

Sydney-Canberra, another 200 mile city?

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Abstract: *Sydney to Canberra could be the next 200 mile city. Canberra is expanding northwards while Sydney is expanding to the southwest along a freeway corridor that enables the Canberra-Sydney journey to be undertaken in less than two and a half hours.*

Strung along this 290km corridor are many towns and villages nestling in distinctive landscape settings. Although bypassed by the freeway, these towns have been invigorated by the opportunities brought by better access. However, accessibility has also brought a threat to the character of these places and the possibility of Sydney to Canberra sprawl. Alternatively the opportunity for a model linear landscape city exists.

The idea of towns linked by efficient transportation and separated by landscape is not new and was expounded and tested in England in the late nineteenth century and early twentieth century. Since the mid-1960s, along with other models from Europe and the United States of America, Canberra has grown as a series of new towns organized around a conceptual structure called the Y Plan. Significantly, landscape has provided a rationale for the location, separation and connection of these towns.

This paper provides a background to Australia's urban typologies and explores the possibilities and limitations of the Y Plan as a physical model for future urban growth from Canberra to Sydney.

Keywords: *Canberra planning, Y Plan, landscape planning*

Introduction

Since the nineteenth century Australia has been one of the most urbanized countries in the world. However, this is not the dense urbanization of London, Paris or New York, but a more dispersed suburbanization, strung out along the coast and its hinterland and only notionally associated with a city core. Initially rail and tram systems, a relatively high standard of living and cheap land enabled people to work in the city, but live in the suburbs. From the 1950s, to the present, efficient automobile transportation systems and telecommunications and information networks have supported a spread-out, low-density pattern of urbanization.

Philip Drew, in exploring the character of Australia's urbanized coastal fringe, notes that 'Australians value space and ... space is equated with individual freedom and independence'. (Drew, 1994: ix). He sees the Australian quest for suburban space as a seeking of contact with nature, albeit combined with security and protection, and that confinement to dense cities is not a part of the Australian identity.

In the 1980s concerns about the rapid consumption of open space, increasing fuel costs and an awareness of environmental and social problems associated with this form of development began to be raised. However, despite several decades of deliberate attempts to promote compact city form through urban infill, such as with the Commonwealth Government initiative of AMCORD, (Commonwealth of Australia, 1995), the vast majority of Australians still strive for a suburban existence with the ideal of a separate dwelling on its own block of land. The consequence of this aspiration, along with high levels of private car ownership, has been the perception and reality of sprawling cities. Linear conurbations such as, what we are calling at this conference 'the 200 mile city', have become mega-cities, where residents have little interest in their own town or city other than the quality of their personal space.

Not only is the sustainability of this type of development questionable in social terms. It is also questionable in economic, environmental, administrative and political terms. So, what are the alternatives? Is there any redemption for the '200 mile city'. Perhaps in reflecting on our past we can see the possibilities as well as limitations for future directions such as the creation of a well planned, sustainable, non-sprawling 200 mile city between Canberra and Sydney.

Australian City Form

Grid City

Australia's nineteenth century city layout belonged to a tradition of colonial planning based on the grid. It provided a physical plan with little concern for social or environmental issues. A framework of streets was established, administrative and commercial buildings were located, and houses were built in response to demand. It was a system supported for its speed and administrative expediency.

The grid allowed for shifting commercial values and population growth. However, its drawbacks were a lack of civic nucleus, loss of social intimacy, dispersed public buildings, a minimum of parks and open spaces and an inability to deal with topography. (Statham, 1988: 16).

Adelaide and Melbourne, as well as many smaller cities, such as Goulburn and Queanbeyan near Canberra, were laid out on the grid. The initial size of these cities was small thereby enabling easy access to surrounding countryside. Adelaide was praised because of the generous allocation of squares and surrounding parklands and its ability to grow as a result of its green belt.

