

CHAPTER 5

URBAN CONSOLIDATION: CHANGING URBAN FORM?

5.1 Urban form is the outcome of economic, cultural, social and environmental processes. People congregate in cities principally for the economic purposes of production, consumption and access to communication networks and transport routes, but social and cultural factors are also important. Australians show a preference for low density housing, high levels of privacy and high visual amenity, with a particular fondness for coastal locations. All these forces influence the density of the dwelling stock, but the relationships between these processes are as important as their separate effects. As Brian McLoughlin, Professor of Urban Planning and Environment at Melbourne University, comments:

Clearly this is a very complex business in that the patterns of land development, the social and economic geography of metropolitan regions, housing choice, physical infrastructure provision (transport, sewers, water) social infrastructure (schools, health care, shops, recreation), energy, environment and questions about the incidence of public and private costs and benefits are intimately bound up in the webs of urban and metropolitan life and policy.¹

5.2 Although Australia is one of the world's most urbanised societies, its urban areas are also among the least densely populated. The cultural preference for detached housing has resulted in extensive but low density cities. The highest density levels are recorded in parts of Sydney, principally on account of the topography of the region, but it is still, by international standards, a low density city. The national preference for low density living and the consequent need to travel long distances (which means a high level of automobile dependence), has severe environmental effects which have been causing concern for some time. More recently, the escalating public sector costs of extending suburban infrastructure ever further and further out from the CBD have also been a cause for alarm. State governments are finding that there is an increasing gap between the capital they can direct to new urban growth and the amount of investment required. This shortfall will increasingly need to be met from other sources.

5.3 Land is increasingly being seen as a finite resource and supplies in desirable and accessible locations can no longer be guaranteed. Governments are arguing that it is thus imperative to utilise what land resources there are to the benefit of as many people as possible. They further argue that urban sprawl is wasteful on land and that the spread of cities should be contained with smaller lot sizes and residential redevelopment.²

¹ Brian McLoughlin, "Urban Consolidation and Urban Sprawl: A question of density", *Urban Policy and Research*, Vol 9, No 3, September 1991, p 149.

² Victorian Department of Planning and Housing, *Building and Land Development Industries*, Victorian Housing and Residential Development Plan, Project No 4, May 1992, p 28.

5.4 The Committee was presented with conflicting evidence as to the relative efficiency and equity implications of low versus high density urban form options and as to whether higher urban density which would result from urban consolidation policies would deliver better environmental, economic and social outcomes. Those who argue against the continuation of the current practices which encourage urban sprawl point to the serious environmental, economic and social costs: lagging services provision, high unit costs of infrastructure, social isolation, traffic congestion, pollution and excessive energy costs. Those who broadly support the continuation or slight modification of current practices emphasise the social and economic benefits which accrue to the 90 per cent of the urban population who will own their own homes at some time. Much of the evidence is opinion rather than fact. What are put forward as real outcomes or benefits are often only potential benefits which depend on a number of complementary policy changes occurring, along with the development of mechanisms to modify urban form. Governments may or may not be able to deliver these in a timely manner.

5.5 The Committee found that there were two main reasons for the high level of uncertainty. First, unlike most other advanced industrial countries, Australia does not have a definite, strong national urban and regional strategy; as a result, its perspective on issues is sectoral rather than national. Secondly, there is no adequate collection of research data on which to base significant analysis. These factors limited the Committee's ability to address the full extent and complexity of urban problems in Australia. Despite the lack of knowledge and the many conflicting viewpoints, governments in Australia have opted to pursue urban consolidation in many urban areas. The potential costs and benefits of these policies (their capacity to improve urban quality of life directly and their long term applicability to Australian society in the 21st Century) became a major focus of the Committee's inquiry.

Urban Consolidation - The Choice of Government

5.6 At the Special Premiers' Conference in July 1991, heads of government endorsed the three broad strategies for urban reform proposed by the Patterns of Urban Settlement Working Group established at the 1990 Conference. The Working Group's strategies were:

- . promotion and planning of and support for urban consolidation;
- . adoption of an efficient inter-governmental approach to achieve more efficient and equitable provision, charging and pricing of urban infrastructure; and
- . improvement in government mechanisms for planning and co-ordination of urban development.

5.7 Planning ministers also adopted a policy of promoting denser housing in the belief that it would reduce some of the problems arising in cities. Resolutions at their September 1991 meeting called for the application of medium density measures in new

release areas, the wider adoption of Australian Model Code of Residential Development (AMCORD) and the inclusion of higher density segments in residential infill projects.³

5.8 A policy of urban consolidation was first adopted by the New South Wales Government in 1989. The rationale was the need to reduce public sector expenditure on residential development. State governments provide a substantial subsidy to new residential development by not fully recovering the cost of providing infrastructure. The combination of continuing expansion on the urban fringe, higher levels of household formation and budget constraints promoted increasing concern about outlays facing state treasuries.

5.9 The wide support for the urban consolidation policy was a response to problems that concerned all three tiers of government. To be effective, however, the program will have to make reforms across a broad spectrum of public and private activity. To achieve an increase in urban density it will have to remove impediments at the local level and alter cultural preference, changes that will have to be effected through appropriate pricing, charging and taxation policies.

5.10 From a Commonwealth perspective it appears that the urban consolidation program offers the opportunity to bring a number of urban issues, previously addressed separately, together under the one policy. Negotiations have hitherto been undertaken separately by different departments without effective co-ordination. Housing affordability and reform of development practices were addressed by DITAC. Policy on automobile emissions was tackled through the "Greenhouse" strategy. Broader urban and industrial waste, and general energy-use issues, were being considered by the Ecological Sustainable Development Working Groups. Micro-reform of local government policies and practices was being facilitated by the Office of Local Government in DILGEO. Simultaneous and co-ordinated progress on all these issues is required if there is to be progress in urban reform.

5.11 Brian McLoughlin argues that it was political expediency which tied these issues together:

...in the Federal election of March 1990, Labor was savaged in a number of constituencies - remarkably concentrated in the outer suburbs of Melbourne and Sydney...These areas of suburban sprawl were overwhelmingly inhabited by young working-class families with small children. In too many cases they lacked the most basic decencies of a fairly rich country - paved roads, mains sewerage, public transport, jobs nearby, childcare and schools, let alone entertainment... The political lesson was plain, and quickly learnt.⁴

³ AMCORD sets guidelines for residential development which ensure that community standards are maintained and that regulations which unnecessarily add to the costs of housing are excluded. It focuses on detached housing but is likely to be extended to cover high density housing.

⁴ McLoughlin, p 148.

5.12 Whether a response to political demands or not, the urban policy package was put together very quickly. The message delivered to government was that there was renewed interest in urban issues and a perceived need for Commonwealth action, and on this occasion the Commonwealth responded. It commissioned a number of policy reviews, such as the compilation, *Background Papers on Urban and Regional Issues* by EPAC, and funded the National Housing Strategy, the first such investigation since 1942. The Commonwealth also reviewed its own land holdings with a view to identifying areas that might be released for residential development. There are, however, risks in hastily prepared policy packages because the policy analysis is only partial and, as a result, the effectiveness of the policies which are adopted can be found inadequate in the long-run.

5.13 The suite of policies and programs which now loosely constitute the urban consolidation program are at various stages of development and implementation. Some are fully developed and operative (Green Street - which commenced as the Joint Venture for More Affordable Housing); some are being taken up and modified by the States (medium density codes); others are just wish lists yet to be fully researched let alone negotiated or agreed to (taxation reform). Other measures, such as making developers contribute to infrastructure costs, are being applied in all States, but in different ways. Sweeping reforms, such as those proposed for state instrumentalities (privatisation or corporatisation), are opposed by political and ideological preferences for preserving the old organisational forms. The rate of corporatisation will vary according to the balance of political forces.

5.14 The already complex range of issues raised by programs to improve the cities are made more complex by the relationships and dependencies among the three levels of government. The difficulties are compounded by the tendency for attempts to resolve urban issues to revive old arguments - notably the imbalance in the differing capacities (arising from fiscal power) of the Commonwealth, the States and local government to undertake policy initiatives, and the reluctance of governments to transfer policy responsibilities.

Housing Policy and Urban Consolidation

5.15 The flight to urban consolidation has also been in part a response to governments' concern to provide affordable housing. Governments have traditionally pursued policies which have fostered high levels of owner occupation, but these were developed in different macro-economic circumstances from those applying to Australia today. In past decades Australian governments have been able to provide jobs, progressive income redistribution policies and universal access of social welfare. Deteriorating economic circumstances and fiscal constraint has fostered a different policy approach - an incapacity to deliver full employment, targeted welfare and a less progressive income distribution policy. In these circumstances the proportion of national investment that flows into housing has come into question.

5.16 Australia has traditionally seen high levels of home ownership as universally desirable and proof that the nation has had a high standard of living. Pat Troy argues that the policy of owner occupation was specifically developed for the cities: "it was

conceived as a way of resolving problems which had emerged in Australian cities and as a way of politically appealing to city dwellers".⁵ It has thus always been an urban policy.

5.17 Professor Max Neutze and Dr Hal Kendig have undertaken work which shows that the present policy mix has resulted in around 90 per cent of the population becoming owner-occupiers at some point in their lives.⁶ Owner occupation has therefore been progressively extended to the poorer sections of society. Although the range of choice in housing is constrained by limitations on personal resources and other market factors, most owners have a range of choices about where they live and the quality of their environment.

5.18 The range of housing stock is becoming less appropriate to meet future needs. In its first Issues Paper, *Australian Housing: The Demographic, Economic and Social Environment*, the NHS noted that, while average household size continued to fall, the trend in new housing stock was for larger and larger premises. By 2006 it is forecast that almost 50 per cent (compared with 40 per cent today) of all households will consist of single persons or childless couples aged over 35. Yet 80 per cent of Australia's housing is essentially family style detached housing, the average size of which has grown from 130 square metres in the early 1970s to just over 180 square metres today. This trend has raised concerns about the possibility of a future mismatch between the housing stock being provided and the sort that would be demanded and fears that the range of housing options in the future would consequently be restricted.

5.19 Pat Troy argues that the policy of urban consolidation is based on the concept of a "peripatetic society", one that is highly mobile and with few possessions. The arguments against continued development of standard detached housing at the urban fringe, he argues, rest on a supposition about what would flow from a deregulated market and place little or no value on the effect of better housing on health, safety and amenity, nor on the flexibility which additional living space offers to households with spare capacity. He argues that ownership levels are a function of numerous factors:

- . property laws and rights;
- . inheritance laws;
- . tax;
- . security over tenure of accommodation, especially rented;
- . governments encouragement to save;
- . cultural meaning attached to housing as a symbol of status;

⁵ Referred to in Patrick N Troy, *The Benefits of Owner Occupation*, Urban Research Program, Working Paper No 29, December 1991, p 47.

⁶ Troy, p 46.

- . cost of housing and their incidence;
- . government subsidies, especially on social consumption;
- . relative economic performance of industry and the rate of inflation;
- . broader features of national economic development;
- . the form and structure of cities;
- . demand, especially that arising from demographic factors such as population size and family size and composition.⁷

5.20 The current focus on economic explanations, Pat Troy argues, leads to policy distortions because it gives inadequate recognition to other motivations. An alternative approach is to re-examine the attractions of home ownership in order to find out if the same objectives could be achieved in other ways. One way to meet social equity objectives might be to relay more of the benefits derived from home ownership to tenants - increased security of tenure, stability in rent and other costs and greater privacy, for example.

Prospects for Urban Consolidation

5.21 It appears to be widely accepted that a more condensed urban form is inherently more efficient, environmentally benign, capable of delivering services and of providing more affordable housing. This view is derived from the perception of the city as a series of concentric zones around a predominant core. It is therefore reasoned that the further you are from the inner city, the poorer your access to services and facilities, the more you have to travel, the greater the pollution and the worse the diseconomies of scale. Conversely, reductions in the distance between inner and outer zones must improve these things. Australian cities developed this concentric zone pattern during the 1970s, the period in which the foundations of urban research were laid.

5.22 Times and cities have changed but society's capacity to understand these changes is reduced by the lack of more recent analysis which outlines these changes. John Brotchie and his colleagues at the CSIRO Division of Building, Construction and Engineering have noted these changes and told the Committee that:

...the lower densities of Australian cities...are comparable to many US cities which developed in the same transportation era and are currently undergoing similar structural change with employment dispersing to the suburbs. As a consequence, commuters are exchanging an inner city destination for a suburban one, with a consequent saving in trip length and travel time...Average travel time in Melbourne reduced by 3.7 per cent

⁷ Troy, p 34-35.

between 1981 and 1986...Average commuting distances are now just over 60 per cent of what they would be for a single-centred city - this is due to multi-centring again - and travel times are less than 50 per cent. These again are measures of the increasing efficiency that is occurring in our major cities.

*Employment has also been shifting...Only 30 per cent of employment is now in the central city. The rest is in the suburbs...the net result is that our cities are changing in the direction of increased efficiency of operation; increased equity of income distribution among them; increased dispersal of jobs towards people in the suburbs; increased diversity of lifestyle preferences with regard to density, location and recreational needs; increased use of telecommunications and computing; and increased need for competitiveness in global markets for goods, services and location of new industries and jobs.*⁸

5.23 They also questioned the cost savings from urban consolidation:

*It is true that, if you are going to have a lot of unused infrastructure around the middle cities, obviously you ought try to use it. Nobody is doubting that, but the magnitude of these savings is to some extent already reflected in the prices of housing and land. If you have got facilities, house prices are high; if you have not, they are not...There is no doubt that it does cost a lot to service a block of land out at the fringe, but by and large the developers' contributions are paying for most of that, with a couple of exceptions such as education and major headworks. Okay, you can pass on the costs of these things, and a number of people say that you should, but the numbers are not as large as the large numbers that are being quoted, or anything like it.*⁹

5.24 While urban consolidation may offer governments the opportunity to reduce their outlays and is therefore beneficial to the community, in the narrow economic sense of reduced expenditure and debt, analysis and evaluation of consolidation policies must be more rigorous than has so far been the case to take account of these changes and to ensure that the policies are still relevant. To derive a comprehensive picture of the impact of urban consolidation on the efficiency, equity and environmental amenity of the community requires a detailed examination of the separate and cumulative effects. As the New South Wales government observed about urban consolidation in its submission to the Industry Commission:

*Work undertaken to date has not provided specific solutions that will meet broad efficiency objectives, while partial or simplistic solutions to these problems may act against both efficiency and equity.*¹⁰

⁸ Evidence, p 204-205.

⁹ Evidence, p 244-245.

¹⁰ NSW Government, Submission to the Industry Commission, p 5.

5.25 Efficiency in the city must be measured by both public and private costs. Policy which treats only one aspect of the equation is not only deficient but will fail in the long run, policies which focus exclusively on reducing public outlays on housing are deficient. The efficiency of the methods by which the population is housed is important because it is a major part of budget outlays, but the efficiency of the network that links economic functions to each other and to labour is equally critical.

5.26 Fringe development has so far been the preferred way of meeting housing demands, but it is now felt that there is scope to restore populations in the established areas where they are falling and thus reduce costs. Governments are now advocating density levels higher than the previously accepted standard of 8-10 dwellings per hectare, and in all suburbs from core to fringe. State governments have set a target density of 14-15 dwellings per hectare on the fringe, granted automatic dual occupancy entitlements to residents in established suburbs and are attempting to remove obstacles to the establishment of medium density townhouse developments within new and established suburbs. The aim is to contain sprawl by reducing the area of land required by each residence. Urban consolidation and higher population densities, however, are not synonymous, as acknowledged by the New South Wales Department of Planning which uses the following definition:

The term 'urban consolidation' means increasing the density of dwellings or population or both. It does not refer to one single policy, but rather a number of related land use measures and housing initiatives that can increase residential densities.¹¹

5.27 Proponents of consolidation lay claim to the following benefits:

- . greater economic efficiency through higher utilisation levels of new and existing infrastructure and consequent reduced demand for new infrastructure;
- . environmental benefits through greater use of public transport;
- . social equity through greater proximity to existing facilities.

5.28 The benefits which can result from medium density housing were first suggested by the Green Street program. This program had its beginning in the then Department of Industry and Commerce and continues to operate today in the Department of Health, Housing and Community Services (DHH&CS). It was a small scale trial and demonstration program aimed at making homes more affordable. Its policy of "zero lot lining", which includes not building footpaths in front of residences, smaller lot sizes, common trenching, narrower streets and avoiding through traffic, did establish that there were ways to achieve greater efficiencies in the delivery of housing which could still meet consumer demands for privacy and personal space. The program aimed to overcome

¹¹ As cited in Hughes Trueman Ludlow and Dwyer Leslie Pty Limited, *Public Sector Cost Savings of Urban Consolidation*, Appendices to Final Report, February 1991, prepared for the NSW Department of Planning, the Sydney Water Board and DITAC.

consumer and industry resistance to these novel methods and appears to have achieved some success in this. The Victorian application of Green Street principals is incorporated into its "VicCode". It is argued that where "VicCode" is applied to medium density development, such developments can be up to \$6 000 cheaper per lot.¹²

5.29 The Green Street program laid the ground work for the acceptance of denser urban form by governments in particular. A single efficiency gain in the development process, however, does not automatically represent a city-wide metropolitan efficiency gain, even if adopted uniformly across the urban landscape. It is even less likely if such gains depend on policy initiatives which must be adopted in several other areas but which may well be subject to separate and protracted negotiations. Charges by public infrastructure authorities such as Melbourne Water are levied on a per lot basis. There are no associated savings to consumers from a reduction in allotment size.

5.30 Urban researchers such as Max Neutze and Patrick Troy have been sceptical of the proclaimed benefits, as has the CSIRO, though each focuses on different elements in the debate. Criticism of the policy is based on doubts about its capacity to achieve its claimed outcomes: the complexity of the interrelationships at work in land use patterns make these difficult to predict.

5.31 Joe Flood told the Committee the scale of proposed urban consolidation was insignificant compared to the size of the task:

*...it is almost impossible to turn our cities around. They were built one way and it will cost a fortune to turn them into something else. Even the most violent proposals for consolidation have not been for anything very great. The consolidation proposal for Sydney is supposed to lead to a shortening of trip lengths of the order of 2 per cent, at the upper limit. It is very small stuff. The efforts that are currently being proposed for consolidation are very modest...*¹³

5.32 There is also doubt as to the assumptions which underlie the adoption of higher density codes and which will distort the impact of consolidation programs or constrain the outcome. Calculation of costs does not allow for private utility, nor does it take account of the real structure of cities, which is in fact different to that assumed in the policy model. Employing an accurate model of what cities are like gives a different picture of the capacity of urban consolidation to deliver the claimed benefits. The cities are in fact multi-nodal, not concentric as assumed, and there is no daily shift *en masse* of the population between the periphery and the core. Industry has adjusted to the costs of operating in efficient cities (as outlined in Chapter 3) by progressively relocating outwards. The result of this shift has been a much increased incidence of travel across

¹² Victorian Department of Planning and Housing, p 39.

¹³ Evidence, p 223.

suburbs between work and home, and a reduction in the incidence of commuting between the suburbs and the core. Peter Hall considers that:

It is no accident at all that, just at the point when America recorded a substantial majority of households with cars - the late 1950s and early 1960s, when ownership levels rose rapidly from about 55% to 75% - urban structures began to turn inside out. Increasingly, people lived, worked, and shopped no longer in the city but in the suburb. And it is no accident either that in the 1980s, exactly the same transition is occurring in Western Europe.¹⁴

5.33 In response to the argument that the current use of land and infrastructure cannot be justified or sustained on economic, social and environmental grounds, Pat Troy has suggested that:

...there are inequities and inefficiencies in the way we presently order and service our cities and we might be able to agree that we generate unacceptable environmental stresses in the way we behave in them but that is not a prime facie reason for changing the whole system.¹⁵

5.34 Assuming, however, that some degree of consolidation is desirable, there remains the question of how much is in fact possible. The answer in the medium term - say ten years - is *not much* according to Mike Berry and Brian McLoughlan, an assessment confirmed by Rob Carter:

Even with a concerted urban consolidation policy and a very ambitious one, we believe that only one-third of the urban growth that we are anticipating in Melbourne can be absorbed through that mechanism. Therefore, the key issue on consolidation is not so much the potential for the existing urban areas - this is in quantitative terms; in public awareness terms it is probably the most important issue - but the way in which you deal with your suburbs in the future.¹⁶

5.35 The potential is so limited because successful consolidation or containment has as much to do with how non-residential uses are incorporated as with the details of housing lot size, living space and household size.

¹⁴ Peter Hall, "Cities in the Information Economy", *Urban Futures*, Special Issue 5, February 1992, p 6.

¹⁵ Patrick Troy, Submission to Industry Commission, Inquiry into Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 2.

¹⁶ Evidence, p 266.

5.36 The complexity of land use patterns makes it difficult to achieve consolidation objectives simply by changing residential density codes (see Appendix 4 for a theoretical analysis of the relationship of urban density and urban land use). The community makes use of a variety of local and extended services that have fixed land use requirements which are unaffected by reductions in the size of housing blocks. Access roads, local shops and offices, distributor roads, high schools, shops, factories, religious and civic land uses, universities, airports and rail stations still have to be provided, and they still require no less space than before. Since these take up 70 per cent of metropolitan land and housing only 30 per cent, it is straining at the gnat while swallowing the camel to try to save space by increasing population density. Unless roads, shopping centres and schools can be miniaturised, an increase in housing density will result in only a small reduction in the total demand for land in new settlement areas. As Mike Berry explains:

As net residential densities rise, the demand for non-residential land usage also rises, unless the newly crowded residents are to enjoy less access to public open space, road space, shopping, educational and other community facilities. These technical limits to effective densification are especially strong in the built-up urban areas where new developments are constrained by what already exists - often reinforced by the defensive regulatory controls of local government. Recent research suggests that the increase in small households does not lead to any significant reduction in average demand for living space. Hence, dwelling densities and household numbers may be increased in an area without significantly lifting total population numbers. Time is critical here. New housing (on greenfield and redeveloped sites) only adds about 5 per cent to the total metropolitan stock each year; even if as much as half of all new housing was medium - to - high density, it would take 20 years for it to rise to 2.5 per cent of the total stock (assuming insignificant pre-existing amounts).

