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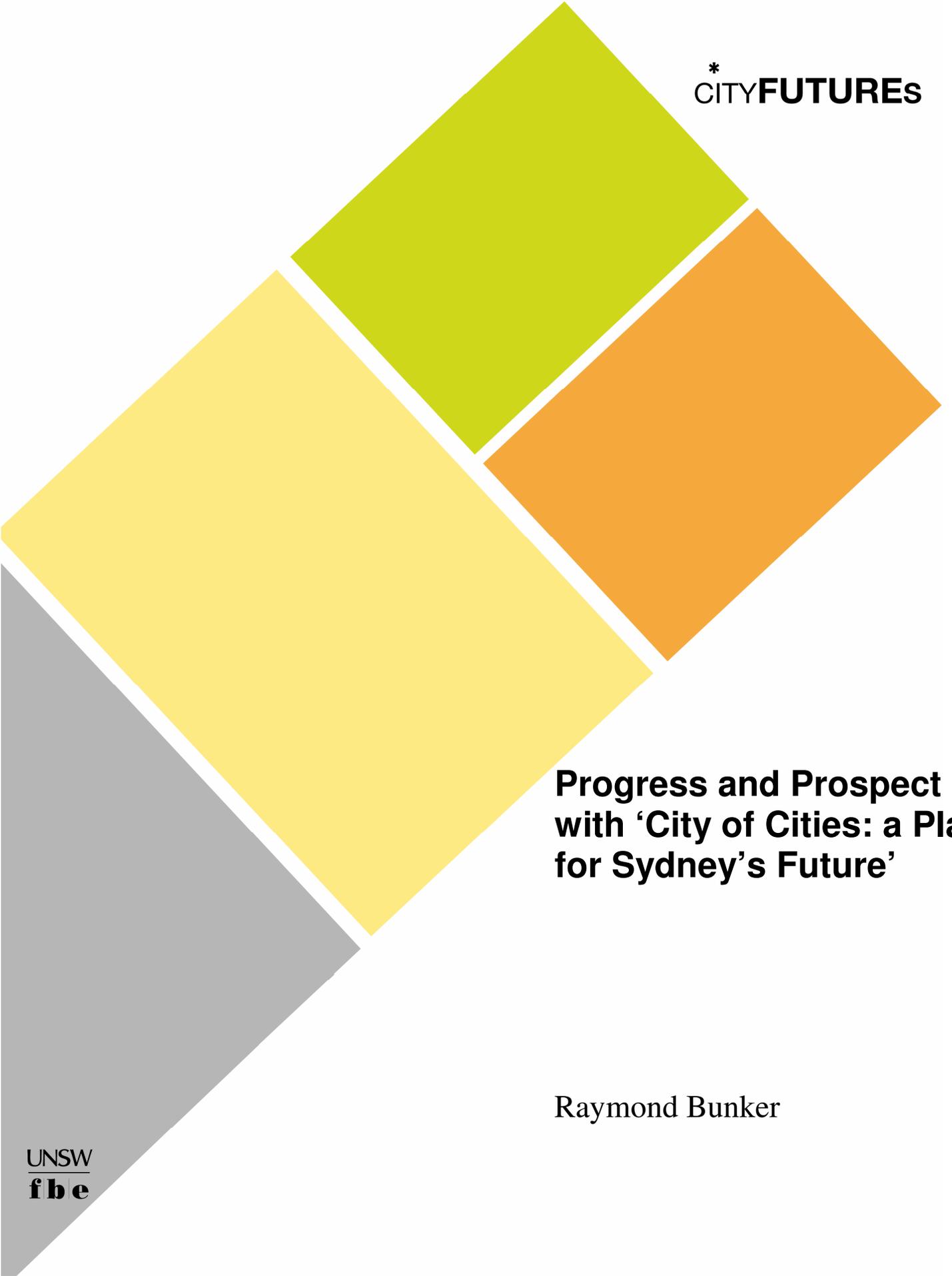
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**Progress and Prospect
with 'City of Cities: a Plan
for Sydney's Future'**

Raymond Bunker

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Progress and Prospect with ‘City of Cities: a Plan for Sydney’s Future’

Abstract: *A continuing issue in metropolitan strategic plans is how much of them will be implemented. This appears to depend on how far planners are able to understand and shape the future of the city; whether appropriate planning and decision-making frameworks and mechanisms exist or can be put in place for making proposals happen; and what kind of methodology, content and process is used in preparing a plan. These themes are employed to analyse the way four of the major issues attending the future of Sydney are dealt with in the recently released metropolitan strategy ‘City of Cities’, and in subsequent statements and plans. These are economic development and its spatial representation, housing, water management and use, and transportation. The first two of these represent innovative exercises in the linking of economic activity and living with land use, density and location. The second two reflect more abstract challenges in framing proposals to acknowledge the increasing constraints of natural resources upon which the city depends. The review ends by suggesting that changes to the planning process would improve the chances of implementation, and the effectiveness of the outcomes.*

Introduction

Recent far-reaching reviews of metropolitan planning by Gleeson and his colleagues (Gleeson and Darbas 2004, Gleeson *et al.* 2004a, 2004b, 2004c) have led to the conclusion that the key issue is how effectively sustainability and governance are addressed in them (Gleeson *et al.* 2004c). The recent spate of metropolitan plans all claim to use both these qualities as leading instruments in fashioning and carrying out their strategies. However they do this in different ways.

Those on the eastern seaboard have similarities. The first, *Melbourne 2030*, (Department of Infrastructure Victoria 2002) sets out a program of restructuring the city towards a more compact poly-centred form. While there is some growth in greenfields locations, an urban growth boundary seeks to limit and concentrate this. Within the existing urban area, a growing proportion of future housing is organized around activity centres in medium- and high-density configurations, where there is also an increasing concentration of jobs and services. These centres are connected with central Melbourne, with each other, and with some regional cities in the arc surrounding Melbourne by improved public transport. Sydney is driven more strongly by the need to strengthen its role as a global city, and plans a spatial economy structured by highly articulated systems of regional cities and major centres within the metropolitan area joined by rail lines and bus corridors. Most future housing is planned within the existing urban area in medium- and high-density form around centres, or in corridors within reach of public transport. Brisbane continues these restructuring themes (Office of Urban Management Queensland 2005), but reflects a long-continuing process of plan-making with local councils in south east Queensland, and there is less specification and precise definition about the urban outcomes.

