Planning, Funding and Delivering Social Infrastructure in Australia’s Outer Suburban Growth Areas

Andrew Wear

Department of Premier and Cabinet, Victoria

ABSTRACT
The long-term success of Australia’s rapidly growing outer-suburban communities depends to a large extent on the presence of social infrastructure such as schools, libraries, sporting facilities and community centres. This paper briefly surveys and analyses the current frameworks and practices that support the planning, funding and delivery of social infrastructure in three of Australia’s fastest growing regions: Melbourne; Perth; and South Eastern Queensland. It finds that Australian governments have become adept at planning new suburbs, but still face significant challenges securing adequate funding for infrastructure and managing the complexity of infrastructure delivery.

Introduction
Australia’s major cities are amongst the fastest growing in the developed world (OECD, 2012). Despite a recent trend towards increasing urban consolidation, the majority of city growth continues to be located in outer suburban growth areas (Department of Infrastructure and Transport, 2013, pp. 31–33). In these greenfield areas, hundreds of new suburbs are being planned and constructed. In Melbourne, for example, the outer suburbs are projected to accommodate almost one million additional residents over a twenty-year period (DELWP, 2015). The long-term success or otherwise of these new suburbs is to a large extent dependent on work undertaken early in the development cycle. This involves local and state governments working together with private developers to plan, fund and deliver the infrastructure necessary to support significant new populations. Increasingly too, the not-for-profit sector also has a role to play, and planning for infrastructure cannot properly be undertaken without consideration for the services that will be delivered within it.
Suburbs rely on core infrastructure such as water, sewerage, electricity, gas and telecommunications. The transport network is also critical, including local access roads, arterial roads and major freeways, as well as to buses and train stations. These elements all need to be planned and delivered in a timely fashion. Yet as the New Urbanism agenda (Congress for the New Urbanism, 2014) makes clear, “hard” infrastructure is not enough to secure the success of a community. Communities rely on a range of other infrastructure, including schools, libraries, childcare, health facilities, sporting facilities, emergency services and arts and cultural facilities. Such infrastructure is commonly referred to in Australia as “social” infrastructure (e.g. Casey, 2005), as it is the infrastructure that typically “accommodates social services” (NZIF, 2009), although it is sometimes used interchangeably with the term “community infrastructure” (e.g. DPCD, 2010; Elton Consulting, 2012). How governments go about planning, funding and delivering social infrastructure is the subject of this paper.

In recent years, Australian governments have developed significant expertise in planning new suburbs. Many new developments are master planned, often guided expressly by the principles of Smart Growth (Daniels, 2001; EPA, 2014a, 2014b) or New Urbanism (Congress for the New Urbanism, 2014). The relationship between housing, activity centres, the transport network and key social infrastructure elements is increasingly being defined at structure plan stage.

Delivery continues to present challenges. The inter-relationships between elements and the sheer number of agencies or organisations with a role to play means navigating significant complexity via collaborative relationships if a quality outcome is to be secured. Funding is also a significant challenge. Most jurisdictions have in place developer contributions schemes that fund local infrastructure, and some jurisdictions have recently introduced developer levies that go some way towards funding state infrastructure in growth areas. However, the delivery of key infrastructure such as major roads, public transport, schools, emergency services and other state-funded infrastructure continues to depend almost exclusively upon state government budget appropriations.

To investigate the approach to social infrastructure in Australia, this paper first presents the key theory informing policy and analysis, before outlining the demographic and policy context. It then briefly examines growth area developments in three of Australia’s fastest growing major regions: Melbourne; Perth; and South Eastern Queensland. These case studies represent contrasting “real world” configurations of planning, funding and delivery arrangements. Consequently they throw light on the opportunities and limitations of different approaches. Finally, the paper provides an analysis of current policy and practice underpinning social infrastructure in Australia, giving particular consideration to the challenges of moving from ideals to practice in the effective provision of social infrastructure in new suburbs.

**Theory**

Emerging out of a critique of unplanned suburban sprawl, a number of movements emerged in the late twentieth century, articulating alternatives to sprawl. Smart Growth and New Urbanism are the two most prominent movements.