The range of policies currently being considered by State and local governments - dual occupancy, small-lot sub-division, corridor development, developer levies, residential codes, demonstration projects and the like - will have a marginal impact on metropolitan spatial form. At best they will achieve a slowing of outward urban development over the next 10 to 20 years. About 90 per cent of urban population growth will be located near and beyond the existing fringe. To achieve a significantly higher degree of containment in this time horizon would require truly radical policy interventions - eg. a ban on private motor vehicles within 25 km of the G.P.O., nationalisation of land marked for new urban development or wholesale block resumption and clearance of built-up areas (1960s public housing revisited!) - the economic, social and (of course) electoral costs of which would be insupportable.¹⁷

¹⁷ Berry, Submission, p 3.

5.37 Australian cities appear to make over generous provision of land for facilities such as schools and hospitals that could be constructed on sites smaller than those generally used - a situation that could be confirmed by some comparative research. The Committee recommends that:

The Housing Ministers Conference initiate a research program to review the land allocated to community services and utilities such as schools and hospitals.

5.38 Pat Troy argues that, although single person households show a slight increase in their preference for medium density housing, almost 80 per cent of those who own their own home, and 75 per cent of those who are purchasing, prefer detached dwellings. Of single person households who rent privately, however, almost two thirds live in medium density housing.¹⁸ National surveys confirm that most people view medium density housing as temporary accommodation.

5.39 On average, medium density dwellings are 70 per cent of the size of standard detached housing. Units occupied by owners are larger than those available for rent. If there were a significant increase in the demand for owner-occupied medium density dwellings one would expect that the average size of medium density units would also increase and thus further diminish the space gains from consolidation.

5.40 The argument that more attention to the size and type of dwelling is required to better match the demographic structure of the population implies that current planning and regulations inhibit the achievement of that objective. Pat Troy argues that there is little evidence of any pent-up demand; if there were, it would have led to higher rates of appreciation for smaller dwellings. Demographic change, particularly the ageing of the population, may reduce the demand for large gardens but may not necessarily reduce the demand for large dwellings. The size of this demand will be moderated by the transaction costs of moving and any future changes to tax liability of capital gains.

5.41 Dr Valerie Brown demonstrates that demographic data should not be viewed in too literal a manner. She suggests that merely because many people live singly at one point in their life, it cannot be assumed that they are choosing to live that way forever.¹⁹ Each possibility has entirely different implications for the type of housing required. It is possible and, some would argue, probable that the high level of transaction costs imposed on relocation makes it more economical for people who expect to need more space at a later stage to buy that space in advance and thus avoid relocation charges.

5.42 Max Neutze argues that historical evidence suggests that higher densities are likely to be achieved in neither inner nor established areas. A single family home with its own backyard is not a ready substitute for a townhouse or a flat; the choice between the two

¹⁸ Troy, *The Benefits of Owner Occupation*, p 38.

¹⁹ Valerie Brown, "Including the Intangible and the Strange: Allowing for Diversity and Change in the Future Productivity of Cities", *Urban Futures*, Special Issue 5, February 1992, p 41.

options is dictated by lifestyle preferences, stage of life cycle and family consumption styles, not relative cost. Families have been able to opt for private open space because, until recently, affluence levels were rising and more people were able to afford it. On the other hand, because detached housing in established areas is a ready substitute for similar housing on the fringe, higher fringe prices are transmitted to housing in more accessible locations, as a result the prices in different locations stay much the same. It might be expected that such a situation would lead to higher density infill, but this has not occurred precisely because the cost of providing a square metre of accommodation in medium or high density housing is considerably greater than in a detached bungalow.

5.43 For urban consolidation to make a useful, if limited, contribution there will need to be significant changes to the design of higher density developments. Without such innovation medium and high density will remain unpopular. Urban designers are, however, restricted to some extent by the building and regulation codes. This was highlighted recently in Queensland by a new medium density design by architects Addison and Yeates. Their project, in the Brisbane suburb of Corinda, is the first medium density pilot project built in Queensland under the provisions of the Queensland "Housing in the 90's" program and required extensive relaxation of development criteria.

5.44 The Addison Yeates design, which provides an alternative to the "Queensland six pack" style of unit development, blends traditional style with a new configuration which makes better use of the site than the standard design. This design also provides better privacy by aligning units so they face the street or back yard rather than over looking neighbouring properties. To accommodate this design, however, the building must be placed to the boundary fence. Accordingly Addison Yeates have been unable to market this design to other areas due to restrictive council building codes which prohibit building to the boundary fence. Innovation can only occur within the prevailing regulations and there is a need to remove unnecessary regulatory impediments to better urban design. Government facilitation, through trialing and demonstration, can assist in this but care needs to be exercised to prevent standards declining to the point where new medium density housing is seen as cheap and unattractive public housing.

Is Urban Consolidation Worth Pursuing?

5.45 If urban consolidation will not significantly reduce urban sprawl, what benefits will it provide? A report to the New South Wales and Commonwealth Governments, *Public Sector Cost Savings of Urban Consolidation* (the Dwyer Leslie report) indicates that public sector savings will be from external major works; urban consolidation will therefore produce large savings only if it permits a substantial reduction in the major works program.²⁰ The New South Wales Government submission to the Industry Commission admits that:

...the costs of curbing outward growth through urban consolidation are not clearly understood at this stage. The capacity of the existing infrastructure

²⁰ Hughes Trueman Ludlow and Dwyer Leslie Pty Limited, *Public Sector Cost Savings of Urban Consolidation*, Final Report, February 1991.

*in established areas to meet increased demands due to higher densities is not generally known with any degree of reliability. ...The picture is clouded by the age of some of the existing infrastructure and its inability to meet modern standards of operation.*²¹

5.46 Privatisation and user pays policies will probably reduce government outlays on infrastructure at the fringe (see also Appendix 5). The costs of living space in medium density housing, however, is higher per unit of living space than in standard development; to be acceptable to the community it requires provision of more public open space to replace the private space forgone. The private cost of development may not therefore fall because the saving per block in facilities is smaller than the proportional loss of physical space.

5.47 In addition, urban consolidation measures such as dual occupancy do not necessarily ensure that higher density development occurs in areas of spare capacity. Developers concentrate on areas where the individual returns make it worth their while and this may well accelerate infrastructure decline and add to public costs. To redevelop or upgrade and extend existing facilities to meet modern requirements may be more expensive than to develop new fringe areas. The Dwyer Leslie report claims that augmentation of physical infrastructure for urban infill or redevelopment is rarely required, but that such requirements are site specific and thus need to be considered case by case. The report provides a limited comparison between two Sydney suburbs which shows that in Bankstown sewer augmentation was required if densities rose by as little as 25 units, while services in Hurstville could cope with an increase of up to 150 dwellings with no augmentation. Melbourne Water, in its submission to the Industry Commission, stated that the spare capacity of specific parts of the metropolitan area is simply unknown.

5.48 In the same submission Melbourne Water was critical of the application of "as of right" dual occupancy:

Current planning policy, however, makes dual occupancy an "as of right" activity anywhere in the metropolitan area and therefore impossible to control in an overall policy context. It is also the area where Melbourne Water receives most criticism for imposing requirements for developer contributions with no apparent need for associated works.

*As no single dual occupancy is likely to occasion an upsizing of the existing system, the contributions are imposed uniformly across both areas with spare capacity and those already under stress. Holistically, this will cause an expensive upsizing program in one area while a significant spare capacity could exist in another.*²²

²¹ NSW Government, Submission to the Industry Commission, p 2.

²² Melbourne Water, Submission to the Industry Commission Inquiry into Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 16.

5.49 The savings in public sector infrastructure costs thus seem to depend upon some "unachievable" gains arising from the deferment of major capital works because the potential for urban infill is not as great as first thought and economically efficient only if specifically targeted to areas with spare infrastructure capacity. It is difficult to identify such areas, and that process will take time. In the meantime, authorities continue to pursue urban consolidation, possibly not always in the right places.

5.50 Other broad aspects also need to be considered including transport and community services. The Dwyer Leslie report claims that transport efficiencies may be derived from urban consolidation because it provides more people with the opportunity to use existing public transport and because it is easier to augment existing systems than to build new ones. Because of the dispersed character of the journey to work, however, the exact costs are difficult to assess. This issue is considered more fully below.

5.51 Urban consolidation is not a panacea for urban problems. As Mike Berry says in his submission:

...the prospects for generating an economically dynamic and socially just pattern of urban development depends on the acceptance of a much longer planning horizon and the implementation of policies with a more explicit economic content.²³

5.52 It appears, however, that urban consolidation policies may offer sufficient benefits to make it worthwhile to continue them, so long as it is recognised that they will neither lead to significant changes to urban form and the structure of the major cities, nor stop urban sprawl. Urban consolidation does provide a useful set of policy instruments which, if even partially effective, can add to the housing options open to urban residents and remove unnecessary regulations. These are good policy outcomes, even if they do not deliver a specified type of urban form.

5.53 Many urban inefficiencies, however, arise from inappropriate pricing policies, and it is the proposed reform of these which offers the prospect of the greatest efficiency gains. Regulatory policies designed to promote a specific urban form will fail if the pricing and taxation regime which encouraged the inappropriate form to develop are retained. Although changes to pricing policies hold out the greatest potential for efficiency gains, they also hold the greatest threats to social equity.

5.54 As Melbourne Water stated:

The real issue is how to balance overall greater community good with the objectives and influences of several single purpose service and infrastructure providers, within current economic and fiscal constraints.²⁴

²³ Berry, Submission, p 3.

²⁴ Melbourne Water, Submission to the Industry Commission, p 13.

Urban Consolidation and Social Equity

5.55 Pat Troy argues that the equity benefits supposed to arise from urban consolidation policies are ill-conceived; the argument that they will be significant is based on the false premise that the government subsidy flows from residents in inner suburbs to those in the outer suburbs. He concludes that the question of subsidies is not clear cut. It is not clear that they go to households on the fringe, nor that claims made for relative *infrastructure savings from inner areas compared with fringe development* are for developments that are of comparable size, quality and amenity. It is not clear that the alleged savings on services are not exceeded or largely cancelled out by the increased unit cost of construction which higher density inner area development incurs.²⁵

5.56 *Urban consolidation proposals raise numerous equity considerations, but lack of data and inadequacy of theory and practical example make it difficult to address these issues decisively. There are a number of issues which need further study. Because the attempt to address community inequalities in one field may worsen imbalances elsewhere, and because problems do not necessarily stop at traditional administrative boundaries, these issues should be considered simultaneously from local government, state, regional and national perspectives. It is no use improving physical and social infrastructure in one area if this increases inequalities in education or public transport somewhere else.*

5.57 Past approaches to the provision of urban services have produced a web of cross-subsidy payments. The cost recovery approach, and the implications of its implementation on a broad scale are far-reaching. The transformation of Australia into a society in which people pay only for what they directly consume is a development that many would find foreign, regressive and abhorrent. Policy shifts in this direction need to be weighed up very carefully because they can be appropriate only if all externalities are reflected in the price. The nature of externalities, however, makes it difficult to do this with precision.

5.58 *Spatial equity issues are difficult to assess because of the web of cross subsidies. Consumers have never paid equally for the same urban services, neither within nor between the States, because local councils and the State governments have different changing policies. The extent of the resultant inequity has never been measured. A comprehensive analysis of all the costs and benefits, however, may yield an entirely different picture of who is subsidising whom. For example inner-city public transport users subsidise outer-suburban users if the measurement is of cost per kilometre travelled, and general taxes levied on non-users of public transport subsidise the entire system which is incapable of operating profitably. Although public transport is seen as a community service, most of its users and the major beneficiaries are those in full-time employment who use it to get to and from work during peak periods.*

5.59 Examination of the debate over the various figures compiled on the cost of fringe development have dealt superficially with the cost differentials between new and existing home owners. The broader question of whether it is equitable to charge for community

²⁵ Troy, Submission to the Industry Commission, p 12.

infrastructure in the outer suburbs while inner suburban areas have their infrastructure upgraded out of general revenue needs much closer examination.

5.60 The tendency towards increased application of user pays on the fringe will affect particularly middle to low income earners and, in turn, public outlays on other public subsidy programs. As the New South Wales Government stated in a submission to the Industry Commission:

Further, moves to greater dependence on upfront payment of servicing costs will result in families on low to medium incomes being priced out of the land and housing markets. It would be expected that there would also be flow-on effects to other Government programs, eg public housing, by people unable to satisfy their housing needs in the private sector, either through home ownership or private rental.²⁶

5.61 Those who stand to gain from higher prices on the fringe will be those who already own houses there. Greater reliance on "upfront payment of servicing costs" are forecast to be expressed as increases in the price of existing homes. Those who stand to lose will be:

- . new buyers unable to meet the price;
- . those who are affected by rising rents and displacement;
- . residents in infill areas who suffer loss of privacy and amenity; and
- . owners of broadhectare land.

5.62 The issue is more complex than this, however, as the New South Wales government has noted:

There are substantial equity issues to be resolved in the period of transition to a higher degree of cost recovery. Part of the value to the homeowner of the various subsidies and cross subsidies of a recurrent nature has been capitalised in the market price of houses. Removing the subsidies may result in general decrease in amenity as well as direct financial loss for people who made investment decisions under a previous set of assumptions.²⁷

5.63 Current market signals have fostered the relocation of many industries to the outer suburbs and thus offered outer suburban residents the opportunity to be closer to their employment, a convenience which has both social and environmental benefits. One of the costs, as the New South Wales government indicates, is that greater reliance on

²⁶ NSW Government, Submission to the Industry Commission, p 3.

²⁷ NSW Government, Submission to the Industry Commission, p 4.

"upfront" charging, with its increased financing costs and risks to the developer, may act as a constraint on land availability for business and thus reduce outer suburban employment options.²⁸

5.64 Working out an appropriate policy balance on these issues will take time. The question is whether governments retain the status quo until an equitable and efficient system is devised (and whether the Commonwealth needs to drive that process to ensure consistency) or whether governments press ahead in the knowledge of the inequities and hope that these difficulties will be resolved over time and through experience.

Urban Consolidation and the Environment

5.65 Better environmental outcomes can result from containing urban growth by:

- reducing the amount of native bush and agricultural land given over to urban development; and
- achieving, through higher densities, a shift from private motor vehicles to public transport, which is more energy efficient and less polluting.

5.66 Whilst it is true that more compact cities will offer environmental benefits, the evidence does not suggest that the current policy of urban consolidation will succeed in containing cities, nor that they will produce a shift from private to public transport. The evidence does suggest that there is a mismatch between the density level of 15 units per hectare advocated in the urban consolidation program's medium density code and the 17 to 21 units per hectare minimum required for viable public transport systems. As the New South Wales government points out that in the short term, increased densities will increase road demand on a system which in many areas is already at capacity. The extent to which traffic can be transferred in the longer term to public transport is uncertain. Even if partially successful, it will add to the problem of peak congestion and possibly lead to demand management through pricing reforms.²⁹

5.67 The potential for moving commuters from private cars to public transport depends on a number of variables, not just the price and accessibility of a service. Many people are reluctant to take trains because of fears about their safety, particularly at night. The increasing complexity of the daily journey to work and the rising incidence of cross-suburban travel, whether for employment, shopping, recreation or other reasons, make it harder to design a suitable public transport network. Because these patterns are not fully understood, there is a tendency among its proponents to exaggerate the benefits of public transport and to underplay the costs of bringing up the standard of half a century ago, when nearly everybody used it.

²⁸ NSW Government, Submission to the Industry Commission, p 4.

²⁹ NSW Government, Submission to the Industry Commission, p 2.

5.68 Researchers at Monash University have shown that between 1961 and 1986 the geographic pattern in travel to work has become more complex, and that a new structure in traffic flows between housing areas and employment locations has emerged.³⁰ The changing nature of metropolitan commuting patterns in Melbourne is illustrated in Tables 5.1 and 5.2. Table 5.1 shows that by 1986, 70 per cent of all journeys to work in Melbourne were intra-suburban. Whilst Table 5.2 shows that although all (except the inner east) regions provided local employment opportunities for 45 per cent or more workers within the same region, there were significant regional variations in reliance on jobs in the central region. Reliance on the central region for employment was strongest in the Western, North Western and Northern regions, it is less significant in the Outer Eastern and Western Port region. This has important consequences for the public transport system, road traffic management and housing policy.

5.69 Effective and least expensive environmental outcomes have to take account of more issues than public transport. Although higher density living may be the best option for increasing the use of public transport, lower density housing may offer better prospects for solving other environmental problems. Before any conclusions can be drawn, a more comprehensive review of environmental costs and benefits has to be undertaken. Urban related environmental problems are a function of the way many people conduct their daily lives, and as such, are not easily addressed. It is essential for policy responses to acknowledge the complex relationships which occur if the policies are to be effective in either diminishing the impact of urban centres on the broader environs or in improving the quality of life within cities. It is necessary then to view simplistic, catch all policies such as urban consolidation with a healthy degree of scepticism. As DASET advises in its submission to the Committee:

*Urban consolidation may have a major role but it is not the Holy Grail and its downsides should not be ignored.*³¹

5.70 The environmental benefits of consolidation are easily exaggerated. The saving of land from higher densities is rarely as great as claimed because more public open space is needed to compensate for lost private space; trying to increase land savings by reducing public open space is a cost in both environmental and social terms. Higher densities enlarge the area covered by hard surfaces, which in turn increases stormwater run-off and the need for drains. The potential for recycling stormwater is thus reduced, and the cost of drainage lifted.

³⁰ Kevin O'Connor, Chris Maher, Virginia Rapson, *Monitoring Melbourne, Number Three 1990*, Department of Geography and Environmental Science, Monash University, Australia 1990, p 38.

³¹ DASET, Submission, p 6.

Table 5.1: Pattern of Journey to Work in Melbourne, 1961-1986

Destination	Share of all trips (%)			
	1961	1971	1981	1986
Central Region	55	41	35	30
Suburban Region of Residence	31	40	43	45
Other Suburban Region	13	18	21	25

Note: The Department of Geography, Monash University, classified all journeys to work into three zones, the central zone; the suburban region of residence (where home and residence coincided in the same zone); and other suburban regions (where work was located in another suburb) for the period 1961-1986.

Source: O'Connor et al, p 38.

Table 5.2: Metropolitan Work Place of Residents, 1986 (expressed as a percentage of trips from a region)

Region of Residence	Region of Work Place							
	West	North West	North	Inner East	Outer East	Central	Inner South	Western Port
Western	57.0	8.0	2.1	0.8	0.7	29.8	1.1	0.5
North Western	11.5	45.2	9.2	1.3	0.7	30.6	1.0	0.5
Northern	3.0	10.2	49.5	4.3	2.2	28.6	1.6	0.6
Inner Eastern	2.5	2.9	7.6	32.1	9.3	37.9	6.1	1.7
Outer Eastern	1.2	0.9	2.0	10.3	48.3	21.5	10.0	5.7
Central	5.1	3.7	3.3	4.0	2.0	73.1	7.4	1.4
Inner Southern	2.1	1.0	1.0	3.4	5.1	35.0	46.3	6.2
Western Port	0.9	0.4	0.4	1.6	7.1	12.1	20.8	56.8
Total	10.8	6.8	9.0	7.1	12.6	30.3	12.5	10.9

Source: O'Connor et al, p 39.

5.71 To assess the costs and benefits of urban consolidation requires a comprehensive understanding of its economic, social and environmental effects on each separate element which constitutes the built environment and of the cumulative costs and benefits which accrue to the community. It is difficult to build up such a picture because we have inadequate knowledge of the links among the separate elements and how they might change under the impact of the policy.

Transport and Urban Form

5.72 The use of the private motor vehicle and other forms of road transport have had a serious impact on air quality, congestion, noise, land consumption and the delivery of social services. Some of the urban problems directly related to high levels of automobile dependency are outlined in Table 5.3.

Table 5.3: Problems with Automobile Dependence in Cities

<p><u>Urban Sprawl</u>: which engulfs farm land and natural areas on the fringe; in Australia the average land loss per capita is about 1200m² for every extra person in our cities which amounted to over 600 000 ha of land lost between 1970 and 1981.</p> <p><u>Oil consumption</u>: Globally motor vehicles use one third of the world's oil with the consequent increasing global dependence on the Middle East where 70% of the world's oil reserves are located.</p> <p><u>Greenhouse gas emissions</u>: 14% of greenhouse gases are due to the automobile, a proportion that is rising rapidly.</p> <p><u>Smog (and acid rain) emissions</u>: Automobiles are the single largest source of atmospheric emissions. In Sydney one in four children in the outer western suburbs (where the photochemical smog goes) are suffering from asthma.</p> <p><u>Noise, accidents and local traffic impacts</u>: Worldwide a quarter of a million people die on the roads and 10 million are injured each year. The hostility of traffic is a daily nightmare to which auto-dependent cities subject themselves.</p> <p><u>Excessive urban infrastructure costs</u>: Low density sprawl is very expensive to service in both physical infrastructure and social infrastructure. This massive subsidy to the automobile is only just beginning to be analysed in auto-dependent cities.</p> <p><u>Social isolation and locational inequity</u>: The excessive auto-dependence of low density outer suburbs in Australia has created new ghettos of poverty for those who have few local services and little alternative to the car.</p> <p><u>Loss of the public realm in cities</u>: The inordinate priority given to private transport and private low density housing means that public transport and public spaces, particularly in the city centre, become neglected. The result is a city that increasingly loses out economically and socially.</p>

Source: Peter Newman, "Transport and Cities: The Giant Leap Backwards" in P Newman, P Vintila and J Philimore (eds), *Markets, Morals and Manifestos - an assessment of Fightback and economic rationalism in Australia*, ISTP, Murdoch University, 1991, p 1.