Adelaide's circumstances are somewhat different, reflected in the 2006 *Planning Strategy for Metropolitan Adelaide* (Government of South Australia 2006). Economic development is the main thrust of the accompanying *South Australia's Strategic Plan* (Office of the Premier 2004), for which the metropolitan strategy acts as one spatial component. While the same themes are present as those in the eastern seaboard metropolitan plans, there is little specification of targets for housing and job growth in various locations, and far more concern with water management and protection and enhancement of ecosystems. The rural-urban fringe is a critical area for water harvesting purposes and for intensive agriculture, horticulture and tourism. There is a separate plan for this region, which contains an urban boundary. Perth has heavy emphasis on planning a network city, using the polycentric, more compact city theme in an interesting variation where land use and transportation are intimately related and used as the major instrument of growth and change (Western Australian Planning Commission 2005). There is also a strong emphasis on process with a program of public involvement and progressive development of strategic initiatives and commitments.

How far and in what ways these plans are likely to be implemented could be seen as a test of how well sustainability and governance have been defined and used in them. To make that test operational it is necessary to define a process of analysis and evaluation that reflects the way each of these plans has been put together. The likelihood of implementation seems to involve three considerations. Firstly, whether planners have adequately understood the forces shaping and driving cities and devised appropriate proposals to more effectively direct these. Secondly whether policies, decisions, investment, projects and operations, particularly by governments will support and drive the plan. Thirdly, it is within this context that planners devise a methodology and process for plan-making and communication. Hence the importance of this third element, in 'reading' the plan (Searle 2004) and in examining the suitability and effectiveness of its content, argument and structure. Applying this framework of analysis to each of the plans should result in conclusions about how far and in what ways they may be realized.

This paper deals with four of the major topics contained in the current metropolitan strategy for Sydney *City of Cities* (Department of Planning NSW 2005a). These are economy and employment and their link with centres and corridors; housing; management and use of water; and transportation. The first section contains a description of the proposals concerning these important topics. The second major section applies the three criteria defined above to examine how far the proposals are likely to be implemented. A third section gathers together these assessments in evaluating the plan. A final section uses these conclusions to suggest changes to the process of metropolitan strategic plan-making in order to improve the chances of implementation

City of Cities (hereafter called the plan) is centrally about economic development. The home page for the metropolitan strategy calls it the 'NSW Government's long term plan to maintain Sydney's role in the global economy and to plan for growth and change' (www.metrostrategy.nsw.gov.au). The most noticeable and strongest feature

of the plan is in classifying economic activity and developing a differentiated typology of centres and locations to which different kinds of businesses are linked. These form the first two sections of the plan and are closely associated.

1. Proposals in *City of Cities*

Regarding the economy, employment, centres and corridors

Earlier studies have identified the importance that advanced business services have in global economic activity, and their marked clustering tendencies (Spiller 2003, 2005). This concept is carried forward and extended in the plan to identify the higher-order producer and consumer services of this kind and where they are located. Thus 'Global Sydney' (central Sydney and North Sydney) is a location for concentrations of information technology and communication, multimedia, tourism and hospitality, cultural industries, finance and business, and health and education (p.48). This concentration is extended south to the airport and north west to Macquarie Business Park to form a 'Global Economic Corridor' containing other clusters of these and other higher-order industries. The plan estimates 700,000 jobs were contained in this corridor in 2001 and there will be 850,000 in 2031.

The other complex of employment identified is that of 'Western Sydney', the suburban area stretching to the west of Olympic Park, just to the east of Parramatta. This is estimated to contain 663,000 jobs in 2001 and projected to have 900,000 in 2031. This suburban economy is driven by the consumption demands of its growing population, and the continuing decentralisation and establishment of manufacturing, commercial, warehousing, storage, and distribution operations.

The spatial representation of the Sydney economy and its various components is a particularly useful one and reflects research and argument of this kind into concentrations of employment, clustering, and the development of suburban economies around the changing dynamics of housing and labor markets. (Freestone 1996, O'Connor 1997, O'Connor *et al.* 2001, Fagan *et al.* 2004, Dodson and Berry 2004, Forster 2004). This theme becomes a main component in the metropolitan strategy map, a simplified version of which is shown in Figure 1.

Twenty seven 'strategic' centres of various kinds are nominated and employment 'targets' for each set for 2031. They are meant to act as locations to house and support business and knowledge-based activities (p. 97). The most important are the two centres of Sydney and North Sydney making up 'Global Sydney'. Four regional centres are designated, three in the west at Parramatta, Liverpool and Penrith and the fourth north of Sydney at Gosford in the Central Coast of New South Wales. There are then nine specialized centres of different kinds such as Sydney Airport and Randwick Education and Health. Finally there are another twelve major centres exercising more generalized functions. The plan seeks to strengthen their role of these strategic centres so that their share of total jobs is expected to increase from just over 40 per cent to almost 45 per cent (p. 94).