The concept of smart growth dates back to about 1997, when it was “launched from a community of environmentalists and policy planners” (Knaap & Talen, 2005, p. 109). Smart growth is conceptualised as “development that serves the economy, the community and the environment” (EPA, 2014b) and is focussed on the creation of “compact cities and suburbs surrounded by countryside devoted to farming, forestry and open space.” (Daniels, 2001, p. 277). Central to smart growth is collaborative planning “in a regional framework involving the state, counties, cities and villages” (Daniels, 2001, p. 276). It utilises tools such as urban growth boundaries, design guidelines, transit-oriented development, mixed-use development, neighbourhood schools, and limiting public funding for infrastructure to designated growth areas (Daniels, 2001, EPA, 2014a). The concept of the “Compact City” (Dantzig & Saaty, 1973) is a similar concept, used in the United Kingdom and Europe.

New urbanism is similar, but subtly different to smart growth. It is articulated in the charter of the Congress for the New Urbanism, founded in 1993 (Congress for the New Urbanism, 2014). Influenced
by architects and physical planners, it has more of a focus on physical form, arguing that “changes in physical form are a necessary precondition for urban economic, social and ecological change” (Knaap & Talen, 2005, p. 109). Central to New Urbanism is a focus on:

The restoration of existing urban centers within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighbourhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy (Congress for the New Urbanism, 2014).

In support of this goal, New Urbanism advocates the following principles:

Neighbourhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology and building practice (Congress for the New Urbanism, 2014).

The social dimensions of new urbanism come through in its articulation of desirable physical characteristics: homes within a five minute walk of the town centre; parks and public places; the town centre to act as a focal point in the neighbourhood; and recreation areas, such as playing fields and playgrounds for formal and informal activities (Sustainable Community Research Group, 2014). Research shows that neighbourhoods with high social cohesion and safety are associated with more physical activity (Timerio, 2004; McNeill et al., 2006; Utter et al., 2011, p. 1693) while access to a safe park is associated with regular physical activity for adolescents in urban areas (Babay, 2008). Research also supports the new urbanist claim that pedestrian-oriented neighbourhoods increase neighbourly behaviours. Unplanned interactions and chance encounters are more likely to occur in pedestrian-friendly environments (Sander, 2002; Lund, 2003) and these interactions create "at least weak social ties" (Talen, 1999).

In practice, the social goals of new urbanism and smart growth are somewhat ill defined and little analysed (Talen, 2002). Where proponents do consider social goals, the discussion is usually about the relationship between physical design and social outcomes, and there is a notable lack of any consideration given to the planning and delivery of social services.

Some critics accuse new urbanism of a “grand fraud" (Marshall, 1996), a marketing scheme that repackages urban sprawl. They argue that the “virtues of a traditional city or town … cannot be replicated on empty land at the edge of town” as “cities are primarily products of transportation systems, not the other way around” (Marshall, 1996). As a consequence, residents of North America’s new urbanist communities do a lot of driving, and houses are mostly traditional large homes that use lots of energy (Glaeser, 2011, p. 215).

While there is a body of work supporting the claim that the provision of social infrastructure urban planning is important to facilitate social participation and create social capital, new urbanism comes under considerably more criticism for its attempt to create “community”, a concept some label “utopian and unrealistic” (Smit, 2006, p. 1) and without a clear definition. Clarke (2005, p. 43) argues that it is:

Part romantic, part spiritual, part utopian, part pragmatic, and part illusory … New Urbanism’s utopian ideal of community presumes a monolithic, collective memory and is premised on a peculiarly American mythology, a nostalgia for a past landscape that was never so picturesque and seldom without discord.

Knaap & Talen (2005, p. 116) argue that “the idea that community has been “lost” due to geographic dispersion is actually not well supported by the research”, while Harvey (1997) reminds us that community also has a dark side:

‘Community’ has ever been one of the key sites of social control and surveillance, bordering on overt social repression. Well-founded communities often exclude, define themselves against others, erect all sorts of keep out signs (if not tangible walls).

The following sections outline the manner in which social infrastructure is provided in Australia, and tests them against these theoretical concepts.

Context

Australia’s population is growing steadily. Fuelled in particular by high rates of net overseas migration, Australia’s population grew by 1.5% annually between 2000 and 2010. Of the OECD nations, only Israel grew faster, at 1.8% per annum (OECD, 2012).
Australia is also a highly urbanised nation. Apart from city-states such as Singapore and Monaco, Australia is the most urbanised nation in the world (Department of Infrastructure and Transport, 2013). Around 40% of the national population lives in Melbourne and Sydney alone, and three out of every four Australians lives in a city with a population greater than 100,000 (Department of Infrastructure and Transport, 2013). Mirroring global trends, Australia’s population continues to urbanise. In 2011–12, Australia’s largest cities grew almost 50% faster than the rest of the country (Department of Infrastructure and Transport, 2013). The Commonwealth Government projects that Australia’s population will be 48 million by 2061 (up from 23 million in 2013), with 74% of Australians living in a capital city (ABS, 2013). The same projections show that by 2061, Perth and Brisbane are likely to double in size, while Melbourne and Sydney will be cities of up to nine million people. Under a range of different scenarios projected by the Australian Bureau of Statistics, Australia’s capital cities will need to accommodate at least 11 million extra people between 2012 and 2061, and possibly up to 19.3 million (ABS, 2013).

