# Regulation and Urban Property Prices

Submission to the Productivity Commission's Review of Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments

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# **Introduction and Summary**

The Productivity Commission's invitation to review planning, zoning and regulatory assessments is timely.

The PC's Issues Paper notes that there has been considerable urban growth in Australia and adds, this brings an enhanced "need for coordination and due consideration of land use changes ... to ensure a community's resources are allocated and used in ways that enhance the net benefits to society as a whole.

In determining the appropriate balance of land for housing with farming, environmental benefits and other geographically extensive uses, we should not lose sight of the relativities concerned. Australia has one of the smallest urban profiles in the world. Whereas the built environment accounts for around 8 per cent of the UK and more in some other European countries the built environment accounts for only 0.3 per cent of Australia, including two per cent of Victoria, 1.1 per cent of Tasmania and less than half of that in the other States<sup>1</sup>.

The key impact of zoning is in creating a regulatory shortage of land available for conversion into housing blocks on the urban fringes of major Australian cities. Government planning policies have, as a result, boosted the costs of housing.

The most direct effect of the creation of housing land price premiums is on new "starter" homes but the impact has flow-on effects throughout the housing market. For "starter" homes, price in the absence of regulated land shortages would be determined by costs, since the housing and land development industries are highly competitive with few barriers to entry. The costs of a new house comprise three components: the land itself, the cost of preparing it for housing and the building of a house itself.

- The cost of preparing a block, depending on terrain and size is between \$40,000 and \$80,000.
- Fully finished houses with three bedrooms, two bathrooms and a double garage are readily available from many builders across Australia at less than \$130,000.
- Land itself in its dominant use, farming, is worth around \$10,000 per hectare, or around \$1,000 per housing block. A regulatory induced shortage of land raises this to between \$100,000 and \$190,000 in the areas on the fringes of major Australian cities.

Opinion surveys regularly rate housing as among the most important issues. House purchasing is also the most significant expenditure item for the vast majority of people. But in spite of the issue's importance, it was not prominent in the 2010 Federal election campaign.

Labor confined its policy statements to social housing.

The Greens discussed housing policy at length, proclaiming "affordable housing is a human right". But their proposals would further restrain land use and inflate land prices. The Greens' plans to require higher spending on insulation and bicycle paths would require increased housing costs that would need to be passed on to buyers.

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<sup>&</sup>lt;sup>1</sup> See http://www.anra.gov.au/topics/land/landuse/index.html

Family First explicitly called on "state and federal governments to release more land suitable for housing".

The Liberals, in a late policy announcement, proposed measures that would actually promote the relaxation of restrictions on land being made available for housing. The Liberal Party announced that it would use federal funding to make the States increase the supply of housing land and reform their planning and approval systems.

Land-use regulation has been the main contributor to house prices having doubled in relation to income levels over the past 20 years.

# Addressing the Issues and the Evidence

On what matters should the planning, zoning and DA related decisions and actions of governments be coordinated? How should performance on these matters be benchmarked?

## **Planning Outcomes in Housing**

Performance can be measured in a great many subjective ways. These include the aesthetic appeal of the area developed or its balance between natural and human content. It can also be measured somewhat more objectively in terms of the efficiency of its services – journey to work times, average households' proximity to schools and hospitals and the like.

However, for most households, at least those aspiring to buy a first home, the ultimate criteria are what costs are imposed on them by the planning process. As the Issues Paper clearly understands, planning regulations add to costs. Not only is this the most meaningful measure of the efficiency of the planning process but estimating these costs is easier than in the case of other measures.

House building encompasses two functions both of which are undertaken by suppliers which operate in highly competitive situations. The first of these is "development". This entails flattening and draining the land, marking out the blocks, building local roads, installing the utilities, and so on.

The costs of this activity for a block of land at a size of one sixth on an acre (660 square metres) are around \$45,000-\$70,000 depending on the terrain.