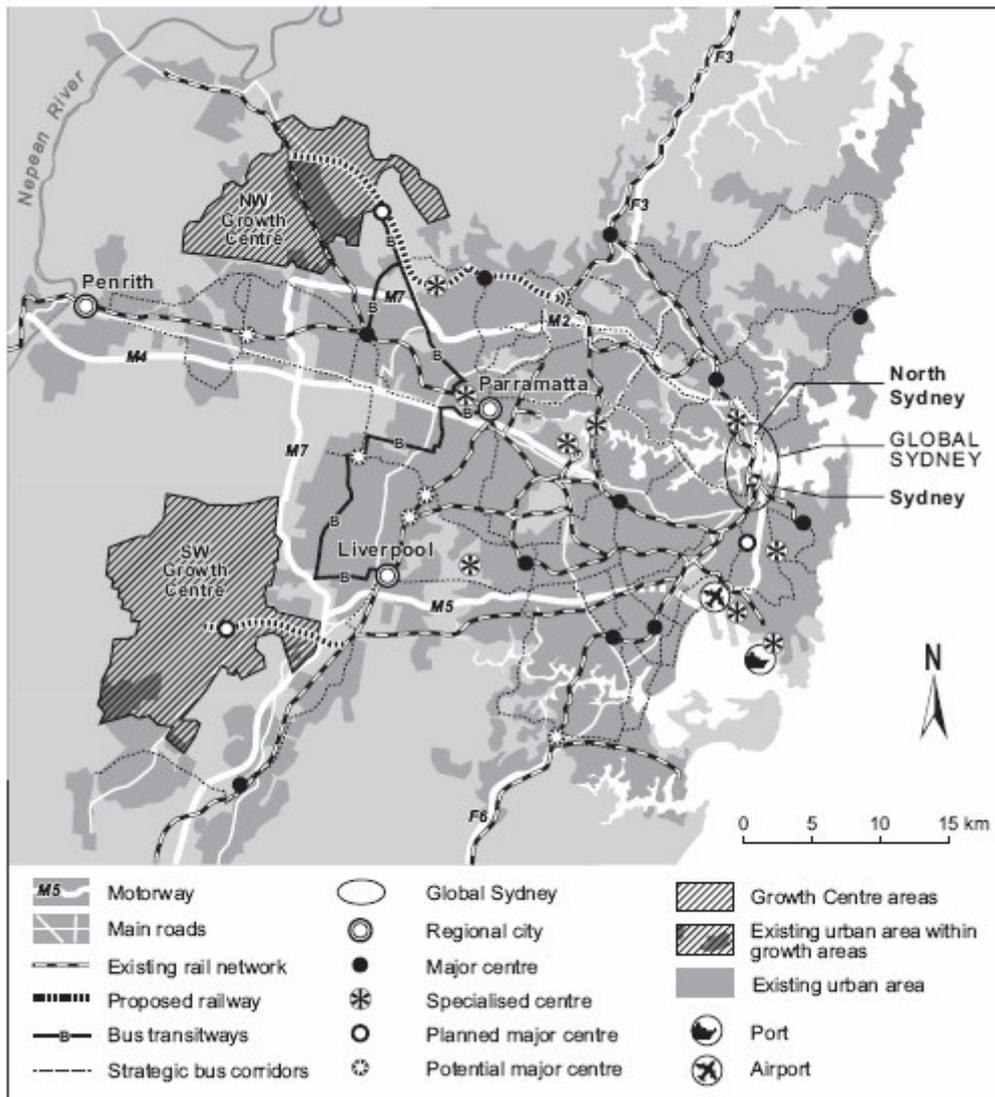


Figure 1. Main Elements of the Sydney Metropolitan Strategy, 2005
(adapted from NSW Department of Planning 2005, pp. 10-11)

Apart from the ‘Global Economic Corridor’ already defined as extending south and north west of ‘Global Sydney’, other corridors of growth and renewal are defined. They are variously categorized as ‘Economic’ ‘Renewal’ and ‘Enterprise’. One Economic Corridor along the M5 joins Sydney Airport with Liverpool to the west. Another extends north-south along the M7, the recently completed western section of the ‘Orbital Motorway Network’. The important Parramatta-Sydney road and rail corridor is the sole Renewal Corridor, although other routes are identified as Potential Renewal Corridors.

The purpose of analysing the major characteristics of Sydney’s economy, including its spatial representation, is that this can then be used as a basis for developing a pattern of economic activity largely housed in centres and corridors of differing character and importance. This is also supported by the main transportation links underpinning the plan.

Western Sydney bears the brunt of growth in employment and residential population. Outside Sydney City and the Inner North subregion (largely Global Sydney), the West

Central, North West and South West subregions are anticipated to house about three quarters of the expected growth of jobs, if Gosford-Wyong is excluded. It is only possible to estimate the increase in dwellings on the same basis using the data provided in the plan, but a comparable proportion of new housing is located in these subregions. To accompany this population growth so that local employment opportunities are available will mean a major effort in job creation in the region where unemployment is already relatively high. Few of these jobs are likely to be advanced business services of the kind characterizing Global Sydney and it is to be expected that there will be an increase in the existing large-scale travel to jobs (p. 105) outside the area for this kind of employment.

Housing

The plan points out that important demographic and social trends means that there will be an increasing number of smaller households and those made up of elderly people. It estimates that 640,000 new homes will be required by 2031. About 195,000 of these will be built in greenfields areas, mainly in growth sectors extending the suburban growth of Sydney in the north west and south west. It envisages that 60-70 per cent of new housing will be constructed in existing urban areas, mainly around centres and in corridors amounting to about 445,000 dwellings by 2031. This gives a balanced approach between new releases of greenfields land, and renewal and infill in existing suburbs. The latter will thus be predominantly in the form of attached housing of one kind or another – terrace houses, villas, townhouses, flats, units, apartments.

Housing densities in existing urban areas are relatively high in central Sydney, from there north to Chatswood, east to the coast, and to the immediate south and west of the City. The plan acknowledges that there may be difficulties in raising densities in such areas and argues that there is much potential for renewal in the middle and outer suburbs to the west. Here the low density separate housing which exists is “the first development since the land was cleared and transformed from agriculture and pasture” (p. 136). The housing targets for dwelling increases here amount to 205,000 of the 445,000 needed in existing urban areas. When account is taken of the dwellings removed in the renewal process, considerably more than this net increase will need to be built.

An analysis of the social profile of people presently living in high density housing in the three nominated regional centres of Parramatta, Liverpool and Penrith has been carried out (Bunker *et al.* 2005c). The data used to construct a social profile for each area were taken from the 2001 Census of Population and Housing as well as the Australian Bureau of Statistics Index of Socio-Economic Disadvantage (ABS 2003). The lower the Index the more disadvantaged is the population. The average for the Sydney Statistical Division was 1,017.

