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Living on the Edge: Sustainable Land Development in Sydney

by

Jackie Ohlin

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EXECUTIVE SUMMARY

The sustainable development of land for housing in Sydney is a complex and contentious issue which includes both the land supply process and issues and factors affecting demand. However, sustainable development increasingly depends upon consideration of how resources, including natural resources, are used or depleted.

Based upon the challenges for humans and human settlements brought on by climate change, this paper discusses whether the sustainable development of urban land can be regarded as merely an option, or whether it is a necessity. Current plans, strategies and programs for urban land development aspire to sustainability, but in view of the size of the problem and the need for a comprehensive response they may not be sufficient. Key performance indicators of trends for sustainability of human settlements are examined for greater metropolitan Sydney. In this context, the viability of continued or accelerated development of greenfield land at the urban fringe currently favoured by governments and developers is discussed.

Some examples of contained urban growth are identified and examined. The need for different approaches to the governance of sustainable urban development across governments and stakeholder groups including local communities is also discussed.

INTRODUCTION

New South Wales typifies the highly urbanised nature of Australian society, with the majority of the State's population (62.7 per cent, or 4.25m of a total of 6.77m in the State)¹ living in the greater metropolitan area of Sydney. (The Department of Planning indicates a higher percentage rate than this, indicating 80 per cent of the NSW population lives in the greater metropolitan region, including the Central Coast, Illawarra and Lower Hunter regions.)² In addition, the majority of the population owns or aspires to own their own homes. The Australian Bureau of Statistics notes:

The overall rate of home ownership in Australia has been steady since the 1960s, with about 70% of occupied private dwellings being owned outright or being purchased.³

The Bureau also comments: 'Home ownership remains a feature of the Australian identity and has for generations underpinned prosperity and individual wealth.'⁴

DEMAND AND SUPPLY

The manner in which that population is housed is governed by both demand and supply factors. The NSW *State of the Environment Report 2006* (SoE Report) notes that among the principal factors affecting demand, net population (births and deaths) is relatively stable and net immigration has also fallen in Sydney. However, the Report notes that approximately one-third of new arrivals to NSW continue to settle in Sydney. As a result, the city has been growing by more than 31,000 people per year.⁵ Also affecting demand is the trend toward fewer people per dwelling, which the SoE Report observes has been 'generating demand for new housing at a faster rate than population growth'.⁶

The SoE Report also comments upon the manner in which the historic patterns of the city's development has been laid down over time. It notes that in spite of increasing urban infill in the form of multi-unit dwellings in the city's inner and middle-ring suburbs, the majority of Sydney residents continue to live in low-density outer suburbs.⁷

- ³ Australian Bureau of Statistics, *Australian Social Trends New South Wales Snapshot*, June 15, 2004
- ⁴ http://www.abs.gov.au/ausstats/abs@nsf/7d12bOf6763c73caca257061001cc588/6aab
- ⁵ NSW Department of Environment and Conservation, *State of the Environment Report 2006,* http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.1.htm#2.1.42
- ⁶ NSW Department of Environment and Conservation, *State of the Environment Report 2006,* http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.1.htm#2.1.42
- ⁷ NSW Department of Environment and Conservation, *State of the Environment Report 2006,* http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.1.htm#2.1.42

¹ Australian Bureau of Statistics, *Population by age and sex, New South Wales – 2005* (Cat No 3235.1.55.001)

² NSW Department of Planning, City of Cities – A Plan for Sydney's Future, December 2005, p 122

Factors traditionally regarded as affecting supply of land include the availability of developable land and infrastructure, the availability of market mechanisms and the availability of market mechanisms that can affect land value. These factors are also increasingly challenged by resource constraints which have emerged more sharply through a focus on climate change.

Particular resource constraints affecting urban development include:

- security of water supply, heightened by the ongoing drought and dwindling dam levels;
- pressures upon 'greenfield land', heightened by concerns over the need for both biodiversity conservation and conservation for agriculture on land at the urban fringes; and,
- increased demand upon energy supply, heightened by concerns over rising summer temperatures and concomitant increased energy peaks caused largely by use of air conditioners.

In sustainability terms, urban planners also express concerns about the prominence of private transport over public transport and its effects, particularly by emissions upon air quality and accompanying health impacts, and by the dominance of transport corridors on the landscape of a sprawling city.

The debate about land supply is a contentious one, with proponents warning of disinvestment and job losses if development is curtailed. A report issued by the NSW Urban Taskforce projects major social and economic impacts resulting from any of three restricted growth scenarios it describes for Sydney. These include:

- no growth 'based on the assumption that there will be no Greenfield residential land releases and no increase in residential dwelling density in existing urban areas above the density permitted under current environmental planning instruments'
- no brown growth based on continued Greenfield residential release supply forecasts, but ceasing increases in residential dwelling density in existing urban areas
- no green growth 'based on continued Brownfield residential dwelling forecasts (infill and transit node development) but ceasing any future Greenfield land releases.'⁸

The group commissioned the report with the concern that a 'current or an incoming state government bowed to populist pressure and declared that "Sydney is full" and that there should be no growth of new residential development across NSW.'⁹

⁸ NSW Urban Taskforce, *No Growth Scenario – Imagine NSW Without Development,* January 2007, pp 8, 36, 40

⁹ NSW Urban Taskforce, No Growth Scenario – Imagine NSW Without Development, January 2007, p 3

However, some would qualify a number of the underlying assumptions made in the report. In particular, the concept of nil dwelling supply as a consequence flowing from any of the projected scenarios does not seem plausible. Even in the most first and most drastic scenario, the likelihood of *some* ongoing development has to be acknowledged. Further, while losses are forecast in the 'no green growth' scenario, it fails to take into account the potential for the accelerated development of developable brownfield land not currently in the pool. And, in a 'no brown growth' scenario, there could ideally be an urban growth boundary imposed which would limit but not stop all greenfield development, and see this development focussed more strategically and at increased densities around transport nodes.

Population projections referred to in the report as a driver to increase the number of dwellings¹⁰ should also be considered cautiously. As indicated earlier in this paper, the population of NSW is relatively stable, net immigration has fallen and demand for housing is being driven by the trend toward smaller numbers of people per household. Also, projected losses of State and Local Government funding under restricted growth scenarios have been questioned. Studies such as one undertaken for the Victorian Department of Sustainability and Environment for *Melbourne 2030* have modelled cities opting for urban growth boundaries. The studies predict increased productivity, expanded production lower labour costs and increased spending capacity for households, all of which will add to government revenue.¹¹ And development and redevelopment of land will be ongoing.

Serious consequences are predicted by the Urban Taskforce for the collapse of the construction industry and economy through restricted growth scenarios (a loss of \$59.4 billion for the period 2007-2011 under a 'no growth' scenario.) However, the modelling undertaken for *Melbourne 2030* suggests otherwise. Indeed, a development industry prepared to embrace the complexity of urban infill, redevelopment of brownfield land and the development of adaptable housing capable of meeting the needs of households shrinking in size and altering in form would have much potential.