5.73 Of particular concern are environmental problems, such as lead emission levels and greenhouse gases:

Lead - The ESD Working Group Final Report on Energy Use indicated that despite declining lead levels throughout the 1980s they are still too high in some parts of the cities.³² Unfortunately the switch to unleaded petrol (ULP) has been slower than hoped, largely because of the downturn in the sale of new vehicles. However, recent reductions in the lead content in super grade petrol supplied to Brisbane, Perth and Adelaide is reported to have produced a fairly rapid improvement in atmospheric lead levels in these cities.

Greenhouse Gas Emissions - The ESD Transport Working Group estimated national carbon dioxide emissions attributable to the transport sector in Australia is about the average for all International Energy Agency member countries. Petroleum products provide all but about one per cent of the domestic transport sector's energy requirements and carbon dioxide is by far its most significant greenhouse emission.³³ The ESD Working Group on Energy Use reported that the urban passenger component accounted for 45 per cent of total energy use by the transport sector.

5.74 To achieve anything approaching the interim greenhouse gas reduction target of 20 per cent set by the Commonwealth government, there will have to be significant changes in the behaviour of individuals and in urban form. This has generated a debate about the effects of transport modes and urban form on energy use.

5.75 Canadian cities, particularly Toronto, have moved strongly to revive public transit systems. This has involved reduced urban road building and close integration of land use and transit planning. Professor Peter Newman and Jeff Kenworthy note:

*Part of the reason why a number of medium sized cities have no freeways also has to do with the fact that the Canadian Federal Government provides no large scale aid for constructing urban expressways. This lack of national support for urban road building has had the effect of encouraging cost-effective transport solutions, including a better integration of transit development with land use planning.*³⁴

5.76 If high density development is to be successful in Australia it will have to be accompanied by reductions in the high levels of automobile dependency. Accordingly, it is only likely to be an option for those areas of high land value in the inner city, most

³² Ecologically Sustainable Development Working Groups, *Final Report - Energy Use*, AGPS, Canberra, November 1991, p 31.

³³ Ecologically Sustainable Development Working Groups, *Final Report - Transport*, AGPS, Canberra, November 1991, p 11.

³⁴ Peter Newman and Jeff Kenworthy, *Towards a More Sustainable Canberra: An Assessment of Canberra's Transport, Energy and Land Use*, Murdoch University, Perth, April 1991, p 75.

notably in Melbourne and Sydney which are already well serviced by public transport and which have good access to services. Large cities cannot be designed for cars and people and increased density.

5.77 Peter Newman and Jeff Kenworthy are strong advocates of urban villages, a high density style of urban form, emerging in some European cities. In his evidence to the Committee Peter Newman argued:

...it is the priorities given to transport that shape the nature of that city. If the Federal Government pours money into urban roads but provides virtually nothing for public transport in terms of new capital infrastructure, grants or anything like that, then you will produce sprawling cities. European and Canadian experience is that, where cities are left to themselves to determine those priorities, you get less money going into roads and more money going into more land concentrating forms of transport, like rail systems. That...means that the Federal Government, without having a deliberate policy of sprawling Australian cities, has been in fact doing that since the postwar period.³⁵

5.78 Chris Cunningham, Senior Lecturer, Department of Geography and Planning at the University of New England agrees with Professor Newman:

We are thus faced by a bald choice: either keep our cars and live in suburbia or, if we wish to live in real cities, give up our cars.³⁶

5.79 He argues that research on cars has concentrated on their harmful emissions or the economic costs of congestion and has neglected their demand for space. But in the occupation of space lies the simple reason why motor-oriented cities must spread. He points out that the motor city requires seven to ten times the area of the pedestrian city to house the same population so until the problem of the private car is solved, efforts to achieve urban consolidation will fail to achieve any useful result.

5.80 Michael Lennon, Director of the Adelaide Planning Review, on the other hand argued that those advocating for higher levels of public transport are pleading for a restoration of a circumstance we desired in the past. Michael Lennon was not confident that even if we had those systems it would change people's behaviour. He argues that you need to watch what people do, not what they say.³⁷

5.81 Joe Flood refers to other researchers who have examined a large number of cities to establish what urban form leads to the shortest trip time. Their findings suggest that an urban form involving sub-centres, job dispersal and fairly high population densities in the Los Angeles style as the most efficient automobile city.³⁸

³⁵ Evidence, p 941-942.

³⁶ Chris Cunningham, "Shank's Pony Will Save Our Cities", *Sydney Morning Herald*, 18 June 1992.

³⁷ Evidence, p 883.

³⁸ Joe Flood, "Urban Consolidation: Savings, Costs and the Greenhouse Effect", *Shelter - National Housing Action*, Vol 7, No 3, Winter 1991, p 30.

5.82 This conclusion is almost opposite to that of the research by Peter Newman and his associates which indicates per-capita usage of fuel is very strongly inversely related to urban density and directly related to the provision of roads for vehicles.

5.83 Joe Flood argues that the difference between the two sets of results hinges on the usage of non-automobile modes of transport. Usage of public transport varies considerably from country to country. In American cities it averages 8 per cent, in Australian cities 20 per cent and in European cities, 30 to 50 per cent. The variation in the percentage of commuters who walk or cycle to work also varies considerably, whilst it can be in excess of 20 per cent in some European and Asian cities it is only about 5 per cent in Australian and American cities.³⁹

5.84 Can the European model of consolidated cities be transferred to Australia at reasonable economic, social and environmental costs? A New South Wales Department of Planning model estimates an increased transit share of only 2 per cent if a consolidated planning structure is adopted. High levels of private mobility is a community benefit derived from the industrial era, and it is not one the community will easily give up. As Joe Flood states:

*Under present pricing, energy limitation is in the direct daily interest of neither business or consumer, and it will take catastrophic green house-related events such as cyclones or major flooding before a consensus between interested local groups to truly change urban form is attained.*⁴⁰

5.85 Michael Lennon was able to show it is not only attitudes and personal preferences for private transport but also costs which limit public transport use:

*The simple fact is that 7 per cent of trips are undertaken on public transport and the percentage is going down, even when we put in major public transport facilities... the cost of public transport is itself a disincentive. We subsidise to the extent of \$400 to every household before we charge a fare. ...In order to get an extra 5 per cent of movement on to the public transport system, which would take us from 7 to 12 per cent, we would have to double the subsidy and we would be very brave about what demand we would actually create.*⁴¹

5.86 The focus must be on the practical ways to reduce the environmental impact of private transport on urban environments, and that entails both maximising the use of public transport (where economically feasible) and minimising the need for long distances between home and work. This means that a multitude of urban form must be run concurrently, not one exchanged by the other, in appropriate locations.

³⁹ Flood, p 30.

⁴⁰ Flood, p 31.

⁴¹ Evidence, p 883.

5.87 Michael Lennon argued that one way to minimise the adverse impacts of motor vehicle use is to try to reduce the demands for trips as much as possible. This strongly supports a different kind of urban form and distribution of activity. A second way is to try to maximise the use of public transport. These two factors, he believes, would promote activity nodes in specified locations in metropolitan areas and higher residential densities around them.⁴²

5.88 Maximising the use of public transport, however, is difficult because public transport cannot be all things to all people. Some form of public transit it is argued is essential to cater for those unable to access private forms of transport, the young, old those with disabilities and low income earners. The question is how much public transit should be publicly provided as a community service and how can it be made more relevant to user needs. The predominantly radial pattern of public transport networks that developed from the 1890s to transport people from the suburbs to the city centres no longer serves the needs of modern inter-suburban commuting:

*Thus, while public transport is competitive for radial trips to the CBD and less so for other radial trips to the central region, it is much less competitive for intra- and intersuburban work trips in an environment well suited to the car.*⁴³

New public transport networks which provide direct links between outer suburbs which link the radial arms of the old system and which service sub centres are required.

5.89 The need to make public transport more relevant to commuters needs were recently addressed in a seminar paper by Juri Pill, General Manager, Administration and Planning of the Toronto Transit Commission, who argued that the cities where transit cannot compete with the car will become obsolete in the next century.⁴⁴ This puts the focus on service quality - cleanliness, reliability, safety and speed which could result in fares that are reasonable but not low. This contrasts with the community service obligation approach in Australia which ensures a low status is attached to public transit.

5.90 The best options for reducing the environmental impact of energy use in urban transport appear to lie in new technologies to increase the efficiency of cars. International automobile manufacturers recognise that most competition in the coming years will be fought in the field of environmental compatibility and are seeking to improve efficiency. The introduction of catalytic converters has already done much to eliminate many of the toxic gases given off in exhaust fumes as has the wider distribution of unleaded petrol. Still more can be done as shown in Table 5.4.

⁴² Evidence, p 885.

⁴³ John Brotchie, "The Changing Structure of Cities", *Urban Futures*, Special Issue 5, February 1992, p 18.

⁴⁴ Juri Pill, "Transit and the Automobile: Toronto's Experience", Seminar Paper for Competing with the Car Conference, Conservation Council of Victoria, Melbourne, March 1992, p 1.

5.91 The process of technologically driven changes is being facilitated by new regulations in the USA and in Japan where the Ministry of International Trade and Industry has ruled Japanese manufactures must make 100 000 electrically powered cars, or two per cent of their total output, by the year 2000. The State of California is also pushing for change through legislation that requires 2 per cent of cars to have no emission by the year 2000 and 5 per cent by the year 2005.

5.92 As far as urban form and public transport is concerned the Committee concludes that a combination of urban form needs to be developed concurrently in a strategy devised to maximise access to employment and minimise trip times. In acknowledgment of the shift of industry to the urban periphery and the mobility needs of people the future form of public transit may not be rail but bus.

5.93 Significant advances in fuel efficiency technology are being made which, if combined with a sub-centre policy to reduce trip time, should work towards reductions in greenhouse gas emissions from motor vehicles. Whether the savings from these two factors combined would be offset by increasing travel overall is unknown and further research is required. The costs and benefits of the popular alternative of simply transferring more people onto public transport also needs to be more rigorously researched. Patrick Moriarty and Clive Beed show that even large increases in public transport patronage will only marginally reduce emissions.⁴⁵ They calculated the following relative emissions (in kilogram of carbon dioxide per passenger-kilometre) in Victoria for 1990:

Trains	0.20
Trams	0.13
Buses	0.12
Cars	0.21

5.94 These figures suggest that if public transport patronage doubled with a corresponding decline in the use of cars (and assuming that the entire increase could be accommodated on existing services and the occupancy rate of cars remained unchanged) then emissions would only be reduced by about 10 per cent. Other cities will have different patterns of transport use, but 10 per cent appears to be a typical maximum possible for reducing emissions by doubling public transport patronage.⁴⁶ The primary need from an environmental perspective is for less travel and not necessarily a change in the patronage of different forms of transport.

⁴⁵ Patrick Moriarty and Clive Beed, "Equity, Transport, Greenhouse", *Urban Policy and Research*, Vol 9, No 3, September 1991, p 144.

⁴⁶ Moriarty and Beed, p 144.

Table 5.4: Summary of Potential Carbon Dioxide Reductions on "Business-as-Usual" Levels from Vehicle-Related Technologies by the Year 2004-05

	Carbon Dioxide Reductions (per cent)	
	Scenario 1 ^a	Scenario 2 ^b
Passenger cars and LCVs . by creating a national demand for fuel economy sufficient to ensure that best international business-as-usual fuel saving technologies are reflected widely in locally available vehicles and that some reductions are accepted in engine size and power . by creating strong international demand for fuel economy such as to draw forward best fuel-saving technologies to reduce average Australian new car fuel consumption to 6.5 litres per 100 kilometres by 2000	4.5	6.4
Trucks . by extensive use of B-doubles, speed limiting and other changes (mainly interurban) . by drawing on strong international for highly fuel efficient vehicles (urban and interurban fleet benefits)	0.7	2.4
Rail . by substantial recapitalisation of rail vehicle stock and route system	0.7	0.7
Air Transport . in national programs no technological gains seen possible beyond current fleet update . assume that strong international demand for new technologies allows 50 per cent fleet penetration of prop-fan domestic transport aircraft by 2005	0.0	1.0
Sea Transport . allow retirement of coal-burners	0.2	0.2
Alternative Energy Sources . more aggressive incentives to move urban heavy vehicles (trucks and buses) to CNG . replace 20 per cent of 4-cylinder newer car sales with 'zero-emission' electric vehicles . adopt a 10 per cent biomass ethanol blend for 30 per cent of all road vehicle applications	0.6 1.2	0.6 1.3 1.2
Total percentage reduction on business as usual carbon dioxide emissions in 2004-05	7.9	13.8

(a): without strong international energy-saving initiatives

(b): with strong international energy-saving initiatives

Source: ESD Working Groups, Final Report - Transport, p 74.

5.95 Public transport caters for a small but important proportion of travel and provides a welfare subsidy - a subsidy which is poorly targeted:

...a huge reliance on subsidies makes public transport particularly vulnerable to any cutbacks in government expenditure. Further, cutback would most probably be aimed at low-patronage outer suburban bus services, off-peak services in general, rail station staff and tram conductors. Fares could rise sharply. The travel disadvantaged would suffer the most.

...While it is true that an average higher income household uses public transport more than a lower-income household, it is also true that low income households are much smaller, giving low-income groups higher per capita public transport use. For the Melbourne work trip, women and workers from low-income households clearly use public transport more. But it still remains the case that most of the subsidy does not go to the disadvantaged. However, without this subsidy, public transport patronage, and thus public transport itself, would soon collapse.⁴⁷

5.96 The Committee recommends that:

The Department of Transport and Communications review public transit options. This review should take into account all environmental, economic and social factors. It should address the optimal split between transport forms for all major cities, be based on an accurate and detailed assessment of the daily commuting patterns of Australian workers, and be cognisant of the future trends in the economy.

5.97 The Committee further recommends that:

The Commonwealth, through the Department of Transport and Communications, establish mechanisms in conjunction with the State Strategic Planning bodies, to ensure the provision of national highways complements strategic land use planning objectives of the States.

⁴⁷ Moriarty and Beed, p 143.

Lead in Petrol

5.98 There is a concern in urban communities about the high level of lead emissions associated with the use of motor vehicles produced before 1986. Lead emissions have, however, been gradually reducing since the compulsory installation of catalytic converters in new vehicles and the introduction of unleaded petrol.

5.99 The proportion of unleaded fuel in the total sales of petrol is increasing, however, the take up of unleaded fuel has not been as rapid as anticipated due to the slow down in sales of new motor vehicles. It is now estimated that unleaded petrol will replace leaded super grade petrol as the dominant transport fuel by 1994 (see Table 5.5). By the year 2000, unleaded petrol will account for 86 per cent of petrol sales.

Table 5.5: Expected Growth in Unleaded Petrol Sales

Year	Leaded Petrol Sales (megalitres)	Unleaded Petrol Sales (megalitres)
1990	11 930	5 218
1991	10 860	6 021
1992	9 726	7 394
1993	8 824	8 595
1994	7 974	9 744
1995	7 031	10 937
1996	6 117	12 128
1997	5 184	13 325
1998	4 221	14 554
1999	3 426	15 620
2000	2 720	16 602

Source: *Australian Institute of Petroleum, Oil and Australia Forecasts 1992-2000, Victoria, April 1992, p 6.*

5.100 A gradual reduction of the maximum lead content in super grade fuel has also contributed the reduction in lead emissions, but as Table 5.6 shows there is still no national standard for lead levels in petrol.

5.101 The Committee considers that a national standard which sets a low lead level for super grade fuel will assist to further reduce lead emissions and recommends that:

A national standard for the lead content in super grade petrol of 0.3 grams per litre be adopted by all the State and Territory governments.

Table 5.6: Maximum Lead Content of Super Grade Petrol

	Maximum lead content - grams per litre
Victoria	0.30
New South Wales	0.40 for Sydney, Newcastle and Wollongong 0.84 other areas
Australian Capital Territory	0.40
Queensland	0.40 Brisbane, Logan City, Ipswich, Gold Coast 0.84 other areas
Tasmania	0.45
South Australia	0.65
Western Australia	0.84 but by agreement 0.65 with further reductions to 0.40 expected by 1996
Northern Territory	0.84

5.102 The lead content in super graded fuel can technically be reduced even further to 0.15 grams per litre by mixing super grade fuel and premium unleaded petrol (a fuel designed for the niche market of high compression engines). Premium unleaded petrol wholesales at 4.77¢ a litre higher than super and unleaded grade fuels in recognition of the smaller volumes of premium petrol which can be sold to the specialist market and the higher costs of production.⁴⁸ Accordingly, under current pricing structures a 50/50 mix of premium unleaded and super grade fuels would wholesale at 2.385¢ a litre higher than super grade fuel. Such a fuel mix could either be sold at this higher price in recognition of the higher social cost (compared to unleaded petrol) it imposes on society, or alternatively the Commonwealth could subsidise the cost of switching to the new fuel in recognition of the community benefits accruing through reduced lead emissions (compared to super grade petrol). Any such subsidy could be phased out as older vehicles are replaced. The feasibility of introducing a premium unleaded/super grade fuel mix and the pricing arrangements that then should prevail should be further investigated and the Committee recommends that:

The Commonwealth Government, in conjunction with the State Governments and the petroleum industry, review the feasibility of introducing a premium unleaded/super grade fuel mix.

⁴⁸ All wholesale petrol prices are set by the Prices Surveillance Authority.

5.103 The Committee further recommends that:

The Commonwealth Government review mechanisms to accelerate the relative consumption of unleaded and reduced lead grades and mixes of petrol compared to higher lead content petrol.

The Future - Continuing Urban Growth

5.104 The Committee is concerned that an urban consolidation agenda, with medium density codes at its nucleus, will do little to contain the growth of cities. It is also concerned that the basis of the policy has more to do with the spatial arrangements and interaction of the 1970s than the 1990s and the 21st Century. This view was confirmed by the findings of the Adelaide Planning Review which concluded that:

Urban consolidation will not achieve containment. Protection of the character of existing residential areas is likely to limit the amount of infill housing achieved. No practical program of land use improvement would be able to accommodate the total demand for more space for housing, industry and commerce. Therefore, the total area of Adelaide must increase.

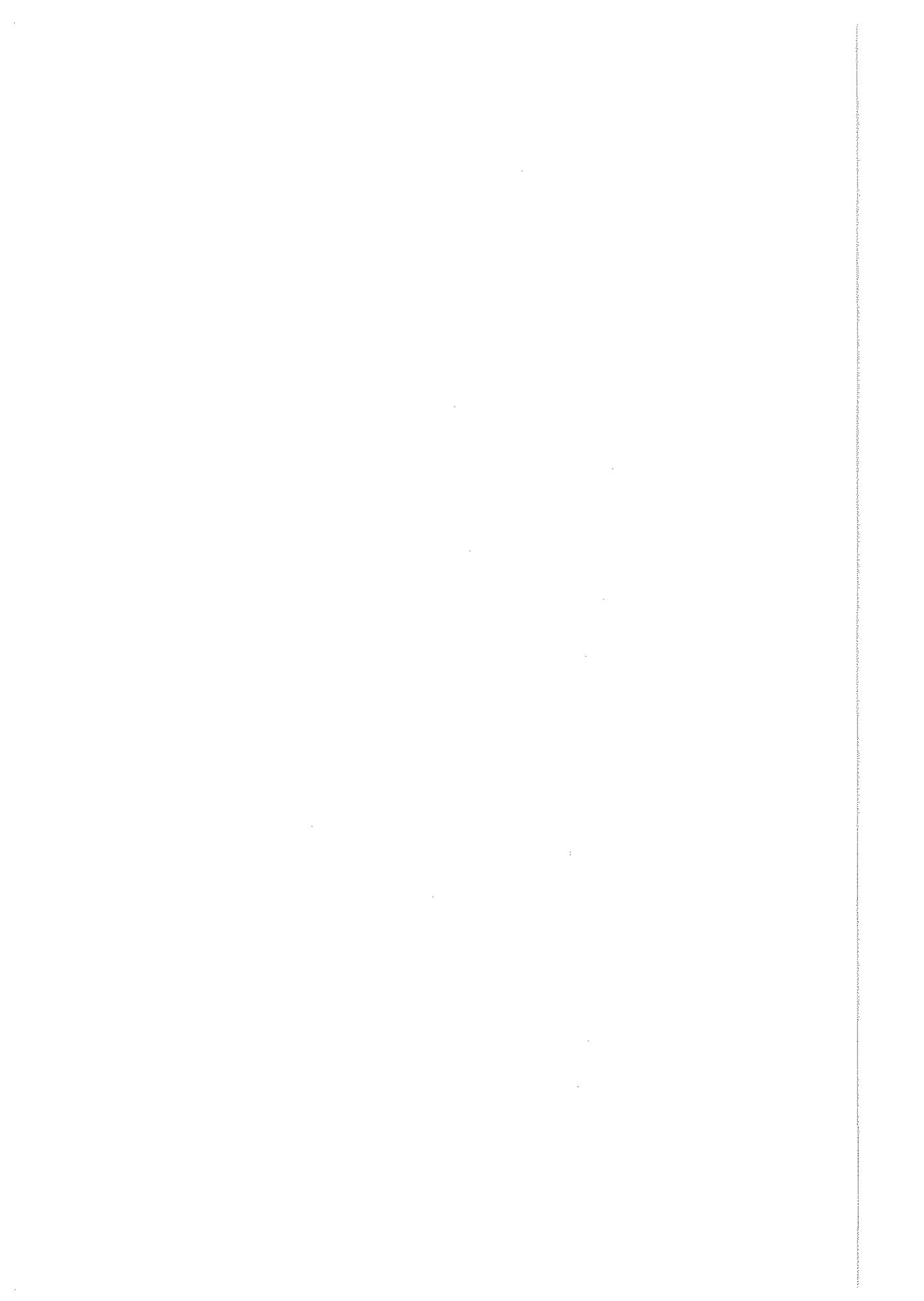
Existing strategies are not achieving the rate of consolidation needed to contain the metropolitan area...

Housing regulations and standards are of marginal importance to affordability. Around Australia, attention is being given to changes designed to lower residential standards, alter the regulation of house building and minimise the special requirements for medium density housing. These changes, however, are of marginal significance in the context of high interest rates and high house prices. On the other hand, disincentives to move from one house to another are found to be relatively important to the rate of matching housing stock to household composition.⁴⁹

5.105 The international trend is for firms to relocate to the urban fringe, which in Australia is forcing capital city councils to take initiatives to attract people back into the city. Together these trends offer the opportunity for a more even distribution of both people and economic activity, a long held objective of many of Australia's social policy researchers.