Much of the population growth in Australia’s cities will be accommodated in greenfields developments on the urban fringe. For example, the Victorian Government projects that between 2011 and 2031, the population of Melbourne’s seven outer-urban growth area councils will grow by approximately 922,000 people (DELWP, 2015). The Western Australian Government projects that outer metropolitan areas will accommodate an additional 350,000 residents by 2031 (WAPC, 2010b). In South East Queensland, the Gold Coast and Sunshine Coasts will need to accommodate more than 600,000 additional residents between 2011 and 2036 (Queensland Treasury and Trade, 2013, p. 3).

One of the important elements of success for growth area suburbs is timely and effective delivery of social infrastructure. A central new urbanism principle is that neighbourhoods are organised around their town centre (Sustainable Community Research Group, 2014). The community goes to the town centre—ideally within a five minute walk of their home (Talen, 2002)—to work, shop, access services, learn, play and socialise. Ensuring that new suburbs have the necessary social infrastructure in place requires both effective planning, and a delivery strategy.

Social infrastructure serves catchments of different scales. For example, a regional aquatic centre serves a larger catchment than a neighbourhood level community centre. It is important that planning is done at different scales, and has appropriate delivery mechanisms to support the planning. A large number of organisations are typically involved in the funding and delivery of social infrastructure. These include: local councils who source funding from rate revenue and developer contributions; state government departments that provide funding to local councils towards social infrastructure; state government departments involved directly in the delivery of infrastructure such as schools, health facilities and justice facilities; private sector developers who deliver town centres and other infrastructure associated with new development; and other private providers who deliver social infrastructure such as medical, childcare and aged care facilities, usually dependent on operational subsidies from government.

The following sections outlines how social infrastructure is generally planned, funded and delivered in Australia. It is then followed by case studies exploring differences across three of Australia’s fastest growing regions.

**Planning**

Effective delivery of social infrastructure in greenfields areas is driven to a large extent by the planning context, as a key social goal is promoting accessibility to “public goods, services and facilities” (Talen, 2002, p. 180) and this implies “minimising distances between daily activities” (Talen, 2002, p. 181) and ideally ensuring that “a majority of homes are within a five minute walk of the town centre and all its basic amenities” (Sustainable Community Research Group, 2014). Informed by the principles of smart growth and/or new urbanism, Australia’s largest cities generally have citywide strategic plans, setting out at a high level the broad parameters for growth in the city. City-wide plans are generally articulated further in a series of regional or corridor plans that guide the delivery of housing, employment and transport infrastructure in the growth areas, and provide the settlement framework that effectively shapes where social infrastructure is required.

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New developments on the edge of Australia’s cities are routinely—although not always—master planned. “Precinct structure plans” are the detailed master plans for each suburb, with populations ranging from 10 000 to 30 000 people. These plans “lay out roads, shopping centres, schools, parks, housing, employment, connections to transport and generally resolve the complex issues of biodiversity, cultural heritage and infrastructure provision” (MPA, 2014).

**Funding**

For infrastructure that is the responsibility of local councils (local roads, sporting facilities, libraries etc.), the funding models are the clearest. Infrastructure is generally funded from rate revenue or from revenue received from developers as part of a development contributions scheme. Although increases in population will ultimately lead also to an increase in the size of a council’s rate base, many councils are reporting that there is nevertheless a substantial funding shortfall, which makes it difficult to construct capital facilities to the required standards (Elton Consulting, 2012). The National Growth Areas Alliance reports that this funding gap results in the “provision of far fewer but larger facilities which are multipurpose in nature such as a shared use community hub and recreational/leisure hubs” (Elton Consulting, 2012, p. 1).

Most jurisdictions have developer contribution schemes in place to ensure that private developers contribute to the cost of infrastructure associated with the development. These schemes vary in their comprehensiveness. While some schemes are limited to providing funding for basic civil infrastructure only, others will provide funding sufficient to deliver the full suite of council-provided social infrastructure.