The effect of land availability on pricing is also contentious. Alan Moran of the Institute of Public Affairs claims that government regulation has 'throttled' land availability and, together with taxation, forced up the price of housing:

..the regulatory induced price increases are devouring savings (with household savings at record lows and even now at negative levels). This is likely to bring about lower than optimal levels of investment and productivity as years go by. The policy changes required include a considerable increase in the land cleared for housing development. Longer term all planning restraints, except those preventing landowners from being adversely affected by developments on adjacent properties, should be removed.¹²

¹⁰ NSW Urban Taskforce, No Growth Scenario – Imagine NSW Without Development, January 2007, p 28

¹¹ SGS Economics and Planning, *Competitive cities – the role of urban design, February 2006,* pp 7, 8

¹² Alan Moran, "No opportunities on the property ladder," On Line Opinion, Australia's e-journal of

By contrast, others suggest that community expectations of higher level planning elements in urban land development have become more 'standard' in a relatively short space of time. These include: controls on lot development and building design; solar access; building materials requirements; appliance rating requirements and water and energy conservation requirements. A study by the Australian Housing and Urban Research Institute into affordability and sustainability outcomes for housing illustrates that in 2003 more traditional regulations on roads, stormwater, sewage and utilities were regarded as the norm. In most jurisdictions these elements are now accepted and even desired components of planning law.¹³

The interplay of market mechanisms on housing investment also exhibits degrees of complexity which extend beyond the view that government regulation and taxes are driving up housing costs. While the Australian Bureau of Statistics reports that home ownership has declined among younger adults over the last twenty years, it also shows, for 2003-04, household income among younger households (15-29 years) was high, and net household wealth rose steadily for all age groups up until retirement age.¹⁴ This included 'thirty something' households, where income stress might be apparent in a rampant market.¹⁵ This information suggests that other factors, for example consumer-driven processes, may be affecting incomes to bring about reductions in household savings.

Until recently, investment in housing across Australia, and particularly in NSW, rode a boom fuelled by Commonwealth Government taxation decisions, low inflation and attractive interest rates. The joint State/Commonwealth Governments' First Home Owner Scheme, that offers first home buyers a \$7000 grant is also widely regarded as having provided a strong stimulus to housing investment. However, investment in housing is no longer the attractive investment it used to be. Changes by the Commonwealth Government to the taxation of superannuation have enticed erstwhile housing investors away from the property market and into salary sacrificing and lump sum superannuation fund investment for more attractive returns. The result has been a sudden decline in investment in housing and a concurrent rental vacancy crisis as 'usual' market conditions have been thrown into disarray. As observed above, boom has turned quickly to gloom among some developers and commentators, observing a decline of affordable home ownership. In this context, State Government taxes on investment properties and developer levies and charges on land to be developed have been identified by some as primarily responsible for rising house prices, a view rejected by the NSW Government.¹⁶ The complexity of influences on

social and political debate, 23 August 2006

- ¹⁵ Australian Bureau of Statistics website, 'Distribution of Household Wealth', Australian Social Trends 2006, pp 5,6
- ¹⁶ NSW Government, NSW State Plan: A New Direction for New South Wales, November 2006, p

¹³ J Blair et al, Affordability and Sustainability Outcomes of 'Greenfield' Suburban Development and Master Planned Communities – a case study approach using triple bottom line assessment, Australian Housing and Urban Research Institute, May 2003, p 3

¹⁴ Australian Bureau of Statistics, Australian Social Trends – New South Wales Snapshot, June 15, 2004

investment decisions in the market, including, occasionally, competing motivations is apparent.

GLOBAL CHALLENGES TO SUSTAINABLE LIVING

Traditionally, a major proportion of developable land has been available at the urban fringe. However, key resource constraints now suggest the need for a more stringent approach to the sustainability of urban land provision.

In the *NSW State Plan* and the Metropolitan Strategy the Government has identified extensive plans, strategies and programs to address both greenfield and urban infill development in the greater metropolitan area. In brief, the *NSW State Plan* establishes objectives for the sustainability of the State's water supply, renewable energy, clean air, reduced greenhouse gas emissions and a commitment to biodiversity, alongside commitments to achieving economic prosperity and quality of life within the urban environment.¹⁷ The Metropolitan Strategy is described as 'the NSW Government's long term plan to maintain Sydney's role in the global economy and to plan for growth and change.'¹⁸ The *NSW State Plan* notes that the Metropolitan Strategy 'sets goals for housing and land supply.' It also says:

Achieving these targets will ensure the distribution of growth in a manner that provides housing choice, greater transport options, proximity to jobs and reduced living costs for individuals and families.¹⁹

The Metropolitan Strategy also set out a number of 'measures of success' for its performance, including:

- Liveability: Maintain or improve Sydney's index and ranking of quality of living (Mercer Human Resource consulting global quality of living survey)
- Economic competitiveness: Maintain or increase the proportion and value of Sydney's contribution to Gross Domestic Product (GDP)
- Fairness: Increase the percentage of the population living within 30 minutes by public transport of a city or major centre
- Environment: No increase in Sydney's environmental footprint per capita
- Governance.²⁰

However, as the Background to the Metropolitan Strategy notes, water consumption by Sydneysiders has tripled since the 1950s while the population has doubled; residential

¹⁷ NSW Government, NSW State Plan: A New Direction for NSW, November 2006, p 109

¹⁸ NSW Department of Planning, www.metrostrategy.nsw.gov.au

¹⁹ NSW Government, *NSW State Plan: A New Direction for NSW,* November 2006, p 126

²⁰ http://www.metrostrategy.nsw.gov.au/dev/uploads/paper/introduction/IMPLEMENTATION

consumers use more energy per capita (an increase of 14.8 per cent) and per household (an increase of 10.3 per cent) than a decade ago, while each person in Sydney creates 27.2 tonnes of carbon dioxide per year. And while air quality has improved over two decades, air pollution is still regarded as a problem. Professor Tony McMichael notes that Sydney's ecological footprint is 150 times greater than the area of Sydney itself.²¹ Whether enough is being done within those plans, strategies and programs to live sustainably is the question.

The imperative to respond to climate change sharpens the focus for policy and decisionmakers. Former chair of the Australian Coal Association and chair of the Experts Group on Emissions Trading, Ian Dunlop, says:

We are about to experience the convergence of three of the great issues confronting humanity. Climate change, the peaking of oil supply and water shortage are coming together in a manner that will profoundly alter our way of life, our institutions and our ability to prosper on this planet. Each is a major issue, but their convergence has received minimal attention.²²

He does, however, identify an opportunity to 'set humanity on a new course, built around an ethical renaissance and sustainable societies.' When considering sustainable land development, what was until now regarded by governments as sound in terms of generating economic activity or necessary for investor and community certainty can no longer be accepted at face value, because there are 'real and imminent' global limits emerging for natural resources.