Garden City

In the early twentieth century the physical form and utopian ideals of the Garden City movement informed the planning of Australian cities. In 1898 Ebenezer Howard published *Tomorrow: A Peaceful Path to Real Reform*, revised in 1902 as *Garden Cities of Tomorrow*. Howard's concerns were predominantly social and he condemned the inhumane conditions of the industrial city. He compared the advantages and disadvantages of town life and country life and concluded that the advantages of both could be achieved in a careful marriage of town and country. Garden city would provide 'the beauty of nature, social opportunities, fields and parks, easy access, low rents, high wages, low rates, plenty to do, low prices, no sweating, field for enterprise, flow of capital, pure air and water, good drainage, bright homes and gardens, no smoke, no slums, freedom and cooperation'. (Howard, 1965: 46).

Although clearly stating that plans could not be drawn until a site was selected, Howard provided a range of diagrams to show relationships between the various parts of the city and the surrounding countryside, as well as how the city could grow. (See Figure 1). All was premised on rapid transport links, communal control of land and economic independence of the city. Nature, or the country, was to be accessible to all and was regarded as benign and all forgiving.

Unwin and Parker first gave Howard's ideas form in the garden city of Letchworth, outside London. However, Robert Freestone notes that Howard's utopian ideals were of less significance than the example of new kinds of house design and street layout and what 'appeared to be a means of improving residential conditions that could be adopted anywhere and at any scale'. (Freestone, 1989: 22).

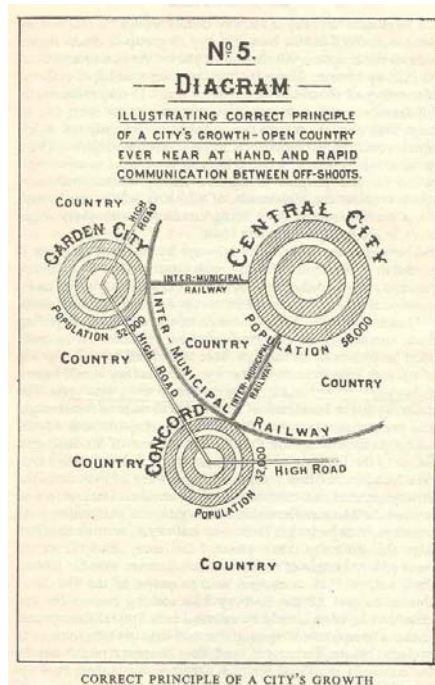


Figure 1: Howard's growth model.

Although Letchworth and Howard's ideas were grounded in the English countryside and picturesque architecture, the message struck a strong chord in Australia and an Australian version of garden city, albeit garden suburb, was promoted by progressive planners, including John Sulman. (Freestone, 1989: 67,118). When Sulman, as Chairman of the Federal Capital Advisory Committee, took charge of the development of Canberra in 1921 Canberra's suburban layout followed Sulman's interpretation of garden city principles. These principles were expressed in individual family cottages on quarter acre blocks uniformly set back from hedged fences facing onto tree lined streets.

The City Beautiful

In Australia the City Beautiful movement based on Beaux Arts formal design principles was associated with grand monumental urban layouts such as could be found in London, Paris, Washington and Chicago. It was a planning method that used a classical approach to unify design where the first duty of the plan was to beautify the city and enhance commercial prestige and display civic pride. (Ciucci et al, 1979: 49, 107). Residential accommodation was housed within large apartment buildings, hotels or villas edged by broad tree-lined streets. Although not a form of living preferred by most Australians, both Sydney and Melbourne attempted beautification projects in the City Beautiful style with grand axial avenues lined by handsome trees and showy public buildings.

Many of the entries to the Federal Capital design competition in 1911 used City Beautiful principles to give physical form to the city, including the winning entry by Walter Burley Griffin, landscape architect of Chicago, and illustrated by his wife, Marion Mahony Griffin. (See Figure 2). Griffin used landscape elements such as forested mountains, hills and flooded river valleys to generate grand axes and vistas to link the various parts

of the city. The formal urban structure generated by the axial lines of communication also visually integrated the surrounding landscape into the city. Within this formal structure Griffin envisaged diverse forms of design to reflect a range of domestic communities that not only provided individual home sites, but also included amenities such as schools, playgrounds and churches.

The internal blocks, typically large, ... leave opportunity for private development or small-community initiative to evolve pretty schemes of driveway subdivision, recessed courts, closes, quadrangles, terraces, common gardens, irregular hill garden subdivisions, and a host of similar possibilities, adding incident and variety to a consistent whole.