The second function is house building itself. Around Australia many builders offer homes (three bedrooms, two bathrooms, double garage) on the buyers' land for some \$130,000.

The value of virgin land which is massively abundant around all our cities is \$10,000 to \$15,000 per hectare, equivalent to around \$1,000 per block.

Combining these three functions and comparing them to the full cost of a new house and land package enables a measure of the inadequacy of land supply approved for building to be made.

Urbis/JHD prepared work for the Property Council which estimated the following land acquisition costs for 2006 for housing developments on the edges of major Australian cities.

Melbourne		\$50,000
Sydney (NW)		\$117,000
Sydney (SW)		\$100,000
Brisbane (Redland)		\$77,000
Gold Coast		\$54,000
Perth		\$84,000
Adelaide		\$11,000
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Residential Development Cost Benchmarking Study

These prices have tended to increase, suggesting a block acquisition cost in Sydney of \$150,000. Thus on the Sydney edge:

- 42 Maxwell Place, Abbotsbury, NSW 2176; 600 sq. mtrs. \$455,000
- Lot 191, 38A Brushwood Place, Hornsby, NSW 2077; 887 sq. mtrs. \$295000
- 4/342 Camden Valley Way, Narellan 2567; 700 sq. mtrs. \$210,000.
- Rosemeadow, NSW 2560, 571.4 sq. mtrs. \$204,950

Adelaide has also apparently lost its low cost land. Based on August 2010 developed land offerings, acquisition costs would be over \$150,000 for a small block and over \$200,000 for a 600 sq. mtrs block. Typical blocks for sale in the outer suburbs include:

- Lot 431&432, Condada Drive, Banksia Park, 5091, 360 sq. mtres \$210,000 -\$215,000
- Lot 100 Loud Street, Old Noarlunga, 5168, \$149,000-\$159,000 339 sq. mtrs.
- Lot 57 & 58, Cottenham Road, Banksia Park, SA 5091; \$245-255,000; 528 sq. mtrs.

In outer Melbourne, land costs are over \$120,000. Typical block offerings are:

- Lot 6616, Fairhaven Boulevard, Craigieburn, 3064 \$190,000, 336 sq mtrs
- Lot 1814, 45 Bundanoon Avenue, Sunbury, 3429 \$189,000 700 sq mtrs

In Brisbane, land costs of over \$160,000 are inferred from these typical site offerings:

- 115 Parkwood Drive, Heathwood, 4110, \$295,000 567 sq. mtrs.
- 90 Gibson Crescent, Bellbowrie, 4070, \$218,000 559 sq mtrs.; \$235,000 661 sq mtrs.

In Perth prices vary but for a standard block land costs over \$200,000. Blocks advertised include:

- Small block 205 sq. mtrs. 2/38 Margaret St, Midland, 6056 \$125,000
- Block of 742 sq. mtrs. 3 Mundanup Court, Kelmscott, 6111, \$199,990-\$205,000
- Lot 377, Stockholm Road, Wanneroo, 6065, \$295,000 522 sq. mtrs.

The Australian Financial Review reported 26 August 2010 that Perth property developer Nigel Satterley has bought a 104 hectare site in the city's south east and plans to develop it for housing. The reported price was nearly \$100 million, which, assuming 10 houses per hectare, means each new home must carry a cost of close to \$100,000 in addition to the expenses of developing the land and building the house.

Land preparation costs can be conservatively set at \$70,000 in Sydney, \$50,000 in Perth and \$60,000 elsewhere. This puts the estimated regulatory induced land price premiums of a 600 square metre block by major capital city at:

•	Sydney	\$150,000
•	Melbourne	\$120,000
•	Brisbane	\$150,000
•	Adelaide	\$190,000
•	Perth	\$100,000

Raw agricultural land is worth around \$1 per square metre. The above figures indicate that once approval for housing development is given, that square metre of raw land on an urban periphery becomes worth \$167 in Perth, \$200 in Melbourne, \$250 in Sydney and Brisbane and \$310 in Adelaide.