The Productivity Commission argues that developer contributions should only be used “for social infrastructure which satisfies an identifiable demand related to a particular development” (PC, 2011, p. 215). In the event that social infrastructure will be used by the broader community:

*Accurate cost allocation is difficult if not impossible and should be funded with general revenue unless direct user charges (such as for an excludable service like a community swimming pool) are possible (PC, 2011, p. 216).*

Developer contributions in some jurisdictions are used for a far greater scope of infrastructure than that suggested by the Productivity Commission. Developer contributions are regularly applied to infrastructure servicing entire municipalities, and in Victoria, developers are required to contribute to “State Infrastructure” (GAA, 2013) which may include roads and public transport servicing an entire region.

Sometimes, council contributions are augmented by grant funding from state or commonwealth governments. This funding is often made available in an ad hoc fashion through competitive grant processes, making long-term capital planning difficult. Considerable resources are expended by councils in applying for grant funding and sometimes grant funds contribute only a small portion of the overall project cost. Nevertheless, grant funds in aggregate are an important overall contribution to councils’ annual capital budgets. The Commonwealth Government (e.g. ANAO, 2013) and some state governments (e.g. Wear, 2013) are exploring reforms to the delivery of grant funds, to minimise the administrative burden on councils, and potentially deliver greater certainty of funding.

Much infrastructure is the responsibility of state governments. This includes schools, major roads, public transport, court services, public hospitals and emergency services. Some jurisdictions have introduced—or are introducing—schemes that require developers to contribute to the cost of state infrastructure. However, the revenue generated from these schemes is likely to make only a very small contribution towards the cost of state infrastructure, and like other development contribution schemes, little of this revenue is likely to flow in the short term. In practice, this means that most state infrastructure in greenfields growth areas must be funded from budget appropriations, and must be considered against other competing government priorities. With most Australian jurisdictions dealing with increasingly tight fiscal conditions, funding for state infrastructure in growth areas remains a significant challenge.
Private companies or not-for-profit organisations deliver a significant amount of social infrastructure. This includes private schools, childcare centres, aged care facilities, pharmacies, radiology and pathology, private hospitals, general practice clinics and other health facilities. Although capital funds are sourced privately, the revenue model for these projects is largely built upon government funding from programs such as Medicare, the Pharmaceutical Benefit Scheme, the Aged Care Funding Instrument, and the Child Care Rebate scheme.

**Delivery**

Following the planning stage, social infrastructure is generally delivered in a fragmented fashion, with only minimal coordination between funding organisations. The reliance on budget appropriation funding for state government infrastructure makes this particularly difficult, as government departments find it difficult to discuss potential delivery priorities or timeframes in instances where funding is not yet approved. The difficulties that flow from this are twofold: firstly, delivery timeframes are uncertain; and secondly, there is an information deficit, as governments are loathe to confirm infrastructure priorities to external parties unless funding is approved, for fear of raising expectations of future funding. For local government, this makes effective coordination with state government extremely difficult and means that opportunities for innovation and efficiency (e.g. developing a sporting facility or library shared jointly by a school and the broader community) are sometimes forgone. Even within state government, effective collaboration across government departments is difficult in this context, as there are not always clear mechanisms for sharing information on medium to long-term priorities across government.

This information deficit also means that private and community sector infrastructure providers must plan in the absence of sufficient information about government priorities. While this does not necessarily impede the delivery of childcare, medical or aged care facilities by these providers, it does mean that opportunities for innovation and efficiencies may be forgone. For example, opportunities that could be explored include: the opportunity to collocate childcare facilities as part of integrated school or education precincts; for new pharmacies and general practitioners to cluster as part of integrated health precincts; or for legal and community service providers to cluster in the vicinity of new court precincts.

In recent years, local governments have tended “towards fewer, larger, multipurpose facilities rather than multiple, smaller, specific purpose facilities” principally driven by “service access, construction, operating and maintenance costs and asset ownership issues” (Elton Consulting, 2012, p. 32). Because these facilities are complex, and rarely the responsibility of a single entity, some early attempts to improve integrated delivery are currently underway. Key to this is the formation of precinct-based partnerships involving councils, state government agencies and developers. These partnerships—which may also involve residents at latter stages of development—take the lead on developing detailed precinct master plans to ensure that development proceeds in an integrated and complementary fashion. The partnerships take the lead in overseeing delivery of the precincts too, with the development of shared priorities that inform council and state government funding decisions. To ensure effective collaboration at the precinct level, brokers are sometimes engaged to work across the various sectors and development partners (e.g. DVC, 2007; DPCD, 2010; Wear, 2012).