(Griffin, 1913: 13)



Figure 2. Griffin's grand land axis.

The Functional City

After WWI a new direction in urban and regional development was founded in scientific and technical reason, although it was not until after WWII that ideas began to take hold in Australia. In 1928 CIAM (Congres Internationaux d'Architecture Moderne) emerged as an avant-garde association, mostly of architects, with the objective of revolutionising architecture and city planning for the benefit of society. Zoning areas of the city for different functions was the most notable outcome. For a defined city area a hierarchy of dwelling, work, leisure and circulation was established with corresponding zoning for each.

Technological developments in the automobile and railway enabled a new scale of urbanity to be considered with open spaces and trees to be a critical part of any individual or collective development. Housing districts would occupy good sites and have suitable solar exposure. Modern building techniques would be used to construct high apartment buildings spaced widely apart thereby freeing the soil for large green parks in which recreation, schools and other collective facilities would be located. The urban mass would be 'segmented and dispersed' in order to grow together into an urban landscape. (Sieverts, 2003: 167).

From its origins in Europe and spreading to Britain and the United States, CIAM included some of the best-known architects of the twentieth century. Its doctrines would shape the urban environment in a rapidly changing world. In Australia its influence came

directly through the MARS (Modern Architectural Research) group, the British arm of CIAM. (Mumford, 2000: 77). William Holford and John Overall, both closely involved in planning Canberra after 1958, were members of the MARS group.

The concept of an urban landscape became the guiding principle for planning after WWII and found expression in the establishment, by the NSW State Government, of a formal planning authority, the Cumberland County Council. The County Plan of 1951 proposed a deconcentration of the inner areas of Sydney and proposed a series of urban districts separated by natural features, each served by a district centre. (Meyer, 1993: 212). Although this plan was short-lived, its prioritization of issues, particularly lack of identity and independence in urban areas and the need for open space, continued through later plans for the Sydney metropolitan area.

Reaction

In the 1970s and 1980s a counter-movement developed against the deterministic, comprehensive, strategic approach founded on government intervention in the public interest. Market interests began to dominate. However, this was balanced by a growing interest in heritage, ecology and conservation. It quickly became clear that expertise and theoretical knowledge were needed to tackle the complex environmental and social issues facing contemporary society. (Sandercock, 1998: 194).

A pre-conceived physical form for the city was abandoned and replaced by a belief that the city would take its form through 'an integrated and holistic approach to the environment that transcends traditional departmental and professional boundaries and is directed towards securing the long-term goal of environmental sustainability'. (Evans, 1997: 5). A set of policies such as land-use policy, energy policy, waste management, water resource management, pollution control, community consultation, heritage protection etc, would evolve to give the city form. (McHarg, 1992: 73).

However, a policy approach to planning did not prevent sprawl, a pattern of urbanization defined by Oliver Gillham as spread out, relatively low in density, automobile dependent, with widely separated land uses, patchy undeveloped land, strip commercial areas and large amounts of surface parking. (Gillham, 2002: 251). Sprawl was regarded as unsustainable and sustainability, encompassing environmental, social and commercial dimensions, is a concept to which all Australian governments are committed. If a concern for sprawl is implicit in the concept of the 200 mile city, then attention needs to be given to the appearance and perception of the physical form of future urban development as well as policies that support sustainability.

Canberra as a case study

Canberra's national capital origins and leasehold system of land tenure are founded in the Australian Constitution. As early as 1901 the design of Australia's capital city was highly contested. In 1911, when an international competition was mounted for its design, competitors were instructed that 'it is expected that competitors will embody in their Designs all recent developments in the science of town planning ... from the utilitarian,

the architectural, the scientific, and the artistic standpoints'. (Commonwealth of Australia, 1955: 90) This instruction related specifically to the Garden City and City Beautiful movements that had excited much interest at the first Town Planning Conference of the Royal British Institute of Architects in London in 1910.

Canberra was not expected to be a large city. It was anticipated that the population of the city would initially be 25,000 and increase proportionally with the population of Australia, which was then less than 4.5 million. Although Griffin planned the city for 45,000, this was reached by 1960. By 1965 it was 78,000 and in 2004 the population is 330,000. It is anticipated to grow to 500,000 in the next 25 years.