In no Australian city is there an intrinsic shortage of land. Sydney, although it is hemmed in by parks and mountains, has a considerable acreage of accessible residential land – the Plain of Cumberland alone could comfortably accommodate an increase in the city's population by 50 per cent. Other cities are surrounded by vast acreages of farm land, most of it somewhat unproductive.

Planning creates a dichotomous land market around major cities: that which is in use for farming and that which has been given regulatory approval to be used for housing. This results in three tiers of value for what is a homogenous product: tier one is fully approved for development; a second tier is outside of any likely development approval; and in between is land that might at some future time be permitted to be developed for housing. The regulatory restraint raises the value of land with approvals because it creates a scarcity of that land. The value increase does not reflect any intrinsic value but is simply an artefact of government with no associated increase in productivity.

In The Tragedy of Planning<sup>2</sup>, restrictions on land use are traced back to the UK developments in the 1930s which became progressively more restrictive after the 1947 Town and Country Planning Act required all new developments to be approved and set out to restrict certain areas, though it was not until the late 1960s that the restrictions in favour of conservation started to bite.

The Australian states followed this approach led by NSW which from the late 1960s was starting to focus on planning and provision of services that would lead, rather than follow, development.

Gradually, we have seen the planning process morph from facilitative to restrictive. What commenced as a seemingly sensible approach to allow for long term planning of infrastructure like trunk roads, schools and medical facilities as well as a codification of the respective values assigned to land for people's homes and land for environmental services has become a land rationing system.

In real terms, across all Australian jurisdictions, land price escalations have led to a considerable increase in the inflation adjusted costs of housing. Brisbane is typical. The city's median house price costs over six times median family income compared with three times that multiple 20 years ago. Some of this increase will be the result of larger houses (not however greater land sizes) and some would doubtless be due to greater affluence bidding up prices in more highly prized areas. However the predominant cause – and especially so for recently developed areas – is supply restraint.

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<sup>&</sup>lt;sup>2</sup> The Tragedy of Planning, Alan Moran, IPA 2006

The affects of restraining supply are seldom understood by those proposing the zoning system and its further tightening. There is a simplistic assumption that, denied space to build on the periphery, people will simply accept greater concentrations of homes in existing areas. Though people will accept such second best solutions, their preferences for more space raise the price of the favoured purchasing target and induce a ripple effect on the price of other land within the urban area.

The price increases stemming from government-induced housing land scarcity is further exacerbated by other factors. Among these is that new house building on sites designated for denser redevelopment within existing areas often turn out to be more sparsely built upon than planned. Many governments favour requirements for dense development in the expectation that this will engender a more lively and cultural social environment and one that is more easily served by public transport. Whether or not these are realistic expectations that accord with house buyers' own preferences (and the fact that the planning scheme insists upon them indicates they do not) the objections of incumbents within brownfield sites will frequently force a changed design. Incumbent home owners will often consider new high density developments would reduce their own amenity values and downgrade the value of their properties. The outcome is delays (which add to costs) and reductions in the numbers of individual titles the development originally envisaged (which further adds to average property costs).

Even without such objections from those inner city residents with an interest in preventing development in their proximity, the many different procedures that must be followed prior to obtaining permission to build inevitably ensures a considerable and costly process. In Victoria the various steps are

### A. Land preparation

- 1. Agricultural
- 2. Strategic plan designates it "future residential" a status that could remain unchanged for years
- 3. Once trunk infrastructure is closing in on the area a "Planning scheme amendment" is created with full plans, traffic assessment, vegetation assessment etc.
- 4. If this is supported by the local government, they then approach the State Government and seek a "Ministerial consent" to place proposals on public exhibition
- 5. Then goes on exhibition
- 6. Any objections to the proposal are assessed by a Planning Panel
- 7. Minister examines and rules on objections in the light of advice from the panel
- 8. The ruling can then be appealed at VCAT
- B. Having received consent, the infrastructure providers are approached by the developer
- C. Planning permit application is made which incorporates detailed engineering design.