The case study area of Parramatta comprised six Census Districts (CDs) in and around this historic settlement and major centre which has been supported for many years as the second most important location in Sydney outside Global Sydney. The picture is of a relatively disadvantaged migrant population mainly from Asia with low incomes, employment skills and limited connections with Australia society. There are few

children and a high rate of turnover of population. The Index of Socio-Economic Disadvantage for the suburb had a value of 936.

The Liverpool case study area consisted of eight CDs to the west of the railway station. This was another migrant community but in this case most came from continental Europe, with some from Asia and Oceania. Moreover, a fifth of the population consisted of children, with many single parent families. This is a welfare dependent community, with a low score of 842 for the suburb on the Index of Socio-Economic Disadvantage.

The Penrith case study area consisted of three CDs again near the railway station. In contrast to Liverpool and Parramatta, this was a predominantly Anglo-Celtic population with over half the households consisting of only one person, nearly two and a half times the average for the Sydney Statistical Division. There were few children, and this was another low income population, with low employment skills and high unemployment. The low score of 897 for the suburb on the Index of Socio-Economic Disadvantage reflects the many single person households of unskilled young and middle-aged adults.

These snapshots show the importance of differentiating among the households and people living in higher-density housing, so that proposals for substantial increases in these kinds of dwellings are better informed by present circumstances and future prospects. Otherwise the social outcomes will be regressive and social sustainability impaired.

Water management and use

Before the release of *City of Cities*, that component dealing with the sustainable use of water had already been covered in the Metropolitan Water Plan (Department of Infrastructure, Planning and Natural Resources 2004) and is included in *City of Cities*. The Water Plan provided a framework for “a sustainable and secure water system for people and rivers over the next 25 years” as the then Premier claimed in the introduction (p. 1). It contained a number of measures both to manage and reduce demand and to improve supply. The supply measures included accessing deepwater at the bottom of the dams, raising the height of the Tallowa Dam on the Shoalhaven River to the south of Sydney so that additional supplies could be pumped from there to Sydney, implementing new recycling initiatives in urban development in western Sydney, and examining the possibility of building of a desalination plant. It also commissioned research from CSIRO into the processes of climate change as compared with natural variability in weather regimes

On the demand side there has been the successful application of management policies and programs which has saved 20 per cent in water consumption in the period 1991 - 2004, much of this in the business and industrial sectors (Turner *et al.* 2005). BASIX, the Building Sustainability Index has required all new separate houses to achieve savings of 40 per cent in mains water supply compared with the average consumption of similar dwellings since July 2004. There was some extension of this requirement in 2006 to cover alterations and additions.

The Water Plan was replaced by a new one in February 2006 (Government of NSW 2006), in ways to incorporate more recycling projects, including dual use reticulation systems in new residential estates, mainly in western Sydney. It identified the site for a controversial desalination plant at Kurnell, which has now been approved and will be built if needed. It continued its research into the potential effects of climate change on water availability and potential water demand by commissioning a new study involving the CSIRO, University of New South Wales and other parties.

There is growing evidence of climate change and the reduction in rainfall in eastern New South Wales (Flannery 2005). If this is so, there is every indication that long-term planning will need to move much more to managing demand, and recycling used water, as well as seeking new sources of supply such as harvesting stormwater or a desalination plant.. Given this uncertainty, and the possibility of the diminishing effect of demand management measures over time (Karm 2006), there is every reason to support the more flexible 'adaptive management' espoused in the new Water Plan (at four times the length of its short-lived predecessor) to address changing circumstances and increased understanding of the effects of climate change.

Transport

There is considerable attention to the movement of freight in the plan, with 86 per cent of this being carried presently by road (p. 162) and that proportion having steadily risen over the years. It is intended to reverse this trend, and the plan makes much of upgrading and extending the metropolitan rail freight network (p. 190).

Regarding public transport, *City of Cities* develops strategies to connect the nominated centres together more effectively by heavy rail and strategic bus corridors. New urban development in the north west and south west is to be served by extending existing rail lines, scheduled for 2017 (recently brought forward to 2015) and 2012 respectively though a final decision on the timing of these projects will depend on 'continuing detailed planning, financial and economic studies' (p. 165). A new rail link under the harbour is scheduled for 2017 to accommodate these additional services. Rail services will also be improved by greater reliability and timetabling to more effectively reflect changing travel demands. A number of strategic bus corridors giving fast access to centres was identified in the *Review of Bus Services in NSW* (Unsworth 2004). The metropolitan plan adopts a network of some 43 strategic corridors providing bus priority which will be progressively implemented from 2006 to 2012. The strategic network is to be integrated with local systems through bus contract reform.

Transport is to be improved within 'Global Sydney' by improvements to bus services in conjunction with the opening of the Cross City Tunnel, including extension of bus lane operating hours. Public transport is to be more effectively integrated with improved interchanges and integrated ticketing. A metropolitan parking policy is to be developed and implemented to encourage the use of public transport from and to centres.

Travel and transport is possibly the most important issue facing Sydney. A recent study by the Centre for International Economics (2005) for the *Sydney Morning Herald* estimated that vehicle travel is costing more than \$18 billion a year through

congestion, accidents, greenhouse gas emissions and pollution, and threatens to stunt the State's economy. Distances traveled in Sydney are expected to rise by 29 per cent between 2005 and 2020 and social costs by 32 per cent.

The transportation proposals in *City of Cities* represent an amalgam of various plans and projects, based on trying to more adequately cope with current conditions. Some may not happen and the then Opposition leader, Peter Debnam has pointed out that most of the projects proposed in the last big transport plan *Action for Transport 2010* in 1998 had not been delivered (Sydney Morning Herald, 20 November 2006). The urgent proposals for the movement of freight by rail are dependent on federal funding. On past experience others will be delayed, or even cancelled. The major rail links to serve the new north west and south west sectors are programmed into a future where travel patterns by car in those developing areas will be well established. The suburban economy of western Sydney depends on private motor vehicles.