**Social Infrastructure in Practice**

The following section surveys the regimes for social infrastructure provision applying to Melbourne, Perth, and South-Eastern Queensland (principally Brisbane and the Gold Coast), which are key greenfields growth areas in Australia. The case study approach, informed by analysis of key planning documents, allows for an examination of the differences in approach, and exploration of the opportunities and limitations of each regime, although it is necessarily a brief high-level overview. For a
comprehensive—although now slightly dated—overview of infrastructure provision as it applies to all Australian Jurisdictions, *Public Infrastructure Financing: An International Perspective* (PC, 2009, pp. 185–224) and *Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments* (PC, 2011, pp. 189–224), completed by the Productivity Commission in 2009 and 2011 are both excellent resources.

**Melbourne**

The Victorian Government developed *Plan Melbourne: Metropolitan Planning Strategy* in 2013, which “outlines the vision for Melbourne’s growth to the year 2050” and “identifies the infrastructure, services and major projects which need to be put in place to underpin the city’s growth” (DTPLI, 2013, p. I). This plan is the latest in a string of 21 metropolitan strategies that date back to 1929 (DPCD, 2012).

Growth Corridor Plans were finalised in 2012 (GAA, 2012a), which set the strategic direction for future urban development at a regional scale. All four growth corridors are traversed by the existing heavy rail network. The plans indicate areas suitable for urban development and the broad form of development (residential, industrial, commercial mixed use, town centre) that is appropriate for each area. They also confirm: areas of environmental significance; the open space network; regional infrastructure such as transport, water and sewerage; and employment land.

Precinct Structure Plans are more detailed planning documents that guide development in a neighbourhood or group of neighbourhoods (GAA, 2012a). They are generally produced by the Metropolitan Planning Authority (i.e. state government) in partnership with the relevant local council and will typically detail: the proposed location of local town centres and local community facilities such as schools; the road and bus network; open space networks; housing yields and density; and major sites or easements required for utilities and other infrastructure (GAA, 2012a).

A Precinct Infrastructure Plan is produced as part of the Precinct Structure Planning process. Plans typically include a list of infrastructure items required for development in the precinct, including a nominated lead agency for the project, an estimation of project timing, project cost and total precinct contribution to the project (GAA, 2012c). Developers then provide payment or in-kind works, facilities or services towards the supply of this infrastructure though Development Contributions to councils. Infrastructure costs are apportioned between developers based on projected “share of usage” (DTPLI, 2007) and are generally payable at the time of subdivision. Development Contributions include payment of a Community Infrastructure Levy to councils, which provide funding for social infrastructure as required for residents of a defined area. This infrastructure includes such things as Maternal and Child Health centres, preschools, community halls, multi-purpose buildings, and recreation facilities.

In an effort to better coordinate the planning and delivery of social infrastructure in Melbourne’s growth areas, the Victorian Government has built upon an earlier pilot program (DPCD, 2010) by entering into agreements with five growth area councils (Wyndham, Melton, Hume, Whittlesea and Cardinia) in partnership to plan and deliver social infrastructure in Melbourne's growth areas (Wear, 2012). Jointly funded “brokers” are based in each of the municipalities to build and mediate relationships between council, government agencies and other organisations and act as a conduit of information between parties. They also coordinate activities and provide support to undertake planning, and assist with problem solving, accessing government departments and locating sources of funding.
Evaluations of the earlier trials showed that this approach was effective, particularly in the development of master planned town centres and the delivery of innovative shared-use facilities (DVC, 2007; DPCD, 2010; Wear, 2012). For example, a partnership in the western suburb of Caroline Springs between the council, state government and developer—facilitated by a jointly-funded broker—delivered financial savings through joint tendering and the use of combined in-house skills; additional facilities due to joint tendering and economies of scale; early delivery of facilities; and a more functional urban design (DPCD, 2010).

**Perth**

In 2010, the Western Australian Government released its metropolitan planning strategy for Perth entitled *Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon*. The document is a “high level spatial framework and strategic plan” and “provides a framework to guide the detailed planning and delivery of housing, infrastructure and services” (WAPC, 2010a, p. 1). For example, the plan sets a target of a minimum 10-year supply of rural land “identified for future urban expansion” (WAPC, 2010a, p. 5) and a density target of 15 dwellings per hectare of land in new development areas (WAPC, 2010a, p. 4).