# **Infrastructure Charges - Sharing the Regulatory Spoils**

In Victoria 24,000 hectares of land has recently been brought within the Melbourne Urban Growth Boundary and earmarked for housing. This land incurs a "Growth Areas Infrastructure Tax" of \$95,000 per hectare. The Minister, Justin Madden claims this revenue

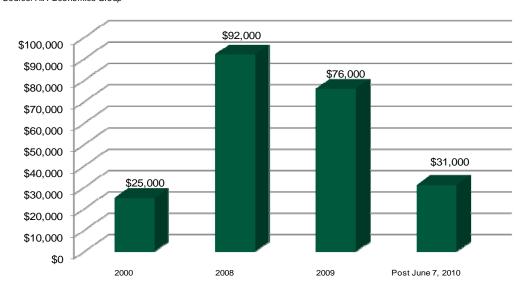
is, "to pay for new schools, roads, community facilities and services, public transport and healthcare."

This is a totally fraudulent statement. New areas require no greater government services' costs than existing areas. The Government actually recognizes this, which is why new developments in Geelong, Bendigo and other regional centres don't have special levies. Indeed, with respect to schools, an ageing population profile in established suburbs allows under utilized schools' land to be sold generating revenues that far exceed the costs of new schools in new suburbs.

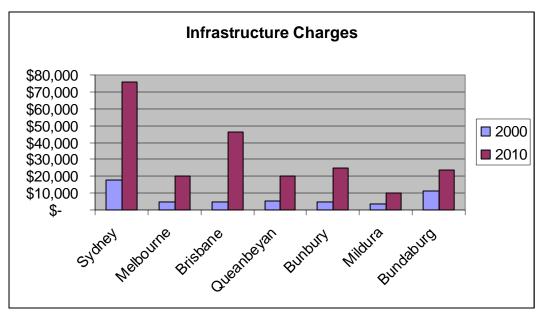
Hence the \$95,000 per hectare tax is simply the State Revenue's share of the shakedown on new home buyers caused by land rationing stemming from the government's planning systems. The government's planning policies create a scarcity of housing land, which boosts its value. Rather than allowing increased land supply, partly motivated by vocal objections to "urban sprawl", the government prefers to require a share of the price increase its policies create.

These special levies across the different states are designed not to add to costs. And in Sydney levies have been reduced ostensibly to prevent them bringing extra costs. The HIA estimates the levies (which include a water headworks component) are as follows

# Infrastructure Charges History - Sydney Source: HIA Economics Group



Charges in other jurisdictions are indicated below (with Sydney set at the pre June 2010 rate).



Source: HIA

Although infrastructure charges are intended to be set at a level that does not impose additional costs, should the value of the land fall (either because of a collapse in demand or because of a reform in the planning regulations) the charges would constitute a genuine price raising tax. In Sydney in June 2010, the Government announced a \$20,000 cap on council imposed charges (known as Section 94 Contributions)<sup>3</sup> – a reduction from up to \$60,000 per lot in some areas – which the State Government recognised, "can make a good project unviable".

There are claims that infrastructure charges are also starting to bite in terms of costs to land development under the Victorian regulations. In introducing the \$95,000 per hectare "Growth Areas Infrastructure Tax", the Government initially sought to make this payable as soon as the land was zoned for housing. After negotiations with the Opposition, this was reduced to 30 per cent of the tax being payable immediately with the 70 per cent payable once the land is fully approved.

While one interpretation of ensuring the charge is payable at an early stage is that this ensures the Government obtains its share of the regulatory induced price increase, it would also be true that the liability would place strong incentives on landowners to sell to developers. This in turn would deter speculation, at least on the part of the landowner, bring a more timely provision of zoned land, and hence some downward pressure on prices.

# **Other Adverse Effects of Planning Regulations**

### **Booms and Busts**

Land restraint also brings other distortions within the economy. Among these is the likelihood of a shortage bringing speculative bubbles. Housing is well documented as being a key trigger of the Global Financial Crisis post 2007. However the housing boom and bust cycle was largely confined to those jurisdictions where government regulation has caused land restraint and price escalation.