In October 2006, Professor Ian Lowe noted:

The way we are currently living is not sustainable... The evidence is overwhelming that we are over-using water and degrading our major river systems... Our material expectations are increasing. Each year we use more energy, travel further in larger and less efficient cars, live in larger houses, consume more resources, produce more waste. If our civilisation is to survive, this century has to be a time of dramatic transformation, not just in technological capacity but in our approach to the natural world – and to each other.²³

²¹ Professor Tony McMichael, transcript of evidence, House of Representatives Standing Committee on Environment and Heritage, Commonwealth Parliament, *Inquiry into Sustainable Cities*, 27 January 2004, p 83

²² Ian Dunlop, "Unholy trinity set to drag us into the abyss", *Sydney Morning Herald*, 16 October 2006

²³ Ian Lowe, Sustainable Natural Resource Management, Inaugural Rick Farley Lecture, sponsored by Natural Resources Advisory Council of NSW and the NSW Government, October 2006, pp 1,2

The Stern Review for the UK Government, *The Economics of Climate Change*, published on 30 October 2006 supports these views. It concluded that overwhelmingly, scientific evidence shows the earth's climate is rapidly changing, largely through increased greenhouse gas emissions caused by human activities. According to Stern:

Human activities are changing the composition of the atmosphere and its properties. Since pre-industrial times (around 1750), carbon dioxide concentrations have increased by just over one third from 280 parts per million (ppm) to 380 ppm today predominantly as a result of burning fossil fuels, deforestation, and other changes in land-use. This has been accompanied by rising concentrations of other greenhouse gases, particularly methane and nitrous oxide.²⁴

The Stern Review indicates that climate change will affect the 'basic elements of human life for people around the world – access to water, food production, health and the environment.'²⁵ Commenting on the impact upon growth and development, and urging widespread and coordinated action, it notes that all countries will be affected:²⁶

If no action is taken to reduce emissions, the concentration of greenhouse gases in the atmosphere could reach double its preindustrial level as early as 2035, virtually committing us to a global average temperature rise of over 2°C. In the longer term, there would be more than a 50% chance that the temperature rise would exceed 5°C. This rise would be very dangerous indeed; it is equivalent to the change in average temperatures from the last ice age to today. Such a radical change in the physical geography of the world must lead to major changes in the human geography – where people live and how they live their lives.²⁷

The recent *Fourth Assessment Report of the Intergovernmental Panel on Climate Change* also paints a stark picture of the projected effects for global warming, predicting a likely range in temperature change by the end of the 21st century of between 1.1°C to 2.9°C for the 'low scenario' to 2.4°C to 6.4°C for the 'high scenario.' ('Low' and 'high' scenarios depending upon complex and real climate models and how we might respond to lessen climate change effects.)²⁸

²⁴ Stern Review: The Economic of Climate Change, HM Treasury, October 2006, p 3

²⁵ *ibid,* p vi

²⁶ *ibid,* p vii

²⁷ *ibid,* p vi

²⁸ Intergovernmental Panel on Climate Change, Climate Change 2007: The Physical Science Basis, Summary for Policymakers, February 2007, p 13

The apparent urgency of these scientific observations is beginning to generate responses at the political level. However, strategies are generally far from comprehensive nor are they bi-partisan and in the words of Ken Livingstone, Mayor of London, they need to 'move further and faster' than ever before to reduce carbon emissions to sustainable levels.²⁹

URBAN LAND DEVELOPMENT IN SYDNEY – CURRENT ISSUES

The political and practical realities of sustainable urban land release are that the city must accommodate its population or change its behaviour, or both.

The Metropolitan Strategy describes a 'City of Cities', or growth centres for greater Sydney, including in the north-west and south-west. In August 2006, the Department of Planning issued a document *Supporting Greater Metropolitan Sydney's Land Supply* as part of the Metropolitan Strategy. It outlines the process and directions for land release within metropolitan Sydney and the Central Coast of NSW. It also touches on the provision of new dwellings in existing urban areas, where, it suggests, 60-70 per cent of the city's new dwellings would be provided.³⁰

The release of the document follows a period (from 2004 to 2006) during which dwelling supply in greenfield and existing areas fell to its lowest level and the State Government received criticism for its tardiness in releasing land for sale. Simon Tennant, Executive Director of Housing and Economics with the Housing Industry Association, said that failure to open up greenfield sites at an appropriate rate to manage supply had contributed to housing unaffordability.³¹ Saul Eslake, chief economist with ANZ Bank, observed that 'the Government's reluctance to release land in Sydney helped to drive up property prices and contributed to making NSW households highly sensitive to interest rates.'³² The NSW Opposition's planning spokesperson, Peta Seaton, noted in 2004 that the NSW Government land agency, Landcom, had released only 64 blocks of land for sale in Sydney and a total of 304 across the State, contributing, in her view, to rising house prices.³³ The State Government rejected the criticism, however, saying that Landcom was only one developer of greenfield land and that the Department of Planning had future plans for the release of at least 500 lots per year.

Also in 2004, the Productivity Commission's Report *First Home Ownership* identified an apparent shortfall in housing supply at the urban fringe in Sydney. However, it also noted that '...it is the increased demand for existing dwellings in established areas that has been the primary reason for recent price rises.'³⁴ The Commission did, however, recommend

- ³¹ Virginia Trioli, ABC Radio, "Housing survey leads to more calls for land release," 23 January 2007
- ³² "Lagging behind NSW proves the weakest link", Sydney Morning Herald, 1 June 2006
- ³³ "Slow release of land blamed for price rises", *Sydney Morning Herald*, 1 December 2004

²⁹ Mayor of London, Towards the Mayor's Housing Strategy: A Consultation Paper, November 2006, p 7

³⁰ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p 3

³⁴ Australia Productivity Commission, Inquiry Report No 28, *First Home Ownership*, 31 March 2004,

that

All state and territory governments should have long-term land release strategies that are based on extensive public scrutiny of projections and key assumptions. The tradeoffs between greenfield development and urban consolidation should be a particular focus of such processes.³⁵

In a 2006 document concerning land supply, the Department of Planning noted that Sydney's population is expected 'to grow by 1.1 million people by 2031.' As a result,

A range of housing options, including greenfield land supply, providing 640,000 dwellings will be required to meet the needs of this growing population and changing demographic. ... Currently the State Government has rezoned and serviced enough [greenfield] land to accommodate more than 26,000 dwellings in Sydney.³⁶

The document also states:

The Metropolitan Strategy *City of Cities – A Plan for Sydney's Future* released in December 2005 makes it clear that the NSW Government wants to increase land supply in greenfield areas.³⁷

These areas are located in Baulkam Hills, Blacktown, Camden, Campbelltown, Liverpool, Penrith, Pittwater, Warringah, Wollondilly and Wyong. In August 2006, there was sufficient available serviced land across these 63 release areas to accommodate potentially 26,662 dwellings. It was predicted that by July 2008, this would be sufficient to accommodate 60,232 dwellings.³⁸

There are several key steps in bringing land to market. They include:

- Formal adoption on the Metropolitan Development Program (following a Government or Ministerial decision)
- Rezoning (a draft plan is prepared by relevant local government councils, publicly exhibited and then gazetted by the Minister for Planning)
- Servicing (servicing plans are prepared taking into account developer contributions and in conjunction with relevant utilities and developers)

p 129

³⁶ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p 3

³⁷ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p 5

³⁸ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p 4

³⁵ Australia Productivity Commission, Inquiry Report No 28, *First Home Ownership*, 31 March 2004, p 136

• Development Application Approval and Construction (Councils approve subdivision applications with construction undertaken by developers. The timeframe for this step may be one to five years).

The greenfield land supply process can take between seven and ten years. The NSW Government has established a Growth Centres Commission for North West and South West Sydney which it considers will 'dramatically reduce the time taken to complete this process.'³⁹

In July 2006, the Minister for Planning established a Land Supply Taskforce, to investigate and report upon greenfield land supply and processes to improve bringing land to market. The Land Supply Taskforce comprised representatives from the Department of Planning, NSW Treasury, Premier's Department (Infrastructure Implementation Group), Landcom, Sydney Water, Integral Energy, the Road and Traffic Authority and the Ministry of Transport.