5.106 The continuation of urban sprawl has costs, in environmental, economic and social terms most notably in the pollution generated by private vehicles, the costs of extending the delivery of sewerage and water and access to services. The question is whether the main objectives which urban consolidation is meant to achieve are best met by striving to achieve arbitrary definitions of spatial densities, or alternatively by improving on the present system of urban expansion through the incorporation of environmental and social costs in prices and charges.

⁴⁹ Adelaide Planning Review, *2020 Vision: Ideas for Metropolitan Adelaide*, April 1991, p 21-22.



CHAPTER 6

URBAN INFRASTRUCTURE

6.1 Urban consolidation has been advocated on the basis that it will reduce public outlays on infrastructure and therefore deliver general economic benefit to the community at a time when all governments are under pressure to curtail their expenditure. The declining population of inner and middle ring suburbs, an effect of demographic change and a fall in the size of households, has created some spare capacity in the infrastructure of these areas. Cost advantages are expected to result from repopulating the established suburbs. It is argued that it would be more efficient to increase the density of the dwelling stock in these suburbs (and thereby increase the utilisation of existing infrastructure), than to keep building new suburbs. It is difficult, however, to restore these old suburbs to their original population levels because of the changes that have occurred in average household size, though it is true that raising the density of the dwelling stock would help to hold current population levels steady.

6.2 By charging less than the full cost of servicing new land, governments have subsidised the provision of residential land on the fringe on the justification that it is delivering a public social good. It has been argued that the subsidy provided to fringe buyers leads to an over-demand for land on the fringe and a needlessly heavy drain on public funds. The fiscal constraint faced by all levels of government, and particularly by the States, is now calling the policy into question and giving urgency to this critique.

6.3 Departing from the historic practice of subsidising new land releases and adopting an infrastructure pricing policy whereby house prices more fully express the real cost of developing residential land raises many questions, including issues of equity. The concern is not only about equity among current purchasers, but also equity between current purchasers and previous generations. The latter have effectively enjoyed a subsidy in their house purchases through the traditional infrastructure pricing policy. They have also benefited from the system of providing urban services out of the revenue from local government rates and state government taxes and charges. Infrastructure has traditionally been funded out of consolidated revenue. Residents ultimately paid, but did so through charges set by public utilities (water, gas and electricity), through rates levied by local government on property values, through state charges and through federal income tax. The adequacy of these methods, and particularly municipal rates to recoup expenses and provide sufficient funds for new capital development has recently been called into question.

6.4 The difficulties involved in changing infrastructure pricing policies is further compounded by doubts about the scale of the environmental and economic benefits to the community arising from urban consolidation. To the extent that savings in public expenditure achieve their objectives there will be some general benefit to the community, but it cannot be quantified. The question can be approached by looking at the more precise issues within the debate over new land development.

6.5 Development of new land takes place with the expansion of residential housing development onto raw land at the fringe of the existing metropolitan zone and is often referred to as greenfield development. It has been argued that if prospective purchasers were charged the full cost of developing land then demand for land on the fringe would fall. Making the user pay would send "the right signals" to the market and result in a more efficient allocation of resources. Or so the theory goes. A Housing Location and Choice Survey by the NHS showed that the desire for home ownership is the biggest motivating factor for first home buyers, especially first home buyers on the fringe. For this group access to services is only a secondary consideration.¹ Under these circumstances higher land prices on the fringe could have the perverse effect of sending people further and further afield seeking ever cheaper sources of land for settlement.

Provision of Infrastructure for New Development

6.6 Development of raw land into saleable blocks consists of the following processes:

- . securing, rezoning and purchasing of raw land;
- . approvals from government (state and local) to subdivide;
- . arrangements for the provision of necessary services - water, sewerage, drains, (hydraulic services); electricity and gas (energy); local roads and telephones (transport and telecommunications);
- . obtaining titles for individual lots; and
- . sale to builders or individuals.

6.7 Government subsidy comes in principally at the third phase - the provision of the necessary physical infrastructure which supports residential development. Provision of infrastructure is complicated by the need to incorporate spare capacity in advance of occupation, a problem that raises questions about how the full costs to be recovered from individuals are to be determined and about the equity implications of applying full cost recovery on current and future users of the system. The first question which needs to be addressed is this: if developers are required to meet the full cost of infrastructure, what does that entail?

Developer Charges and Cost Recovery

6.8 One argument is that charging developers for the full cost of infrastructure is an effective method by which to introduce full cost recovery. Under this system the private land developer makes payments to councils to cover the cost of providing suburban infrastructure. They already make partial contributions in most of the States, though these vary in composition between the States.

¹ Meredith Edwards, *Australian Cities Toward 2000: The National Housing Strategy*, Vital Issues Parliamentary Library Seminar Series, 28 April 1992, p 9.

6.9 The difficulty is how to set a fair price when infrastructure is provided at the start of greenfield developments but at a standard designed to meet the demands of long term growth. Early buyers would, therefore, be charged for services not required until later. To be equitable some form of discounting is required for those who get in early. A good analogy are the fences on a new suburban block. The first resident would be charged for the fence and then recoups the neighbour's share when the adjoining blocks are sold or built on. The only difference between fences and, say, drains, is that the time scale for recovery of costs would be considerably longer - 10 to 12 years or more. Because of the huge capital outlays incurred in the construction of major dams and headworks, these are built to a capacity well in advance of expected initial use. Likely maximum demand is unknown, because it will largely be a function of the number of users and of consumption patterns which will alter with age and lifestyle. Yet under a user pays system, an estimate of the numbers of users, and the time at which they will come on stream, must be made to apportion the costs of building and operating the system in order to recoup an adequate real rate of return on the investment (estimated at present to be five per cent).² In order to be equitable, the residents using the system now, should not be charged more than future users. Given the impact of inflation (especially over the last decades) some discounting of charges must be made for current users. Obviously, there is a large element of estimation in setting the price for these systems.

6.10 Unlike government or semi-government authorities, which can obtain loans at lower interest rates, private developers are charged commercial interest rates. The resulting higher costs are passed on to new home buyers in the purchase price of residential lots. Full cost recovery thus results in new home buyers paying more for their services, first because of full cost recovery, and secondly because private companies must pay more for loans than governments. To the extent that the private sector can deliver services more efficiently and thus more cheaply, some of these higher costs may be offset, but the net position to consumers at this stage is unclear.

6.11 Payment for infrastructure through municipal rates is more equitable but is less efficient because rates have been based on property values. Effective and efficient asset management depends on an adequate rate of return on invested capital but the difficulty is that earnings on assets will vary between sites. State authorities apply a rates structure which is averaged across all the sites they service, but a more efficient system would involve different rates in different zones, depending on the actual service costs.

6.12 A unilateral move towards differentiated zone pricing according to the principle "return on assets", however, could be highly inequitable. Because some people have paid for services in advance and some have not, it would be unfair to charge everyone in such a way as to obtain the same rate of return. Some users would then be double charged.

² A 5 per cent real rate on return on capital investment was recently recommended by the Industry Commission in its inquiry into Australia's water resources. The current rate of return for investment in urban water networks is between 2 to 4 per cent. An increase in the real rate of return of capital is estimated to deliver Australia a much more efficient water consumption pattern.

6.13 The cost of providing infrastructure also varies according to topography of and proximity to existing infrastructure. The move to user pays on the above model would require a highly differentiated cost setting structure which would in itself add to the administrative complexity of the system and thus to its cost.

6.14 The issue is further complicated by the existence of several different authorities, each with its own array of assets, built up over a lifetime of competitive or non-co-operative institutional behaviour, controlled by differing political, ethical and economic criteria. Each authority has a different asset base, and some have been more efficient than others. A move to "return on assets" management will penalise land owners in areas serviced by authorities that have been inefficient or have made poor management decisions in the past. This policy may also discourage the movement of people to these municipalities, even though settlement might be preferred there, for employment or some other purpose, if the rating system had not been changed. Authorities with a bad record of management and investment decisions will seek to recoup those losses from new residents. For reasons of community cohesion it may then become desirable to assist people to move to some areas close to their work if a user pays ratings approach is widely adopted.

6.15 The problem discussed above is mentioned in evidence given to the Industry Commission by the Castlemaine District Water Board:

...part of the Board's current pricing strategy is designed to assist in a catch up on the previous era where no financial reserves were developed for project financing.

What must also be understood is that until the late 1980's there was little economic evaluation of works projects and as such much of the investment in the existing infrastructure may not have been made on the basis of its ability to yield a financial return. This impacts on the achievement of cost recovery and rates of return by increasing price to cater for past poor investment decisions.³

6.16 The Committee concludes that this is an extremely complex issue needing further research which the Commonwealth Government should help to fund and guide. The Committee recommends that:

The Minister for Health, Housing and Community Services send a reference to the Industry Commission to review the environmental, economic and social costs and benefits of differential charging for water services provision in regional centres such as (but not limited to) Newcastle, Wollongong, Geelong, Townsville, Albury-Wodonga and Ballarat.

³ Castlemaine and District Water Board, Submission to the Industry Commission Inquiry into Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 1-2.

6.17 A phased set of "one off payments" from the Commonwealth to public authorities through the Commonwealth Grants Commission may need to be implemented so as to "level the playing field" between authorities and ensure that residents are not penalised for what, at the time, appeared to be sound management decisions made under different political and economic circumstances. Authorities should not be compensated for bad management practices, nor should authorities which have applied better management practices be discriminated against.

6.18 Although the cost of new infrastructure provision is increasingly being recouped on a user pays/cost recovery basis, the cost of subsequent use and maintenance of the services is still generally charged to consumers on the basis of average property values. The need for infrastructure arises from population growth and per capita consumption. Better demand management can reduce consumption, extend the life of existing assets and reduce the cost to fringe buyers by deferring the need to augment existing infrastructure. It is even possible that reductions in consumption by existing users will result in savings to new users.

6.19 In 1983, the then Hunter District Water Board (now the Hunter Water Corporation) in Newcastle, which is responsible for the water supply of the Hunter region in New South Wales, adopted a user pays pricing structure and was able to defer construction of new infrastructure and divert resources to other uses, such as achieving higher environmental standards. The Corporation has been refining these practices over time for the past nine years, and the benefits to the community are considerable. Few other authorities have followed this example, however, and most water boards still charge for excess water, rather than consumption per litre from a zero base. Nor is there any state or national policy aimed at facilitating such changes. The Hunter Water Corporation is an excellent example of innovative and responsible regional management of a community resource. The disappointment is that its approach to charging has not acted as a catalyst for change amongst other water supply authorities or other public utilities, nor has it galvanised political will, in calling for such changes to ensure better management of public resources. The type of innovations introduced by the Hunter Water Corporation can be most beneficial and ought to be encouraged because they can lead to improved performance standards by public authorities.

6.20 The Commonwealth should reward innovation and responsible management where it results in efficiencies and a reduced demand on Commonwealth outlays. Because the best and most innovative management of public utilities will flourish through direct incentives payments, the Committee recommends that:

The Commonwealth and the States collaborate on the establishment of best practice management performance standards for state infrastructure authorities to encourage innovation in infrastructure provision and pricing.

Social Infrastructure and Community Services

6.21 The largest potential for savings from increasing the utilisation of existing infrastructure seem to be from community services such as schools, hospitals, and public transport (see Appendix 5). If savings can be made on social infrastructure, it is suggested that it may be possible to devote more resources to productive infrastructure, thus enhancing Australia's economic potential. Such a proposition begs the question of what social, as opposed to productive, infrastructure is - a question particularly acute in a society which is in transition to an information economy. How Australia shapes up economically in the 21st Century will partly depend on the extent of public investment in productive infrastructure like transport systems, which move goods to international markets, and social infrastructure like educational systems, which endow the workforce of the future with its skills.

6.22 When facilitating Australia's transition to the information age and fostering a productive culture, it is important to provide the sort of infrastructure that will meet the needs of the 21st Century. Governments' policy agenda, however, have been driven by the short term need to contain government debt and reduce expenditure, a priority which has enticed governments into seeking better utilisation rates on existing urban infrastructure. This quest is politically driven because it is difficult to take services away from residents, even if they are under-utilised; it is much easier to defer their provision. While maximising the utilisation of existing assets is a necessarily short term goal, in the long term the usefulness of the stock of buildings established in the 19th Century and 20th Century, is relevant only to the extent that it meets future economic and social needs. Infrastructure is a means to an end, not an end in itself.

6.23 Community services such as health, education and public transport are traditionally seen as social goods and part of the social wage. Along with cultural facilities, these services contribute significantly to the quality of life and should therefore be provided by government. Transport, communications and essential services such as water and electricity, on the other hand, are classified as productive infrastructure, because they contribute directly to the productive process. Community services like health, education and public transport can also be seen as contributing to the productive capacity of the economy: a society which suffers excessive productivity losses through illness, lack of workforce skills or absenteeism is not getting the most out of its human resources.

6.24 As the information economy develops, ever higher levels of education and occupational training are required, and industries are increasingly attracted to pleasant, semi-rural locations already provided with social infrastructure (as outlined in Chapter Three). The division between productive and social infrastructure has always been blurred; with the further development of the information society it will become increasingly irrelevant. The need for social infrastructure will have to be considered equally with other faculties and services when new areas are being developed and inner urban areas are being redeveloped.

6.25 The relationship between productive and social infrastructure can be suggested by the example of child care. Although this is traditionally regarded as a community service, child care is now seen as an important part of increasing the participation rate of women in the workforce, just as education and public transport are necessary to equip people for and get them to their jobs.

6.26 The need for social infrastructure, the potential savings to government by maximising the use of existing facilities, and how such services are to be paid for, are questions that must be assessed from a demand, rather than a supply perspective. This demand should be managed by the introduction of prices which reflect the true cost of providing the services. In this way the community plays its part in determining the allocation of resources. This approach is more likely to result in a net reduction in both public and private costs.

Economic, Equity and Environmental Impacts of Full Cost Recovery and the Alternatives

6.27 To the extent that it reduced public expenditure, full cost recovery could provide a general economic benefit to the community, but this is a narrow way to measure community benefit and could be misleading if the full public cost is offset by a rise in private costs. What is needed is a comprehensive analysis of long term public and private costs and benefits which would result from the introduction of full cost recovery in the provision of infrastructure on the urban fringe. Because a policy cannot be judged in isolation from complementary policies, a systematic or "package" approach must be adopted. A useful "package" cannot be put together on the basis of narrow economic cost benefit analysis alone; it must also take account of social and environmental impact issues.

6.28 Assessment of the social implications of full cost recovery is hindered by the lack of uniformity in the application of developer contributions within and across states. Detailed consideration of these issues is required before equity issues can be properly assessed. This would require more data than are available to the Committee.

6.29 In theory, any equity gains from cost recovery policies would be expressed only in the long term capacity of developer contributions to generate higher levels of equity than would be evident if past practices were continued. This is a difficult thing to measure. One aspect of urban development cannot be considered in isolation from others. If people paid more for land on the fringe, but were compensated by better public transport or employment planning, funded by the public expenditure savings, the individuals on the fringe who had paid the higher prices might be better off.

6.30 The government cannot guarantee that such benefits will result and most citizens would doubt its capacity to deliver complementary and co-ordinated benefits and suspect that they would end up worse off. Such suspicions both complicate attempts to analyse costs and benefits and also militate against reform, even if the latter has the potential to offer greater benefit.

6.31 Full cost recovery must increase the price of land on the fringe. Part of that increase will be transferred to the established suburbs because housing there is an alternative for house and land packages on the fringe. Land for housing will be more expensive because servicing costs (major subdivision costs) will be passed on in full to purchasers. It is not merely that costs will shift from the public to the private sector, but that the payment system will change from rates levied over time to an upfront charge on buyers. Some buyers will prefer less fully serviced land at a lower price. To the extent that this opportunity is diminished, the new system will discriminate against them.⁴

6.32 Rob Carter told the Committee that the increase in the price of raw land is already the most significant component of rising land prices:

*We found that of all the factors that you can analyse, housing costs, given quality factors over the past decade, have not increased in real terms. The costs of servicing urban land has not increased in real terms. Interest rates, if you take a longer view, have not been a major impact on housing affordability. What it boils down to in the end is the price of raw land and the acceleration in the price of raw land. When you analyse the behaviour in the market in the period, particularly speculative trading in land on the basis of expected capital gains, but not for development - land swapping hands three times in the same year, and the end result being a 100 per cent increase in prices, with well-documented cases of that - that has been behind the deterioration in affordability for home buyers in that period. It, of course, has substantially improved since then and affordability indices are on the up again. But the potential for that to be repeated in another boom is there.*⁵

6.33 Evidence from planning authorities such as the National Capital Planning Authority (NCPA), the Victorian Department of Planning and Housing and others also shows that there is widespread concern over land speculation practices and perception of the need to "capture betterment". Land speculation has been described as a national sport, but it must be curbed in the interest of both fiscal efficiency and social equity. The introduction of full cost recovery will make it more essential than ever for the government to capture betterment for the public and limit the socially expensive gains of speculators.

6.34 It has been argued that developer contributions themselves can help reduce the price of raw land. One of the benefits from developer charges is claimed to be that it forces them to lower their bids when buying raw land. Although it is usually in the buyer's interests to pay the lowest price for land, the buyer's perception of a fair price is partly determined by the need for services and how much they will have to pay. If state governments pay for all the infrastructure without requiring developer contributions the

⁴ A detailed discussion of this issue can be found in Richard Kirwan, "Infrastructure Finance: Aims, Attitudes and Approaches", *Urban Policy and Research*, Vol 8, No 4, December 1990, p 185-193.

⁵ Evidence, p 261.

developer's perception of a fair price will be different from what it would be to pay for the infrastructure costs upfront. If developer contributions are charged, the setting of raw land purchase prices will also be affected by the extent to which the developers expect to be able to pass the costs on.

6.35 Whether infrastructure charges will be absorbed by the developer, the land seller or the home buyer will depend on the dynamics of the market at a particular time. If demand for land is strong, costs will be transferred to the home buyer; if it is weak they will be absorbed by the developer - though the extent of this can be affected by the developer's size. Given the long lead times in the housing industry, many developers are already holding land in relation to which they may not have anticipated developer charges, and they would probably have negotiated purchase prices accordingly. A change in policy might therefore result in some land holdings being overvalued. Although they have not yet been fully implemented, developer charges are not new and have applied to differing extents for some time.⁶ As Pat Troy argues:

...developers have been required to contribute to the cost of headworks including costs of mains amplification. This has tended, in some locations, to encourage developers to make lower bids for raw land. In other locations developers have not been able to bid down the price of land. In both cases, however, developers have factored this input into the costs of their developments. The effect for the house purchaser, however, has been for them to be required to pay 'up front' for an asset which has a long life...⁷

6.36 But Rob Carter disagrees:

What you have got then is a realistic assessment, by a developer in purchasing that land, of the real cost of that land, including the servicing of it. We already have anecdotal evidence coming in that our development contributions at this relatively low level out there are really influencing the trading in rural land - that developers in purchasing and vendors in selling rural land, even at the moment without wholesaling, are factoring in the development contributions and therefore come out with a more realistic price on sale.⁸

6.37 Since market conditions vary over time, it is possible that each view may be correct for the period under discussion. The Committee has no way of assessing conclusively what the price of unsubdivided land would be without developer requirements. The real impact of developer charges on the cost of raw land is still little

⁶ Victorian University of Technology, Submission to the Industry Commission, Inquiry into the Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 9.

⁷ Patrick N Troy, Submission to the Industry Commission, Inquiry into the Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 6.

⁸ Evidence, p 262.

known and can fluctuate according to the state of the market. Nevertheless, it has been argued that developer contributions produce other economic benefits in the land development process - for example:

- . development of scattered lots with poor access to private and public services is discouraged;
- . new developments no longer have to help pay for the sewerage, drainage, roadworks, etc. built for earlier developments;
- . government resources are released for other purposes; and
- . new developments come complete with adequate open space and provision for other amenities.

6.38 Because equity and environmental considerations are often in conflict, it is difficult to evaluate the outcome of policy changes. If infrastructure is provided free, local councils may (as has been alleged) demand higher standards than would otherwise be provided. (They would do this to minimise long term maintenance costs and to capture the political benefits of providing a higher standard of amenity for existing residents. This benefits the community as a whole but disadvantages the local prospective purchasers).

6.39 The price of land is also a function of normal market processes: prices will only be low if there is a large supply relative to the demand. Such a situation is likely to arise only when several areas are being developed simultaneously, an increasingly unlikely situation as government planning attempts to achieve a more efficient sequence of development. It is also likely that competition in the supply of land will be reduced, and that land prices will therefore rise as a result of high holding costs. These will raise barriers to new home buyers by raising the price of land and reducing the stock of serviced lots available.

6.40 There are alternative land development practices that governments can consider, including land wholesaling or land banking and betterment levies.

Betterment Levies

6.41 Betterment levies have been proposed for situations where there is doubt as to whether authorities receive sufficient return on their investment in urban infrastructure and where an increased return on that investment would lead to a more efficient and effective provision of infrastructure in the future.

6.42 The rising value of raw land is often attributed, not to improvements made by land owners, but to their capacity to capture the value of improvements made around them by government activity as a locality develops. This issue was first brought to public notice by the Henry George League's concern about "unearned increment" and was one of the reasons for the adoption of a leasehold system for all privately occupied land in the

Australian Capital Territory.⁹ Community concern about the private appropriation of benefits, such as rising home and land values, which derive from the public provision of infrastructure has increased under today's conditions of fiscal constraint. It is suggested that if the value of betterment went to the government, it could be redistributed to the benefit of the whole community rather than well placed individuals. The NCPA, for example, has claimed that in Australia "failure to plough betterment back into local infrastructure provision could be costing as much as \$400 million per annum".¹⁰

6.43 The NCPA advocate that, in order to maximise net community benefits, the government should intervene more directly in the land release process:

*This could involve arrangements which reproduce the benefits of the Canberra land lease system. That is, arrangements where Government releases land, purchased at betterment free prices, to private developers who will pay a price reflecting the promised delivery of various forms of infrastructure. In this way, betterment is capitalised in the public sector for reinvestment in infrastructure, rather than accruing as windfall gains to speculators.*¹¹

6.44 A system of betterment levies would set the value of land before it was zoned for residential purposes. Any subsequent increase in land value would then be considered to be due to its new zoning status, and the difference in value subject to betterment tax. The difficulty with this system is that land near an existing centre may change hands many times before rezoning takes place, but there may often not be much change in its value before and after zoning for residential purposes. If land is traded many times before rezoning previous land speculators have already privately captured the potential betterment value beforehand. The potential gain in efficiency is lost through loopholes in the system.