The National Capital Development Commission and the Y Plan

In 1958 the National Capital Development Commission (NCDC) was formed to plan, develop and construct Canberra as Australia's National Capital. (Overall, 1995: 5) In the 1960s the NCDC developed the Y-Plan as a strategy to cope with Canberra's immediate and long-term growth up to a population of 1 million.

Comprising a set of eight new towns, it took the ideas of Howard's garden city growth concept that had been refined through several iterations of new town developments in Britain. Its form was pre-conditioned by the hill and valley structure of the territory and the intention to visually occlude Griffin's central city. A series of new towns were grouped into three corridors emanating from the central Canberra, thereby forming a 'Y' shape. It would be supported by a clearly structured transport system, including a rapid public transport system, and a range of social, economic and municipal developments to enable each town to develop a degree of independence. Landscape planning principles would be used to create urban identity and provide integrity to each town, while efficient transport routes would maintain the cohesion of the clusters. (See Figure 3)

Each town was intended to have a population of 100,000 to 120,000 people. The transport system was to comprise an express public transport route connecting the town centres and running through the built-up spine of each town with stops placed not less than 1.5km apart, except near the town centres. The main element of the road network was a system of peripheral parkways situated mostly outside the built-up areas. A further hierarchy of roads would be developed over time.

The nature of the terrain was such that the growth corridors would occupy natural valley systems and be contained by surrounding hills. Naturalised hill and ridge systems would define a clear boundary between urban areas and rural areas as well as provide a landscaped open space system, which would form a linked national capital open space system. Landscape treatment would also be used to enhance localised natural features within the towns, provide recreation spaces and create an aesthetic dimension within built-up areas.

It was planned as a simple but flexible framework for urban development that would develop over time and according to population pressure. It would enable Canberra to grow to a future population of 1 million and beyond with the potential to expand over the

border north-west towards Yass and north-east towards Goulburn. Initially an intermediate plan for a population of 500,000 was planned and evaluated.

The principle conclusion derived from the evaluation was that an urban form based on linear corridors containing a series of towns and radiating from the Central Area in the shape of a 'Y' would be the best form for long-term growth of the City. It would facilitate extension of the urban area and would protect the integrity of the Griffin Plan.

(NCDC: 1970: x)