Economic Development Centres and Corridors	Housing	Water	Transport
Provide a varied framework for accommodating jobs across the city. This should encourage growth of advanced enterprises and higher order activities with benefits from co-location and clustering in a global corridor stretching from Macquarie University in the north-west through the CBD to the Airport. Other major strategic centres are designated in the suburbs for such activities and those serving the local population. Employment lands are identified for businesses using broad acres, and 'economic, enterprise and renewal corridors' to house varied activities along major communication routes. Job targets are set for centres for the year 2031.	Provide a varied housing stock for the needs of a changing population with smaller and more diverse household types. 30-40% of new housing to be in greenfields sectors in the north west and south west mainly. Remainder to be in existing urban areas, much of it in the form of renewal and redevelopment in medium- and high-density form, particularly in middle suburbs to the west. Focus residential development around strategic centres and other centres of varying size and along routes well served by public transport. Subregional targets set for 2031 populations, and about 82% of the 445,000 new dwellings needed seen as located in the global central city, other major centres or those of lesser size.	Incorporates 2004 Metropolitan Water Plan "towards a sustainable and secure water system for people and rivers over the next 25 years". BASIX system requires all new dwellings to be designed to reduce water consumption by 40% compared with current average use. Recycling schemes to be expanded including treated sewage effluent for industry and use of recycled water in the new greenfields growth centres. Plan superseded in 2006 by new Water Plan with increased attention to recycling, augmenting various sources of supply including a desalination plant to be built if dam levels fall to a critical level.	New rail route from the north west sector through the city centre and out to the south west sector to be completed by 2017 and 2012 respectively, subject to budget and development circumstances nearer those dates. Completion of Epping-Chatswood rail link. Upgrading and untangling of rail network. A bus transitway from Liverpool to Parramatta will be extended to Rouse Hill and over forty strategic bus corridors completed linking the major centres so that cross-suburban travel by public transport is facilitated. Expansion of shipping operations at Port Botany and construction of dedicated freight lines to move goods and lessen reliance on road trucking, dependent on federal funding.

Table 1: Summary of the main proposals on selected themes contained in the Sydney metropolitan strategy, 2005

2. Taking stock

Table 1 summarises the proposals contained in *City of Cities* in the four matters discussed. The necessary descriptions of them above can now be gathered together into a more evaluative framework of discussion. We now apply the three criteria of understanding and appreciation of urban conditions and trends, shaping appropriate policy responses, and developing suitable planning processes.

Economic development, centres and corridors

Understanding

City of Cities contains good analysis of the drivers of the economic development of Sydney and their spatial representation. However, this needs to be pursued further in empirically uncovering the local processes involved in growing innovative businesses (Berry 2005). Such studies would, for example examine the validity of distinctions made between two types of clustering forces: that arising from linkage of one business to another in a functional manner, and that arising from cross-industry advantages generated by a rich milieu of urban services such as computing professionals and high order business services (Searle and Pritchard 2005).

The examination of labor markets begun in the comparison of Western Sydney with Global Sydney needs to be partnered with similar consideration of housing markets. Otherwise continuing polarizing trends regarding advantage and disadvantage (O'Connor *et al.* 2001), could also compromise economic performance. The choice of regional cities in the west of Sydney happens to select existing populations living in attached housing with troubling scores in terms of socio-economic disadvantage. If these conditions are reinforced by the projected increase in population, there will need to be a variety of initiatives and programs to prevent further social stress.

Robustness of government policies

The proposed strategy for the economy and employment depends heavily on a suite of associated measures including the provision of key infrastructure. The later *State Infrastructure Strategy* (Department of Treasury NSW 2006) is closely tied in with the metropolitan strategy and does contain much of the short- and medium-term public investment needed to implement the proposals in *City of Cities*. The important Innovation Strategy is under development and has been partnered with the metropolitan strategy in the selection of the strategic cities designated in *City of Cities* for establishing fast wireless broadband infrastructure as an aid to economic development (Iemma 2006b). While this may represent the ‘magnet infrastructure’ designed to transform centres so that they achieve their economic and social potential (p. 70) there are no signs of similar supportive investment to that provided in some of the business clusters and specialized centres in Melbourne and Brisbane. The Innovation Strategy was showcased in an Innovation Statement in 2006 (Iemma 2006b) which contained principles and objectives and now appears to be the responsibility of the Department of State and Regional Development.

Planning processes

The *City of Cities* proposals seems to act as a default program of economic development for Sydney, and are accordingly heavily weighted in terms of urban development, when other circumstances could also be of critical importance. It remains to be seen how far the developing Innovation Strategy will encompass these necessary measures where skills training, education and other labor market programs directed to specific locations could well be important (Dodson and Berry 2004). The re-election of the Iemma Government in March 2007 has, however provided a continuing platform for this initiative.

The selection of centres of various kinds and their job targets need further substantiation and monitoring. It might well be better to concentrate on a few well-researched centres and focus all efforts on ensuring their success in economic, social, environmental and communications terms, while carefully watching progress and taking appropriate supportive action.

Housing

Understanding

Analysis in *City of Cities* is limited to demographic and social trends such as an ageing population and smaller households without any consideration of communal conditions such as severe disadvantage and dysfunction (Bunker *et al.*, 2005a, 2005b, 2005c; Randolph and Holloway 2005, Baum *et al.*, 2005, 2006). The lack of research into housing markets could continue to concentrate pockets of unemployment and deprivation, particularly in western Sydney (Fagan and Dowling 2005, Berry, 2006), to the extent of compromising economic development and ensuring either long journeys to work or travel by car or both.

Robustness of government policies

Greenfields development in the north west and south west is carefully organised with a Growth Centres Commission, preparation of plans mapping out transit-oriented development in each sector involving a centres hierarchy, permeable street patterns and residential densities graduated according to access to public transport and centres. A special infrastructure contribution is required in these areas and it is yet to be seen how far the development will achieve some of its objectives (McMahon 2006).