Land Banking

6.45 Land banking is a system in which undeveloped land is purchased by the government at rural prices and sold to *bona fide* developers at a price which reflects its potential for urban development. The land banking system is already operative in South Australia.

⁹ In the late 19th Century, Henry George, believed it was necessary to capture the increase in rising land prices (which he termed the social increment) and avoid higher taxation. The leasehold system adopted in the ACT in 1920 was based on the desire of O'Malley, then Minister for Housing, to capture betterment publicly.

¹⁰ NCPA, Submission, p 6.

¹¹ NCPA, Submission, p 6.

6.46 Rob Carter, supported the adoption of the land bank system in Victoria on the ground that it is preferable to betterment taxes which are cumbersome and less effective:

You need to go one step back in the production chain to have targeted land wholesaling whereby you purchase buffer stocks in critical development corridors and you purchase stocks of land by compulsory acquisition if necessary where there are hold-outs across key servicing corridors. To have that ability, even at that relatively small percentage of the market in those key corridors, to release critical supplies of land during more intense periods of activity will have a significant impact on preventing those boom-bust cycles.

...You have basically got to use independent valuations to arrive at a fair price in dealing with that situation. What you are doing is, of course, buying at not the rezone value but the rural raw land value, and that is the basis of the valuation.

These kinds of proposals do have the support of the Urban Development Institute of Australia, in terms of the sorts of mechanisms that we are proposing and, of course, very much the support of the housing industry. They do not have the total support of some of the holders of fringe farming land.¹²

6.47 The legal costs of compulsorily acquiring land could erode the benefits of land wholesaling so that significant price reduction might not be achieved, but there may still be substantial benefits. When questioned on this matter, Rob Carter explained:

It is not going to achieve dramatic reductions in land prices. What it is going to achieve primarily is a more orderly and reliable supply of serviced and available land over time; and we believe it will certainly achieve a great reduction in the boom-bust cycles. They are the ones that can do a lot of damage. Real long term growth in urban land prices is just a reality of the growth of cities...¹³

6.48 The private sector is suspicious about land banking because it feels that governments have an unfair advantage in being exempt from land taxes. Where land banking authorities are not exempt, however, they behave in much the same way as other purchasers in the private market and become just another market player. Deeper consideration of this option is clearly needed.

¹² Evidence, p 261-262, 266.

¹³ Evidence, p 265.

Cost Recovery Options

6.49 The land development industry argues that before new mechanisms are considered, there must be a close examination of the returns that governments already receive from increased land values. The Urban Development Institute of Australia (UDIA) put to the Committee that in the absence of betterment levies:

*...in effect the increase in land value is already taxed in most cases either through company tax or capital gains tax. The only land which is excluded is that which has been in the same ownership since before capital gains tax was introduced.*¹⁴

6.50 At present there is no definite estimate of current returns to governments from charges analogous to betterment tax, the appropriateness of those returns, or their distribution to the three levels of government. Nor is it known whether specific purpose taxation would be more appropriate than nominal tax levies. The Committee can only conclude that further research should be undertaken to clarify these issues, and that costs and benefits of land wholesaling should also be further investigated. The Committee considers that the land banking system has great potential but needs to be more thoroughly investigated. To understand how this option could be applied most to the maximum benefit of both developers and consumers, the Committee recommends that:

A nation wide study be initiated through the Housing Ministers Conference to investigate the costs and benefits of land banking and betterment levies.

The Adequacy of Existing Infrastructure

6.51 The Committee was able to determine neither the extent of spare capacity in existing community infrastructure, nor its capacity to meet future social needs at least cost. It appears, as was the case for reported "savings" in physical infrastructure from consolidation (such as sewers), that spare capacity is assumed to be there because the population of inner suburbs has declined.

6.52 For the savings considered possible from an urban consolidation program to be achieved, it is essential that redevelopment and urban infill are directed to locations where spare capacity exists. If they are not, the cost to the community could be greater than if urban fringe expansion continued because the cost of augmenting services in the inner suburbs is higher than building them fresh on the fringe. In addition land in the inner suburbs is significantly more expensive than on the fringe; the opportunity cost of putting that land to uses which provide alternative economic or social benefits to the community should therefore be considered.

¹⁴ A V Jennings, Submission to the Industry Commission, Inquiry into Taxation and Financial Policy Impacts on Urban Settlement, 1992, p 7.

6.53 Site analysis by suburb is essential for gathering the information needed to reconcile demand with supply. Governments need to be aware of under- and over-supply in each component of infrastructure before they adopt urban consolidation as a practical strategy. Although savings are assumed to be uniform across suburbs, it is probable that any spare capacity will not be uniform across all services in one location. An area may have spare capacity in its schools and roads, but none in its hospitals, child care facilities or public transport. Areas with spare capacity in physical infrastructure such as sewerage may lack capacity in community services and transport networks.

6.54 Previous studies are of little use in addressing this question because of their focus mainly on physical infrastructure and their lack of agreement on most issues. There have recently been three major studies on the adequacy of infrastructure: a 1987 report *Constructing and Restructuring Australia's Public Infrastructure* by the House of Representatives's Standing Committee on Transport and Communications; EPAC's 1988 report, *Economic Infrastructure in Australia* and the Third National Infrastructure Conference Report by the National Infrastructure Committee in 1990. Only the last of these attempts a detailed examination of the need for new capital works to support social infrastructure.

6.55 There is no consensus among these reports even on the adequacy of Australia's *economic* infrastructure, let alone other types. The principal area of agreement is that expenditure on infrastructure in the 1980s declined, though EPAC argues that this trend alone is not sufficient to assess the adequacy of infrastructure spending. The Standing Committee on Transport, Communications and Infrastructure, on the other hand, concluded that:

...there is no reason to believe that Australia will be immune from a build-up of rehabilitation or replacement needs of the type that has occurred in other developed economies.

Maintenance and replacement needs will substantially increase during the rest of this century due to the overall age pattern of Australian infrastructure. Unless the need due to ageing can be offset by savings elsewhere, through lower demand, aggregate need for public investment must rise.¹⁵

6.56 The National Infrastructure Committee concluded:

There is a compelling need to upgrade infrastructure in the urban fringe and rural Australia.

Demographic (including migration) and work practice changes will require concomitant infrastructure support.

¹⁵ House of Representatives Standing Committee for Transport, Communication and Infrastructure, *Constructing and Restructuring Australia's Public Infrastructure*, AGPS, Canberra, November 1987, p xvii.

To sustain our present quality of life and to enable Australian industry to perform at optimum competitiveness, the supporting infrastructure must be of at least world standard.

Overseas research shows a direct link between infrastructure and productivity. Greater domestic research, therefore, needs to be undertaken urgently into the question of the economic cost of inadequate infrastructure...¹⁶

6.57 The Committee is concerned that important community facilities such as education, health and public transport have deteriorated to such an extent that they may not be capable of meeting current demand without significant upgrading, let alone the increasing demands of the coming decades. The New South Wales Government share this concern:

In the short term at least increased densities will place added demands on a road system which in many areas is already at capacity. In the longer term it is hoped that greater use of public transport will alleviate traffic problems but the extent to which this will occur is uncertain. The problem of peak congestion on the rail system will also need to be addressed, possibly by demand management through pricing reforms.¹⁷

6.58 Some researchers also question the adequacy of existing social infrastructure. Pat Troy argues:

There are a couple of fallacies here that never get explored. One of them is that the population left those inner areas for several reasons. One of them is that the schools in those areas are substandard, by and large. They do not comply with contemporary views about the kind of spaces we want our kids to be brought up in, the kind of classrooms we want and the kind of facilities that they need to support that or the kind of playing fields that they need around those schools.¹⁸

¹⁶ National Infrastructure Committee, *The Third National Infrastructure Conference*, AGPS, Canberra, September 1990, p 1-3.

¹⁷ NSW Government, *Submission to the Industry Commission, Inquiry into Taxation and Financial Policy Impacts on Urban Settlement*, 1992, p 2.

¹⁸ Evidence, p 718.

6.59 The Committee recommends that:

An infrastructure audit program be established in conjunction with the States and local government to develop a data base on the adequacy of physical and social infrastructure:

- . the infrastructure audits be funded through the Better Cities Program;**
- . the infrastructure audit program concentrate initially on identifying the urban areas most suited for medium and high density development and the infrastructure replacement and development needs of those areas; and**
- . following the development of the infrastructure data base, strategies be formulated for infrastructure replacement or development in those areas identified as being most suitable for medium and high density development.**

Alternatives for Infrastructure Provision

6.60 Given the cost of connecting houses to the systems necessary for civilised life, the question of alternatives arises. The cost of connection increases with distance from the main system. Options are becoming more viable as the technology advances, and they could soon become feasible from an economic and desirable from an environmental perspective.

6.61 Australia still relies heavily on 19th Century technology and organisational structures for water supply, sewerage disposal and transport systems and has invested little in alternatives. On-site hydraulic management systems, for instance, could meet a better economic and environmental performance standards and, perhaps, offer the opportunity for long term growth in employment through the creation of competitive advantages for Australian technology. But these opportunities are not being grasped. The biases and rigidities of institutions are highlighted by the Sydney Water Board's response to the idea of recycling. During informal discussions with the Committee, the Board gave the impression that it regarded the idea of converting waste into drinking water as an ideal to dream about but not a practical possibility. Yet the technology which can achieve this "miracle" is already well advanced in Australia and being widely used in other countries, to purify waste for secondary uses in industry, gardens and toilet flushing, and in some cases to produce domestic drinking water.

6.62 Many options exist for the development of similarly innovative installations:

- . solar on-site power, for individual houses or a locality;
- . "enviro cycle" septic systems;
- . tanks to collect water for gardens or to control run off; and
- . on-site sewage systems (such as those developed by Memtec).

6.63 The comparative economic benefit of these non-system solutions to consumers would increase if a full user pays policy were introduced, but investment in these technologies has been impeded by institutional conservatism. Rising standards of living in Asian countries have created potential markets for reliable non-system technology at the right price. Australia has only to grasp the opportunity.

6.64 Such commercial opportunities require further investigation. The Industry Commission should expand its urban research program to investigate the long term potential in both the domestic and Asian market for non-system urban service technologies and suggest the ways in which governments could help to realise these opportunities. The Committee recommends that:

The Industry Commission review the opportunities and potential for Australian industry to develop, market and export urban environmental products and services and the Departments of Health, Housing and Community Services, Industry, Technology and Commerce and Arts, Sport, the Environment and Territories, together with Austrade, the Environment Management Industry Association and State water board representatives form a steering committee to monitor the Industry Commission review and to develop supporting policy to encourage the development and marketing of such technology.

Alternative Policies for Providing Social Infrastructure

6.65 If there is spare capacity in the existing community services of the inner urban areas, could it be exploited by means other than urban consolidation? New South Wales has shown that it can by de-zoning schools. This allows parents to send their children to schools near where they work, which is often more convenient than sending them to schools near home.

6.66 Evidence from Professor Susan Bambrick emphasised the need to better integrate educational facilities across regions. Students need access to specific centres of technical expertise in tertiary education, which is best provided in a regionally co-ordinated manner and without costly duplication of buildings and staff.

6.67 An indication of future educational requirements is evident in Coffs Harbour. This region, which is experiencing a high level of population growth typical of many towns along the central and north coast of the New South Wales, has a significant youth population in need of tertiary education at either TAFE or university. As Professor Bambrick points out, Coffs Harbour students wanting a university degree used to have to go to Brisbane, Newcastle, Sydney or Armidale; today students can study at the University of New England without leaving home.¹⁹ Despite the benefits of a university presence in Coffs Harbour, however, the courses on offer are limited. In order to increase their range, access to external courses has been arranged in several ways. An Open Access Centre provides facilities and tutors to supplement students enrolled in external courses; and video-conferencing links classrooms and helps to break down the proverbial tyranny of distance. It may eventually be necessary to move to a university centre to finish their course, but imaginative use of technology can minimise the cost to families and governments.

6.68 With improvements in the linking of tertiary institutions through new technology and the placement of Open Learning Centres strategically throughout the region, the range of course available to non-metropolitan areas can be expanded far beyond what only a couple of campuses could offer on their own.²⁰ This improves educational opportunities in expanding population centres and substantially reduces expenditure on buildings, teaching staff and other facilities necessary for a comprehensive range of courses. Susan Bambrick advises that access to courses in non-metropolitan areas is often restricted to liberal arts, business and client-oriented services and stresses the need to increase access to more expensive courses like engineering and medicine. On this point she argues that:

*The heavy investment areas such as medicine, engineering, nuclear physics and astronomy are quite understandably neglected. There is, however, argument for providing non-metropolitan universities to feed students for expensive professional courses into metropolitan universities after foundation studies in science - it would ensure students making that investment would have some demonstrated capacity, and the size of that commitment would be less.*²¹

6.69 The Committee recommends that:

The capacity to use new technology to provide health and education services to newly developed suburbs and regions be further investigated.

¹⁹ Dr Susan Bambrick, Submission, p 2.

²⁰ Evidence, p 458.

²¹ Bambrick, p 4.

Reducing Public Outlays

6.70 Governments are trying to reduce expenditure on infrastructure, but, in succeeding, they may be placing a significant long term burden on the community. Much of the existing infrastructure in the established suburbs is over 100 years old and in need of significant repair. Repopulation of older areas through urban consolidation may accelerate the deterioration of the infrastructure there and add to costs because it is significantly more expensive to replace existing than to lay down new infrastructure. As any motorist knows, it is a labour intensive activity that normally involves extensive disruption to residents and traffic. Representatives of Melbourne Water informally advised the Committee that it was estimated that it can cost up to five times as much to repair and replace old networks as to build new ones.

6.71 Authorities do not know the location of spare capacity in hydraulic services, the most important and expensive element of infrastructure. It is thus impossible to apply cost recovery measures specific to particular locations, and pricing is simply averaged out across suburbs. There are therefore no reliable price signals to direct development towards preferable locations.

6.72 Much of the existing infrastructure also has to be upgraded to meet today's more exacting environmental standards. An unfair share of this burden is often paid by new purchasers because the cost of maintenance and upgrades are averaged out across metropolitan users. New purchasers pay not only the full cost of their own infrastructure up-front, but also the cost of upgrading inner suburban infrastructure through their rates.

6.73 Infrastructure problems are exacerbated by permitting dual occupancy on suburban blocks, which allows owners to capture the betterment of their location, a situation governments discourage on the fringe so as to facilitate medium or higher dwelling density. There are no restrictions on the design or amenity of dual occupancy development, but these factors are crucial to the long run success of programs to increase acceptance of medium density. Dual occupancy might turn out to be the 1990s equivalent of the 1960s "six pack" developments, which took medium density back thirty years and from which planners are still suffering.

6.74 It is more difficult to achieve better environmental outcomes with "as of right" dual occupancy than with selective redevelopment because the latter can be targeted on suitable sites - for example close to public transport networks to reduce private vehicle use. Dual occupancy development can occur anywhere and can aggravate traffic and congestion problems. It can also add significantly to surface runoff, domestic waste water and sewerage, and demand for electricity, but it is hard to plan for these pressures because there is no attempt to plan where dual occupancy developments occur.

Equity and Efficiency Implications of Charging According to Location

6.75 As the legislation is currently framed there is a nexus between development and service provision. Developers can be charged only for services of direct relevance to opening up the land. Only the infrastructure that meets a justifiably documented need consistent with the nexus may be incorporated into the developer contribution

calculations. Despite this, state governments are increasingly trying to charge developers for more cultural forms of infrastructure: libraries, aged persons' centres, community buses, indoor sports and leisure centres, for example.

6.76 There appears to be a growing expectation that developer contributions will underpin an increasing proportion of social infrastructure previously funded out of general revenue. The question is the degree to which the need for facilities is a result of rising per capita consumption brought on by general population growth and ageing, and the degree it is specifically related to the development of a new suburb.

6.77 Pat Troy questioned the propriety of charging people for services based on their location. He argued that those advocating urban consolidation implicitly assumed inner city residents were paying a subsidy to outer urban residents, but this assumption was invalid. In relation to education, for example, he asked:

How can you say it is a subsidy when we make a commitment to requiring everybody to go to school? We provide resources for them to go to school. Where is the subsidy? This is a universal provision. There is no special transfer taking place from the inner areas to the outer areas in that regard.²²

6.78 Pat Troy also argued that differential pricing based on location discourages close examination of subsidies and the question of who pays for whom. One of the biggest transfers comes from the outer suburbs, which subsidise public transport for the inner suburbs. In his evidence to the Committee he asserted:

The tram system in Melbourne only deals with about a quarter of the population. The public bus system in Sydney deals with a third of the population, but in both cases the entire population pays for the losses that those systems incur. The same thing applies to the train system in both cities.²³

6.79 Subsidies are provided to different areas for a variety of reasons and it is not only new home purchasers on the urban fringe who can be identified as beneficiaries. Any review of infrastructure provision and pricing should encompass the delivery of all metropolitan community services including transport, health and education.

²² Evidence, p 717.

²³ Evidence, p 719.

CHAPTER 7

TAXATION AND OTHER COSTS IMPEDING URBAN CHANGE

7.1 One of the central planks of the Commonwealth's urban consolidation agenda is the removal of institutional impediments that perpetuate the current pattern of urban form. The Commonwealth has been critical of local government over its restrictive housing provisions and approvals processes and the States over inefficient pricing and charges policies levied by the public utilities they administer. However, the Commonwealth needs to review the impact of its own policies which may perpetuate current urban form and which some would argue have a far more profound effect on the extent of urbanisation, the demand for housing and the size of dwellings, than any policies administered by the States and local government.

7.2 Michael Lennon put to the Committee:

...the Commonwealth should focus its attention primarily on matters which fall within its own constitutional jurisdiction at this time. The major matters relating to this topic are tax policy, the distribution of Commonwealth revenue, immigration levels and, importantly, the Commonwealth's own development activities and the impact of those.¹

Taxation and Urban Form

7.3 Inconsistencies in tax rules will reduce efficiency gains from urban consolidation programs. Taxation and fiscal issues currently are under consideration by the Industry Commission, and they are dealt with here only as they relate to the efficiency and equity of urban settlement patterns. In the absence of abundant "hard" data, the Committee has focused on community concerns in this area.

7.4 The NHS Background Paper No 5, on Taxation and Housing, points out that the housing tax policies of the Commonwealth and the States are contradictory:

While the Commonwealth Government has furthered the fiscal advantages from holding housing assets, the increasing burden of transaction taxes levied by state governments have contributed to a deterioration in access to housing. These coordination failures impede the implementation of a coherent housing policy.²

¹ Evidence, p 869.

² Gavin A Wood, *Taxation and Housing*, The National Housing Strategy, Background Paper No 5, AGPS, Canberra, 1991, p 7.

7.5 It was put to the Committee that taxation policies applied to housing by all levels of government have distorted siting decisions and that these distortions have led to both inefficiencies and inequities within the community. Unless taxation issues are addressed, they will undermine and possibly multiply the effect of policy changes aimed at encouraging greater efficiency. ACOSS is also concerned with the tax treatment of housing and its effects on equity, efficiency and siting. It put the view that, unless tax issues were dealt with, they would undermine the effectiveness of other policies such as those on developer charges.

7.6 ACOSS argued in its evidence to the Committee that the tendency to build ever larger dwellings in more remote and poorly serviced areas such as Pennant Hills in Sydney can only really be explained in terms of the tax signals given to the Australian public as to where to put its money.³ ACOSS went on to argue that getting pricing mechanisms right is a worthy aim, but that while the current tax treatment of housing remains, such a move would only increase the inequities of our cities.⁴

7.7 The questions which thus need to be asked are:

- . whether current policies lead to an over-demand for housing;
- . if so, what is the nature of that over-demand;
- . is this over-demand reflected in the quantity or the quality of housing; and
- . is it expressed in the housing form itself or in the demand on publicly provided goods and services directly associated with housing.

7.8 The difficulties in addressing these issues include the array of taxation provisions levied by the three levels of government and the complexity of the advantages which are derived from home ownership. There are elements of both investment and social good associated with the provision of housing, each of which should attract a different assessment for taxation purposes.

7.9 It is because there is a social good element in housing that governments have been heavily and directly involved in housing policy, with a particular interest in general affordability and the provision of welfare housing? People who cannot provide housing for themselves may be eligible for forms of public housing or to loans from public lending authorities that they would not be able to get from banks.

7.10 Housing provides an individual with a range of personal benefits, such as shelter, safety and personal amenity through both privacy and the quality of the surroundings. The long run demand for housing is also influenced by provisions relating to superannuation and retirement income and the fall in income faced on retirement.

³ Evidence, p 90.

⁴ Evidence, p 96.

Housing is also a tradeable and (usually) appreciating asset. There are a minority who buy housing deliberately as an investment, aiming to make a long term profit by letting it and/or eventual resale.

7.11 Most people need to strike a balance between the personal utility they can derive from a house and its investment potential. The balance is struck by juggling personal values and possibly income levels. ACOSS argues that people at higher income levels place more emphasis on investment potential and tax minimisation.⁵

7.12 Taxation on housing is levied by all three levels of government. The Commonwealth is responsible for capital gains tax and negative gearing provisions. The States levy land tax on land holdings and stamp duty on transaction costs such as conveyancing and mortgages. Local government levies municipal rates. Each of these taxes and charges has specific effects, but the interaction of these taxes is also important in determining the final cost or benefit to be derived from changes in policy.