*Directions 2031* also outlines a high-level strategy of planning “for an efficient and equitable distribution of social infrastructure” (WAPC, 2010a, p. 23), leaving identification of social infrastructure requirements to sub-regional strategies. The *Outer Metropolitan Perth and Peel Sub-regional Strategy* (WAPC, 2010b) projects that these areas will accommodate an additional 350,000 residents by 2031. It identifies urban expansion areas (or areas for further investigation), estimates dwelling supply, nominates activity centres and indicates where civil and social infrastructure will be required to support growth. The sub-regional strategy does not specify the detail of social infrastructure required, but rather indicates that social infrastructure requirements would need to be developed, with consideration given to dwelling yields, policy standards, consultation with service providers and local government, as well as existing social infrastructure provision (WAPC, 2010b).

The sub-regional strategies are accompanied by sub-regional structure plans prepared by the West Australian Planning Commission in consultation with state government agencies and local government. These plans seek to provide a long-term spatial framework for the sub-region, including future land use, open space and reserves, major roads, railways and activity centres. Sub-regional structure plans are then articulated further via district and local structure plans.

Social infrastructure in Perth’s growth areas is substantially funded via developer contributions. This was facilitated by a change made to the State Planning Policy in 2009 (and left unaffected by the subsequent metropolitan planning strategy) which specifically empowered local governments to recoup the capital costs of social infrastructure, including “sporting and recreational facilities; community centres; child care and after school centres; libraries and cultural facilities; and such other services and facilities for which development contributions may reasonably be requested” (State of Western Australia, 2009, p. 4690). Development contributions can be via the provision of land, the construction of infrastructure works transferred to public authorities upon completion, or by monetary contribution (PC, 2009, p. 667). Development contributions are not typically imposed via precinct structure plans; rather, they are usually imposed via conditions on subdivision. In areas where there is fragmented land ownership, contributions may be imposed via a development scheme or local government scheme (Productivity Commission, 2009, p. 667). Western Australia does not have a contribution scheme for state infrastructure.

**South East Queensland**

The *South East Queensland Regional Plan 2009–2031* is a strategic plan for the major inter-related urban areas of Brisbane, Toowoomba, the Gold Coast and the Sunshine Coast. It is an update of an earlier plan produced in 2005 (Office of Urban Management, 2005), and is envisaged as a comprehensive
strategic plan to address the key issues facing the region: high population growth; housing affordability; transport congestion; climate change; and employment (Queensland Government, 2009, p. 4). At the time of writing, the plan was under review, and a new plan scheduled to be completed by the end of 2015 (DSDIP, 2015c). The Regional Plan incorporates “sub-regional narratives” which provide more information about the pattern of expected growth in each of the nine identified sub-regions. They set out the approach to development and identify the key infrastructure requirements in each sub-region.

The Regional Plan was initially supported by an annual South East Queensland Infrastructure Plan and Program (Department of Infrastructure and Planning, 2009), which outlined the government’s intentions for state infrastructure, including project identification and sequencing. The plans covered a number of projects encompassing: transport; utilities; health; education and training; sport and recreation; as well as community services such as police, justice and corrections facilities. In 2011, this was incorporated into a statewide Queensland Infrastructure Plan, which covers the period 2011 to 2031 (Queensland Government, 2011).

South East Queensland is also unique in Australia, with very large councils—for example, Brisbane City Council is home to more than 1 million residents—and each council also has its own city planning documents, in addition to the regional plan (e.g. Brisbane City Council, 2014). Since 2014, councils, when developing their local planning schemes have been required to develop Local Government Infrastructure Plans, which identify “the local government’s plans for trunk infrastructure that are necessary to service urban development at the desired standard of service in a coordinated, efficient and financially sustainable manner” (DSDIP, 2015b). Local Government Infrastructure Plans guide infrastructure charges levied on developers for “trunk infrastructure” at subdivision stage. This regime is not substantially different to the interim regime (requiring ‘Priority Infrastructure Plans’) that was implemented in 2011 (Allens, 2014).

Infrastructure plans and infrastructure charges are limited in their application to social infrastructure. For example, the Priority Infrastructure Plan applying to Brisbane City Council includes land and works for local, regional and metropolitan parks as part of the trunk infrastructure network. For other social infrastructure, the trunk infrastructure network incorporates only the land component, and hence no developer contributions are applied to the non-land capital costs of this infrastructure (Brisbane City Council, 2013). A review of the infrastructure planning and charging framework was completed in 2014 which did not change the scope of application of infrastructure charges to social infrastructure (DSDIP, 2015a). In masterplanned areas, the Sustainable Planning Act 2009 also provides the government with the power to levy a “regulated state infrastructure charge” to recover from developers the cost of state infrastructure.

**Analysis**

In broader political and public debate on the future of Australian cities, the idea of limiting—or containing—sprawl has near universal currency. It makes sense then, that Australian governments planning for the future of our major cities have been influenced by the principles of smart growth and new urbanism. Although extensive greenfields development is planned for Melbourne, Perth and South-Eastern Queensland, considerable use is given to smart growth tools such as urban growth boundaries, mixed use development, neighbourhood schools, and public funding for infrastructure.
limited to designated growth areas (Daniels, 2001; EPA, 2014a). In many instances—most notably in Melbourne—new outer suburban development is planned around heavy rail corridors, and significant transit-oriented development is planned or underway. In this context, Marshall’s criticism of new urbanist communities as repackaged urban sprawl seems somewhat inappropriate, since new suburbs are actually the “products of transportation systems, not the other way around” (Marshall, 1996). Nevertheless, residents of outer suburban growth areas do travel further to work and have a much lower public transport mode share that more established suburbs in Australia’s cities (e.g. DTPLI, 2014).

The focus of new urbanism on reconfiguring sprawling suburbs “into communities of real neighbourhoods” is a central theme in the language of Australian governments, and governments are generally working to create cities and towns “designed for the pedestrian and transit as well as the car” and shaped by “universally accessible public spaces and community institutions” (Congress for the New Urbanism, 2014). Significant work is occurring to ensure the town centre acts as a focal point in the neighbourhood, and that recreation areas are provided for (Sustainable Community Research Group, 2014). Table 1 summarises the arrangements in place for social infrastructure across three of Australia’s fastest growing cities.

Of the three cities examined in this paper, Melbourne is furthest advanced in its efforts to ensure new suburban development systematically provides for social infrastructure. Aside from a citywide plan that concentrates new suburban development, Melbourne has an elaborately developed system of “growth corridor plans” and precinct structure plans that give extensive consideration to the required social infrastructure. This is augmented by a regime of developer contributions towards both state and local infrastructure, including social infrastructure. Efforts to collaboratively plan and deliver social infrastructure have also been shown to be effective.

The Western Australian Government sets out a goal of an “efficient and equitable distribution of social infrastructure” (WAPC, 2010a, p. 23) and clearly defines urban expansion areas and activity areas. Nevertheless, the planning, funding and delivery of social infrastructure are more or less left to local government, which must secure development contributions via conditions on subdivision. Councils will invariably approach this task in a diversity of ways, and there does not appear to be a systematic approach to the creation of new urbanist communities in Perth.

South-eastern Queensland has pursued an innovative agenda over the last few years, embodied particularly in the South East Queensland Infrastructure Plan and Program (Department of Infrastructure and Planning, 2009) and Queensland Infrastructure Plan (Queensland Government, 2011), which send clear signals to non-government actors about the government’s infrastructure intentions, and at least in theory provide for greater alignment between the investment decisions of government, the private sector and the not-for-profit sector. Nevertheless, Queensland governments have been reticent to require developers to contribute to the cost of social infrastructure, necessary to create “communities of real neighbourhoods” (Congress for the New Urbanism, 2014). Developers are not required to contribute to the non-land capital cost of social infrastructure.

Although Australian governments have comprehensive planning regimes in place, and all have some form of funding regime, outer suburban stakeholders nevertheless have significant concerns about infrastructure provision. Growth area councils, under the banner of the National Growth Areas Alliance (2014), maintain that:

residents face … a lack of infrastructure. We still have a long way to go before we can claim liveability for all parts of our cities.

In Melbourne, the Victorian Council of Social Services argues that:

Melbourne has become a city divided—offering a high quality of life for those who can afford to live where the infrastructure and services are located, but leaving far too many people facing isolation, transport poverty and the risk of financial crisis. (VCOSS, 2014).

While civil infrastructure such as roads and utilities is required before residents can move into a new development, social infrastructure is a “lag infrastructure” in that it is usually provided only when a critical population level has been reached. Because of the somewhat piecemeal nature of funding
available for social infrastructure, there is a real risk that social infrastructure is provided late, and this
can have consequences for service delivery. For example, in Melbourne’s outer suburban growth areas,
schools designed for a permanent student population of less than 500 are now routinely accommodat-
ing more than 1,000 students (Proctor, 2015), with substantial numbers in relocatable classrooms
(Cook, 2014).