The proposed renewal and redevelopment in existing middle and some outer suburban areas in the form of medium- and high-density housing, particularly in western Sydney needs much more refinement and detail to establish its appropriate character (Randolph 2002), and probably requires interventionist measures and some funding by government to happen smoothly. Housing affordability will not be helped by the special infrastructure contribution in growth areas. The extent of necessary renewal and augmentation of infrastructure in areas of significant increase in dwelling stock, and how it is to be funded is not worked out.

Renewal and redevelopment proposals depend heavily on the operation of the market within enabling reforms such as the standard local environment plan template. It is

necessary for suitable reformed legislation to cover the increasing diversity and complexity of strata plan developments as acknowledged in *City of Cities*.

Planning processes

Implementation of the dwelling stock increases proposed in *City of Cities* is by the further allocation of the year 2031 dwelling numbers by subregions contained in the strategy to local councils in the subregion through a subregional planning process (Department of Planning, 2005b, 2006a, 2006b). A METRIX subregional planning model has been developed to allocate the additional dwellings needed in the best configuration possible and is also of use in estimating vehicle kilometer trips generated in different scenarios (Corpuz *et al.* 2006). These allocations of dwelling capacity by local council areas take no account of the viability, effectiveness or consistency of the renewal and development process. Apart from the neglect of social impacts and environmental consequences, the strategy displays little consideration of how the urban renewal process works and whether the anticipated increase in dwellings and population will actually take place. It skates lightly over the necessary augmentation and replacement of infrastructure which will be necessary and conditioned much by local circumstances. There is no discussion of the kinds of intervention that may be necessary to bring about renewal in a satisfactory manner (Randolph 2002).

Water management and use

Understanding

The uncertainties apparent about the reliability and amount of future rainfall has led to the expansion of an important research program involving CSIRO and the University of NSW in the new 2006 Metropolitan Water Plan. In March 2007 a major new climate change research centre was established at the University of New South Wales as a focus for a diverse network of researchers including academics and government research groups such as CSIRO and the Bureau of Meteorology. Investigation is continuing into the potential of other sources of supply, of demand management, and of recycling.

Robustness of government policies

Since the publication of *City of Cities*, the new Metropolitan Water Plan has begun to shape an expanded suite of policy measures to address water management and use. These are beginning to emphasise demand management and recycling more than previous policies. Shorter-term measures include the construction of a dam in the Hunter Valley, possible pumping of water from ground water aquifers in the Southern Highlands and the building of a desalination plant if water levels fall below critical levels. As the potential changes in supply and demand management are being explored, a flexible program of 'adaptive management' is being followed as information-gathering continues and various policy options are considered. Successive decisions and commitments will follow as these uncertainties are clarified.

Planning processes

These circumstances suggest that water management and use will need to evolve much further beyond the sensible demand management measures already introduced. Actions already taken or in train will provide savings, but further decisions will be needed well before 25 years, given the growth in population and the uncertainties brought about by climate change.

Some indication of the range and mix of policy measures that need to be devised are contained in recent research on the causes and characteristics of residential water consumption in Sydney (Troy *et al.* 2005). These comprise:

- Educational Campaign
- The supply obligation of the water supply authority should be limited to the volume of potable water needed for the health of the population (this is estimated to be about 20 per cent of total consumption)
- Consumers should be required to accept some responsibility for their own consumption behaviour by making use of the water resources available locally (through rainwater tanks and storage and recycling of grey water)
- Waste water flows should be reduced to minimise pollution of receiving waters
- Any program of development should be capable of being progressively introduced
- Equitable pricing regime
- No human consumption of recycled water.

Some parts of this particular suite of measures involving recycling and re-use of water within the dwelling, would need to be designed into the construction of all new accommodation including medium- and high-density housing.

Transport

Understanding

The Transportation and Population Data Centre in the Department of Planning collects and analyses data on trip and travel characteristics, particularly the journey to work. The Centre has developed a model called METRIX to monitor and assess council plans to ensure that planned development aligns with the Strategy's sustainability and growth targets and in particular to moderate the vehicle kilometer trips generated. The metropolitan strategy still relies heavily on concentrating jobs and services in centres and arranging population growth so that people can and will access nearby centres by public transport.

More research is still needed into the changes to tripmaking that these changes to urban form and structure might make. Changing work practices, the organisation of business activity, and the dynamic and atomized character of household trip-making may alter the assumptions on which the reduction in car-dependence takes place. The determinants and consequences of decisions about travel made by households, businesses and other establishments need continual monitoring.

Robustness of government policies

City of Cities assembles the programs and projects of various state agencies involved in public transport, and as noted above, the 2006 State Infrastructure Strategy contains some of the infrastructure projects mentioned in the plan. But the later crash program of \$660 million to ease traffic congestion announced by the Premier on 20 November 2006 (Iemma 2006c) introduced some new costly initiatives to address bottlenecks (or 'pinch points') on roads and increasing congestion in the CBD, while accelerating some of the public transport proposals in *City of Cities*. The freight movement proposals involve Commonwealth Government funding.

Despite the importance of clustering and interaction of business activities in the Global Arc, there is no systematic attempt to plan for easy and frequent movement by public transport around this area such as exists in other global cities.

Planning processes

Transport planning is continually criticized for the perceived lack of systematic planning for both public and private travel. It seems more concerned with shuffling projects for public transport and roads rather than designing systems for lessening car dependence. There has been no consideration of such well-researched proposals for transport from independent researchers at the Warren Centre (2002), and in some exasperation, an alternative integrated transport strategy was formulated by Chris Stapleton, a transportation planning consultant. It was launched in March 2007 by an organization called 10,000 Friends of Greater Sydney (or FROGS), an offshoot of the Warren Centre study. Considerable public disquiet about transport is shown in continuing and reputable opinion surveys.