Decisions taken as a result of the work of the Land Supply Taskforce include:

- Moving to adopt benchmarks to monitor land stock levels at key stages;
- Creating a Land Supply Chief Executive Officers group to help coordinate the delivery of land;
- Investigating the use of Part 3A of the Environmental Planning and Assessment Act to resolve any land supply bottlenecks;
- Developing proposals to accelerate action from State agencies in response to both proposed and approved new release areas; and
- Considering the introduction of 'flying squads' to provide assistance to councils to achieve timely processing of draft rezonings and subdivision applications.⁴⁰

While some of these decisions will take time to have effect, the intent indicates a tougher stance to ensure the rollout of greenfield sites, in particular.

POTENTIAL EFFECTS OF LAND SUPPLY TASK FORCE DECISIONS

Benchmarking, Coordination and State Agency Action on New Release Areas

It is anticipated that the coordinated actions of State agencies will be measured against the governance performance target for the Metropolitan Strategy, identified above. These should be particularly useful in gauging whole-of-Government responses.

Use of Part 3A

Part 3A of the *Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act* came into effect on 1 August 2005. It can be applied to:

- major infrastructure projects or other development that, in the opinion of the Minister, is of State or regional environmental planning significance;
- major infrastructure or other development that is an activity for which the

³⁹ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p 2

⁴⁰ NSW Department of Planning, *Supporting Greater Metropolitan Sydney's Land Supply*, 2006, p 5

proponent is also the determining authority (within the meaning of Part 5) and that, in the opinion of the proponent, would (but for this Part) require an environmental impact statement to be obtained under that Part.⁴¹

In addition, the Minister may also declare a project to be a critical infrastructure project. If a project is so declared, the following conditions apply:

- Proponent or objector appeals in respect of the determination of an application for approval of the project are excluded (s 75K, 75L and 75Q);
- All environmental planning instruments (other than State Environmental Planning Policies (SEPPs) that specifically relate to the project) and Council orders are excluded (s75R);
- Third party appeals against the project under the EPAA or other environment protection legislation is excluded.⁴²

Part 3A provisions allow project proponents to bypass Council planning legislation by applying directly to the Minister for project approval. The Director-General of the Department then prepares a process for compliance with environmental assessment which may include an assessment panel convened by and reporting to the Minister who then decides upon the project's approval (s75I And 75J). Appeal processes for proponents and objectors are quite defined and short (three months and one month respectively) (s 75K and 75L).

The legislation also allows a proponent to acquire and retire biodiversity credits 'of a number and class (if any) specified by the Minister' (s 75J). This provision has caused concern among some that vulnerable species or communities may be at risk.

In a response to a question on notice in Parliament on 13 September 2005 regarding the intent of the Part 3A legislation, the Minister for Planning said:

This is the Government's response to concerns about delays and uncertainty in getting decisions on major development and infrastructure projects. The planning system was frustrating decision making sometimes because of lack of resources within local government, political dithering by local government and the multiple approvals required by a whole range of State agencies ... [W]e now have a streamlined process. This is a truly integrated approach to development decision-making which preserves community consultation and allows a quicker resolution of issues and even faster rejections at an early stage if necessary.⁴³

⁴¹ Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005, 75B (2)

⁴² Stewart Smith, *Recent Developments in Planning Legislation*, Briefing Paper 16/06, NSW Parliamentary Library Research Service, 2006, p 16

⁴³ Hon F Sartor MP, *NSWPD*, 13 September 2005, p 17605

By contrast, critics such as former Director of the Council of Social Services of NSW, Gary Moore, and planning commentator Elizabeth Farrelly have suggested that the legislation gives the Minister wide discretion, suspends all other planning legislation and curtails rights of public appeal.⁴⁴

Assistance to Councils

While NSW Councils have been criticised for failure to achieve timely processing of rezonings and subdivisions, this is in part due to a current shortage of planners. The Planning Institute of Australia says:

The chronic shortage of planners has been a problem for the profession and quality planning outcomes for some 3-5 years... Attraction, retention and churn of planners, particularly within local government affects quality outcomes.⁴⁵

Commenting in general terms about the performance of councils processing of planning approvals, Cr. Genia McCaffery, President of the Local Government Association said:

While much has been made of the "worst" performing councils in terms of DA processing times, the reality is that the majority are performing well. The [annual comparative information data on NSW councils] report shows that 73.5% of councils processed all their DAs within the 40 day time limit. This is a significant achievement given the critical shortage of planners across NSW, the time required to properly consult with local communities and delays caused by councils having to wait on advice or approval from state agencies.⁴⁶

Local Government has also been critical of the range of changes in planning law delivering more power to the Minister, particularly as these affect local democracy:

The Minister says he will remove the planning powers of councils which he declares to be underperforming in terms of time taken to reach critical decisions, without any definition of the criteria he will adopt.⁴⁷

⁴⁷ Cr Genia McCaffery, President, Local Government Association of NSW, Media Release, 23 February 2006

⁴⁴ Robert Harley, "Development change draws criticism, Australian Financial Review, 9 March 2006; Elizabeth Farrelly, "3A projects add a new dimension to rules," Sydney Morning Herald, 25 October 2006

⁴⁵ Planning Institute of Australia, *Planning Report Card: Planners Telling it Like It Is,* invitation to participate in poll, April 2006, p 5

⁴⁶ Cr Genia McCaffery, President, Local Government Association of NSW, Letter to the Editor, Sydney Morning Herald/Daily Telegraph, 3 January 2007

However, local government has also declared generalized support for the Metropolitan Strategy, provided it is considered as a genuine partner in its future development.⁴⁸

CAN BASIX SAVE OUR BACON?

It is significant that the NSW Government has positioned itself to respond to sustainability concerns in urban development. However, the 2006 *State of the Environment Report* illustrates that the need to respond comprehensively to climate change has become more urgent than envisaged as recently as the 2004 launch of the Metropolitan Strategy. Discussing the 2006 SoE Report, Environment Minister Hon. Bob Debus MP was reported as saying NSW had to '... face the reality that its environment and resources were finite and it could not maintain its rate of consumption.' He added that the 'evidence is that climate change will impact on our ecosystems, water resources, biodiversity and economy.'⁴⁹

The Building Sustainability Index (BASIX) is the key government strategy introduced to target domestic energy and water-saving measures. It operates as a State Environmental Planning Policy and a Regulation (Environmental Planning and Assessment Amendment (Building Sustainability Index) Regulation 2004), to assess how a proposed development will achieve savings in mains-supplied potable water use, greenhouse gas emission and thermal performance. Savings may be instituted across a range of options, including:

- use of insulation;
- window-glazing, eaves and window-shading;
- wastewater for garden use;
- light-coloured roofing materials;
- skylights;
- water-efficient landscaping;
- passive solar design;
- energy-efficient hot water systems;
- grey water systems; and
- water-saving appliances and fittings.

When introduced, energy efficiency targets for detached homes and townhouses were set at 25 per cent. High-rise apartments were to improve their energy efficiency under the scheme by 20 per cent. For each category, this target was due to rise to 40 per cent in July 2006. However, the NSW Government did not increase the target for high-rise apartments as proposed. Representatives of the development industry had argued that the 20 per cent energy target would add between \$13,000 to \$14,000 to the cost of a unit, and that proceeding to the next stage of BASIX would put units beyond the reach of the industry's 'target market.'⁵⁰ Others, including Jeff Angel, Director of the Total Environment Centre,

⁴⁸ Cr Genia McCaffery, President, Local Government Association of NSW, Media Release, 20 April 2006

⁴⁹ Anne Davies, "The city that ate its environment," Sydney Morning Herald, 16-17 December 2006, p 7

⁵⁰ Anne Davies, "Cheaper, not so green homes", Sydney Morning Herald, 2 May 2006

and Clover Moore MP suggested that by failing to raise the target the Government ignored information showing that owners of homes built with a BASIX certificate enjoyed cheaper electricity and water bills and higher resale values and recommended energy-efficient homes to others.⁵¹

The effectiveness of an increase in BASIX targets for single dwellings and low-rise multiunit developments is still to be assessed by the Department of Planning, but other evidence suggests there may well be a need to go even further than the established BASIX sustainability targets.