Capital Gains

7.13 Distortions occur in the allocation of resources and in investment when similar assets are treated differently for taxation purposes. It has been argued that the exclusion of the family home from capital gains has meant that the housing sector has attracted more resources than would otherwise have been the case.⁶ This has diverted resources from more productive areas, such as the traded goods sector, thus causing detriment to the whole community because of the resultant shortage of capital for investment in productive enterprises. ACOSS expressed the view that the current tax arrangements say "Buy as much space as you can possibly afford because there simply is not a better deal in town".⁷ ACOSS qualified this assertion, however, by arguing that such over-investment in housing occurs principally at the top end of the market.

7.14 An alternative view was put to the Committee by Richard Kirwan. He argued that the real long term rate of return on private housing was probably around 2 per cent and that there was thus "not a great tax grab to be had".⁸ In his view much of the increase in home values arose from inflation and home improvements.

7.15 It has also been argued that the immunity of the family home from capital gains tax is inequitable as well as inefficient.⁹ Australia applies a more or less progressive income tax, which imposes a higher rate of tax on higher income earners. A tax

⁵ Evidence, p 94.

⁶ Evidence, p 90.

⁷ Evidence, p 95.

⁸ This view was put forward during the Committee's early round of informal discussions.

⁹ See Wood *Taxation and Housing* for a detailed account of these argument.

exemption like the family home generates a larger absolute and proportional return to households as they move into higher tax brackets. It thus has a regressive effect and contradicts the progressive demands of the income tax schedule. This inequity is compounded because higher income groups are the greater the proportion of home owners, and it is they who derive the greatest benefit from the policy.

7.16 Changes to taxation provisions are not generally popular, especially if they mean a new tax. Community sensitivity to the idea of taxing the family home has deprived policy makers of the possibility to gather sufficient data from which to prepare an adequate analysis of the problems. The Industry Commission is exploring these issues, but the paucity of data prevents the Committee from reaching a definite conclusion. All the Committee can say is that, in principle, equal assets should receive equal tax treatment. The Committee believes that there needs to be a more detailed analysis of this issue which considers as many of the factors which shape demand as it is possible to assemble. These would include retirement income policy, superannuation and private utility. The report of the Industry Commission may shed more light on these questions.

7.17 The fact that the taxation system has always included these inconsistencies should not prevent society from undertaking an analysis of the impact of not taxing the family home that is as objective as possible. It is only when it is offered policy outcomes and a range of alternative options that the community can express its preferences; otherwise it is limited to the known and remains blind to the possible or desirable. Government is itself to blame for some of the public sensitivity which surrounds this issue. Governments of all persuasions have taxed on nominal values and allowed "bracket creep" to net higher and higher tax returns without ever having to account to the community for the increased imposition. Investment expectations may well change if inflation is kept low.

Negative Gearing

7.18 Negative gearing is a tax provision which allows a taxpayer to deduct from taxable income the difference between the income derived from a rental property and the cost of purchasing and maintaining that property. It was abolished during the mid 1980s but later reintroduced on the ground that its abolition had caused a reduction in the availability of rental accommodation. ACOSS has argued that the community has an exaggerated idea about the volume and type of rental accommodation generated by what amounts to a generous tax concession to those with enough wealth to take advantage of it:

...the combination of negative gearing and the application of a capital gains tax on private rental investment does create a flow to investment at the upper end of the private rental market. The way that operates is that under existing taxation provisions people can apply the losses of their private rental investment against any other form of income. As an investor, you want to recoup that income. While people can make a loss on income, at some point they want to recoup that loss. People just do not make losses for free. That means they will tend to invest at the upper end of the market in order to ensure that they get an adequate return on their investment.

...the combination of negative gearing and the capital gains tax has tended to concentrate investment through negative gearing at the upper end of the market. In fact, we would argue that while it generally increased supply of private rental stock, it did not direct that private rental stock to the lower end of the market where the greatest need is. Hence, lower income households are still suffering from acute affordability problems.¹⁰

7.19 Whether negative gearing is an efficient or effective method of providing a social good in the form of rental accommodation is thus disputed. It may be that clearer and better targeted government or private rental accommodation could however, deliver a more efficient and equitable outcome to the community.

Transaction Costs

7.20 Owners incur transaction costs when shifting from one dwelling to another. These taxes are applied by the States as a means of raising revenue. Pat Troy argues these are a crude form of wealth tax which is inequitable because it penalises everybody who moves house, including those who want to relocate in pursuit of socially desirable efficiency goals, such as living closer to work.¹¹ The NHS paper on Taxation and Housing presents a different view, seeing transaction costs as regressive where they should be progressive. It views the desire to relocate as principally "trading up", an improvement in lifestyle which therefore needs to be taxed progressively.

7.21 Motives for relocation are individual matters. The relevance of either Professor Troy or the NHS, or both, depends on the nature of the site, especially if mobility interstate or between capital cities to country centres is taken into account. Relocating from Sydney to a country town to find work would probably result in upgraded accommodation at low cost because housing is cheaper there. On the other hand, such a move would also entail reduced access to social and recreational facilities and (possibly) increased travel costs.

7.22 It might be expected that stamp duty would, like any cost, make housing more expensive at all prices, but it appears that stamp duty schedules are structured in such a way as to discriminate against lower cost housing. The NHS paper on Taxation and Housing argued that stamp duties applied on housing did not rise at a sufficiently steep rate with rising property values to be consistent with a progressive income tax schedule.

7.23 State stamp duties on housing were levied first in New South Wales but were soon introduced by other States in an effort to expand their revenue bases at a time of fiscal restraint. Their impact on the siting of urban development is not known, and their effects on general efficiency or equity issues are not clear. The Industry Commission raised the question as to whether stamp duty acts as a disincentive to sales and whether they inhibit

¹⁰ Evidence, p 94.

¹¹ Patrick N Troy, *The Benefits of Owner Occupation*, Urban Research Program, Working Paper No 29, December 1991, p 48.

people from moving from larger to smaller houses and vice versa as life cycle needs change:

Stamp duties are based on the value of the property changing hands, rather than the cost of title transfer. They are a major source of revenue for State/Territory governments, and are used for revenue-raising, rather than simply a cost-based charge. This may mean that the size and incidence of the duty, and the rules which determine which transactions are dutiable and which are exempt will affect decisions to buy or sell.¹²

7.24 The data is not adequate for a proper assessment of the arguments put forward in this debate. The Committee considers, however, that an efficient economy is a flexible economy and that there should not be unnecessary impediments to the movement of people between employment centres created by the imposition of unnecessary transaction costs, state or private. A privileged market position for solicitors in a near-monopoly on conveyancing, and the real estate institute practice of charging a percentage fee on the total value of a sale, are as much a part of the "protected past" as universal welfare. The introduction of differential pricing may also help to force a change of attitude in the private sector and result in increased efficiency generally.

7.25 The Committee recommends that:

The Industry Commission, in its review of the Taxation and Financial Policy Impacts on Urban Settlement, pay particular attention to the impact of transaction costs on housing mobility (both public and private).

7.26 The Committee further recommends that:

Policies and programs aimed at facilitating the private provision of low cost rental accommodation be placed on the agenda of the Australian Housing Council for discussion.

Awards, Regulations and the Residential Building Industry

7.27 The residential building industry will be affected by emerging government policy directions relating to urban form, regulation and infrastructure pricing. Together these processes will alter the purchasing preferences and cost of house and land packages and will significantly affect efforts to change the pattern of settlement.

7.28 The residential building industry is characterised by a large number of highly competitive small operators. This has provided many cost benefits to consumers purchasing standard private residential housing. However, as a report by the Victorian

¹² Industry Commission, *Taxation and Financial Policy Impacts on Urban Settlement*, Issues Paper, December 1991, p 14.

Department of Planning and Housing observes, the industry may need some restructuring and will have to become more responsive to the market:

The need to make more efficient use of existing and new urban infrastructure has gained much attention in government and industry circles over the last twelve to eighteen months.

...There is a real challenge for the industry to both produce, and effectively market, smaller and higher density dwelling alternatives. This may mean some restructuring in the industry. Unless a shift in this direction is made, the industry will find it difficult to continue operating as it does presently. As serviced land prices rise in real terms, more households will find it beyond their means to purchase or build the large family home on large blocks of land at the urban fringe.

There will also need to be a greater degree of integration between the land development and building design and construction processes. The provision of a range of housing types requires a much greater element of up front planning in terms of subdivision and housing design requirements to provide a mixture of lot sizes and medium and low density housing.¹³

7.29 If cities of the future are going to contain a greater mix of housing types to better respond to changing demographic and lifestyle characteristics of urban populations it will be necessary to encourage the building industry to be more innovative and flexible. Governments need to ensure that the efficient cost structure which the industry provides in the standard residential market is not lost in the process of reform but rather is extended to the other sectors of the housing market. The Victorian Department of Housing and Planning points out that:

There will be increasing scope for the industry to provide not only detached housing, but also affordable medium density housing. However it is considered important that the flexibilities and cost efficiencies of the current residential construction industry in Victoria be maintained for medium density construction. Medium density construction must therefore be made more accessible to smaller builders. To do this, some of the cost barriers in producing medium density housing need to be addressed.

The costs of producing medium density housing are proportionately higher than for attached housing. Demand is therefore not as strong as it would be if there was a greater supply of affordable medium density housing. There are many reasons for this cost difference, some of which include strict and costly local government planning regulations and the high cost of investment capital. For example medium density developments face additional charges for landscaping and carparking and often higher

¹³ Victorian Department of Housing and Planning, *Building and Land Development Industries*, Victorian Housing and Residential Development Plan Project No 4, May 1992, p 37-38.

infrastructure connection charges. The HIA has indicated that some larger builders advise their clients to allow an extra \$5,000 - \$8,000 per medium density unit over the cost of a single detached house in order to meet additional charges.¹⁴

7.30 In an endeavour to reduce costs and improve national efficiency the Commonwealth, in conjunction with building unions and employers has been promoting restructuring of industrial awards in the building industry. This has principally been directed at reducing inefficiencies in the commercial rather than the residential building industry but is still relevant to the issue of urban reform because unions often seek to classify medium density housing developments as commercial sites. This results in higher labour rates and additional site allowances. Some of these additional payments, identified by the Victorian Department of Housing and Planning, include:

- . superannuation contributions \$40 per week;
- . redundancy payment of \$41.60 per week per employee;
- . minimum site allowance of \$1.35 an hour for some developments;
- . mandatory union membership;
- . additional site amenities; and
- . higher labour rates for certain trades, for example bricklayers charge \$450 per 1000 bricks for houses and \$870 per 1000 bricks under commercial rates.¹⁵

7.31 The Victorian Department of Planning and Housing suggest that:

These additional charges can add substantially to the cost of such developments. Some industry sources claim that this can be as high as 20-30% while more conservative Department estimates are 10-15%. There is no strict uniformity to the application of commercial rates for residential projects by unions. The rates and additional site allowances tend to be negotiated on a site by site basis.

...One of the main concerns is the effect of these higher rates, both labour rates and the additional site allowances, on the affordability of medium density housing. Developers undertaking such projects usually pass any increase in cost on to the end user. Due to the higher cost of medium density development caused by a range of factors, one of which is higher labour costs, many of the recent medium density developments have been aimed at the higher end of the market to ensure their profitability.¹⁶

¹⁴ Victorian Department of Housing and Planning, p 38.

¹⁵ Information on labour rates supplied by the Victorian Housing Industry Association.

¹⁶ Victorian Department of Housing and Planning, p 40.

7.32 There is a lack of information about the additional cost associated with awards and site classification and the Victorian Department of Housing and Planning identifies a need for more research and cost analysis. The Committee is concerned that these costs may inhibit developments that would otherwise contribute to the development of better cities and joins the Victorian Report in calling for further research, specifically the Committee recommends that:

The Department of Health, Housing and Community Services review the adequacy of information and research into costs associated with residential building site classification and awards and promote further research into this problem.

Integrating Commonwealth and State Activities

7.33 One of the major impediments to the reform of cities is the lack of co-operation and co-ordination between the various levels of government. Road transport is one example of where this co-ordination needs to be improved. The Commonwealth is now responsible for the maintenance of the national highway system, with the States and local government responsible for roads in their respective jurisdictions. There is just as much need for the Commonwealth to liaise with the States on the provision and maintenance of national highways, as there is for the States to ensure the various arms of their bureaucracies are working in harmony. For example, upgrading the national highway through the Adelaide Hills inevitably leads to undesirable urban development as development follows infrastructure, which in this instance is in the water catchment.

7.34 Michael Lennon suggested that issues arising from such developments need to be resolved up-front in an agreed policy approach between all parties, after due consideration of all the ramifications of the development of such economic infrastructure. He argued:

The consequence of not having that agreed policy is that we deal with major questions on a fragmented basis.

...The fundamental point of the system we are producing is that a government should be required to articulate its development objectives up-front as a guide for its own actions, as a guide for its own negotiations with other governments and as a guide to private investors as well, who are looking to see whether a proposed development or investment is going to fit.¹⁷

¹⁷ Evidence, p 874-875.

Release of Under-utilised and Surplus Land

7.35 Constraints on Commonwealth authorities are forcing them to manage their assets more effectively, which is assisting in facilitating the release of long held land surpluses. As Michael Lennon advises:

*What we have been able to achieve through negotiations with selected Commonwealth agencies is quite an unparalleled release of surplus and underutilised Commonwealth and State Government property...we are looking in this first bite at 1,000 hectares within the existing metropolitan envelope.*¹⁸

7.36 But, according to Michael Lennon this is only the first step, he advised:

*...if I were to put my finger on an area where we wanted to seek the cooperation and assistance of the Commonwealth to get a better city, it would be in the Commonwealth's own employment patterns and distribution of the Commonwealth's own employment within the metropolitan envelope.*¹⁹

7.37 Michael Lennon cited public sector unions as the biggest disincentive to move. That resistance, however is likely to diminish with the increasing participation rate of women in the workforce. Adelaide has a quite heavily regionally based labour market.²⁰ Support for sub-nodal centres will come from the workplace itself as women seek employment closer to where they live, motivated by the lifestyle women lead, performing a multitude of tasks.

7.38 The Committee recommends:

The Commonwealth Government develop strict policies requiring its departments and agencies to better integrate their locational decisions and land release programs with the States' planning needs as identified in land use planning strategies.

¹⁸ Evidence, p 876.

¹⁹ Evidence, p 878.

²⁰ Evidence, p 881.

CHAPTER 8

OVERVIEW - DIRECTIONS FOR THE FUTURE

In the end we need self-sustaining societies and living environments nurtured by successful economies. Unfettered by yesterday's notions of acceptability, we need creative management, and sensitive government.¹

8.1 Urbanised regions and cities in particular, are the focus of economic and social life in Australia, though their economic importance has been masked by the contribution of the rural sector to the economy, particularly in generating export income. The economic importance of urban regions will be heightened with the unfolding of the information age, when wealth will be generated in city cores, small country centres and the urban periphery, and when Australian exports follow the trend to increasing world trade in services and information. The quality of the transport and communications network which connects these productive centres will be crucial to the viability of future goods and services production, and it is this which determines the standard of our social and environmental amenity.

8.2 The data presented to the Committee suggest that, with current trends, cities will continue to expand, principally along the existing urban corridors, engulfing the small country centres in their path and incorporating them into the fabric of the metropolis. What was a series of dots connecting the major centres of population along the east coast from Cairns to Melbourne is likely to become a nearly continuous line of urban development.

8.3 As this strip develops, the balance of population along its length will alter significantly. While Sydney will retain its place as Australia's number one city, the increasing numbers drifting northwards have inspired speculation that Brisbane could become Australia's second largest city in the long term. The position of smaller centres in the urban hierarchy will also change, and it is already predicted that Canberra will overtake Newcastle as the sixth largest city early next century.

8.4 Historically, the direction of internal migration has altered as people followed economic opportunities. In recent times the lure of mineral riches (which has so often been the motivation for migration) has been replaced by the hope for employment in tourist-related services in the northern east coast. This trend has been reinforced by other social and economic factors, including the tendency of retirees and others on fixed incomes to seek cheaper and more aesthetically pleasing locations with a better climate. Joe Flood asks whether there could be a reversal in these migration trends if the jobs fail to materialise in north coast centres and the most recent information from the ABS

¹ Robert Cheesman, *Patterns in Perpetuity - New Towns, Adelaide, South Australia: A Study of Adaptive Planning Processes*, Thornton House, Adelaide, 1986, p 6.

shows that economic recession has induced a reversal in the 1980s trend of increasing employment mobility. The long term economic and technological trends, together with the increasing emphasis on trade with Asia suggest that the longer term northward trends will be sustained until well into the 21st Century. Growth centres are likely to be in:

- . semi-rural towns along existing corridors between the major cities;
- . internationally preferred tourist destinations;
- . agricultural regions which can switch production to meet the needs of the expanding and sophisticated Asian markets for quality fresh and processed food; and
- . mineral zones which supply materials required by the new technologies: such as mineral sand, titanium and rutile.

8.5 Growth will occur in centres which have good access to the national highway system and to major international transport hubs such as ports and international airports.

8.6 There are other, more disconcerting, regional and urban implications of economic and technological trends. Of particular concern are the increasing disparities between income groups and geographic regions, and the inadequacy of existing intergovernmental arrangements to take account of these issues. Significant existing centres of population in country and old industrial suburbs of major centres have been unable to attract new industries, a failure which severely reduces access to economic opportunities.

8.7 The increase in urban population levels has provoked concern over the quality of life within cities, while the ever-outward expansion of the urban fringe is reviving concern about the quality of the environments into which they spread. Society has only slightly reduced the environmental impact of its urban lifestyle while continuing to devour bush, coastal and agricultural land.

8.8 The built environment will be a significant element in the quality of life enjoyed by future Australians, socially, economically and environmentally. In acknowledgment of this fact, recent effort has been directed towards determining preferred spatial outcomes - the optimal size of cities and appropriate density levels, for example. In addition, there has been an attempt to foster more innovative building design so as to produce houses which are:

- . more environmentally benign and which therefore use less energy;
- . more socially responsive in taking account of health and safety elements; and
- . more affordable as a result of innovation in the use of space, provision of infrastructure or new building materials.

8.9 Policies aimed at enhancing the quality of life in cities must be based on an understanding that the character and uses of urban space are an outcome of the interaction of economic, social and environmental processes. Although better spatial planning can enhance the quality of life within cities, its relevance in the long term is determined by its capacity to accommodate the expected future requirements of changes in these processes and new technological processes. The rate of economic and technological change injects a new variable into urban planning, one that values choice, mobility and opportunity over rigid zoning restrictions. For planning to adequately reflect such dynamic and interactive processes, it must be based on rigorous research and analysis not only at the local and regional level, but at the national level, reflecting the nationally integrated nature of the Australian economy.

8.10 The greatest needs are for cities to have the flexibility to adapt to changing demands. This requires effective cost structures which ensure that resources are allocated efficiently with due regard to social and environmental costs. Until pricing systems are better developed it is best to continue to fix costs through regulatory and policy means which push in the same direction as the market is eventually expected to travel.

8.11 The planning process attempts to secure the most desirable outcomes from projected trends, but it has been somewhat discredited, especially at local and regional levels. Plans are seen as inflexible, and planning regulations are widely resented as delaying development more than necessary. Land use planning, however, is necessary to contain the environmental impact of cities within acceptable limits and to identify the areas to which it is inappropriate to extend human habitation or economic activity. Rigorous forward planning based on adequate knowledge of land characteristics and existing or potential land use, and backed up by strong legislation, is essential to prevent market forces from pushing development into unsuitable areas.

8.12 The capacity of planning to deliver better cities by specifying spatial arrangements is limited, which is not to say that planning has no contribution to make to the creation of better urban environments. It can help by co-ordinating the establishment of better integrated transport systems and by identifying more environmentally benign urban forms, such as sub-centres and better locations for heavy industry. The capacity of planning to deliver a particular spatial result is limited, however, by its lack of control over the disposal of land by the market and the practical patterns of human interaction.

Urban Consolidation - Not a Complete Solution

8.13 Urban planning has delivered a plethora of ideal forms on which urban life could be modelled. At various times during this century, Australian town planners have advocated new towns, decentralisation, urban villages and high rise public housing. Urban consolidation is currently in favour and has been pursued by governments because they believe it will contain urban costs. They also believe that promoting higher density will reduce demand for fringe development and that sprawl will be contained. It is further hoped that costs will be reduced by limitations on costly new greenfield development and development in established areas where there is spare infrastructure capacity. The data provided by government planning departments and academic researchers, however, shows that most growth will still be on city fringe.

8.14 The environmentally concerned support some aspects of urban consolidation because they believe it will reduce motor vehicle use and increase reliance on public transport. This is certainly the most promising aspect of denser urban form, but it will not eventuate where consolidation fails to integrate land use with transport planning, and does not take adequate account of external factors such as personal safety, relocation of employment opportunities or demand for multi-destination trips.

8.15 Urban consolidation is also favoured by those who would like to see a European style city, but what is needed is a city which more efficiently meets Australian needs. Those that advocate sprawl want more of the same and expect the community to continue picking up the tab. They also tend to discount environmental costs as an annoyance that will be dealt with elsewhere or simply go away.

8.16 Even the advocates of urban consolidation admit that it will not succeed in containing sprawl and that the bulk of new urban growth will continue to be on the fringe. This raises questions about the real level of savings to be expected from the application of this policy. There is at present no way of knowing whether urban redevelopment is occurring where there is spare infrastructure capacity, and such areas cannot be assumed to coincide with middle and inner suburbs with falling populations. It is vital that any urban consolidation that does occur is located in areas where there is spare capacity; otherwise it may result in increased costs, not savings.

8.17 Although existing urban consolidation policies are unlikely to contain cities there are elements of the program which should be reinforced; even without containment they offer sufficient other benefits to warrant the program's continuation. These are:

- Reform of planning and building regulations

The Commonwealth should continue to facilitate reform of building codes and local area approval processes to remove "red tape" and allow the market to meet demand more readily.