3. Evaluating the plan

Gathering these threads together leads to a number of conclusions. Firstly, there are significant gaps in the research basis for the plan. For example, the plan seems to assume a trickle-down effect of increased prosperity upon the fortunes of the less advantaged. Its aim of 'fairness' is reduced to improving travel access to jobs and services which, while important ignores personal and institutional barriers to urban goods and services. The lack of analysis of housing markets and social impacts is puzzling given the attention to the 'new economy' and its evolving labor markets. The continued decline in housing affordability has the potential to erode economic competitiveness (Property Council of Australia 2006). In more general terms, the bibliography is dominated by important but in-principle contributions by international scholars which need enrichment and adaptation to the Sydney scene (Berry 2005), government reports and specialized consultancy studies. There is almost no reference to the rich corpus of research on Australian urban development. Gleeson *et al.* in their recent review of metropolitan planning (2004c) draw attention to Brian McLoughlin's (1992) complaint about the "lack of theoretically informed analysis of urban planning" and *Melbourne 2030* has been criticized by academics for its simplistic view of urban life (Birrell *et al.* 2005) The result is an over-reliance on changes to the built environment to achieve social, economic and environmental ends, and lack of appreciation of the complex influences on behaviour and decision-making by Sydney residents.

Secondly, the plan acts as a basis of resolution for a number of state government policies and builds upon them to fashion a restructuring of Sydney to facilitate economic development and provide certainty for developers, investors and businesses. In doing this it makes a number of assumptions about the substance and longevity of those policies. Laying aside those which occur when there are changes in government, there are often abrupt changes in government policy. The current plan bears the marks of the relatively recent and sudden decision to virtually abandon sea-born freight movement in Sydney Harbor and transfer operations elsewhere including an expanded Port Botany with all the attendant problems of increased freight and general traffic to the south and west. The State government has no control over proposals for substantial commercial development at Sydney Airport and industrial and business expansion at Bankstown Airport, because they are on Commonwealth owned land.

It is highly probable that there will be considerable changes in emphasis, if not in direction about transport policy, brought about by growing congestion on the roads and the environmental impact of increased vehicular travel. Reducing car-dependence will require a variety of measures including regulation and pricing as well as land use planning and infrastructure provision. There are similar uncertainties with water management and use necessitating 'adaptive management' as the effects of climate change begin to become apparent.

Thirdly, in a time of growing uncertainty with the need to combine well-targetted commitment with flexibility, creative opportunism and rapid adjustments in government policy, it is puzzling to find the plan assuming a modernist character as a long-term plan with strongly articulated targets of employment and housing on which the implementation of the plan seems to depend. This planning process seems more appropriate for planning localities, estates, and transport systems and in delivering projects rather than shaping the progressive decisions needed to deal with the potential of a dynamic evolving metropolis facing major uncertainties which must be resolved as it charts a transition towards sustainability. It is true that the plan promises annual updates and five-yearly reviews. But that usually leads to increased efforts to achieve it together with minor modifications. Inevitably the plan begins to lose credibility as major changes in trends or circumstances take place.

It is important to illustrate this point further, by reference to the job targets in the strategic centres, and their sources and history. These are specified in the plan together with statements about the importance of their adoption and achievement (pp. 94-5). The Sydney Region Outline Plan of 1968 (State Planning Authority of NSW 1968) nominated only two major centres outside the centre of Sydney. These were Parramatta and Campbelltown. Below these, five town centres at Camden, Blacktown, Mount Druitt and Chatswood were mentioned without specification as to their planned role, growth or future size.

Tables 2 and 3 adopt the nomination and nomenclature of centres in *City of Cities*. Table 2 compares the forecasts made in the Sydney plan of 1988 (Department of Environment and Planning 1988) about future employment in major centres with actual figures for 2001 and forecasts for 2031 contained in *City of Cities*. It is likely there may have been some changes in the definitions of some centres between the two

Centres (in City of Cities parlance and order)	Sydney into its Third Century, 1988 (p 48)		City of Cities, 2005 (p 95)	
	1981	2011	2001	2031
<i>Global Sydney</i>				
Sydney CBD	188,919	220,000	331,572	380,000
North Sydney	28,750	40,000	49,160	60,000
<i>Regional Centres</i>				
Parramatta	20,360	60,000	41,662	60,000
Liverpool	10,904	20,000	15,533	30,000
Penrith	3,703	20,000	19,074	30,000
Gosford	5,233	10,000	12,284	17,000
<i>Specialised Centres</i>				
Macquarie Park			32,308	55,000
St Leonards	22,983	20,000	25,166	33,000
Olympic Park/Rhodes			13,667	25,000
Port Botany & environs			11,264	12,000
Sydney airport & environs			36,063	55,000
Randwick education & health			9,790	12,000
Westmead			13,267	20,000
Bankstown airport/Milperra			16,325	20,000
Norwest		8,000	4,651	15,000
<i>Major Centres</i>				
Bankstown	9,727	15,000	10,094	14,000
Blacktown	10,592	18,000	10,220	15,000
Bondi Junction	6,095	10,000	9,821	14,000
Brookvale/Deewhy	5,100	10,000	9,663	12,000
Burwood	7,355	10,000	9,525	13,000
Campbelltown	4,729	30,000	10,542	15,000
Castle Hill			9,091	12,000
Chatswood	9,363	20,000	22,923	28,000
Hornsby	9,637	15,000	9,412	12,000
Hurstville	6,978	10,000	12,983	17,000
Kogarah			9,476	12,000
Wyong/Tuggerah	1,000 (est)	5,000	8,417	12,000
TOTAL	351,428	553,000	763,953	1,000,000

Table 2: Employment distribution in centres at base years (1981 and 2001) and as forecast in 1988 and 2005 Sydney plans. NB definition of some centres changed in base years, particularly in central Sydney.