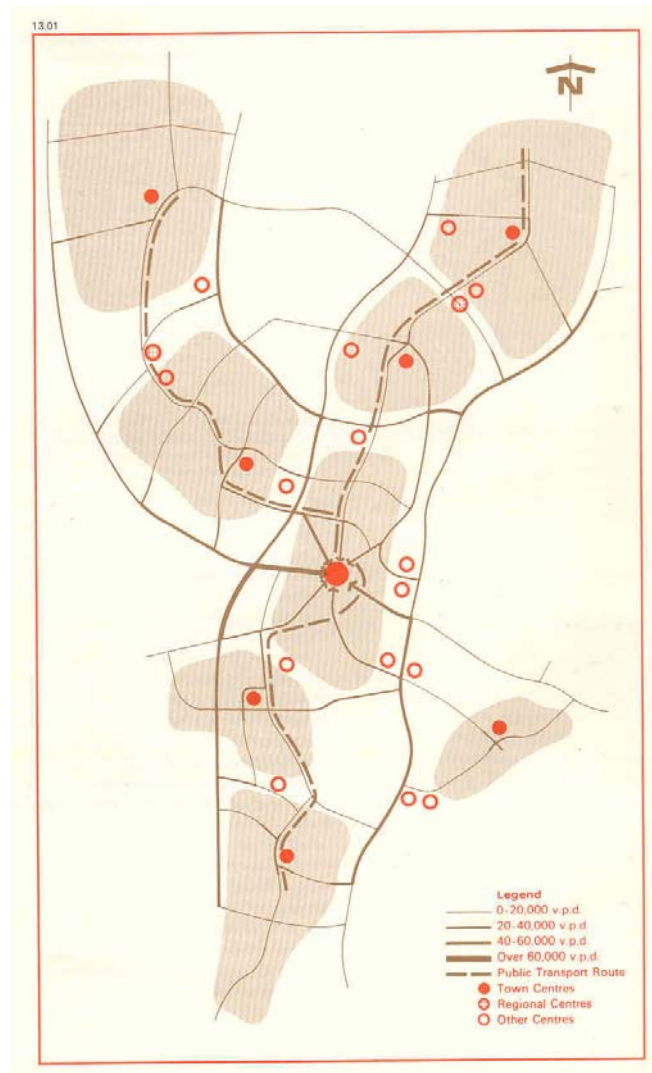


Figure 3. The Y Plan for a population of 1 million

Several key principles were established for open space and landscape elements. These included: preserving the crest line of hills and the mountain slopes as part of the permanent woodland and metropolitan park system; introducing wide reservations between the main sections of the city; placing limits on the continued spread of existing suburbs; and, planning future residential areas as comparatively self-contained new

towns in the open valleys around Canberra. Not only would individual character be created, the appearance of sprawl would be minimized as the city expanded.

Landform, hydrological system, soils, underlying geology, and native vegetation were surveyed and analysed. Drainage ways were developed as easements to form the basis of an open space network into which pathways and cycle tracks were integrated. Hilltops and water edges were protected and tree planting was started at an early stage, usually in advance of engineering works. As a part of NCDC's long-term commitment, urban management systems and structures were formed.

Since 1964, four new towns have been established for Canberra; Woden-Weston Creek in 1964, Belconnen in 1967, Tuggeranong in 1973 and Gungahlin in 1989. Each town has its own distinctive landscape character and layout, commercial centre and community focus. The greenspace separation between new towns is protected as public open space and is maintained by the Government.

Central Canberra and Woden-Weston-Creek have moved beyond the first generation of residents and are starting to incorporate change and redevelopment, generally without compromising the surrounding open space or public landscape character of generous tree planting. This is being achieved through tree protection legislation, a street tree replanting strategy, wetlands on urban creeks and medium density residential development around commercial centres.

Canberra's planned and controlled development of satellite new towns is not common in Australia. Much of the impetus and success can be attributed to the leasehold system of land tenure, the vision of the Y-Plan and the legislative framework that guides the planning of the city. Since 1988 this comprises the National Capital Plan and the Territory Plan. As well as providing a broad pattern of land use these nested plans provide the framework to protect national capital interests, protect urban and rural landscapes as well provide people with an attractive, safe and efficient place in which to live, work and recreate.

In Europe and Britain, where such development is more common, large conurbations are made up of a number of development clusters linked by transportation routes in what Sievert's calls 'cities without cities'. (Sievert, 2003). Although notionally based on Howard's concept, the main difference relates to land ownership. Issues such as arbitrary administration areas of limited size, management, political power and competition rather than cooperation are difficult to resolve. However, Sievert's believes that landscape is the key to identity and to enable the city web to succeed.

Canberra-Sydney

The 290km, or almost 200 miles, between Canberra and Sydney is now connected by an efficient freeway that bypasses major towns. (See Figure 4) This enables the Canberra-Sydney journey to be undertaken in less than two and a half hours. As well, the Very Fast Train project between Sydney and Melbourne via Canberra is simmering

on the backburner and Canberra Airport is looking to expand as a potential supplement to Sydney airport. Could the 'Y-Plan' provide a model for future urban growth between Canberra and Sydney on the assumption that both cities will continue to grow and the demand for suburban dwelling will continue?