Sydney's Performance on Sustainability Indices

As indicated earlier in this paper, the 2006 SoE Report shows that NSW is tracking poorly on sustainability indices for urban development. These and other sources of evidence describe the case for swift and comprehensive responses to an emerging sustainability crisis in the metropolitan area, underscored by water supply problems, increased energy demand, transport failures, air quality concerns and failure to protect biodiversity.

Water

The 2006 SoE Report has 'mixed' news regarding the state of the city's water supply. It notes that the quality of Sydney's drinking water has been maintained and, because of water restrictions and other water saving methods, the trend in water consumption is 'improving.'⁵² It also notes the strategies contained in the NSW Government's Metropolitan Water Plan to secure Sydney's water supply (including harvesting stormwater, accessing water at the bottom of dams and readiness to extract water from aquifers and by desalination). However, it also clearly states that there are larger, long-term challenges for water management:

Population growth and climate change are long-term trends that must be reconciled in the management of finite water resources. IWCM [Integrated Water Cycle Management], which incorporates demand management, water recycling and water-sensitive urban design, is a key driver for improving the sustainability of our water consumption. Recognising recycled wastewater and stormwater as legitimate sources is fundamental to achieving IWCM ... Plans for increasing Sydney's water supply will need to consider equity issues and environmental impacts that may be shifted within the Hawkesbury–Nepean catchment or between catchments. Adequate environmental flows need to be guaranteed to maintain the health and biodiversity of individual water supply catchments and their rivers.⁵³

⁵¹ Anne Davies, "Cheaper, not so green homes", Sydney Morning Herald, 2 May 2006; Clover Moore MP, 'Backwards for BASIX', Media Release, 14 July 2006

⁵² http://www.environment.nsw.gov.au/soe/soe2006/chapter 2/chp_2.2htm

⁵³ http://www.environment.nsw.gov.au/soe/soe2006/chapter 2/chp_2.2htm

This conclusion to the SoE Report suggests that future action on sustainable water management for the city needs to look beyond the current Plan.

Generating greater public involvement to seek sustainable outcomes is seen as one problem-solving process for the issue. As an advocate of tighter water restrictions, better water pricing, recycling and stormwater harvesting, the founder of Clean Up Australia, Ian Kiernan, believes that the main parties have underestimated the willingness of people to play a part in solving Sydney's water crisis.⁵⁴ As the SoE Report shows, this willingness has already extended to water restrictions being widely embraced by the community. However, the Government has been reluctant to consider aspects of water recycling for domestic use, apparently believing that the public will not accept it. This stance has left the Government with the four options outlined in the *Metropolitan Water Plan* for securing the water supply: harvesting stormwater, accessing water at the bottom of dams, extracting water from aquifers and desalination. The first two of these are under way, and plans for implementation of the latter are reportedly well-advanced. However, they present some issues for consideration in sustainability terms.

The *Daily Telegraph* revealed that Sydney Water has previously provided advice to the Government warning that

The environmental performance of desalination is very poor due to its high energy demand, the significant greenhouse gas emissions, the need to dispose of waste brine and the land required for the plant.

In response, a Government spokesman said the advice was given two years ago, there has been prolonged and persistent drought and 'detailed studies' into desalination over the past two years mean 'it is now a viable option for a secure source of new water.'⁵⁵

Groundwater experts have claimed that Australia's groundwater resources, including those in urban areas which are currently part of the Government's Metropolitan Water Plan, are poorly managed, over-used and in danger of being polluted and depleted.⁵⁶ The experts query the extent to which bore licences have been and are being granted without a full understanding of the function of the aquifers in relation to the country's water table and longer-term environmental impacts. They argue the need for environmental expertise to be more rigorously included and regarded in the decision-making process for the granting and management of bores.

Energy

The 2006 SoE Report notes a deteriorating trend in the impacts of energy sources (principally coal-fired power stations) on greenhouse gas and pollutant loads and the use of

⁵⁴ Wendy Frew, "NSW goes against the flow on water law," Sydney Morning Herald, 3 January 2007

⁵⁵ Simon Benson, "Desalination Won't Work," *Daily Telegraph,* 16 January 2007

⁵⁶ Rosslyn Beeby, "Nation's aquifers in crisis: experts", Canberra Times, 16 January 2007

large quantities of fresh water. It also notes that demand for electricity and other energy sources has risen and continues to rise, driven by population and economic growth. In spite of government measures to encourage cleaner power production and investment in new energy technologies, the SoE Report says:

The environmental impact from these existing power stations is predicted to increase over the next decade as their electricity production increases to meet growing demand.⁵⁷

The SoE Report concludes that 'tackling the impacts of the stationary energy sector is fundamental to addressing greenhouse emissions and climate change.' It notes that there are measures existing power stations could take, such as further efficiency improvements to pollution control equipment, to reduce their already large environmental footprint. The SoE Report identifies current methods to mitigate carbon dioxide emissions, such as geosequestration, which it notes 'at this early stage in the development of its technology appears to be among the more expensive greenhouse gas abatement options.' In addition, the Report identifies alternative cleaner power fuels, including natural gas and cogeneration (the simultaneous production and use of energy and heat).⁵⁸

A report on cogeneration in residential apartment buildings produced for the Department of Planning in August 2006 identifies the benefits of the method for reducing greenhouse gas emissions by 10-25 per cent in those dwellings. It indicates that cogeneration for hot water and pool heating (the most common requirements) would cost between \$500 and \$3,000 per dwelling for a typical high-rise building and produce savings in terms of lower strata fees but not necessarily in individual power bills. The report suggests that a demonstration project in NSW be implemented, as it is a 'proven technology' overseas and because industry appears capable of meeting the challenges.⁵⁹

High-rise apartments of nine or more storeys emit on average 10.4 tonnes of carbon dioxide per dwelling (compared with 6.5 tonnes for low rise dwellings and 9.0 tonnes per detached dwellings), and individuals in high-rise apartments are responsible for, on average, 5.4 tonnes of emissions (compared with 3.4 tonnes for individuals in low-rise and 2.9 tonnes for individuals in detached dwellings).⁶⁰ This indicates it is important to increase energy efficiency targets for city apartments.

However, air-conditioning use across the city is also driving demand for electricity to unprecedented levels. Economics commentator Ross Gittins writes: 'Over the past decade,

⁵⁷ http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.3htm.