Centres (in City of Cities parlance and order)	Initiatives for Sydney Property Council of Australia, 2002 (pp.14-15)			City of Cities, 2005, (p.95)
	1996	2011	2026	2031
<i>Global Sydney</i>				
Sydney CBD	210,000	220,000	230,000	380,000*
North Sydney	35,000	40,000	50,000	60,000
<i>Regional Centres</i>				
Parramatta	35,000	50,000	60,000	60,000
Liverpool	11,000	30,000	40,000	30,000
Penrith	12,000	20,000	25,000	30,000
Gosford	5,000	6,000	7,000	17,000
<i>Specialised Centres</i>				
Macquarie Park	29,887	40,000	52,000	55,000
St Leonards	30,000	40,000	50,000	33,000
Olympic Park/Rhodes				25,000
Port Botany & environs				12,000
Sydney airport & environs	11,321	20,000	30,000	55,000
Randwick education & health				12,000
Westmead	16,102	18,000	20,000	20,000
Bankstown airport	21,741	22,000	22,000	20,000
Norwest				15,000
<i>Major Centres</i>				
Bankstown	11,000	14,000	15,000	14,000
Blacktown	8,500	15,000	20,000	15,000
Bondi Junction	9,000	12,000	15,000	14,000
Brookvale/Deewhy	15,000	18,000	20,000	12,000
Burwood	8,500	10,000	12,000	13,000
Campbelltown	8,500	10,000	15,000	15,000
Castle Hill	3,000	5,000	8,000	12,000
Chatswood	20,000	25,000	30,000	28,000
Hornsby	7,000	8,000	10,000	12,000
Hurstville	9,000	12,000	15,000	17,000
Kogarah	7,000	8,000	8,000	12,000
Wyong/Tuggerah	3,000	3,000	4,000	12,000
TOTAL	526,551	646,000	758,000	1,000,000

Table 3: Employment distribution in centres for various years as proposed by the Property Council of Australia in 2002 and City of Cities in 2005. NB definition of some centres may differ somewhat between the two documents: *Sydney CBD expanded.

documents as growth has occurred and *City of Cities* contains figures for central Sydney expanded beyond the CBD. The definition of specialised centres in *City of Cities* also brings in more dispersed and varied concentrations of jobs than those contained in a commercial centre, and only some of these are contained in the 1988 plan.

Table 3 compares the job targets specified by the Property Council of Australia in their public discussion paper of November 2002 (Property Council of Australia 2002) with those contained in *City of Cities*. Their correspondence is striking, after adjusting for the difference in the forecast years. The Property Council figures are based on the arbitrary need to maintain 25% of future employment in centres.

Campbelltown has slipped down the league table since 1968 and has been replaced in *City of Cities* by the two river cities of Liverpool and Penrith. This in itself should cause some concern given the large population in the south west of Sydney.

These tables suggest that precise specification of job targets for all centres well into the future is a problematic exercise. This does mean that some major centres selected after careful research, vigilantly monitored and well-supported should be used as levers for growth and change.

4. Possible changes to the planning process

The subregional planning process which allocates jobs, dwellings and population to local council areas needs to be informed by research into the labor and housing markets involving those subregions. At present the Metropolitan Development Program (MDP) monitors housing development including reasonable rolling forecasts of the location of potential additional dwellings some eight or nine years ahead. This well-established program, operated in conjunction with local Councils is a valuable indicator of short-term trends, and its scope is to be extended to employment lands in the plan. It might be better to set *indicative* targets for employment and housing some fifteen years ahead and revise these as time goes by and the MDP shows the extent and type of actual and short-term development. Well-chosen strategic centres and areas could be paid special attention and support if it turns out that they are truly effective levers in achieving economic, social and environmental sustainability. The METRIX model could be modified to assist in gathering together the results of population and job estimates based on such research and monitoring.

The planning process does not adequately acknowledge local conditions, opportunities and constraints. The distinctive nature of existing communities in the regional cities is not acknowledged, and the rationale is that the 'planning system is being progressively **transformed from a process driven approach to an outcomes focused service**' (Iemma 2006a, emphasis in original). But inevitably, the employment capacity of centres, and the absorption potential of residential areas for increases in dwelling stock must also consider the opportunities for enhancing local communities and improving the quality of place and space. It also has to be informed and supported by the necessary augmentation or replacement of infrastructure.

Renewal and redevelopment processes will be driven not only by the opportunities offered by increased capacity offered in revised Local Environment Plans, but by the

viability and feasibility of such change. This depends on such variables as interest rates, ownership, economic conditions, the availability of finance, and taxation and levy regimes. These conditions typically produce varying levels of activity over time, and are often very localized in particular suburbs. This characteristic of the renewal process does not seem to sit well with the confident targets which need to be met to fulfil the plan.

Conclusion

The strength of *City of Cities* is that it sets a direction and the first steps in taking the metropolitan economy forward so that it remains competitive. However it is an uneven strategy, set within a conventional plan-making process which projects Sydney forward in terms of an end-state distribution of population and jobs and arrangement of land uses and broad communications twenty five years hence. The work program to take things forward is based on achieving that scenario and contains a formidable list of matters to be resolved.

An alternative methodology would be to acknowledge that there are matters of primary importance that need further understanding and action within the trajectory of economic development. Most conspicuously, housing conditions and social wellbeing need similar consideration to that shown to employment growth, and this understanding would progressively enrich and modify indicative targets and arrangements for living and working. This *could* be a major theme in subregional planning

The complex and connected issues present in Sydney suggest that a better way of progressing with these plans would be to use shorter time periods, be more selective and better informed about fewer strategic opportunities, and address them through a range of necessary and appropriate measures to complement the arranging of built form, city structure and transport. This would incorporate the 'strategic choice approach' of Friend and Hickling (1997) of a planning process that identifies progressive decision-making as leading issues are shaped and connected. This is a continuous work program where uncertainties of different kinds are explored and resolved in order to shape and take commitments as necessary, both short- and long-term. Prominent among these uncertainties are community preferences and attitudes (now strongly manifest in growing unease about water and transport in Sydney) and the mixed substance and opportunism of political decision-making, as well as an understanding of the complex and fascinating dynamics of metropolitan growth and change – hopefully towards sustainability.

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