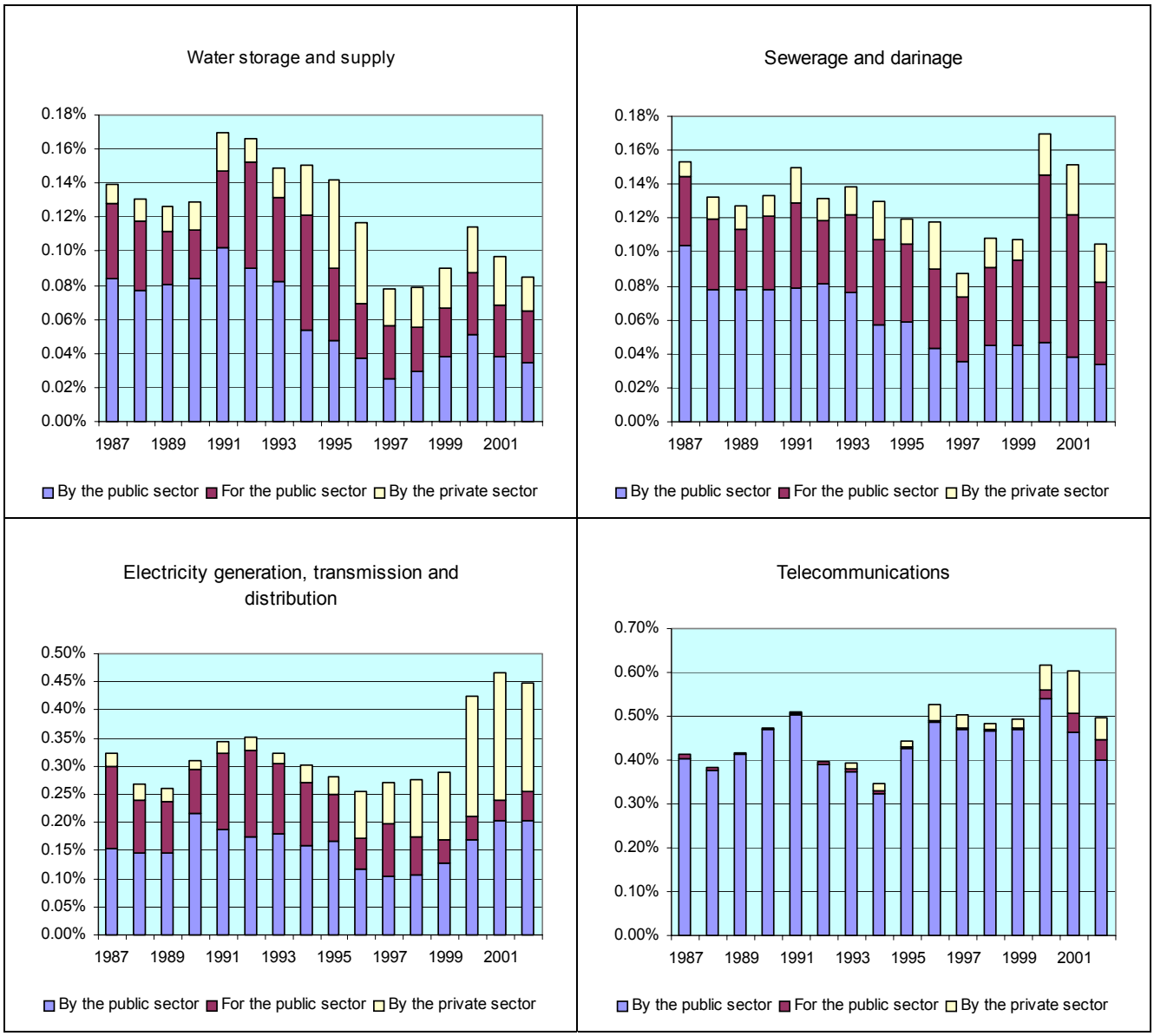


Australian Bureau of Statistics (2003), Engineering Construction Activity, Australia, Cat No 8762.0

Expenditure on roads, highways and sub-divisions has risen as a percentage of GDP, for both the private sector and the public sector. Expenditure on water storage and supply and on sewerage and drainage fell continuously through the 1990s. There was relatively strong growth in electricity and telecommunications infrastructure spending. Most of the growth in electricity was due to the construction of private power stations.

Figure 8: **Construction expenditure by the public sector, for the public sector and by the private sector (percent of GDP)**





Australian Bureau of Statistics (2003), Engineering Construction Activity, Australia, Cat No 8762.0

Where there has been significant privatisation and an expanded role for the private sector, such as in electricity, there has been strong growth in infrastructure spending. However, in most areas of urban infrastructure, provision is dominated by governments or state owned monopoly. In areas where the public sector continues to dominate infrastructure provision, expenditures have either fallen or remained fairly static. Growth in infrastructure spending has certainly come from the private sector rather than the public sector.

It may well be appropriate that infrastructure spending has fallen in many areas as past construction efforts have adequately equipped the economy with base

infrastructure assets so that spending will be on maintenance and incremental expansions. However, in other areas government spending priorities may have shifted away from providing infrastructure that is justified on both economic and social grounds.

5 Land Development and the Ongoing Challenge

The cost of land continues to represent a large component of the total cost of housing in all Australian cities. The main factors contributing to the rising cost of developed land include:

- the increased cost of acquiring undeveloped or "raw" land;
- increased direct servicing costs,
- increases in government taxes and charges;
- increasing buyer demand; and
- delays in the planning approvals process.

Governments at all levels can have an important influence on the affordability of housing through policies and regulations that impact on the price of land and the costs of developing that land. They can also have an impact through the timeliness and process by which they manage the planning approvals process.

In the foregoing sections of the report, we have highlighted the extent of increases in costs and their impact on the cost of land. The final section will describe some of the main government policies/initiatives likely to affect, and in some instances already affecting, the cost to develop land in the foreseeable future.

Many of these issues were highlighted in the 2002 *Landcost: the Impact of Land Costs on Housing Affordability* report. This report will highlight the major issues that impact the cost of developing land and will explore in detail the major issues of concern that are common to all cities. It is important to remember that although these issues are common across cities, they are experienced at different levels of intensity and importance in each city.

- Declining public funding of infrastructure and more pressure on developers to fund such infrastructure – the costs of which are passed on to the end purchaser.
- Environmental policies, such as the Western Australian Government's Bush Forever and the Queensland Government's Vegetation Management

Act, that 'sterilises' land from being developed, thereby reducing the amount of available land and driving the cost of raw land upwards.

- Environmental initiatives that has an environmental motive rather than an economic motive, for example, governments' requirement that vegetation from land clearing be mulched as opposed to the more economically efficient method of burning.
- An increasing level of controls especially in the area of heritage.
- The increasing trend of governments requiring developers of new estates to fund the cost of community facilities and infrastructure that benefit the whole community, not just new homebuyers. This includes land for public open space, landscaped public areas and so on.
- In a similar trend of new home owners contributing to public infrastructure, the Brisbane City Council has applied a public housing levy on some areas where up-zoning has occurred. The State Government is considering legitimising this approach. A similar scheme was proposed in NSW but for the time being is not being pursued.
- Significant delays with the planning approvals process that impact on the cost of developed land through increased holding costs and additional time spent on applications by developers.
- Lack of long term planning when considering future development needs. For example, land that is subdivided into small parcels today will be difficult to service and aggregate for urban development in the future.
- External influences that impact on the ability of households to purchase land including the higher education contribution scheme (HECS) debts, the encouragement to participate in alternative investment schemes, the income tax bracket creep and others.

5.1 Delays in the approvals process

Perhaps the most common theme amongst all cities in the increasing impact that delays in the planning approvals process has on the cost of land. In Western Australia, anecdotal evidence suggests that planning approval delays are generally of the order of 5 – 15 months however, there are some instances where delays go back as far as August 1999. These delays are experienced in all areas of land development including sub divisions and rezoning amendments.

All cities agree that governments at all levels suffer from an administrative backlog caused by understaffing, a lack of experienced staff and a decision making process that is open to political influence.

The total cost of these delays is difficult to measure. In Western Australia one member has a $5 million contract that is waiting to be let which involves 26 staff and contractor jobs for a ten month period. This situation represents a significant economic gain that could be realised sooner rather than later.

5.2 Environmental issues

Policies that aim to protect the environment continue to remain an important issue for developers. In particular, is the uncertainty surrounding new and existing policies as well as the growing complexity of their nature.

Bush Forever in Western Australia is a good example of the issues that are facing developers. A survey of members in September 2002 received a 35 per cent response rate. Of those that responded 54 per cent of developers had sites that were impacted by Bush Forever. The main concerns raised centred around:

- Uncertainty created by a complex and time consuming process to achieve agreement on Bush Forever sites, an absence of clear guidelines for developers to follow, and a lack of ability for authorities to negotiate trade-offs.
- Inadequate funding to properly compensate developers for land 'sterilised' from development. Assessment of the land is considered subjective which results in disagreement between parties when discussing compensation.
- A perception by developers that the land set aside for Bush Forever is not being properly managed by Government creating a lack of faith in the system.

The Vegetation Management Act in Queensland has similar implications. Members of the industry, as members of the community, are supportive of the country's biodiversity being conserved. However, guidelines to such policies should be made more transparent and efficient.

6 Conclusions

This report has examined the impact of government policies, regulations and charges on the cost of developing residential land and where possible updates the 2002 Report: *Landcost: The impact of land costs on housing affordability*. The report finds that the industry faces similar issues and trends highlighted in the 2002 report. In particular, Governments have a major impact on development costs both directly, through taxes and charges, and indirectly through the standards they impose on land developers. The cost of developed land has

become the major part of housing costs in Sydney, Melbourne and in Brisbane, and is rising in importance in Perth and Adelaide. Government policies affecting urban land development have direct implications for housing affordability. In this study we have calculated that for every $10,000 increase in the costs of developing urban land, 234,000 income households are no longer able to afford the conservative $150,000 house/land package.