- Reforms of infrastructure pricing

The Commonwealth should take a stronger stand in favour of a user pays policy on the provision of water supply and sewerage systems. (The Hunter Water Corporation has shown this policy to be workable and effective from both an economic and an equity perspective.)

8.18 The following policy options should also be adopted:

- Introduction of designated sub-centres

These should be encouraged because they bring employment opportunities and residential areas together and thus reduce trip times, congestion and pollution. State governments are already making positive moves in this direction.

Incentives for environmentally benign technology

Faster adoption of environmentally benign solutions should be encouraged across communities. These could include better sewerage systems, solar hot water and electric cars. Effective mechanisms include differential depreciation rates, reduction in sales tax and long term exhaust emission reduction goals.

8.19 The evidence indicates that the real issues in the debate over sprawl and consolidation have been hidden. These are:

Should governments be restricting growth in their outlays on the provision of urban services, or should cuts be made in other areas of responsibility? Given the choice, would the community defer funding on, for example IVF programs, sport, the arts or drug control, or would it prefer the abolition of one level of government?

Should the government provide an unprofitable public transport network, or should it target subsidies based on income for transport costs. If it is possible to establish viable public transport systems, where should they be and what form should they take?

How does the community wish to meet the environmental costs of urban form? There are both fast and slow processes at work in the cities. Changing urban form is usually a slow process, but changing prices (so long as the community is willing to pay) and facilitating new technology may enable change to be pushed more quickly.

Given the impact of its policies on regions and sectors within cities, what role should the Commonwealth play in urban issues?

Management of Urban Environments - the Role of the Commonwealth and the Need for Inter-governmental Co-ordination

8.20 Planning for future urban development is undertaken by state government departments of planning, which produce long term strategic plans for capital cities and regions. Local governments also prepare strategic plans for future population growth. State plans are drawn up in isolation from those of the other states, and regional plans are drawn up without reference to other regions.

8.21 Although the Commonwealth has had little involvement in urban planning, it necessarily has a significant influence on urban form, through its funding of transport infrastructure, particularly roads; immigration policy; industry restructuring; and, most recently, sectoral reform (which extends micro-economic reforms to the national rail

system, electricity supply and water services).² General economic policies and taxation provisions also have a powerful impact on urban development, and it is likely that, in the future, national environmental policies will also exert more influence.

8.22 The market's response to Commonwealth policy initiatives over the past ten years has had more impact on urban form and use of infrastructure than state planning initiatives. Planners often have little to do except mop up after the market has finished. It is therefore critical to understand the cumulative impact of Commonwealth policies across States and take account of this knowledge at the time of policy implementation. How to get better policy co-ordination between the Commonwealth, the States and local government then becomes a crucial issue. Two ways are for the States, in conjunction with local governments, to maintain better regional databases and for the Commonwealth to be more alert to the impact of its policies on regions.

8.23 The work of the Industry Commission in exposing the costs of current management practices in essential state services like electricity, rail and water has highlighted the need for reform in these areas. The question is whether drawing attention to inefficiencies is sufficient to stimulate the States to take action, or whether the Commonwealth should drive the process harder.

8.24 The impact of Commonwealth programs is such that the States and local governments cannot be expected to bear sole responsibility for regional economic management, nor to meet the costs of national economic objectives. The Commonwealth has recognised this in relation to road and rail provision, and it is implementing a program to ensure national consistency. Although all governments have to cope with external factors beyond their control, a significant proportion of the factors external to the States and local government control are the result of Commonwealth policy. This offers the opportunity to improve urban management through better inter-governmental relations which take account of the regional disparities resulting from national policy.

8.25 It is important that the Commonwealth have a regional and urban perspective when developing national policy. Such a perspective must also take a long term view because the length of time required to change urban settlement patterns across regions and within cities is so great. Cities expand very slowly even in boom times, adding little more than 2 per cent in any year to their dwelling stock, and thus restrict the opportunity to change urban form quickly through new construction. Forward commitment to infrastructure can fix the pattern of urban growth to previously established priorities for many years ahead. These factors limit the pace of change and make it essential that decisions which shape urban development be made earlier rather than later.

² The Commonwealth's direct involvement in urban planning was restricted to the period 1972-1975 and to the operations of the Department of Urban and Regional Development. Whilst most remembered for its decentralisation program, which was a mixed success with towns like Albury-Wodonga, growing but Bathurst/Orange not so successful it did have other more specific urban impacts. The Commonwealth's Glebe project was a unique demonstration at the time of an alternative approach to housing and construction in Australia. The Glebe project set an example of how the urban renewal process could equally meet community needs by preserving and renovating existing local communities. This example has been an inspiration to others such as the NSW Housing Trust project at Woolloomooloo.

8.26 Commitment to more sustainable cities requires Commonwealth leadership. The States may find it difficult to pursue sustainable development if such a policy entails short term loss of economic activity and associated employment. Unless national approaches are taken, opportunities to repair the damage done by previous patterns of urban settlement will be lost and the potential long term gains will not be realised.

8.27 The Commonwealth must establish within its own administrative arrangements some system of acknowledging, monitoring and responding to the spatial implications of its policies, in a manner harmonious with the objectives of the other levels of government.

Regional Development

8.28 Australia's urban and regional problems reflect the widening gap between rising social expectations, which are aligned with the wealthier OECD countries, and the diminishing wealth-generating capacity of an economic and productive system that has more in common with the resource-based economies of the less developed world. Australia has failed to retain its historic share of international trade in the new growth commodities (elaborately transformed manufactures, services and information), a failure which is the main reason behind our balance of payments constraint.

8.29 The capacity of some regions to survive a high level of structural change has been limited. Government programs were meant to facilitate adjustment through retraining and provision of funds to develop regional economic strategies but general economic contraction has produced high unemployment levels in declining sectors and in those with long term growth prospects.

8.30 These problems have led some to call for a national approach to the co-ordination of regional development. Dr Joan Vipond argues that where similar problems are found in all urban areas, there can be value in a national strategy. She suggests, however, that this situation has not prevailed since the 1960s: today, different types of regions have different problems, a diversity which creates conflict over the allocation of government resources. In these circumstances, she argues, it is impossible to formulate a national urban strategy.³

8.31 The Committee disputes this conclusion. In fact the opposite is true: the diversity of regions and their needs makes it imperative to understand the regional differences on a national scale and to facilitate regional strategies which reflect the comparative, rather than competitive, strengths of regions and thereby achieve the best economic outcome possible for each. Regionalism can degenerate into parochialism, but a national planning perspective can ensure that regions complement rather than compete with one another. There are processes which could minimise cost and maximise the benefits, including an expanded role for the Commonwealth Grants Commission in ensuring uniformity in the

³ Joan Vipond, "Australian Experiments with Regional Policies", in Benjamin Higgins and Krzysztof Zagorski (eds), *Australian Regional Developments: Readings in Regional Experiences, Policies and Prospects*, AGPS, Canberra, 1989, p 74-76.

treatment of regional issues across States. A national strategy does not in itself imply significant bureaucratic intervention in the development of regional economic strategies; it may well be that a national/regional economic strategy entails the removal of fiscal equalisation and greater regional differences in factors such as wages.

8.32 New forms of information and communications technology allow people more flexibility in choosing where to live but has created a new set of planning issues which can be solved only on a regional and national scale. Instead of the traditional "satellite" pattern, in which regional centres revolve around their state capital, the range of connections to regional towns is now more numerous and multi-directional. This is reducing the importance of some state policies, while enhancing the importance of others, particularly co-operative policies in key zones where state borders divide economic regions: north coast New South Wales and south coast Queensland; the Australian Capital Territory and south-east New South Wales; Albury-Wodonga, for example. The greater the mobility of the population and the more interconnected the economy, the greater the need for co-operation among the States in developing a national approach to issues.

8.33 The need for larger scale planning and reduced expenditure also affects local governments, and there are benefits to be derived from the amalgamation of certain local government functions in some regions. The benefits, however, are not uniform and amalgamation should be facilitated only where it is shown to be more efficient in delivering services. In some cases the resulting arrangements will cover many activities, but in locations where the range of common interests is smaller, shared functions will be limited accordingly.

8.34 The Committee supports the Commonwealth's recent moves to a regional approach to the delivery of services and encourages it to adopt a policy of strategic view of cities and regions as functioning entities with systematic links to one another. This change in emphasis could be achieved by deciding to take full account of the impacts of all Commonwealth policies on cities and regions. One way of achieving this would be to require that analysis of these impacts be included in all Cabinet documents. It could also establish a sub-committee of the Cabinet's Structural Adjustment Committee to review urban and regional issues and ensure that federal policies are mutually reinforcing. These measures would initiate a process within the administration that could lead to deeper consideration and integration of policies with urban implications.

8.35 The Commonwealth should establish an urban and regional research unit with co-funding from the real estate and land development industries. The Commonwealth should also establish a unit to co-ordinate data on the regional impact of government policies.

8.36 The Committee has made a number of recommendations in the preceding chapters. In addition to these, as explained above, it sees the need for a co-ordinating

unit and a research program to support a national approach and further recommends that as a first step in this process:

The Commonwealth establish a unit within the Department of Health, Housing and Community Services to review urban and regional policy issues and to develop a national perspective on urban and regional development. This unit should also assume the local government responsibilities of the Department of Immigration, Local Government and Ethnic Affairs.

8.37 The Committee also recommends that:

The Commonwealth establish an urban and regional research program, co-funded with industry and State government agencies, to examine the spatial impacts of changing economic, social and environmental trends and to consider socially and economically effective means by which cities can adapt to changing demands.

BARRY O JONES
Chairman

August 1992



CONDUCT OF THE INQUIRY

When it was established in May 1990 the Committee defined concerns about the future of Australian cities as one of three broad areas for inquiry. Later, a sub-committee was appointed to propose terms of reference which were adopted by the full Committee on 6 June 1991. A sub-committee was then established to conduct the inquiry.

The inquiry was advertised on 22 June 1991 and the sub-committee wrote to Commonwealth government agencies, State governments, academics and professionals inviting submissions. During the latter part of 1991 the sub-committee held a series of informal discussions and inspections in Brisbane, Perth, Adelaide, Melbourne, Sydney and Canberra. This was followed early in 1992 by a series of public hearings in all of the mainland state capital cities except Perth and in Newcastle, Coffs Harbour and Canberra.

By June 1992 the sub-committee had received 107 submissions, some of which were responses to a series of questions and a discussion paper circulated to witnesses. The sub-committee also took 971 pages of evidence. The submissions are listed in Appendix 2 and the people who appeared at public hearings are listed in Appendix 3.

The sub-committee concluded its deliberations and proposed a draft report to the Committee in August 1992.

LIST OF SUBMISSIONS

- 1 Mr John Walker
Senior Criminologist
Australian Institute of Criminology
ACT
- 2 Mr T H Bolton
Keystone Services & Associates
SA
- 3 Mr David R Anderson
VIC
- 4 Mr D R Croker
ACT
- 5 Mr Tom Worthington
ACT
- 6 Mr Peter Barrett
Manager
Facilities Policy and Planning
Ministry of Education
WA
- 7 Mr Brian Haratsis
Managing Director
Urban Consulting Group
VIC
- 8 S Manohar
Ecocity Planning Associates
WA
- 9 Dr Peter Murphy
Senior Lecturer
School of Town Planning
University of New South Wales
NSW

- 10 Mr Peter Kacirek
NSW
- 11 Mr Cam Leagh-Murray, and others
QLD
- 12 Ms Anita Reed
QLD
- 13 Professor Rolf Jensen
NSW
- 14 Mr Edward S Teiffel
NSW
- 15 Dr Chris Watson
President
Australians for an Ecologically Sustainable Population Inc
ACT
- 16 Mr Clive D Moore
SA
- 17 Mr Deryck Cutter
NSW
- 18 Mr Allen A Strom
Secretary
Gosford District Environment Foundation
NSW
- 19 Mrs C Lower, and others
VIC
- 20 Mr Ed Wensing
ACT
- 21 Mr J A Flannery
President
Institute of Municipal Management
NSW
- 22 Dr Terry G Birtles
Associate Professor
Applied Geography
University of Canberra
ACT

- 23 Dr J G Mosely
Peak Environmental Enterprises
VIC
- 24 Ms Christine Heal
WA
- 25 Timothy Andrews, and others
ACT
- 26 Newcastle City Council
NSW
- 27 Yao Souchou and Alan Cameron
SA
- 28 Ms Dianne Deane
Policy Manager
Australian Local Government Association
ACT
- 29 Dr Ray Bunker
Senior Lecturer
School of the Built Environment
University of South Australia
SA
- 30 Ms Vanessa McDonald and Ms Colleen McDonnell
SA
- 31 Ms Sally Wicks and Ms Nadine Hicks
SA
- 32 Ms Tania Ford and Mr Michael Osborn
SA
- 33 Mr Dean Davidson and Mr Phil McManus
WA
- 34 Mr J R Rankin
Town Clerk
City of Lake Macquarie
NSW
- 35 Mr Paul Ritter
Peer Institute
WA

- 36 Mr Rex Addison
Addison Yeates Pty Ltd
QLD
- 37 Mr Martin Auster
Sub-Dean
Urban and Regional Planning
Department of Geography and Planning
The University of New England
NSW
- 38 Mr Peter Houston
Tutor in Planning
School of the Built Environment
University of South Australia
SA
- 39 Associate Professor Rod Simpson
Deputy Dean
Division of Australian Environmental Studies
Griffith University
QLD
- 40 Mr Keith Parsons
Newcastle Hill Residents' Group
NSW
- 41 Ms Rose Cogger
Secretary
Newcastle Civic Association
NSW
- 42 Ms Margaret Henry
President
Newcastle Hill Residents' Group
NSW
- 43 Ms Angela Hale
SA
- 44 Ms Jan Behrmann
Secretary
Warwick Regional Development Group
QLD

- 45 Dr John R Minnery
Director
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Queensland University of Technology
QLD
- 46 Central Victorian Ratepayers and Residents Association
VIC
- 47 Dr H W Dick
Chairman
The Hunter Region Community Forum
NSW
- 48 Shortland Branch
Australian Labor Party
NSW
- 49 NSW Chapter
Royal Australian Institute of Architects
NSW
- 50 Associate Professor Ken Taylor
President
Australian Institute of Landscape Architects
ACT
- 51 Australia Council for the Arts
NSW
- 52 City of Essendon
VIC
- 53 Central Coast Branch
Australian Conservation Foundation
NSW
- 54 Mr John Hyslop
Director
Dwyer Leslie Pty Ltd
ACT
- 55 Western Sector Public Health Unit
NSW

- 56 Dr Roland Fletcher
Senior Lecturer
Department of Anthropology
The University of Sydney
NSW
- 57 Ms Karla Bell
Transport Campaigner
Greenpeace Australia Ltd
NSW
- 58 Mr Alan A Parker
Town and Country Planning Association
VIC
- 59 Mr Tony Cooper
Head of Consultancy
Baillieu Knight Frank (Melbourne)
VIC
- 60 Dr Kevin O'Connor, Professor Gordon Clark
and Associate Professor Chris Maher
Department of Geography and Environmental Science
Monash University
VIC
- 61 Sydney Water Board
NSW
- 62 Dr Blair Badcock
Department of Geography
The University of Adelaide
SA
- 63 Department of Immigration, Local Government and Ethnic Affairs
ACT
- 64 The City of Noarlunga
SA
- 65 S A Quill
NSW
- 66 Mr Dirk Bolt
Dirk Bolt Consultants
The Netherlands

- 67 Social Planning Group
Western Region Social Planning Group
Melbourne Western Region Commission
VIC
- 68 Mr R J Graham
Department of Geography and Environmental Studies
University of Tasmania
TAS
- 69 Royal Australian Planning Institute
VIC
- 70 Wollondilly Shire Council
NSW
- 71 Redcliffe City Council
QLD
- 72 National Capital Planning Authority
ACT
- 73 Australian Automobile Association
ACT
- 74 Australia Council for the Arts (Supplementary to
NSW Submission 51)
- 75 Mr John Alker-Jones
Principal Planner
Albury-Wodonga Development Corporation
NSW
- 76 Australian Council of Social Service
NSW
- 77 Mr R Cotton
VIC
- 78 City of Melbourne
VIC
- 79 Department of the Arts, Sport, the Environment, Tourism and
Territories
ACT
- 80 Government of Victoria
VIC

- 81 Greater Taree City Council
NSW
- 82 Ms Judy Wilks
NSW
- 83 The Council of the City of Lismore
NSW
- 84 The Council of the City of Grafton
NSW
- 85 Mr Martin Butterworth
Martin Butterworth and Associates
NSW
- 86 Mr Geoff Payne
Manager
South Coast Valuations
NSW
- 87 Institute of Municipal Management (Supplementary to
NSW Division Submission 21)
NSW
- 88 Department of Planning and Housing
VIC
- 89 Mr Paul Broad
Managing Director
Hunter Water Corporation Limited
NSW
- 90 Professor Susan Bambrick, OBE
Director
The University of New England - Coffs Harbour Centre
NSW
- 91 Ms Hilary P M Winchester and Mr Phillip M O'Neill
Department of Geography
The University of Newcastle
NSW
- 92 Mr P Bennie
President
Local Government Planners Association
NSW

- 93 Department of Health, Housing and Community Services
ACT
- 94 Newcastle City Council (Supplementary to
NSW Submission 26)
- 95 Department of the Prime Minister and Cabinet
ACT
- 96 Dr Kevin O'Connor (Supplementary to
Department of Geography and Submission 60)
Environmental Science
Monash University
VIC
- 97 Tweed Shire Council
NSW
- 98 North Coast Regional Organisation of Councils
NSW
- 99 Government of Queensland
QLD
- 100 Professor Mike Berry
Department of Planning, Policy and Landscape
Royal Melbourne Institute of Technology
VIC
- 101 Royal Australian Planning Institute (Supplementary to
VIC Submission 69)
- 102 Ms Margaret Henry (Supplementary to
President Submission 42)
Newcastle Hill Residents' Group
NSW
- 103 National Capital Planning Authority (Supplementary to
ACT Submission 72)
- 104 The City of Noarlunga (Supplementary to
SA Submission 64)
- 105 Department of the Arts, Sport, (Supplementary to
the Environment and Territories Submission 79)
ACT

- 106 Department of Industry, Technology and Commerce
ACT
- 107 Mr John V Langdale
Senior Lecturer in Economic Geography
School of Earth Sciences
Macquarie University
NSW
- 108 South Australian Premier's Planning Review
SA

LIST OF PUBLIC HEARINGS AND WITNESSES

BRISBANE - 13 FEBRUARY 1992

Dr John Robert Minnery
Director
Centre for Urban and Regional Development, Queensland University of Technology

Martin Butterworth and Associates

Mr Martin John Joseph Butterworth
Principal

Urban Development Institute of Australia

Mr Robert John Goakes
Consultant

Mr Geoffrey Allen James
Treasurer

Mr Cameron Leigh-Murray
Queensland President

SYDNEY - 14 FEBRUARY 1992

Institute of Municipal Management

Mr Robert John Ball
Management Committee Member

Mr Terrence Stanley Barnes
Senior Vice-President

Mr Graham Roy Towle
Chief Executive Officer

Greenpeace Australia Ltd

Ms Karlamanda Virginia Bell
Greenpeace Transport Campaigner

Royal Australian Institute of Architects

Mr John David Chesterman
Vice President (Environment)
New South Wales Chapter

Australian Council of Social Service

Ms Jill Lang
Deputy Chair
Urban and Regional Development Committee

Ms Alison Frances Morehead
Senior Policy and Research Officer
Urban and Regional Development Unit

Mr John Hayward Mant
Chairman
Urban and Regional Development Committee

Mr John Nicolades
Principal Policy Resource Co-ordinator
Urban and Regional Development Unit, and
Deputy President

School of Earth Sciences, Macquarie University

Mr John Vyvyan Langdale
Senior Lecturer

MELBOURNE - 21 FEBRUARY 1992

Professor Michael John Berry
Head of the Planning, Policy and Landscape Department
Royal Melbourne Institute of Technology

CSIRO Division of Building, Construction and Engineering

Dr John Frederick Brotchie
Program Manager

Dr Joe Flood
Principal Research Scientist

Dr Peter Wesley Newton
Senior Principal Research Scientist

Victorian Department of Planning and Housing

Mr Robert Adrian Carter
Director-General

Melbourne City Council

Ms Laurinda Amy Gardner
Manager
Strategic Planning

Mr John Francis Noonan
Manager
City Planning and Development

Royal Australian Planning Institute

Mrs Judith Gaye McKenzie
Honorary Secretary-Treasurer

Dr Kevin O'Connor
Senior Lecturer
Department of Geography, Monash University

Town and Country Planning Association

Mr Alan Arthur Parker
Vice-President

NEWCASTLE - 12 MARCH 1992

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Managing Director

Mr James Alex Buchanan
Adviser

Newcastle Chamber of Commerce and Industry

Mr Colin Chapman
Vice President

Newcastle City Council

Mr Garry Fielding
Director of Planning Services

Mr Greg Heys
Alderman

Mr John Rees
Manager
Strategic Planning

Newcastle Hill Residents' Group

Ms Helen Margaret Henry
President

Northern Parks and Playgrounds Movement

Mr Douglas John Lithgow
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Hunter Economic Development Council

Ms Jennifer Roberts
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COFFS HARBOUR - 13 MARCH 1992

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Northern Rivers Regional Organisation of Councils

Mr Christopher Lawrence Clare
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Deputy Manager
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Hastings Municipal Council

Mr Anthony Gerard McNamara
Chief Town Planner

North Coast Regional Organisation of Councils

Mr Paul Albert Sefky
Research Officer

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CANBERRA - 19 MARCH 1992

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National Capital Planning Authority

Mr John Edward Bolton
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Mr Malcolm Phillip Smith
Acting Chief Executive

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Office of Local Government

Mr Rodney Gibson Calvert
Assistant Secretary
Office of Local Government

Mr David Anthony Crofts
Manager
Urban Planning and Housing Section

Mr Mark Lynch
First Assistant Secretary

Urban Development Institute of Australia

Dr Robert Campbell
Consultant

Mr Wayne Lindsay Stokes
National President

Department of Transport and Communications

Mr Thomas Dale
Acting Assistant Secretary
Regulatory Policy Branch
Telecommunications Policy Division

Mr Warwick McNamara
Acting Director
Transport and Environment Section
Land Transport Operations Branch

Mr Neville Arthur Potter
Assistant Secretary
Land Transport Operations Branch

Australian Local Government Association

Mrs Diane May Deane
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Department of Immigration, Local Government and Ethnic Affairs

Mr Steven Craig Garlick
Assistant Secretary

Master Builders Construction and Housing Association of Australia

Mr Wilhelm Harnisch
Director
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Professor Patrick Nicol Troy
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Ms Clare Wall
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Assistant Secretary
Social Justice Secretariat

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Primary Industries, Transport and Communications Branch

South Australian Department of Premier and Cabinet

Mr Michael Andrew Lennon
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CANBERRA - 25 MARCH 1992

Professor Peter Newman
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THE POTENTIAL OF INCREASED RESIDENTIAL DENSITIES TO REDUCE DEMAND FOR LAND

Increasing urban densities should reduce demand for land on the edge of cities. In order to determine the potential of increased densities to reduce the area required by cities and so contain their spread, it is necessary to examine the relationship between residential land use and the total demand for urban land. Raising the number of dwellings per hectare will not necessarily increase the population density in a particular region because the number of people in each dwelling will vary according to the type of household. Professor Brian McLoughlin notes that a density of 15 dwellings per hectare could mean anything from 20 to 50 persons per hectare, depending on the types of household.¹

In addition, cities contain non-residential land, and new residential development creates extra demands for such land as well as for land for housing. The non-residential areas include the CBD, industrial sites, universities and schools, cemeteries, freeways, parks and recreation reserves, airports, railway stations, churches, suburban shopping centres, theatres and other entertainment facilities. These make a fixed demand for land that cannot be reduced in the same way as the demand for housing land can be reduced by increasing dwelling density. Provision for these other land uses places a limit on what can be achieved by increasing population density in the remaining area.