⁵⁸ http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.3htm

⁵⁹ NSW Department of Planning, Cogeneration for residential apartment buildings in NSW – Challenges and Opportunities, prepared by Invenergy, August 2006, pp 5, 16, 23

⁶⁰ Paul Myors, Rachel O'Leary and Rob Helstroom, Energy Australia and NSW Department of Planning, "Multi-Unit Residential Building Energy and Peak Demand Study", *Energy News*, vol 23 No 4, December 2005, p 114

Transport

The 2006 SoE Report notes deteriorating trends in the number of vehicle kilometres travelled, in freight and commercial travel, non-commuter travel, vehicle occupancy rates and, until recently, reduced public transport patronage. The Report says, however, that 'it is too early to tell if a recent upturn in public transport will be maintained, so [that] trend is unclear.' The Report identifies opportunities to achieve improved fuel and vehicle emission standards by accelerating adoption of cleaner technologies and reducing Commonwealth tax incentives to buy or lease new cars. It also suggests that strategies to encourage greater use of practical non-car modes of transport aimed at environmental and health enhancements should be a priority, but notes these will require a whole-of-government approach.⁶³ In a sense, the SoE Report is indicating that, in spite of the best efforts to build energy and water-efficient homes in our sprawling city, these may be negated by the distances residents are travelling in cars for jobs, leisure and other pursuits.

Research conducted by Anne Hurni from the University of Western Sydney found that there is a greater degree of car dependence in Western Sydney, where car ownership rates are higher than for the rest of the city. However, 10.9 per cent of households in Western Sydney have no car. Further, she found half of Sydney's geographical area is more than 800 metres from a 'medium-frequency transport service'⁶⁴ thus creating a particular problem for those living in low density western suburbs.

While one part of the solution to developing a sustainable transport system for Sydney requires a reduction in car dependence, there is also a need to ensure that public transport is sufficiently safe, reliable and geographically comprehensive to attract patrons. The mode of public transport use is inextricably linked to energy use.

Air quality

The 2006 SoE Report indicates that for several types of air pollution, concentrations are either decreasing or are stable. While this is good news, the Report also notes:

Air pollution can cause a wide range of health symptoms from coughing, wheezing and shortness of breath to more serious

⁶⁴ Jordan Baker, "Rail, bus services failing western Sydney: report," Sydney Morning Herald, 21 October 2006

⁶¹ Ross Gittins, "The big picture lays responsibility on our doorsteps," Sydney Morning Herald, 13 December 2006

⁶² Annabel Hepworth and Duncan Hughes, "East can take the heat, at least this year," *Australian Financial Review,* 25 October 2006

⁶³ http://www.environment.nsw.gov.au/soe/soe2006/chapter2/chp_2.4.htm

impacts for those with pre-existing respiratory and cardiac conditions such as asthma attacks, hospital admission and premature death. It has been estimated that air pollution from motor vehicles alone accounts for more than 500 early deaths in the Sydney Region per annum and over 1000 hospital admissions. Exposure to high concentrations of air pollution over many years is associated with reduced life expectancy and increased incidence of lung cancer. The health costs of ambient air pollution in the greater metropolitan region have been estimated to be between \$1.0 billion and \$8.4 billion per annum. In Sydney, the health costs of motor-vehicle emissions alone are estimated to be between \$600 million and \$1.5 billion per annum. Apart from the impact on human health, some air pollutants can also damage flora, fauna and the built environment.⁶⁵

In its report into *Health Impacts of Air Pollution in the Sydney Basin*, the NSW Legislative Council's General Purpose Standing Committee No. 2 noted that while major improvements have been made in controlling air pollution in the city, 'hot spots' of stagnant polluted air have been identified in areas of western and south-western Sydney which are detrimental to the health of local residents. The Committee recommended that the health costs of air pollution should be taken into account in the planning and approval process.⁶⁶

Biodiversity

The 2006 SoE Report indicates that the condition of native vegetation is declining over the longer term and while approved land clearing has been 'significantly reduced,' illegal land clearing remains a substantial problem.

At the same time, the 2006 SoE Report notes that the number of species listed as threatened has increased by 47, the trend in the number of threatened species is deteriorating and there is concern about certain populations and communities.⁶⁷

A recent report by the World Wildlife Fund (WWF) says that land clearing is the biggest threat to the country's environment and biodiversity, and noted that the number of animals killed when native bushland is lost is probably underestimated because it excludes damage done by illegal land clearing. However, the Minister for Natural Resources, Hon. Ian Macdonald MLC, took issue with the WWF's estimates of the numbers of animals lost, saying that 'satellite imagery showed the amount of land cleared was much lower than the figures used by WWF.'⁶⁸

⁶⁵ http://www.environment.nsw.gov.au/soe/soe2006/chapter3/chp_3.3

⁶⁶ NSW Legislative Council, General Purpose Standing Committee No 2, *Health impacts of air pollution in the Sydney basin,* Report 22, November 2006, pp xix and 16

⁶⁷ http://www.environment.nsw.gov.au/soe/soe2006/chapter6

⁶⁸ Wendy Frew, "Revealed: legal land clearing's savage toll", Sydney Morning Herald, 28 February 2007

While that debate continues, efforts to more proactively address threats to biodiversity and the drivers of biodiversity decline, as indicated in the 2006 SoE Report, need to be embraced, including species-specific recovery actions in cases where the only populations remaining are in a highly disturbed habitat.

WHERE NOW FOR THE METROPOLITAN DEVELOPMENT PROGRAM?

Implementation of a streamlined planning process for the Metropolitan Development Program is now in the hands of a Land Supply Chief Executive Officers Group. It is charged with implementing the Government's objectives by:

- Ensuring agencies work together to support rezonings;
- Preparing annual five and ten-year plans to program rezonings and achieve timely delivery of infrastructure services;
- Providing regular and detailed reporting on the current status of rezonings, approval and construction of utility services and approval and construction of subdivisions; and
- Identifying priority release areas where the powers of the Minister for Planning under Part 3A of the Environmental Planning and Assessment Act should be used in lieu of the traditional rezoning process.⁶⁹

But is management of the Metropolitan Development Program adequately addressing sustainable land development and the pace with which issues for sustainable land development are changing and throwing commonly held assumptions into question? The *Metropolitan Development Program (MDP) Update*, published in February 2007, notes a number of key changes relating to land supply since 2003, based upon a May 2006 audit of zoned and serviced release areas. They are:

- The total MDP stock level has increased by 32 per cent;
- The zoned stock level has increased by more than 45 per cent; and
- The zoned and serviced stock has increased by 45 per cent.⁷⁰

The Minister for Planning, Hon Frank Sartor MP, announced that: 'Between July 2003 and January 2006, total greenfield lots earmarked for development under the *Metropolitan Development Program* climbed from nearly 82,000 to more than 107,000.' He also said:

The NSW Government will continue working towards its target of more than 55,000 lots zoned and serviced within the next two years.... We intend to secure a large buffer supply to be available when interest rates ease and the market picks up.⁷¹

⁶⁹ NSW Department of Planning, *Metropolitan Development Program Update*, February 2007, p 26

⁷⁰ NSW Department of Planning, *Metropolitan Development Program Update*, February 2007, p 6

⁷¹ Hon F Sartor MP, Minister for Planning, "NSW Government Announces Surge in Sydney Land Supply", Media Release, 12 February 2007

NSW Parliamentary Library Research Service

The MDP Update outlines an ambitious process to achieve benchmarks for three land supply stages. These are:

Total MDP	Rezoned	Zoned and Serviced
-dwelling potential of all	- dwelling potential of all	-dwelling potential of all
areas committed for	areas for which rezoning has	areas rezoned and for which
development by being	been completed:	trunk water and sewer
placed on the MDP:	8 years supply = land with	services have been
15 years supply =land with	potential for 60,000	constructed so that local
potential for 112,500	dwellings	reticulation can occur:
dwellings		7.3 years supply $=$ land
_		with potential for 55,000
		dwellings by 2009 ⁷²