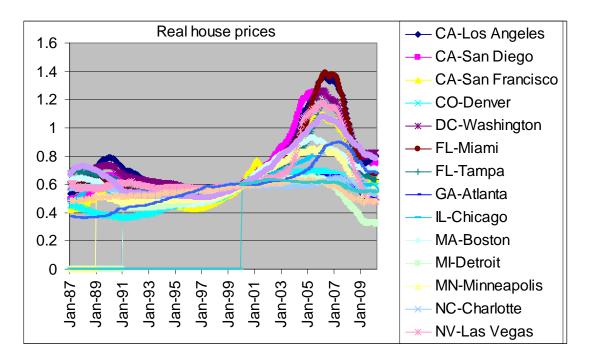
<sup>&</sup>lt;sup>3</sup> Premier's Press Release 4 June 2010, Significant Reform to Local Government Infrastructure Charges.

In Germany, a Constitutional provision gives a landholder a near automatic right to build a house on his land and house prices have been stable for many years. In most of Canada and the US south and mid west land regulations do little to restrict the quantity of land available for housing. House prices in these areas are far lower and more stable than in the areas like Florida, California, Arizona and in the UK and Australia.

The lack of price escalation in areas where there is easy entry into home ownership can be most readily demonstrated with different US jurisdictions since these all had the same national fiscal and monetary policies.

The S&P Case Shiller Index is one of the most respected US measures of house prices. It measures prices of stand-alone houses adjusted for quality changes. Some of the city prices in the Index's go back to 1987. Other cities have been added later.

If the Index is deflated by the CPI to offer a measure of real price changes, the picture is as follows.



Within this cacophony of change two facts emerge. First, California (Los Angeles, San Francisco and San Diego) and Florida (Miami and Tampa), where land supply is constrained, had the most pronounced price surges between 2001 and 2007. Following falls over the past three years that have led to as much as a halving of inflation-adjusted prices, declines in these places' house prices appear to be decelerating. However, in real terms they remain 30-50 per cent above their 1987 levels.

Secondly, markets with few land constraints have shown no increases in real prices. Data for Dallas is not available prior to the year 2000 but since then the city has shown a steady decline in real average prices. Cleveland prices have shown little movement as has been the case for Charlotte and Atlanta. Detroit, where real house prices are down by a quarter from their levels of 20 years ago, is probably a special case.

The message is that declines in demand can bring falling prices even if supply is constrained. But when supply is not regulated it adjusts to demand and roller coaster price movements are transformed into gentle undulating trends.

### **Corruption and Rent Seeking**

The prospect of gain from entrepreneurial activities is a major driving force for economic growth. Where opportunities for making such gains through obtaining favourable regulatory decisions are evident this will, at the very least, divert entrepreneurial activities from socially productive venues. It is also likely to engender corruption – the prospects of increasing the value of an asset from \$10,000 to over \$500,000, simply as a result of a regulatory decision, places massive incentives to seek out such decisions.

Other than diverting of energies from socially positive goals, the prospect of massive gains from property rezoning also has the capacity to undermine the integrity of government processes. On 20<sup>th</sup> August 2010 a familiar theme was reported upon, namely claims that developers in South Australia had contributed strongly to government re-election campaigns and as a result had obtained preferential treatment in having land moved into a developable category<sup>4</sup>.

Similarly, writing in The Monthly, August 2010, former NSW Labor Ministerial staffer, Mark Aarons writes, "During my time working as an adviser, rumours about the pressures exerted by head office on various ministerial offices to assist big donors circulated regularly. I only experienced this directly once, when a senior NSW party official rang to ask me to fix some problems for a large north-coast developer who was also a major donor to the ALP. Like other staffers in such a difficult situation, I had to devise a way of balancing this demand with my professional responsibilities - an unfair position, by any reckoning, in which to be placed."