To illustrate this point Professor McLoughlin proposes a hypothetical city with characteristics "roughly typical of an Australian capital city".² This city accommodates 1 000 000 people with a net residential density (NRD) of 30 persons per hectare. This includes provision of land for dwellings, local access roads, incidental small open spaces, primary schools, small local shops and other local services. This city has a gross residential density (GRD) of 23 people per hectare (when regional infrastructure such as secondary schools, local industry, civic buildings, medium sized parks and smaller factories are taken into account); and an overall urban density (OUD) of 15 people per hectare (when total metropolitan land use is taken into account). With a NRD of 30 persons per hectare, this city occupies an area of 66 666 hectares.

The impact of increasing the NRD to 35, 40, 45 and 50 persons per hectare respectively is shown in Table 1. It can be seen that increasing the density to higher levels results in diminishing reductions in the need for residential and associated land: a 66 per cent increase in NRD results in only a 44 per cent reduction in gross residential area.

¹ Brian McLoughlin, "Urban Consolidation and Urban Sprawl: A Question of Density", *Urban Policy and Research*, Vol 9, No 3, September 1991, p 151.

² McLoughlin, p 152.

Table 1: Total Gross Residential Land Needs for a Hypothetical City of 1 Million persons at different population densities

Net Residential Density (pph)	Net Residential Area (ha)	Gross Residential Area (ha)	Overall Urban Area (ha)	Overall Urban Density (pph)
30	33 333	43 333	66 666	15.0
35	28 571	38 571	61 904	16.1
40	25 000	35 000	58 333	17.1
45	22 222	32 222	55 555	18.0
50	20 000	30 000	53 333	18.8

Source: McLoughlin, p 153.

For the largest increase in density (30 to 50 persons per hectare), an effective increase in NRD of 66.6 per cent yields only a 25 per cent reduction in overall urban density. A smaller and probably more realistic short term increase from 30 to 35 persons per hectare results in an increase of only 7.2 per cent in overall urban density. The same increase in NRD yields a saving of 4 762 hectares, with the requirement for total urban land falling from 66 666 hectares to 61 904. This is a small saving in relation to the effort that would be required to achieve the increase in density.

If it is assumed that this city radiates on a flat plain from a single core, the radius of this city declines from 14.6 km at 30 person per hectare to 13.1 km at 50 persons per hectare. It falls to 14.1 if the more realistic target of 35 persons per hectare is achieved (as shown in Table 2).

Table 2: Radius of Hypothetical City of 1 Million People at Different Densities

Net Residential Density (pph)	Net Residential Area (sq.km)	Radius (km)
30	666.66	14.6
35	619.04	14.1
40	583.33	13.6
45	555.55	13.3
50	533.33	13.1

Source: McLoughlin, p 153.

Because cities are already well established, it is difficult to raise the density of existing urban areas. If the reduction in demand for land resulting from the increased density is not as great as might be hoped, emphasis must be placed on urban consolidation projects which are most easily achieved and which will yield the largest returns. In practice this means redeveloping land not previously used for housing.

The Adelaide Planning Review, which released its *Final Report* together with its *Planning Strategy for Metropolitan Adelaide* in June 1992, referred to the opportunity to place medium density housing on government owned land. In the central sector of Adelaide, for example, there are 85 government owned sites larger than two hectares (a total area of about 500 hectares), that the *Planning Strategy for Metropolitan Adelaide* says will be made available for urban infill.³ Such a move would help ensure that lack of land will not constrain the achievement of urban consolidation proposals in the coming decades.

The success of urban consolidation strategies will depend on the willingness of communities to accept that land be redeveloped for higher density housing and not retained as public open space or preserved for other non-residential uses. The degree to which the community accepts higher densities will depend on the extent of innovation in the design of urban consolidation projects.

³ Planning Review, *2020 Vision: Planning Strategy for Metropolitan Adelaide*, June 1992, p 91.

STUDIES ON THE COSTS, SAVINGS AND COMMUNITY BENEFITS ASSOCIATED WITH URBAN CONSOLIDATION

There are four major studies which have recently endeavoured to quantify the costs and benefits of urban consolidation compared with development on the fringe and all have concluded that substantial financial savings and community benefits accrue from consolidation policies. The potential savings are said to be gained through utilising spare capacity in infrastructure which is already in place in inner areas. Community benefits are the time saved in the journey to work and increased accessibility to services.

Review of the Studies Comparing Urban consolidation with Development on the Fringe

The first major attempt to compare the costs and benefits of consolidation and development on the fringe was Travers Morgan's 1986 study in Melbourne.¹ As summarised by Travers Morgan and Applied Economics:

This study examined the costs and benefits of locating an extra 10,000 people in an established area (Moorabbin) by increasing residential densities on established residential land compared with housing a similar number in a fringe area (Cranbourne). Based on a quantitative assessment of accessibility, road congestion, utility infrastructure, housing, roads and public transport, schools, health and community facilities, and a qualitative assessment of housing and environmental quality, the study concluded that urban consolidation would provide substantial net benefits. The study commented that the net benefits found for urban consolidation would probably apply to similar increments in population in other areas of Melbourne.²

Using a balance sheet method, Travers Morgan's 1986 study estimated that the cost savings resulting from consolidation were around \$29 000 for every additional household. Approximately \$17 000 of this benefit was obtained from savings in the cost of resources used in the provision of urban infrastructure and public services. The Ministry of Education, which would not have to construct so many new schools, was considered to be by far the greatest beneficiary as it would stand to save some \$4 300 for each

¹ Travers Morgan Pty Ltd, *Pilot Study of Urban Consolidation Policy and its Application to Metropolitan Melbourne - Final Report*, 1986.

² Travers Morgan and Applied Economics, *Housing Costs Study, Study 2 - Evaluation of Fringe Development and Urban Consolidation*, Sydney, 1991, p 53.

household diverted from the fringe to an inner location. Around \$12 000 per household accrued to users of urban facilities and services, mainly through improved accessibility.³ The adverse effects of consolidation were considered to be the likely increase in congestion and the difficulties of low income groups in finding suitable accommodation in established areas. In addition, local amenity for existing residents could have deteriorated somewhat. However, Travers Morgan considered that these adverse effects were not substantial.⁴ Table 1 is based on Travers Morgan's balance sheet and shows the comparative advantage of urban consolidation as they calculated it.

In 1987 Neilson Associates used a similar methodology to Travers Morgan to support the claim that there would be substantial benefits in accommodating an extra 8 000 households in or around the City of Melbourne rather than on the fringe of the metropolitan area. The estimated economic and financial benefit to the community was averaged at \$41 640 per household for an inner versus fringe location.⁵ Like that of Travers Morgan, this study also attributed this level of benefit to the advantages gained by individuals in reduced travel costs and time to work, increased accessibility to services as well as cost savings to agencies providing services. The disbenefits derived mainly from social disruption and loss of amenity for existing residents. However, these disadvantages were considered to be short term and localised and residents stood to gain from consolidation through a reduced share of the rental burden and enhanced access to more diverse commercial facilities. Table 2 provides a summary of the cost advantages per household as calculated by Neilson Associates.

A study by Hughes Trueman Ludlow and Dwyer Leslie completed in 1991 was commissioned by the New South Wales Government to specifically focus on physical infrastructure provision such as roads, stormwater and telecommunications. One of the studies primary aims was to formulate a methodology which could determine and quantify the level of public sector cost savings which may be derived from urban consolidation in Sydney. This study, like proceeding ones, also concluded that substantial cost savings would accrue to the community and public sector budgets through urban consolidation compared with infrastructure provision for urban fringe development. Cost savings per lot were claimed to range from between \$28 900 and \$30 700 based on a comparison of fringe subdivisions of 840m² average lot size with 18 dwellings per hectare and 50 dwellings per hectare in established areas. Savings of between \$17 000 and \$18 000 were achieved when fringe subdivisions of 450m² average lot size with 18 dwellings per hectare were compared with developments of 50 dwellings per development in established areas.⁶ Table 3 shows the total differences in physical infrastructure between consolidation and fringe development as calculated by the consultants.

³ Travers Morgan Pty Ltd, p 45-47.

⁴ Travers Morgan Pty Ltd, p 49.

⁵ Neilson Associates Pty Ltd, *Net Community Benefits of Urban Consolidation*, Discussion Paper, November 1987, p S-3.

⁶ Hughes Trueman Ludlow and Dwyer Leslie Pty Limited, *Public Sector Savings of Urban Consolidation*, Final Report, February, 1991, p vi.

Table 1: Planning Balance Sheet Showing Comparative Advantages of Urban Consolidation (1985-86 dollars)

Group Affected	Economic Comparison (\$ per Household Located)	
	Advantage	Disadvantage
<u>Users of facilities & services:</u>		
QUALITY OF HOUSING STOCK		
Residential Occupiers	-	-
ENVIRONMENTAL QUALITY		
Fringe Area Residents	Some Advantage	
Established Area Residents		Some Disadvantage
Re-locating Residents	-	-
ACCESSIBILITY TO COUNTRYSIDE AND URBAN FACILITIES		
Residential Occupiers	16 280	
ROAD CONGESTION		
Private Travellers and Businesses		4 270
<u>Producers of Infrastructure and Services</u>		
UTILITY INFRASTRUCTURE		
Melbourne and Metropolitan Board of Works	1 230	
Developers	4 320 *	
HOUSING		
Ministry of Housing	20	
Developers	3 480	
ROAD PROVISION		
Developers	4 770 *	
Local Councils	630 *	
TRANSPORT		2 120
Melbourne Transport Authority		
- Rail Services		
- Bus Services	370	
EDUCATION		
Ministry of Education	3 780	
HEALTH FACILITIES		
Health Department	20	
COMMUNITY SERVICES		
Local Councils	200	
Community Services Victoria	-	
TOTALS	35 100	6 390
NET ADVANTAGE WITH CONSOLIDATION	28 710	

(*): Denotes zero cost for locating in an established area.

(-): Assumed that there is no significant difference.

Source: Travers Morgan Pty Ltd, 1986, Executive Summary.

Table 2: Net Community Benefits from Inner City Consolidation (1986-87 dollars)

Item	Cost Basis	Amount
PUBLIC UTILITIES		
Water supply, sewerage, drainage	Differential between capital cost of lot on the fringe and inner development	\$4 330
Electricity	Capital cost per lot on the fringe	\$ 230
Telephone	Differential between inner and fringe connection	\$ 475
Road Provision	Capital costs per household on the fringe: - arterial and collector roads - local streets per lot on the fringe	\$ 630 \$4 770
Private Transport	Journey to work: - travel cost saving/person - time cost saving/person Non-work journeys: - travel cost saving/person - time cost saving/person	\$9 395 \$8 354 \$2 425 \$2 213
EDUCATION		
Education	Capital cost: - pre-school place - primary school place - secondary school place	\$2 364 \$4 726 \$9 732
COMMUNITY FACILITIES & URBAN MAINTENANCE		
Community Facilities	Capital costs per household: - Library \$150 - Community centre \$ 60 - Senior citizens centre \$ 20 - Family day care \$ 20 - Health centre \$ 20	\$ 270
Sport and Recreation	Capital costs per household: - Public open space \$ 25 - Ovals and playing fields \$225	\$ 250
Urban maintenance	Recurrent cost savings per household	\$1 115
TOTAL		\$51 279

Note: These benefits were distributed across different household structures in order to calculate the average level of savings per household (stated as \$41 640).

Source: Neilson Associates, p 37-39.

Table 3: Total Cost Differences Per Dwelling in Physical Infrastructure Between Consolidation and Fringe Development by Infrastructure Type and Density Level (1989-90 dollars)

Fringe: Consolidation:	840m ² lot 50 dw/ha	840m ² lot 18 dw/ha	450m ² lot 50 dw/ha	450m ² lot 18 dw/ha
<u>Infrastructure Component:</u>				
Sewer	8 422	7 752	4 551	3 881
Water	4 171	3 601	3 411	2 841
Stormwater	7 276	7 276	3 898	3 898
Gas	1 753	1 492	1 369	1 108
Power	2 248	2 152	1 885	1 789
Telecom	1 031	795	659	423
Local Roads	4 635	4 635	2 483	2 483
Miscellaneous	1 148	1 148	615	615
TOTAL SAVING	30 684	28 851	18 871	17 038

Source: Hughes Trueman Ludlow and Dwyer Leslie Pty Ltd, p 66.

The report claims that consolidation is cheaper because services are already in place in the inner areas where spare capacity has been created by the reduction in household size from 2 to 2.25 persons in multi-unit dwellings.⁷

The Hughes Trueman Ludlow and Dwyer Leslie report also points out that the main cost in consolidation is the connection to existing services which actually declines on a per unit basis the larger the number of units in a development. The report states that augmentation is rarely required and the analysis generally assumes no augmentation costs. The report however does concede that firm figures cannot be established as augmentation requirements are so site and area specific that they need to be examined case by case.⁸ In this conclusion the report reflects the lack of data on the capacity of existing services and facilities in inner and middle suburbs. The report also notes that major development sites in inner areas could attract costs as great as development on the fringe due to the need for new internal services and (possibly) augmentation of external

⁷ Hughes Trueman Ludlow and Dwyer Leslie Pty Limited, p vi-vii.

⁸ Hughes Trueman Ludlow and Dwyer Leslie Pty Limited, p vii.

mains.⁹ It does not take account of an accelerated rate of deterioration of ageing infrastructure which would result from increasing densities. Nevertheless, all agencies contacted by Travers Morgan and Applied Economics in the process of their latest study also advised that, with the exception of drainage and transport, there would be no costs, or only minimal costs, associated with incremental urban consolidation.¹⁰

The latest attempt to quantify the costs and benefits of urban consolidation was completed by Travers Morgan and Applied Economics in 1991. The study was commissioned to investigate housing costs and its support infrastructure and in Part 2 of the study, a prime objective was to formulate a more comprehensive and consistent evaluation methodology which could be applied to specific strategies for consolidation or urban fringe development. To this end a model was constructed and tested on four residential strategies with differing mixes of densities and development in inner and fringe suburbs in the cities of Sydney, Melbourne and Adelaide. As stated by Travers Morgan and Applied Economics:

The conclusions of Study 2 are that urban consolidation in existing suburbs and more intensive forms of development on the fringe can provide significant savings in the provision of services and infrastructure and can create significant economic and social benefits. Two main issues need to be addressed however: the impact on neighbourhoods and the provision of low cost housing.¹¹

It is suggested by Travers Morgan and Applied Economics that codes and regulations for local amenity and environmental controls should be clearly established and administered by local authorities to protect neighbourhoods and it is also recommended that the provision of low cost housing needs special attention. The latter recommendation is based on the experience that urban consolidation does not usually provide housing as cheaply to the purchaser as fringe development. A summary of the benefits per household as calculated by Travers Morgan and Applied Economics is presented in Table 4. Table 5 lists the items which were included in the methodology.

⁹ Travers Morgan and Applied Economics, p x.

¹⁰ Travers Morgan and Applied Economics, p x.

¹¹ Housing Costs Study Steering Committee, *Housing Costs Study: Overview of Study*, May 1992, p 8.

Table 4: Summary of Findings - Net Social Benefit of Urban Consolidation Compared with Fringe Development in Sydney, Melbourne and Adelaide

City	Savings Per Household (\$)
Sydney	11 900
Melbourne	11 500
Adelaide	8 600

Note: Scenario 3 (part fringe/part urban consolidation) was used for this summary.

Source: *Travers Morgan and Applied Economics, p 153.*

Table 5: Summary of Items Included in the Evaluation Methodology Formulated by Travers Morgan and Applied Economics

House and Land	Services
House Prices	Water
Building Costs	Sewerage
Ancillary Costs	Stormwater
Opportunity Cost of Land	Electricity
	Gas
	Telephone
	Roads
	- Arterial
	- Local
	Public Transport
	Health Care
	Education
	Community Services

Source: *Travers Morgan and Applied Economics, Appendix C, p 1.*

Deficiencies in Evaluation Methodologies of Studies Reviewed

Travers Morgan and Applied Economics referred to some deficiencies in the information used in these studies (particularly in relation to the actual opportunities to implement urban consolidation programs) and stated "little appears to have been done to assess where areas of spare capacity for utility, transport and human services might coincide with areas capable of being economically redeveloped or consolidated"¹².

¹² Travers Morgan and Applied Economics, p 6-7.

Travers Morgan and Applied Economics also strongly emphasise that the studies which have attempted to quantify the costs and benefits of urban consolidation versus fringe development to date have been limited mainly by the paucity of data. They also consider that the earlier studies are deficient because:

*...they were not based on an explicit evaluation methodology or theory of welfare optimisation. (This comment applies even more strongly to most other studies). In the absence of such a methodology, there is a danger that certain costs and benefits may be wrongly included or excluded or wrongly evaluated.*¹³

The exact extent of incremental expenditure on public transport and main roads to meet higher demands from consolidation also represents a huge gap in the data required to determine the overall costs of development at the fringe or in inner suburbs. The report on public sector cost savings by Hughes Trueman Ludlow and Dwyer Leslie stated that it was not possible to adequately estimate transport costs because of dispersed journey patterns and the large scale of the task. The consultants considered that a land use survey was required to obtain this information.

Travers Morgan and Applied Economics warn that poor data in some critical components of costing may lead to erroneous conclusions, and it is acknowledged that transport is an essential element which must somehow be included in any evaluation of consolidation. The assumptions on which the transport costs calculations have been based suggest that these considerations have not been given due emphasis. For example, Travers Morgan and Applied Economics based their public transport calculations on the assumption that 50 per cent of the workforce would travel to the CBD and 50 per cent to local employment centres.¹⁴ However, a paper by Patrick Moriarty and Clive Beed points out that suburbanisation has not only moved residences, but also resulted in the relocation of workplaces, shops and services. They state:

*Thus in 1951, there were jobs for 59 per cent of the workforce in their own municipality, but by 1981, this had risen to about 70 per cent.*¹⁵

With the lack of comprehensive data on travel patterns, any assessment of the costs or savings related to public and even private transport is speculative.

Other studies have also based their work on assumptions which do not always reflect actual or emerging trends such as housing preferences, travel patterns or household formation. Neilson Associates for example, calculate substantial capital cost savings by the Ministry of Education through urban consolidation. The analysis has allowed for a

¹³ Travers Morgan and Applied Economics, p 54.

¹⁴ Travers Morgan and Applied Economics, p 130.

¹⁵ Patrick Moriarty and Clive Beed, "Equity, Transport, Greenhouse", *Urban Policy and Research*, Vol 9, No 3, September, 1991, p 145.

larger representation of households with children and a lower proportion of singles in the consolidation scenarios.¹⁶ This has not been realised in consolidation measures to date. The assumption that consolidation will increase the proportion of children in inner areas which can take advantage of available capacity in the educational system, will substantially skew the estimated cost advantages of consolidation.

Medium Density Housing

A recent study into the economics of medium density housing in South Australia was completed in 1991 by W.D. Woodhead of the CSIRO. This study concluded that suburban developments could be supplied more cheaply if the widespread "bias" against medium density housing was removed.¹⁷ Woodhead has confirmed that dwellings on broadhectare land can be provided more cheaply than housing in inner locations, but analysis of the development approvals process and other factors related to the building of medium density housing, highlight the opportunity for numerous costs savings which can be readily made. It is suggested that actual cost reductions of \$4 500 per strata title unit may be readily achieved by state governments adjusting title procedures, stamp duty charges and Workcover insurance rates. An additional \$1 500 per strata unit may be achieved by local government relaxing its requirements for additional features.

Travers Morgan and Applied Economics, in the *Housing Costs Study*, support the long held suspicion that producer costs at the fringe vary substantially between cities and highly variable within cities due to the differences in the number and level of developer requirements imposed by local authorities and infrastructure providers, and broadhectare land costs.¹⁸ The study has also investigated the determinants of the prices of established housing documenting house price trends and patterns and attempting to explain the causes of long run and short run differences between cities.

¹⁶ Neilson Associates, p 36.

¹⁷ W D Woodhead, CSIRO Division of Building, Construction and Engineering, *A Study into the Economics of Medium Density Housing*, April, 1991, p 1.

¹⁸ Housing Costs Study Steering Committee, p 3.