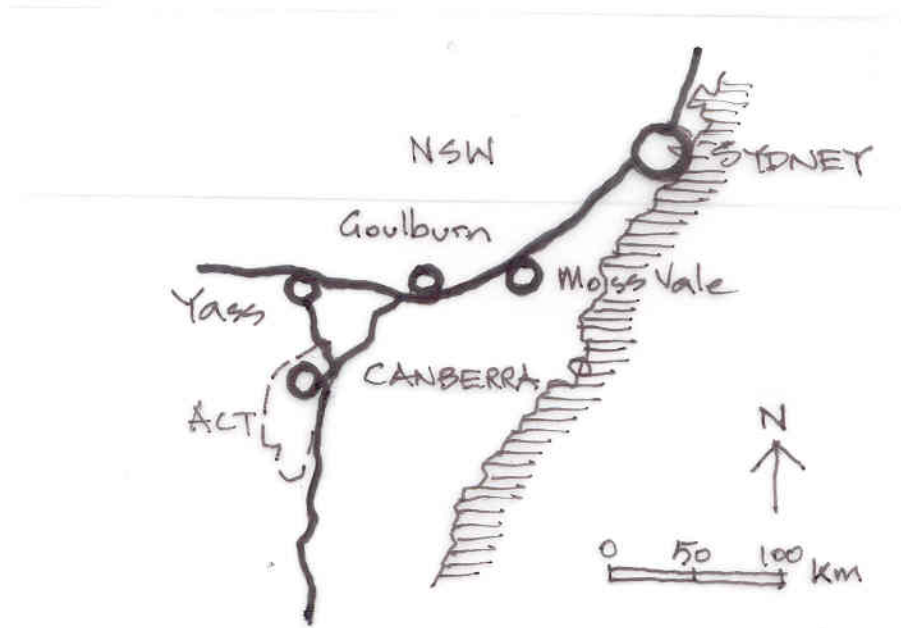


Figure 4. The Canberra-Sydney corridor

Growth has already started along the Canberra-Sydney corridor. Ease of access to both Canberra and Sydney has enabled many more people to consider working in the city and living at a distance from the city. However, real estate opportunism and poor planning controls in council areas surrounding the ACT has seen a rash of adjacent rural residential estate development. Meanwhile Sydney is expanding to the southwest along the freeway corridor. The Southern Highlands area, including Bowral, Moss Vale, Mittagong and Berrima has formed one node and there is the opportunity for Goulburn to form another.

The Y plan provides a model for clusters of contained communities of approximately 100,000 to develop around existing nodes and within a substantial landscape framework. However, the complex of land ownership, shire boundaries and land use issues would need to be coordinated at the highest political level, notionally federally, for the strategy to succeed. The opportunity for new towns to be developed at Sutton and Gooramoon have already been diminished largely due to the inability of state and territory governments to resolve cross-border planning issues, coupled with market opportunism.

More recently, the ACT Government has sought to address issues of environmental, social and economic sustainability through its Spatial Plan, a plan to accommodate Canberra's growth the 500,000. While in the keeping of the spirit of the Y-Plan in terms of creating distinctive new towns with a strong focus on landscape quality, the Spatial

Plan promotes a more centralised compact city form within ACT boundaries, thereby reducing the strong linear possibilities of the Y-Plan.

Conclusion

Canberra is expanding northwards while Sydney is expanding to the southwest along a major road transport corridor. Will this become the unmitigated sprawl that has afflicted so many other linear developments, or could a new form of sustainable city appear?

Ideas and visions from the past, adapted to reflect contemporary concerns and future aspirations, may provide the key. Sustainability, measured in environmental, social and economic terms, is a major contemporary concern. Future aspirations may not only relate to sustainability, but also to how we see ourselves as a nation and as a people.

Perhaps it is time to revisit past planning ideas and visions. Howard's vision of Garden City was to improve social conditions through community, beauty, access to services and contact with nature. Garden City ideas of communities linked by efficient transportation and separated by landscape could be developed within a framework of social and environmental sustainability.

The City Beautiful vision celebrated the high ideals of civilization and the beauty of trees and gardens. City Beautiful ideas, such as expounded by Canberra's designer, Walter Burley Griffin, could enhance Canberra's national capital values and Sydney's state capital economic strength as well as support environmental sustainability objectives.

The vision of the Functional City demonstrated efficiency, social equity and the importance of green space. However, the Y-Plan, with its series of new towns strung out along a corridor like pearls on a necklace, provides a model for future growth over time.

Landscape, with its ecological and environmental sustainability values, could become the rationale for the location, separation and connection of nodal towns and associated new towns along the 200 mile corridor between Canberra and Sydney. Not only does the strategic vision of the Y-Plan provide a model for the Canberra-Sydney corridor, it offers a vision for the physical planning of the whole east coast and hinterland of Australia.

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