According to data assembled by the Greens, one sixth of past political donations, an amount exceeded only by those of unions, were from property businesses in the two years to 2008/9. Should such contributions be being made in the expectation of particular gain at the expense of others within the community – as is the case with selectively rezoned land – healthy political processes are undermined.

### **Zoning and Approved Retail Outlets**

To obtain shopping centre sites, developers face tough regulatory barriers.

Governments seek to limit the availability of new centres. Originally this was to ensure good transport links, but development restraints have become means by which shops and shopping centres are protected from competition.

Stringent approval processes create shortages of retail sites that best meet consumer demands. As with the supply of any other good or service, shortages bring excessive prices. And those excessive prices mean high rents for shopping centres and other retail outlets.

Twenty years ago the Hawke Government set out to reform and remove regulation. But almost uniquely, planning approvals and zoning laws, including those covering shopping centre sites, were largely exempted from this reform program.

<sup>&</sup>lt;sup>4</sup> See <a href="http://www.theaustralian.com.au/news/nation/labor-donors-in-court-bid-to-gag-greens-mp/story-e6frg6nf-1225907494011">http://www.theaustralian.com.au/news/nation/labor-donors-in-court-bid-to-gag-greens-mp/story-e6frg6nf-1225907494011</a>

Governments mistakenly believed that the availability of shops was immune from the laws of supply and demand. But in point of fact zoning laws protect suppliers from rivals and limited customers' access to alternative outlets. Perhaps because of a poor understanding of the nature of demand, supply and price, and perhaps for rather more unsavoury reasons, the impact of such shortage creation on consumer prices has been neglected.

One antidote to the price excesses resulting from retail land rationing has been competition between governments for revenue. For bulky and fashion goods, direct factory outlets have sprung up around all of Australia's major cities. Like Melbourne's Tullamarine development, these have usually taken advantage of surplus Commonwealth airport land that was beyond the authority of restrictive state government planning laws. The Commonwealth, recognising that state government policies had created a shortage of easily accessible land for shopping centres, refused to make the land subject to state planning restrictions. As a result, it was able to sell the land at a premium and the increased supply doubtless has eroded some of the high retail margins consequent on land shortages for retail development created by state zoning laws.

State governments and planners were indignant at their consequent loss of planning control. Some interests might have had to accept an associated reduction in patronage from developers, but the upshot was a great service to the consumer in bringing about lower prices.

Unfortunately the sites close to airports, though ideal for fashion and bulky goods, are less suitable for supermarkets. Hence the regulatory scarcity created by planning restraints has continued to mean excessive rental costs for supermarket sites. These higher costs are passed on to the consumer in grocery prices.

Some indication of the extent of this has been gathered by a developer association, the Urban Taskforce. This shows that Australian shop rents add an extra 10 per cent to prices compared to overseas best practice.

One study<sup>5</sup> concluded that, "[T]he potential gains to retail productivity growth from a more flexible planning system in Australia could ... equate to between \$52-\$78 billion of NSW Gross State Product, and \$197-\$296 billion in Australian Gross Domestic Product."

Retailing centres have no justification to be locationally restrained. The retailer must scout out the best locations and site his outlet accordingly. The retailer needs no government agency to tell him about how well the transport facilities would link in with his locational decision. A poor choice of development site carries its own penalties.

As with other matters, restraining the number and location of retail outlets means nonoptimal expenditures by suppliers on meeting the needs of their customers. It means higher prices and less convenience.

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<sup>&</sup>lt;sup>5</sup> Choice Free Zone, Allan Fels, Stephen Beare and Stephanie Szakiel, 2008 Urban Taskforce Australia Ltd

## **Expediting Approval Processes**

Even with a regulated system that rations supply, measures can be taken to improve productivity. In Victoria, SPEAR (Streamlined Planning through Electronic Applications and Referrals) is a system that streamlines the planning and subdivision process. It provides for on-line lodgement and delivery of all permit applications and other documents needed to obtain approval of plans of subdivision or consolidation of land.