The MDP Update indicates that, while it intends for the majority of this yield to be provided in greenfield areas

... the current levels do not meet the new benchmarks and it will be necessary to increase stock levels over the next few years. Based upon current indicative rezoning and servicing dates, there are over 32,140 potential dwellings to be rezoned and over 35,000 to be serviced in the short term which will enable the benchmarks to be achieved.⁷³

The MDP Update notes that the steps in planning land release (outlined earlier) are sequential and require long lead times. These, in turn:

... require minimum levels of stock to be maintained at key points in the supply process to avoid shortages occurring in the availability of vacant home sites and to establish capacity for production to be accelerated when demand increases.⁷⁴

It is worth recalling that pre-2006 targets for the Metropolitan Strategy indicated 60-70 per cent of Sydney's new dwellings would be provided in existing suburbs, and hence 30-40 per cent of activity was proposed for greenfield areas.⁷⁵ However, a current Land Supply Taskforce Report has the number of new dwellings in existing suburbs for the past five years tracking at 98,907, or 79 per cent, while for the same period, the number of new dwellings for greenfield areas was 26,058, or 21 per cent.⁷⁶

⁷² NSW Department of Planning, *Metropolitan Development Program Update*, February 2007, p 7

⁷³ NSW Department of Planning, *Metropolitan Development Program Update*, February 2007, p 12

⁷⁴ NSW Department of Planning, *Metropolitan Development Program Update*, February 2007, p 9

⁷⁵ NSW Department of Planning, Supporting Greater Metropolitan Sydney's Land Supply, 2006, p.6

⁷⁶ NSW Department of Planning, *Land Supply Taskforce Report*, (unpublished)

Given this reality, questions need to be asked about the direction of respective urban development plans and strategies. Is the current land supply process sustainable? Is a push toward increasing land supply in greenfield areas really necessary? The weight of evidence outlined earlier in this paper suggests that, in a sense, no matter how high water and energy-reduction targets are set for greenfield sites, the current land supply process cannot be sustainable in the long term. As to the second question, with urban infill largely accommodating the demand for new dwellings, how can this process be improved and made more attractive for developers, government and communities? Director of Urban Research at Griffith University, Brendan Gleeson, notes that the vision of a compact and sustainable city still has a long way to go. He suggests that simply because the market has, until now, encouraged decentralised, dispersed and somewhat disorganised patterns of settlement, it does not mean the process is desirable or inevitable:

By allowing that sort of dispersion in concert with some pretty haphazard and ill-conceived redevelopment we're imposing unnecessary social, environmental and economic costs to our cities and communities.⁷⁷

Some commentators have expressed concern that urban infill may lead to loss of amenity. An alternative view is that relevant and appropriate community engagement, greater sensitivity regarding planning and design of infill developments and shared problemsolving among stakeholders can deliver outcomes that are both liveable and affordable. Governments and developers may fear 'NIMBYism' (or, 'not-in-my-backyard' resistance to change) but as Rolf Clapham of the Coalition Against Private Overdevelopment said recently of development proposals for the low-density suburb of Putney:

We want development. We just don't want it to be up to six storey-high towers and totally ignoring RTA traffic guidelines. I think it's really clear protest groups are not against development; they are against our democracy being taken away and instead planning being driven by big developer groups.⁷⁸

President of the Planning Institute of Australia, Sue Holliday, says:

There's no point releasing more and more land on the fringe of our cities, isolating the poorer members of our communities from jobs, from transport and putting them in to more difficult environmental situations.⁷⁹

⁷⁷ Erica Cervini, "Addressing the high price of unruly sprawl," Australian Financial Review, 31 October 2006

⁷⁸ Catherine Munro and Sunanda Creagh, "Let Sydney grow or lose \$6b: developers," Sydney Morning Herald, 26 February 2006

⁷⁹ ABC News Online, "Tax not land the key to housing crisis, planning group says," 28 January 2006

ALTERNATIVES TO URBAN FRINGE GROWTH

If 'sustainability' rather than 'sustainable growth' becomes a commitment and reality among government, developers and communities, options may be limited to those that are sustainable in the longer term. It is largely this concern that fuels the 'growth-no growth' debate. However, there are also opportunities for economic growth in adapting to the challenges of climate change (including sustainable urban development) as the Stern Report indicates. Consolidated patterns of settlement can also lead to investment. A recent study of planning proposals for *Melbourne 2030* shows that through consolidation Melbourne could achieve:

- A 12% reduction in vehicle trips over 25 years; and
- A 23% reduction in time spent traveling.⁸⁰

The scenario also indicates

significant resource savings in housing construction, infrastructure extension/augmentation costs for new housing development and land for urban expansion. Realising this package of resource savings will require an additional investment from Government compared to the Base Case [business as usual], particularly in fixed rail public transport. But the benefits far outweigh costs. Over 25 years, the implementation of *Melbourne 2030* would deliver a present value (net) benefit of between \$25 billion and \$43 billion depending on what discount rate is used. The plan would deliver a benefit of around \$3.50 for each dollar of extra cost incurred by comparison to the Base Case.⁸¹

Urban growth boundaries exist in other jurisdictions within Australia and internationally. They are designed to arrest urban sprawl and encourage higher density residential development around transport and service 'nodes.' While developers have occasionally expressed the desire for urban expansion in terms of a need for 'certainty' about land supply, others have remarked that without defining a clear edge to the city, agricultural and park lands come under relentless pressure to become greenfield housing sites. In Adelaide, the Planning Strategy introduces the concept of a 'metropolitan urban containment boundary' to create an 'edge' to the metropolitan area and rule out future urban sprawl.⁸² And in *Melbourne 2030*, an urban growth boundary is one of the 'directions' proposed to help achieve a more compact city.⁸³ In both instances, the plans for the cities demonstrate the intent to allow for in the order of 20 years supply of urban land.

In the case of Portland, Oregon effective sustainable development has been demonstrated

⁸⁰ SGS Economic and Planning, Competitive cities – the role of urban design, February 2006, p 5

⁸¹ SGS Economic and Planning, Competitive cities – the role of urban design, February 2006, p 5

⁸² http://www.environment.sa.gov.au/reporting/human/population.html , pp 4, 6

⁸³ http://www.dse.vic.gov.au/melbourne2030online/content/strategic_framework/03a

by the imposition of an urban growth boundary around the metropolitan area together with a concerted focus on urban renewal and public transport. A study compared development in Portland with that of Atlanta, Georgia during a period of rapid economic growth from the mid 1980s to the mid 1990s. Commuting times in Portland declined by 9 per cent while those in Atlanta increased by 1 per cent, in spite of a freeway widening program in that city. Air quality problems, measured as 'ozone alert' days, declined by 86 per cent in Portland while they rose by 5 per cent in Atlanta. Energy consumption fell by 8 per cent in Portland while it grew by 11 per cent in Atlanta for the same period. Portland residents noted an improvement of 19 per cent in neighbourhood quality while residents of Atlanta felt the quality of their neighbourhoods declined by 11 per cent.⁸⁴

The Mayor of London, Ken Livingstone, has embarked on a set of strategies for London which are closely integrated. These are:

- to accommodate London's growth within its boundaries without encroaching on open spaces
- to make London a healthier and better place for people to live in
- to make London a more prosperous city with strong and diverse long term economic growth
- to promote social inclusion and tackle deprivation and discrimination to improve London's accessibility
- to make London an exemplary world city in mitigating and adapting to climate change and a more attractive, well-designed and green city.⁸⁵

London Sustainability Commissioner Peter Head is putting the Strategy's principles into practice by designing zero carbon emission housing.⁸⁶

In China, the proposed eco-metropolis of Dongtan on Shanghai's Chongming Island will house half a million people by the year 2040:

It will be self-contained, growing its own food on small organic farms, powering its zero-particulate cars by battery or fuel cells, generating wind energy and hydrogen, capturing storm water and recycling all waste... Dongtan's eco footprint will be about 2.6 hectares a person, compared with 7.5 in Shanghai and other Western-type cities. Using mainly private capital, it's been kick-started by huge public transport investment as well as legislation.⁸⁷

⁸⁴Arthur C Nelson, "Effects of Urban Containment on Housing Prices and Landowner Behavior," May 2000, in *Smart Growth America* (undated), p 11

⁸⁵ Mayor of London, *Towards the Mayor's Housing Strategy*, November 2006, p 7

⁸⁶ Elizabeth Farrelly, "Green with envy, maybe, but more crazy than clever," Sydney Morning Herald, 14 February 2007

⁸⁷ Elizabeth Farrelly, "Green with envy, maybe, but more crazy than clever," Sydney Morning Herald, 14 February 2007

The Housing Industry Association, however, argues that urban growth boundaries (UGBs) 'reduce or eliminate the potential for market competition between owners of land inside the UGB and those with property outside the UGB, therefore artificially limiting the pool of land that is available for conversion to higher use.' The Association believes that UGBs should be rejected as a means of managing urban growth and facilitating land supply.⁸⁸ The Association, nevertheless, recognises that urban development does not stop even if greenfield development does: 'UGBs must incorporate mechanisms that identify the supply of infill development opportunities and bring these opportunities into production within a realistic timeframe.'⁸⁹

Urban renewal projects offer many challenges to developers, political leaders and community members. They can be complicated, contaminated or difficult sites. They can be held in many different ownership or stakeholder hands and thus be hard to negotiate over. They can be more prone to conflicts in terms of noise, amenity, design and similar factors. However, many believe that with commitment to integration of effort and shared solutions urban renewal projects can achieve great strides in new partnerships for sustainability. The Coin Street Community Builders project on the South Bank in London is one example. Local community members successfully lobbied for a development that now includes affordable housing for low income families, integration of arts and recreational facilities, vibrant retail and open space and a range of hospitality services.⁹⁰

There is room, too, for new ideas about ways in which we can invest in community land to ensure affordable housing. For example, Shann Turnbull of Macquarie University describes a system in which ownership of structures and improvements on land is separated from the ownership of the land itself. In this system, each individual owns their house as well as shares in community land corresponding to the size of individual plots. They are free to sell their house and shares, but shares are sold to the community land bank which in turn sells them to the new buyer at a higher price. In this manner, the community captures increased land value and can use proceeds for infrastructure and other community improvements. Additional revenue is created by leasing of community land for commercial and public enterprises.⁹¹

There are also opportunities for experimentation with the way in which urban areas are governed. Brisbane City Council is an example of a jurisdiction where one local government area covers the whole of the metropolis, thereby potentially reducing the need for separate negotiations and policy differences across local government boundaries. In South Australia, the Local Government Association represents local councils in dealings with the Government on policies and programs. This process has proved very effective in achieving shared solutions to complex problems including, but not restricted to, the

⁸⁸ Housing Industry Association, Urban Growth Boundaries – HIA Policy Statement, 16 March 2006

⁸⁹ Housing Industry Association, Urban Growth Boundaries – HIA Policy Statement, 16 March 2006

⁹⁰ www.coinstreet.org

⁹¹ Social Science Research Network, "Cooperative Land Banks for Low Income Housing," Shann Turnbull, Macquarie University, abstract

metropolitan area. Former President of the Planning Institute of Australia, Marcus Spiller sees a potential role for the Commonwealth Government as part of a new approach to governance in national planning for urban areas:

The cities already have their policies and strategic plans, mainly creating "cities within cities". What's missing is the mechanism, or governance model, for delivering those strategies. It's in the Commonwealth Government's interest to keep Australia prosperous, because the States are really struggling to deliver those [metropolitan] plans, mainly because they're shirking the issues around government reform.⁹²

In this vein, the House of Representatives Standing Committee on Environment and Heritage Inquiry into Sustainable Cities recommended a national approach to the governance and policy frameworks for urban areas with regard to impacts on urban sustainability and methods of achieving sustainable outcomes.⁹³

For informed decisions to be made about what is sustainable, processes that engage all stakeholders in finding and agreeing on solutions will be critically important. In addition to established community processes, community members also look to governments and business for leadership. The United Kingdom's Sustainable Development Commission recently observed: 'Consumers are ready and willing to act on climate change and the environment, but can't see the point because they feel their efforts would be isolated and in vain.'⁹⁴ There is also the suggestion that individuals and community members would like to reduce their housing footprint. This is one area where the market could respond.

In the Georgia Basin of British Columbia, scientists and community leaders developed an interactive process to engage community members in thinking about the sustainability of their region and acting on the knowledge. The Quite Useful Ecosystem Scenario Tool (QUEST) avoids a traditional approach to modelling, which starts with scientific knowledge, creates a model and then brings in users. QUEST begins by identifying the priorities people have, designs an interface, designs models to fit the interface and finally, gathers data. It also develops a 40 year timeframe so that people can imagine themselves and their families living and responding to events and activities during that time. It asks for members' collective vision of sustainability. Members then select external conditions for global scenarios that will influence their region and discuss how events and activities work in practice. Next, they are asked to decide what they would like the future to hold in terms of outcomes for populations, urban growth, transport systems and land use. A simulation is run, based on these inputs. Once participants see the future resulting from their initial choices, they can re-evaluate and change where they want to go. This process

⁹² Tina Perinotto, "Planners must learn the lingo," Australian Financial Review, 20 April 2006

⁹³ Australia House of Representatives Standing Committee on Environment and Heritage, Sustainable Cities, Parliament of the Commonwealth of Australia, 2005, pp 32, 36

⁹⁴ UK Sustainable Development Commission, Why are we waiting?, www.sdcommission.org.uk/pages/020506.html

can continue until participants find the future scenario that is most satisfactory.⁹⁵ QUEST is but one tool in a raft of useful tools and processes being used by agencies and organisations to engage stakeholders of all kinds, including government officials and political decision-makers, to examine sustainable solutions to urban development and to quantify and report on impacts, outcomes and possibilities.

CONCLUSION

The challenge of sustainable urban development in the context of climate change suggests the need for a new framework. Ideally, it would embrace the complexity of the current land supply process, challenge existing assumptions about the demand for housing, engage all stakeholders meaningfully and ensure that we do not create an ever-sprawling city that is unsustainable in either the short or long-term. The size of the challenge suggests the need for reform of current programs. It also indicates an opportunity to think laterally and develop solutions which tackle housing forms that have failed to keep pace with changing household structures and are not only sustainable but which enhance the design and liveability of our cities.

⁹⁵ John Robinson, "interactive Science for Sustainability in the Georgia Basin," *Environment Canada Policy Research Seminar Series*, November 2002

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