Although the planning and delivery regimes detailed in this paper appear sophisticated, the true test
of effectiveness lies in how well implementation is happening. An effective outcome requires multiple
state government agencies and local councils to perform the roles envisaged for them. With limited
budgets and varied organisational capability, it would be no surprise if things sometimes went awry.
For instance, the Productivity Commission reported that as of 2010, only one local council had the
required Priority Infrastructure Plan in place (PC, 2011, p. 191), despite a deadline of March 2006
initially being legislated by the Queensland Parliament (Hopgood Ganim, 2010).

The role of state government in funding social infrastructure needs further consideration. Often,
governments act in an ad hoc fashion to provide grants to local councils for infrastructure. As a
consequence, councils dedicate significant time and effort towards grant applications or advocacy.
There are more efficient models of disbursing funding vertically between tiers of government than
discretionary grants, and there is an opportunity for state governments to explore different approaches.
Uncertainty about state government funding for growth areas infrastructure makes it difficult for
local government to coordinate effectively with state government. Without effective coordination
between jurisdictions, significant opportunities for innovation and efficiency are lost, and it is critical
that both tiers of government continue to explore better ways of working together to plan and deliver
social infrastructure. Collaborative, partnership-based approaches—such as those being pursued in
Victoria—are worthy of further consideration.

Similarly, there are significant opportunities to better leverage private sector investment in social
infrastructure and tap into additional sources of capital funding. State governments are usually reticent
to signal their intentions to invest in infrastructure until funding is committed. Consequently, the
private sector—like local councils—finds it difficult to effectively collaborate with state governments.
State governments could explore better ways of giving confidence to potential private sector investors
in governments’ medium to long-term investment priorities. The Queensland Government’s earlier
effort via the South East Queensland Infrastructure Plan and Program potentially provides a good
model that could be built on elsewhere.

Housing affordability is a key issue that seems to sit in tension with the objectives of Smart Growth
and New Urbanism. Infrastructure provision clearly has a cost, and research in the United States
suggests that for every extra dollar of infrastructure charge, new house prices increase by about $1.60
(Nelson et al., 2008) and this may be higher in Australia (Bryant, 2015). This is potentially an issue
of concern, especially as many infrastructure charging regimes extend far further than the principle
advocated by the Productivity Commission of contributions limited only to infrastructure satisfying
demand from a particular development (PC, 2011, p. 215). Yet house prices are only one dimension of
affordability. Other private costs accruing to households over the longer term can include the costs of
commuting (Roberto, 2008), educational outcomes (Department of Education, 2014) and long term
health (Timerio 2004; McNeill et al., 2006; Babey, 2008; Utter et al., 2011, p. 1693). While debate about
the appropriate mix of funding from developer charges and general revenue will continue, trading off
appropriate infrastructure provision in return for cheaper house prices is not likely to be a sensible
option over the longer term.

Conclusion

Over a number of years, Australian governments have developed, implemented and refined a fairly
comprehensive approach to planning for social infrastructure in growth areas. Informed by the prin-
ciples of smart growth and new urbanism, citywide planning, supported by sub-regional planning
and local structure planning has become the norm. These plans typically lead to the development of
infrastructure plans that encompass not just “hard” infrastructure, but also a range of social infrastructure. The requirement for developers to contribute to social infrastructure through local contributions schemes has generally become normalised across jurisdictions, although some debate continues about what constitutes “essential” infrastructure for development, and hence how much developers should pay.

While the various planning frameworks outlined here are thoughtful and considered, they are also elaborate and complex. There is a good chance that the way they operate in practice differs from the way they were intended to operate. Further research will be needed to evaluate the manner in which the reforms are being implemented in practice (and what that might mean for further reforms), as well as to evaluate the long-term effectiveness of the reforms in achieving the desired outcomes.

With housing affordability a critical issue facing Australia’s major cities, it is understandable that governments are sometimes reluctant to impose greater costs on new development by levying additional charges on developers. However, if governments accept that social infrastructure is essential, then it will have to be paid for one way or another: either through revenue obtained from the population at large (budget appropriations); or through revenue obtained from those directly benefitting (developer charges). Further research and debate is clearly needed to explore the appropriate source of funds for essential infrastructure.

Australia’s capital cities will be transformed over the coming decades, with hundreds of thousands of new houses being built in new communities on the city fringes. If our intention is to build socially-cohesive neighbourhoods, then provision of social infrastructure is essential, and how well we do this is a truly important matter for public policy.

Note

1. Formerly known as the Growth Areas Authority.

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