A Victorian study estimated that Councils indicate that it can take up to 77 weeks<sup>6</sup> from submission of an Application for a Planning Permit to approval of the plan of subdivision or consolidation. This is more optimistic than some other estimates. The National Housing Council *State of Supply Report* indicates that Australia's urban development takes from 6.25 to 14.5 years for residential land to be designated for development to the completion of the first houses<sup>7</sup>. Demographia reports<sup>8</sup> that "By comparison, the same process could as little as one year on the fringe of urban areas with … more responsive regulation, in the United States. Further, before prescriptive regulation policies (urban consolidation) were adopted in Australia, the process tended to take from 1 to 1.5 years".

SPEAR directly addresses two of the problems in the extended approval process.

Firstly, it automatically rejects incomplete applications, thereby allowing speedy resubmittal. Work in a government report, *Better Decisions Faster* identified that 90% of all permit applications are incomplete.

Secondly, SPEAR replaces postal delivery with online delivery of all development documentation – including plans. It has been estimated that SPEAR generates processing efficiencies that should amount to a time saving of up to 6 weeks once it is fully utilised.

The benefits of a system like SPEAR fall into three categories.

Firstly, there are savings in land holding costs to the degree that the process allows an acceleration of the transition time between which raw land is converted to a finished land/dwelling package. These savings accrue to developers in the first instance.

Secondly, there are savings in on-going administration costs that the various parties, councils, surveyors and Referral Authorities, would make. These savings are normally described as "paper burden" cost savings. These include the reduction in resources covering a host of matters ranging from manual answering of queries to preparing paper documents that this system now allows to be undertaken on line.

The third set of benefits is qualitative rather than quantitative. It consists of a group of key benefits that arise from using open electronic based systems which cannot be quantified; for example, transparency and security.

In 2003, Opticon Australia projected that the streamlining in the approval process due to SPEAR could reduce the average time to process planning permits by 4 weeks. One month's

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<sup>&</sup>lt;sup>6</sup> Opticon Consulting Report "Benefits to Industry of SPEAR Release 1.0" February 16 2006, p.11

<sup>&</sup>lt;sup>7</sup> http://www.fahcsia.gov.au/sa/housing/pubs/housing/national housing supply/Documents/NHSC StateofSupplyR eport.pdf, page 50.

<sup>&</sup>lt;sup>8</sup> http://www.demographia.com/dhi.pdf p. 26

holding time saved by SPEAR, would permanently reduce the number of properties it is necessary to have in the development process at any one time.

Based on publically available data<sup>9</sup>, this translates to a benefit to the Victorian economy of an estimated \$26 million to \$80 million per annum because of these lower 'stock' levels. <sup>10</sup> The higher figure is based on the saving if the whole house and land package is affected by the improved stock flow. The lower figure represents a saving in just the serviced land component.

In the absence of detailed information on the process of building and its management between different stages, it is difficult to determine where between these two estimates that the real gain actually resides. It is also difficult to estimate what proportionate share would ultimately be gained by the different parties – consumers, developers, builders, etc. It is expected that developers will benefit significantly from these savings but it is normal in a competitive market that the bulk of such gains are eventually made by the consumer.

### **Annual Value of New Dwelling Development in Victoria**

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	М	Melbourne		Rest of Victoria				
	Number	Land Value (\$M)	Number	Land Value (\$M)				
New Houses	19650	\$3,144	10350	\$981	\$4,125			
New other dwellings	7830	\$313	670	\$16	\$329			
Total	27480	\$3457	11020	\$997	\$4,454			
Total land/ house packag	e	\$ 10,305		\$3,415	\$13,719			

<sup>&</sup>lt;sup>10</sup> 'Annualising the Capital Cost Savings from SPEAR', Dr Alan Moran, February 2006

<sup>&</sup>lt;sup>9</sup> Based on ABS 8731 and HIA, values are: