Council of Mayors (SEQ)

Liveable Compact Cities Project

Open Space and Medium-Density Living Study

Issues Paper

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Sarkissian
speaking for the future

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Executive Summary

The *Liveable Compact Cities Project Policy Position Paper* (Council of Mayors (SEQ), 2011b) found that public open space is an important feature of medium-density living in SEQ and the ways in which people are using open space are changing. It identified the need to address the following issues:

- How open space is currently being planned and the challenges being faced;
- The relationships among private, communal and public open space;
- Community attitudes towards open space provision, integration and connectivity with regional and sub-regional open space networks; and
- New initiatives and approaches being developed by Councils to address emerging challenges and needs.

The purpose of this *Issues Paper* is to investigate and report on these issues, as far as practical, with the intention of informing the scope of a *Toolkit* to be developed through this Open Space and Medium-Density Living Study. The *Toolkit* will comprise both statutory and non-statutory strategies to address issues for open space provision in medium-density housing.

Urban consolidation within Australian cities, despite its many recognized advantages, has tended to proceed without due consideration for the creation, preservation and enhancement of open space, including greenspaces, with a resulting negative effect on residents' physical, psychological, social and emotional well-being. A large and growing body of research-based knowledge on the positive role parks and other greenspaces play in enhancing the quality of urban life is influencing the way governments, planners, architects, developers, sustainability experts, housing and social justice advocates and residents view the crucial importance of available and accessible open space in our increasingly densified cities.

We must address concerns about climate change, economic downturns and food security, which form part of the global context for urban greenspace. Families are looking closer to home for more affordable outdoor recreational opportunities; residents of high- and medium-density urban communities are seeking places where they can grow their own food and compost green waste; and sustainability professionals are emphasizing the crucial role vegetation plays in carbon sequestration, cooling and reduction of greenhouse gases.

This *Issues Paper* provides the context for the development of a *toolkit* that will include recommendations for effective methods (both statutory and non-statutory) that Local Governments can use to facilitate a central role for open space in urban redevelopment and consolidation and that it meets the needs of a growing and increasingly diverse population.

The paper draws upon both a scan of available national and international literature and a consultation with key stakeholders achievable within the confines of the project.

What is urban open space?

Practitioners and researchers distinguish among different levels of spaces accommodating different activities and providing different benefits. There is general

agreement that a spectrum, continuum or hierarchy is a helpful way to conceptualise open space in urban contexts:

1. *Public open space*: areas that are publicly accessible and of varying sizes. It includes squares, town centre parks and open spaces and spaces that are capable of providing activities and amenities for large numbers of people. Also includes smaller local and neighbourhood parks.
2. *Shared (sometimes referred to as common or communal) open space*: within the territory of a group of dwellings, usually a relatively small space that only those residents have access to and can use.
3. *Private open space*: the gardens, yards, balconies, terraces, verandahs, courtyards and other spaces associated with a specific private dwelling.

In addition to this accepted hierarchy, the term *greenspace* is sometimes used interchangeably with open space and at other times to refer to spaces that are treed and green whether public or shared. Others use the term *urban common* or *commons* to refer to plazas and paved space sin the public realm. Parks are generally regarded as public spaces for recreation, open to all users.

The main findings of the literature scan

Misconceptions about the drawbacks of medium-density housing, along with poor planning and design, have led to ongoing resistance to its development. Perceptions persist strong ly among st planners, developers and the public that medium density is not family housing , a hang over from our ing rained suburban culture and history. Encouraging families to live in medium-density residential areas requires careful attention to open space design, especially to accommodate children's needs for outdoor play.

Inadequately designed, managed and maintained shared outdoor space has resulted in its under- or non-use and neglect or elimination of it in medium-density design. A limited understanding of the value of different types of open space has left some in Local Government development assessment unconvinced of the value of shared open space and willing to trade it away if there is good public open space nearby. Governance, in the form of community- or strata-title, can also present a formidable barrier to inclusion and provision of shared open space. Those who value it are seeking greater legitimacy and stronger planning tools to help them negotiate for its inclusion.

Open spaces are needed to support diversity and social inclusion, including the needs of children, pets, teens, older adults, culturally and linguistically diverse groups and a range of income levels. Open space, and in particular green open space, plays a crucial role in our physical, mental and emotional health and has social and safety benefits. It also plays an important ecological, climate change adaptation and sustainability role. Parks with greenspace should be differentiated from non-green parks and urban commons: while these latter forms of public open space perform an important function, they should not be seen as a substitute for green open space (as parks or on-site).

A needs-assessment and context-specific approach to the provision of open space ensures that the design of private, shared and public space will more closely meet the requirements of local residents. Post-occupancy evaluations are equally crucial to understanding on-going resident needs regarding open space and the effectiveness of current practice.

The need for further research

There is a need to understand more completely the diversity of residents' needs for access to open space in medium-density housing in SEQ, and, in particular, the role of on-site open space. While there is limited research generally of this kind, the literature findings suggest that on-site shared open space and public open space are not interchangeable. Rather, they play distinctly different roles in supporting the open space needs of people living in medium-density housing. Two separate investigations into medium-density housing in SEQ (Kennedy and Buys [2010] and Integrated Open Space Services [2007]) draw different conclusions about the value of on-site open space, allowing no clear conclusion to be drawn on its value to residents.

The absence of Post Occupancy Evaluations (POEs) in SEQ may well be resulting in a misunderstanding of the needs of residents. Rather than concluding that the poor use of shared open space is a reflection that it is not needed (as perceived by some developers, designers and Local Government planners), it may indeed be that these spaces are not used because of their poor design and the lack of congruence of fit between the spaces and resident needs. This is the conclusion reader(?) by Cooper Marcus (2003) in her extensive study of shared open space in the United States. There is a need for systematic POEs, using rigorous methodologies to study individual residential developments to offer meaningful and valuable insights to inform planning for residents' open space needs.

The South East Queensland context

This research has confirmed what is well known in planning circles: attitudes and practices within South East Queensland (SEQ) are frequently at odds with the research literature on open space and best practice. Councils are finding it increasingly difficult to secure local parks and, faced with seriously reduced budgets for open space, some are moving away from small neighbourhood parks to focus on larger parks in a well-connected open space network. Other more visionary Councils are being more strategic in purchasing land now, in the knowledge that both demand and land prices will continue to increase.

Planners and industry representatives have suggested that development is cost-driven, with on-site shared open space and car parking often the first to be traded. We can, however, note some emergent opportunities and innovations. State and Local Governments are developing alternative approaches to the park-area-per-capita approach, focusing on creating an urban open space network based on larger parks with more linkages such as shady, tree-planted connector streets, along with better quality and greater accessibility.

Some SEQ communities, such as Moreton Bay Regional Council and Redland City Council, are focussing on needs-based and qualitative assessments of open space provision in the development of more recent open space strategies (moving beyond the more traditional standards-based approach to open space planning). These approaches adopt increasingly sophisticated frameworks and tools to audit the demand, supply and suitability of open space with a focus on quality, diversity and connectivity, rather than mere quantity. In the Redland City Council's Open Space Strategy (2011), detailed open space planning from broad catchments to the neighbourhood level has helped raise awareness of the role of and functional needs for open space, increasing the capacity of development assessment planners to negotiate better open space outcomes. Ipswich City Council has adopted a planning approach that includes open

space provision as a key component of neighbourhood centres where they are supported by higher density housing.

Other innovative approaches to the provision of greenspace in SEQ include the following: re-use or shared use of school sites; provision of green roofs; capture of spaces between buildings and building setbacks, along with reclaimed land through road closures, to augment public open space (other opportunities may be available through the Australian Government's Emissions Trading Scheme [ETS] and Waste Levy initiatives); provision of electricity and Wi-Fi in open space to encourage greater use; and the potential for provision of incentives to developers for 'best-practice' shared open space outcomes.

Issues needing further investigation

A number of issues has been raised in this *Paper* that cannot be 'answered' by this Study. They are complex and require further investigation to explore fully all relevant implications:

1. Recommended site cover to accommodate the competing demands of shared and private open space, utility, car parking, water management and development feasibility. Further work would be needed to test and model different development scenarios for their implications;
2. The nature of incentives that could be used to encourage best practice provision of shared open space;
3. The absence of a local (SEQ) evidence base about residents' need for shared open space; and
4. Direction on implications of potential changes to titling arrangements (i.e., from strata to community and / or freehold title) in medium-density housing.

Scoping the *Toolkit*

Section 7 provides an outline of the proposed contents of the *Open Space and Medium-density Toolkit*, which has the following four components:

1. A strategic overview of the urban and planning context for providing open space to support medium-density living;
2. A 'Model Code' to guide the development of statutory provisions for open space within medium-density housing developments;
3. A (non-statutory) on-site open space guide to support the interpretation of the statutory model code; and
4. A (non-statutory) public open space guide specific to medium-density living needs.

1. INTRODUCTION

1.1. Background and Purpose

The Council of Mayors (SEQ) Liveable Compact Cities Project (LCCP) seeks to address policy, practice and market challenges to support the achievement of medium-density infill residential development in South East Queensland. Research under the LCCP (reported in the *Liveable Compact Cities Project Policy Position Paper* [2011b]) found that public open space is an important feature of medium-density living in SEQ, and the way in which people are using open space is changing. It identified the following issues to be addressed:

- How open space is currently being planned and the challenges being faced;
- The relationships among private, communal and public open space;
- Community attitudes towards open space provision; integration and connectivity with regional and sub-regional open space networks; and
- New initiatives and approaches being developed by Councils to address emerging challenges and needs.

The purpose of this Issues Paper is to investigate and report on these issues, as far as practical, with the intention of informing the scope of a *Toolkit* to be developed through this Open Space and Medium-Density Living Study. The *Toolkit* will comprise both statutory and non-statutory strategies to address issues for open space provision in medium-density housing.

For the purposes of this paper, medium-density housing means: *attached dwellings (villas, townhouses and apartments) between two and ten storeys* (Council of Mayors, 2011b:4).

In preparing this paper, reference has been made to national and international literature (noting that this was a literature scan and not a full literature review), and input from consultations with Local Government urban and open space planners, State Government agencies, the Urban Development Institute of Australia and the Queensland Conservation Council (see Appendix 1. for a list of Stakeholders consulted). Both processes were constrained by their coincidence with the Christmas and New Year holiday period. To achieve tight reporting timeframes, the findings of each avenue of investigation have been reported separately as literature findings and as consultation findings.

1.2. Context

> *Community groups, urban activists and some scholars have criticised urban consolidation, arguing that it can compromise the character and heritage of inner city neighbourhoods and can detrimentally impact residents' quality of life, by placing residents in noisy locations, by concentrating social disadvantage, by undermining social cohesion and by losing precious public open space to urban infill.*
>
> *Some planners, leisure scholars and greenspace theorists now suggest that Australian planning systems may be incapable of responding to the challenges that densification and concomitant population increases place on urban open spaces and greenspace* (Byrne, Sipe and Searle 2010).

As the quotation above suggests, urban consolidation within Australian cities, despite its many recognised advantages, has tended in many cases to proceed without due consideration for the creation, preservation and enhancement of open space, especially greenspaces, with a resulting negative effect on residents' physical, psychological, social and emotional well-being.[1] Too often, open space is an afterthought in the development process or viewed as an economic liability rather than an asset (cutting into developers' profits). However, a large and growing body of research-based knowledge on the positive role parks and other greenspaces play in enhancing the quality of urban life is influencing the way governments, planners, architects, developers, sustainability experts, housing and social justice advocates and residents view the crucial importance of available and accessible open space in our increasingly densified cities.

Concerns about climate change, economic downturns, Peak Oil and food security form part of the global context within which urban greenspace must be considered. As fuel prices rise, families are looking closer to home for more affordable outdoor recreational opportunities; residents of high- and medium-density urban communities are demanding places where they can grow their own food and compost green waste; and sustainability professionals are emphasizing the crucial role vegetation plays in carbon sequestration, cooling and reduction of greenhouse gases. The tops and sides of buildings are being converted to green-roofs and living walls and derelict alleys are being transformed into shared greenspaces for neighbourhood residents. Car-oriented lifestyles are slowly giving way to residential development that uses infill and brownfield sites to create compact, mixed-use communities that are more conducive to car-free living, walking and cycling.

We can predict some of the future economic, demographic and household composition factors that will further increase the demand for open space on or near medium-density housing sites:

[1] Many other factors explain why adequate on-site shared open space is not always provided in medium-density neighbourhoods, including a historical deficit, inadequate funds to purchase new land and the 'value' of on-site provision not being fully appreciated by developers and decision-makers.

- Greater cultural diversity, including more multi-generational households;
- Mortgage stress, resulting in both parents working, with attendant child-care demands;
- A high proportion of grandparents (up to quite elderly) caring for young grandchildren at home on a regular basis for several days during the work week (with needs for easily accessible nearby outdoor space);
- More people working from home (who will require outdoor recreation opportunities closer to their dwelling);
- Increasing numbers of people living with disability, both mental and physical, as the population ages (especially Baby Boomers);
- A higher proportion of single-person households (both young and older people);
- Shared households and other non-traditional housing arrangements (the result of higher housing prices, lack of appropriate/affordable housing options, unemployment or under employment, etc.); and
- More demand for "nearby nature" as housing densities increase, private open space decreases and fuel prices increase.

This *Issues Paper* provides the context for the accompanying *Toolkit* that includes recommendations for effective methods (both statutory and non-statutory) that Local Governments can use to ensure that open/greenspace plays a central role in urban redevelopment and consolidation and that it meets the needs of a growing and increasingly diverse population. The insights in this *Issues Paper* reflect a needs-assessment approach, user-based and context-specific, rather than a standards approach to determining open space requirements. Needs-based planning uses population forecasts, focus groups, interviews and surveys, post-occupancy evaluation, participant observation, behaviour observations and mapping and other tried-and-true methods to determine how people currently use (or would like to use) open space.

These methods can also be used to predict future needs, in terms of the numbers of people likely to be using the spaces and potential changes in the types of activities that may need to be accommodated. The needs-assessment approach reveals that open spaces must be designed to be flexible and adaptive (Byrne and Sipe 2010). A context-specific approach ensures that decisions about the provision of open space will be appropriate to the needs of a local neighbourhood or area.

What is urban open space?

While this may seem an easy question to answer, it is a huge topic of debate among scholars, researchers and practitioners, who distinguish among different levels of spaces accommodating different activities and providing different benefits. However, there is general agreement that a spectrum, continuum or hierarchy is a helpful way to conceptualise open space in urban contexts:

1. *Public* open space: areas that are publicly accessible and of varying sizes. Includes squares, town centre parks and open spaces and spaces that are capable of providing activities and amenities for large numbers of people. Also includes smaller local and neighbourhood parks.
2. *Shared* (sometimes referred to as common or communal) open space: within the territory of a group of dwellings, usually a relatively small space that only those residents have access to and can use.

3. *Private* open space: the gardens, yards, balconies, terraces, verandahs, courtyards and other spaces associated with a specific private dwelling.

In addition to this accepted hierarchy, the term *greenspace* is sometimes used interchangeably with open space and at other times to refer to spaces that are treed and green whether public or shared. Others use the term *urban common* or *commons* to refer to plazas and paved spaces in the public realm. Parks are generally regarded as public spaces for recreation, open to all users.

This *Issues Paper* provides a brief overview of some of the issues, trends, needs, attitudes and challenges involved in the provision of private, shared and public open space in and around medium-density housing developments in Australian cities, including in SEQ. The emphasis is especially on the need for greater attention to the design and provision of private and shared outdoor space and neighbourhood parks and their connectedness to each other and to other public open spaces. Private and shared outdoor spaces are especially important for households with small children, whose outdoor activities need to be monitored and for older people and those with limited mobility, who prefer and need opportunities to be outdoors while still close to home. Not only is shared open space important to the potential residents of medium-density housing (see LCCP Community Perceptions Research Report, 2011), it also provides a critical transition between the privacy of the dwelling and the 'public-ness' of neighbourhood parks and other outdoor spaces (Cooper Marcus 2003).

2. CORE ISSUES OF MEDIUM-DENSITY HOUSING

In many ways, the core issues associated with the social aspects of medium-density housing have not changed much in the last twenty-five years or so (see, e.g., Cooper Marcus and Sarkissian 1986; Sarkissian *et al*. 2004; Brisbane City Council, 2006; LCCP Community Perceptions Research Report 2011). Repeated research identifies the same concerns, expressed by residents of medium-density housing (described below).

When people were surveyed about their housing preferences in the 1980s, 1990s or 2011, they generally report that they support the idea of building at higher densities (i.e., higher than low density housing but not necessarily high density housing) and especially what is known as medium-density housing. They claim to understand the sustainability and health implications of the density imperatives. However, respondents tended to express the same concerns about higher density living:

- **Privacy** (acoustic and visual): Living in close proximity to your neighbours raises issues related to being observed (or overheard) in your own private space and observing (or hearing) others in theirs. Often privacy problems result from residents and their visitors not appreciating the constraints of medium-density living and not modifying behaviours (such as playing music or talking loudly on balconies at night);

- **Spatial requirements**: Inadequate living and storage space, especially for families;
- **Neighbourhood 'fit'**: Residents of single-family neighbourhoods worry that higher density developments will forever alter the neighbourhood character and become "concrete jungles";

- **Play and pets**: Lack of play-space for children and/or pets and the suitability of higher density housing, generally, for households with small children;
- **Governance**: Body corporate costs and loss of personal autonomy—a growing concern as community title (strata title) forms of governance increase;
- **Cost considerations**: Concern that shared outdoor spaces should not be too large, thereby costing more to maintain than smaller ones (or no provision at all). Smart design is preferred as a way of getting good value for money and a space that will actually be used; and
- **Neighbourhood impacts**: Potential effects of higher density housing on crime rates, traffic congestion, loss of parking spaces, loss of existing open greenspace and demographic make-up of local neighbourhoods.

That these issues continue to be raised and to influence neighbourhoods' support for (or resistance to) higher density development indicates that Local Governments, planners, developers, architects and others involved in the planning, design and building of higher density housing have not been entirely effective in their efforts to attract Australians to the benefits of higher density living. In part, this reflects a long history and culture of low density, single-family living. However, scepticism about the benefits of higher density living also indicates that the design of housing developments has generally not incorporated, nor paid sufficient attention to, the well-documented stated preferences and concerns of residents. It is clear, from a wide body of evidence-based and anecdotal research over several decades in Australia and overseas, that the quality and acceptability of medium-density housing are strongly influenced by the quality and design of open space, particularly shared on-site open space.

3. LITERATURE SCAN FINDINGS

A full list of references reviewed for this *Issues Paper* is in the References at the end of the *Issues Paper*

Findings from the literature scan are reported in three sections below:

- Section 3.1: Social and ecological functions of open space;
- Section 3.2: Issues arising from the literature scan; and
- Section 3.3 Practice issues.

3.1. Social and Ecological Functions of Open Space

3.1.1 Introduction: a variety of functions and benefits

There is a wide literature on medium-density housing but a dearth of Australian evidence about open space in this housing form. Open space in medium-density housing performs many important functions and contributes to the acceptability of this form of housing, which aims to address significant local, regional and global environmental and social concerns. In Australia, the negative perceptions often associated with medium-density housing from a social perspective appear to ignore the wide range of social benefits which residents (and, to some extent, neighbours) can enjoy in this housing form. These include:

- Shorter journeys to work, facilities and services;
- Reduction in pollution;
- Greater opportunities for social interaction and support;
- Greater opportunities for provision of social infrastructure;
- Opportunities to revitalize declining inner city areas; and
- Amelioration of problems commonly associated with geographic isolation and/or urban sprawl.

There is now widespread understanding that higher density housing is both socially and ecologically desirable. In general, many residents report their satisfaction with a small yard or garden, having found a large garden a burden. Older people appreciate opportunities for unforced social encounters close to home and locations close to services and facilities, reporting that the stress of travel in high density settings was a problem for them.

Children and young people are likely to find a greater catchment of peers to play and associate with within walking distance of their home. Child safety may be enhanced in cluster configurations where natural surveillance of shared open space permits adults to monitor small children's play. Safety and security of property, vehicles and the person may be enhanced by territorial boundaries and a clear sense of ownership and control by residents. Smaller housing forms and associated outdoor spaces reduce both the effort and cost of maintenance. Well-designed smaller dwellings can be easier and less expensive to heat and cool. Opportunities for neighbourliness may increase because of the proximity of neighbours with shared socio-demographic characteristics and values.

Many lower income people find the cost of maintenance of a garden prohibitive and appreciate the lower levels of maintenance associated with small units. Medium-density housing also permits community gardening in shared spaces where people can save money on food costs without the additional cost or responsibility of a private back yard. Low-income people greatly value shared open spaces because they frequently cannot afford holidays and therefore open space near home is particularly important. Many low-income people are single and some have lived in Single Room Occupancy (SRO) situations and are quite happy with a small dwelling and the protection of their privacy. Many low-income households are female-headed and the natural surveillance and child-supervision opportunities are important to them. Single-parent families, who are often low-income, also value a catchment of peers nearby for their children to play with.

Many older people have low incomes and many low-income people are elderly. Medium-density housing is particularly appropriate for older people if their specific needs are addressed through incorporating Universal Design principles. Many low-income people have a disability and medium-density housing provides opportunities for caregivers to live nearby so that independence can be fostered and appropriate care provided, while the resident still has an individual dwelling and a sense of autonomy (Sarkissian *et al*. 2004).

Thus, there are powerful arguments in favour of medium-density housing in Australia. The issue of open space in medium-density housing is another matter, however. Set out below is a summary of the social and ecological functions of open space in medium-density housing.

3.1.2 Social justice and equity

It is not enough simply to provide greenspace within an urban area. Some scholars and researchers make a distinction between the spatial distribution of parks, or availability and accessibility—how welcoming they are to diverse users (e.g., Talen 2010; Byrne, Wolch and Zhang 2009). Certainly, greenspaces should be well-networked and within walking distance of home, but if particular groups of users feel unwelcome or uncomfortable (people with disability, women, youth, older people, people from culturally and linguistically diverse (CaLD) backgrounds, Aboriginal people, etc.) the spaces are not working for everyone. It might be a necessary component of social equity in greenspace provision to distribute parks throughout an urban area, but it is not sufficient in itself. Low-income areas, for example, have been shown to need more parks and greenspaces than more affluent areas whose residents usually own cars and can afford to drive to more distant recreational and outdoor opportunities.

Topics and concerns to consider:

- Conflicts between and among traditional and non-traditional users of spaces and pressure for more grassed areas for active team sports (often influenced by sporting clubs); such spaces often favour male activities over those of women;
- Conflicts between different age groups using spaces (e.g., older children using and damaging younger children's'(?) tot lot(?) equipment if no provision is made for older children or teens);
- The needs of teen skateboarders and bike riders for areas specifically designated for their sport, though not in remote areas that are hard to reach by walking, cycling, or transit;
- Failure to recognize that certain cultural groups use space in different ways (picnicking, dancing, preparation of food, gatherings for celebratory or festive occasions, etc.) and that open spaces need to be designed to accommodate a wide range of culturally specific and diverse activities and uses;
- The needs of vulnerable and older users which can include: providing seating along park edges, easily accessible from the footpath; level, even walking surfaces and loop paths (walking circuits); seating every eight metres or so; plenty of shade and interesting plantings to engage interest; toilets; raised beds for gardening (if community gardening space is available); and areas that are safe from more rowdy users so that older or vulnerable users do not have to "run the gauntlet"; and
- The need to design and program spaces to reflect the following: leading practice; the results of targeted community engagement with local communities (needs assessment); and fit or congruence with identified local and predicted user needs (as well as local context).

3.1.3 The psychological and restorative benefits of access to nature

In the past, community open space planning and design have focussed primarily on physical activities and excluded consideration of the more subtle (but equally as important) psychological dimensions of health and well-being. Sport is valuable. Walking is excellent exercise, suitable for all ages, with demonstrated health benefits. Moreover, access to nature simply to enhance well-being is important. Both aspects and functions can and should be accommodated in complementary ways.

A wide body of current, international and statistically validated research on the benefits of 'nearby nature' attests to the extensive healing, restorative and therapeutic benefits

of access to nature. People tend to favour complex, varied landscapes that include water, dense ground-level vegetation, trees, views, level and even walking surfaces (important for older people, as well as those with balance issues, limited mobility, or who use wheelchairs or walkers), as well as open, grassy areas and greenspaces that are accessible and attractive in all seasons.

There is now considerable empirical and theoretical evidence for the positive effects that simply viewing natural scenes can have on human health. Simply by viewing nature, many aspects of human health and development can be markedly improved. The benefits are mostly psychological but important to older people: recovering from stress, improving concentration and productivity and improving psychological state, particularly of people in confined circumstances such as hospitals and high density environments. The flow-on effects for physical health have also been documented (Leather et al., 1998; Lewis, 1996; Kaplan, 1992).

Kaplan and Kaplan (1989) found that observing or viewing nature is an important form of involvement with it. Much of the pleasure that people derive out of nature comes from opportunities to observe and much of this observation occurs, not when people are in nature itself, but when they are looking out a window (Kaplan and Kaplan, 1989). Scenes of nature, particularly those depicting water, had a beneficial influence on the psychological state of humans. Kaplan (2001) found that apartment residents had enhanced wellbeing and greater neighbourhood satisfaction when they could look out onto more natural rather than more built settings. Satisfaction was far greater when residents could see even a few trees than when their view was of large open spaces (Kaplan, 2001). Urban residents who could see gardens found their neighbours to be friendlier and felt their housing development had a stronger sense of community, thus contributing to their neighbourhood satisfaction (Kaplan, 1985). Kearney (2006) found that having a view of natural environments (such as landscaping) increased residents' neighbourhood satisfaction and suggested that higher density living, such as high-rise living, could be more acceptable if residents have a natural view.

Some benefits of access to nature

Access to nature has been shown to provide the following benefits:

- Lower levels of anxiety;
- Lower stress levels and improved emotional states—the amount of time people spend in open greenspaces is associated with a reduced risk of developing stress-related illnesses;
- Lower levels of depression and negative thoughts;
- Reduced mental fatigue;
- Restoration of ability to focus attention;
- Help with other processes, such as self reflection, particularly since favourite places are also very frequently natural settings;
- Increased Quality of Life (QoL)—social engagement provides people with a meaningful social role that confers a sense of value, purpose, identity and attachment to one's community;
- A more active lifestyle and greater life satisfaction and health, facilitated by supportive outdoor spaces that are accessible and easy to use;
- Other QoL benefits such as possibilities of meeting people and socialising, the "simple joy of being outdoors" (fresh air, sunshine, gardening, watching singing

birds and the scenery); escape from indoors or from routine places; and good feelings or positive experience;
- Improved perceptions (and perhaps realities) of community safety—social interaction fostered by the use of open space can also enhance people's sense of community safety;
- Evidence of children's emotional and physical development reveals that contact with nature is essential to children's well-being, can lessen the occurrence of restlessness and acting-out behaviour; may lessen the amount of bullying; and may be related to fewer diagnoses of Attention Deficit Hyperactivity Disorder (ADHD) among children with access to greenspace;
- Teens' need for contact with nature: adolescents need to "hang out" with their friends, but recent studies show that they also like to be outdoors, especially in areas where they can look out without being seen (prospect and refuge). Access to natural places for refuge, solitude and reflection is beneficial to youths' positive identity formation, self-efficacy and other developmental tasks (Owens and McKinnon 2009); and
- Crime Prevention through Environmental Design (CPTED): recent research counters long-held beliefs about the negative effects of urban vegetation by emphasising the role it plays in increasing residents' use of public greenspaces (thereby increasing natural surveillance or "eyes on the street") and the possible role exposure to green places plays in mitigating some of the psychological precursors to violence among urban youth (Kuo and Sullivan 2001; see also Maller *et al*. 2009).

3.1.4 Ecological and sustainability functions of open space

Outdoor spaces, especially greenspaces, perform important environmental roles, as well as being beneficial for human health and well-being. For South East Queensland, we must consider the sub-tropical environment and the need for the design and locations of open and greenspaces (at all levels of the spatial hierarchy) to facilitate air flow and cooling, for stormwater and wastewater control and retention and to provide protection from sun, rain and wind. Medium-density housing design and the outdoor spaces within and nearby should consider the following factors identified by the Centre for Subtropical Design (2010):

Air movement and cooling and protection from elements

Private spaces (balconies, decks, patios and verandahs):

- Provide a sense of privacy, yet be connected to the outdoors;
- Be deep enough to accommodate a table and chairs and a barbeque;
- Be partially enclosed and not too exposed (partially recessed); and
- Work in conjunction with windows to provide views to greenspaces/scenery and ventilation for interiors of units.

Shared outdoor spaces:

<u>Communal areas</u>

- Should feature native sub-tropical vegetation;
- When large enough, can provide stormwater and grey water control and retention;

- When large enough, could provide space for growing food (individual garden plots); and
- Should include opportunities for outdoor cooking, reducing heat build-up within dwellings.

Spaces between buildings

- These spaces can serve connective, green, shelter and ventilation functions.
- Should be of sufficient size to enable air movement;
- Should be covered when functioning as transition zones to footpaths/streets for sun/rain/wind protection;
- If outdoor car parks, should be designed to have other functions (such as sitting/barbeque areas, bike / scooter / ball play); and
- Should not be considered as a substitute for greenspace.

Public spaces:

These spaces play an important function in augmenting the cooling and protection functions of public open space and on-site open space.

Roads, paths, walkways

- Provide important linkages from residential areas to green open spaces and encourage walking and cycling

Streams, drainage canals

- Can function as linear parks connecting residential areas to larger public greenspaces, providing wildlife and plant-life habitat.

Carbon sequestration and reduction of greenhouse gases (GHG)

All greenspaces, private, shared and public:

- Provide carbon absorption by plants and trees;
- When accessible and close to residential areas: can reduce production of GHG through reducing travel by residents to parks and recreational activities;
- Can provide space for food production, thus reducing GHG associated with travel to markets and importation of foreign-source foods;
- As part of carbon trading market, can produce revenue from carbon sequestration capacities, providing funds for greenspace upkeep and management.

Further, open space and greenery also play a role in supporting other ecosystem services, including air cleansing, water management and cooling.

A cautionary note

As important as these ecological and sustainability functions are, a trend is emerging that is cause for concern. State Government requirements for stormwater management, rainwater tanks, and so forth are in some cases taking precedence over provision of private/communal space within medium-density housing developments (see, for example, answers to Liveable Compact Cities Project [LCCP] Open Space Medium-density housing questionnaire provided by Brisbane City Council). The result is that by attempting to address multiple agendas in an *ad hoc* way, shared open space can in some instances be poorly planned and thus become unusable (such as open space at the edges of developments). It can be comprised mostly of vegetation or serve merely stormwater discharge functions. While it is clear that the ecological functions of greenspace are very important, they must be balanced with the other social benefits greenspace can provide. Within this same context, and particularly in five to ten-storey housing developments, other competing uses such as car parking can also compromise the quality of shared open space. This results in negative consequences for residents, especially children, older people and people with disability.

3.2. Issues arising from the literature scan

3.2.1. Governance

Because all five major Australian cities have policies that aim to accommodate at least 60 per cent of future growth within growth boundaries, the result must be increasing urban density. The SEQ Regional Plan establishes a target requiring almost 50% of new housing stock to be medium-density housing in infill development over the next twenty years. Accompanying that density will be a growth in the number of strata-titled properties (Forster and Hamnett 2008). In its 2011 Policy Position Paper, the LCCP discusses the role of community titling (also known as strata or cluster titling) in facilitating the development of medium-density housing since the 1960s. Body corporate costs and restrictions on the autonomy of purchasers can be major impediments to achieving broader occupation of medium-density development. The Council of Mayors (SEQ) is currently investigating opportunities for freehold and community titling arrangements, which will also need to consider the implications for the provision of shared open space.

Bodies corporate can establish by-laws for their building(s) and are responsible for the maintenance and repair of buildings and communal spaces, both indoors and outdoors. Bodies corporate can enact bylaws governing how (and even if) shared outdoor spaces can be used. Easthope and Randolph (2009) emphasise that bodies corporate constitute a fourth level of governance in Australia, with an increasingly important role in ensuring the maintenance and repair of significant parts of our cities. If urban consolidation is to be successful, the governance of strata title developments needs to be viable, cost-effective and inclusive. Local Government decision makers and planners need to be aware of the issues posed by community title concerning the maintenance of shared outdoor space. Strata by-laws can have potentially negative effects through

their power to regulate owners' and occupants' behaviour on common property, as well as the effects on the rights of children to a safe place to play.[2]

Jacqueline Vischer (1984) and Clare Cooper Marcus found in their post-occupancy evaluation of the medium-density False Creek South development in Vancouver (built primarily in the 1970s) that semi-private (shared open spaces) in some clusters or enclaves were never used. In other enclaves, children were specifically prohibited from using them, counter to planners' intentions. Management rules for shared outdoor space varied among enclaves; in some, use of it was severely limited owing to concerns about noise and damage to plantings by playing children. The implications of these findings for this research are that as consolidation progresses, the growing number of strata councils and their by-law making authority can have serious negative effects on the achievement of government-mandated policy objectives relating to the provision of on-site open space in medium-density housing, including the ecological, health and psychological benefits greenspace provides.

Australian legal scholar, Cathy Sherry (2008) emphasizes that community or cluster title legislation in Australia allows bodies corporate to develop by-laws to regulate owners' and occupants' behaviour on common property, including where and how children can play:

As a party to the Convention on the Rights of the Child, Australia has recognised children's rights to 'engage in play and recreational activities appropriate to [their] age' and agreed to 'encourage the provision of appropriate and equal opportunities for ... recreational and leisure activity'. While this provision creates no enforceable legal rights for individual children, it does suggest that **those who are responsible for the urban environment, in particular local or state governments, should consider the needs of children when they facilitate the creation of the legal and physical structures in which children live. To date, very little attention has been paid to the effect of high-rise and master-planned legal structures, in particular by-laws, on children's recreation and well-being** (emphasis added).

Sherry goes on to point out that, "private by-laws should not be able to unreasonably restrict or ban something as fundamental to children's well-being as outdoor play." Because the costs to individual children and the wider community are so substantial, Sherry concludes that "private citizens should not be able to counter efforts by government to combat obesity [or promote psychological and emotional benefits] by unreasonably restricting children's outdoor activity."

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[2] It is important to acknowledge that developers establish the initial by-laws for the housing development. Thus, it is important for them to put a 'good model' in place at the very beginning. Standard development conditions could assist in making these arrangements more effective for residents. While future residents can vote to change these by-laws, a majority vote is required.

High-quality and appropriate design of shared outdoor spaces play a crucial role in their continued use. That shared greenspaces are not used, or that their use has changed because of proscriptive strata by-laws, does not necessarily indicate that they are unimportant (and therefore are not needed). *Rather,* it suggests (as the international research confirms) that they are poorly designed, located, managed and maintained. This is a serious issue for planners, designers and bodies corporate. Local Governments need to recognize that their good intentions in requiring or encouraging on-site greenspace within medium-density developments are at risk of being trumped by inexpert design and by the changing attitudes of bodies corporate (i.e., the governing body of strata title properties).

3.2.2. Listening to "narratives of home"

In marketing medium-density housing, designers and developers encourage potential buyers and residents to associate particular images of 'home' with these new developments. The 'home' these professionals envisage for medium-density housing emphasizes not so much the activities focused within the housing unit—as they would be in high density, single-family housing—but rather, an engagement with a socially and architecturally diverse neighbourhood. In their study of medium-density housing in Melbourne, Fincher and Gooder (2007) examined the stories used by both supporters and opponents of higher density living in the context of often highly contentious public hearings about proposed developments. The ability of Local Government councils to mediate these opposing points of view is crucial to the outcome.

Because medium-density housing often takes the form of infill, rather than greenfield or brownfield developments, proponents must convince existing neighbourhood residents of its benefits. Fincher and Gooder found that architects wanted developers to recognize diversity in the surrounding neighbourhood and to reflect that diversity in the housing and site design as part of belonging to, rather than standing apart from, the existing community. Architects, developers and planners viewed medium-density housing as a 'bridge' between the type of home represented by the high-rise building—usually marketed to potential buyers as a kind of urban 'adventure', unsuitable for families—and the family-friendly, high density residential neighbourhood with its emphasis on family life within the home and yard.

A 2006 study for the City of Brisbane found that households with children were still the exception in higher density areas and that societal pressure to provide a 'proper' or 'traditional' home, in conjunction with quality-of-life concerns, tended to persuade couples to move to high density neighbourhoods once they became parents. An important component of this definition of the 'proper' place to raise children is the availability of a backyard space "for kids to be kids" (Brisbane City Council, 2006).

Well-planned shared outdoor spaces can function as a communal backyard. Parents' anxieties about living at higher densities, which can include fears about the perils of children playing on and around high balconies and windows, "stranger danger" from the surrounding neighbourhoods and children's exposure to hazardous traffic, can be addressed through provision of shared open space designed with children's needs in mind. This can include fencing open play areas and having some covered ground-level areas for all-weather outdoor play.

High-rise living may also be a problem for older people, especially single older people, who may experience great isolation in high-rise housing. With an ageing population, many of whom live alone, this is a growing issue that can be addressed in part by providing appealing, furnished and appropriately located shared open spaces. Walking circuits are another great design feature for older people, which can double as 'play circuits' for young children.

Decision-makers and planners can bolster their support for medium-density infill developments, in part, by listening to the stories supporters and opponents tell during the development approval process. These narratives are of more than academic interest: Elected officials and planning staff can learn a great deal about how residents define 'home' and what they want to see in medium-density developments, and how they will function to meet both initial and future residents' needs. Shared open space for children's play and other forms of recreation is an important component of that definition and Local Governments need to provide a strong counter-narrative and champion medium-density housing as a proper place for households with children.

3.3. Practice Issues

3.3.1. Trading urban commons (non-green) for greenspace

There is a trend towards increased use of the term 'open space' in relation to high density housing, with its focus on urban commons (hard, non-green spaces) and private open spaces etc., resulting in a shift away from public green/natural spaces in high density housing areas. High land costs in urban infill settings and limited funding to acquire, embellish and maintain parks are major drivers of this outcome in SEQ. From our reading of the literature from practice and academic study, this appears to be an over simplification of the issues. Local Governments need to increase usage of public open space in cost-effective ways, particularly given the high land costs in medium-density locations and the limits on funding from developer contributions to acquire and embellish public park infrastructure (i.e., the 'cap' set by the Queensland Government). Another factor is the need to accommodate a broader and more diverse range of leisure and recreation activities. They require public open space to accommodate multiple functions and higher usage (often resulting in an increase in paved surfaces to minimise maintenance costs).

As certain types of open space are not likely to be provided within medium-density neighbourhoods (e.g., district sports parks), there is also the need to provide greater accessibility to these facilities for residents living in growth corridors and activity centres.

For both groups (residents of high-density and medium-density areas), the value of open spaces was significant, the importance of open spaces was rated more highly than satisfaction with open spaces and green spaces were rated as more important than urban commons (Gold Coast City Council, Review of Parks Network by Dwelling Type: Stage 1 Report, 2007).

Municipalities must ensure that the definition of "open space" they use includes an emphasis on green and accessible open space. This is not only because of all the psychological and restorative benefits Nature provides, but also because of the

increasing tendency of non-green open spaces, such as plazas, open-air malls and other "urban commons" to be privately owned, 'commodified' and their use restricted (e.g., see Loukaitou-Sideris and Bannerjee 1993; Miller 2007). Local Governments must insist that publicly owned and accessible greenspaces are not negotiable and acknowledge that they also confer important benefits related to public health, community building, economic and adaptation to climate change.

3.3.2. Greenspace and New Urbanism

New Urbanism (NU), currently the predominant driving force in community residential development (and evident in many Australian cities), has contributed much to the design of compact, walkable, mixed-use and socially and environmentally sustainable communities worldwide. However, NU has also come under criticism for the tendency of its practitioners to neglect the value of shared open space within medium-density developments in favour of private and public spaces. Typically, systematic research by an experienced Australian planner-educator reveals that lawns often dominate those spaces and that the NU parks also lack a level of ecological and social sophistication (Forsyth and Musacchio 2005).

Clare Cooper Marcus (2003a; 2003b) (acknowledged as a leading international authority) has taken the New Urbanists to task for their assertions that rear lanes (alleys) and paved parking areas in NU communities function as shared outdoor space and that they are good places for children to play. She claims the New Urbanists are "throwing the baby out with the bathwater" when they designate shared outdoor spaces as "unassigned spaces" and eliminate them altogether. Cooper Marcus' point is that properly designed shared outdoor spaces are *no*t unassigned. She argues that they serve essential and specific functions. Citing extensive evidence based on research she conducted herself over several decades, as well as extensive observations in Australia since 1973, Professor Marcus identified the following seven features of successful shared outdoor spaces in medium-density housing:

1. It is bounded by the dwellings it serves and is clearly not a public park;
2. Entry points into this space from a public street or footpath are designed so that it is clear that one is entering a setting that is not public space;
3. Its dimensions and the height-to-width ratio of buildings to outdoor space create a human-scaled setting;
4. Each dwelling unit bounding the shared outdoor space has access to an adequately sized private outdoor space (patio, yard, balcony), which forms a buffer between the dwelling and the shared outdoor space;
5. There are clear boundaries and easy access between what is private (dwelling unit, patio, yard, terrace, courtyard) and what is shared;
6. As much care is focused on the layout, circulation patterns, planting plan, furnishings, lighting, of the shared outdoor space as is normally focused on the dwelling interiors. In particular, the design needs to focus on children's needs (play equipment, paths for wheeled vehicles, areas for exploratory play, etc.) since research clearly and consistently demonstrates that children will comprise more than 80% of the users of such spaces if they are designed with the above criteria in mind; and
7. The scale of such a space can vary from urban, rectilinear courtyards to more rambling suburban greenways as long as all the above six guidelines are followed, thus ensuring that the space is perceived as unambiguously neither private nor public, but shared (Marcus, 2003a).

Cooper Marcus concludes that some specific resident needs can be accommodated only by on-site provision of open space. In some cultural groups, for example, a mother may have limited territorial range: she may not be permitted to take a pre-school child to a neighbourhood park without another adult present. There may be serious implications for the independence, agency and social and territorial mobility of that child (especially if she is a girl in a traditional household) if she is confined to the dwelling or a small yard or balcony. Paying close attention to these points is vital to creating well-designed and well-used shared outdoor spaces in development sites. Local Governments and planners must closely scrutinize any proposed residential development based on New Urbanist principles to determine whether these basic, non-negotiable requirements have been incorporated into the site design.

3.3.3. The importance of neighbourhood parks

By definition, neighbourhood parks have limited areas, from pocket parks of less than a tenth of an acre (0.04 hectares) to entire blocks of 5-6 acres (2 to 2.24 hectares) and can include linear systems or parks. Because of their size, small parks cannot be everything to all people and often are limited in the amount and diversity of vegetation they can provide and the habitat they can offer to wildlife. Inevitably, they are limited in the range of activities they can accommodate and hence limited in meeting the diverse range of community needs. However, for residents in low-income families, perhaps without access to a private vehicle, these parks perform very significant functions in aiding children's growth and social and physical development. Developers are often eager to locate pocket parks within larger developments as a strong marketing tool, sometimes at the expense of one larger park. However, these pocket parks are often not large enough to accommodate local residents' diverse needs, are poorly designed and thought-out and tend to be developed on poor-quality land (see LCCP Open Space Medium-density questionnaire, Brisbane City Council).

As Forsyth and Musacchio (2005) point out, referring specifically to *small* parks, that they are often relegated to the status of 'stepchild' within municipal and metropolitan open-space systems. However, in an era of fiscal constraint and high urban land values, they can be a very important source of local greenspace, particularly for those living in higher density neighbourhoods, who may lack adequate private and shared outdoor space. Therefore, careful attention to the design of neighbourhood parks can ensure that they meet local needs for recreation, relaxation and respite that may not otherwise be available.

Some of the features of successful neighbourhood parks are outlined below.

Features of successful neighbourhood parks

If the majority of local residents are households with children:

- Playground equipment with cushioning material underneath for pre-school children, sandboxes;
- Comfortable seating nearby for caregivers with clear views of entire play area;
- Challenging play for older children (age eight and over), such as slides (slippery dips), climbing walls, etc.;

- Space for team sports;
- Lawn area for running, throwing/kicking a ball around, separate from the team sports area;
- Barbeque and picnic area close to play area;
- Toilets and drinking fountain close to pre-school play area; and
- Paths wide and level enough for prams and strollers.

If the majority of local households are young adults without children:

- Expansive lawn area with some shaded areas for a variety of casual outdoor activities (sunbathing, sleeping, rolling down a hill, reading, picnicking, chatting, tossing a Frisbee, etc.);
- Stage/amphitheatre for casual or programmed performances;
- Barbeque and picnic area;
- Trails for walking/jogging/cycling;
- Tennis and/or other hard-surfaced courts; and
- Bicycle parking with good visibility from all areas of the park.

If the majority of local residents are older adults:

- An entry plaza with nearby toilets, interesting and attractive vegetation and shaded and/or covered seating to facilitate socializing and to accommodate those who do not care to venture further into the park;
- Safe, smooth walking route around perimeter of park;
- Choice of a few paths through the park, clearly marked for easy wayfinding, with frequent opportunities for sitting;
- Paths wide enough for two wheelchairs to pass; and
- Lawn area for bocce, lawn bowling, etc. with shaded/covered perimeter seating.

Additional features any age/household would want in a nearby park (especially if they lack shared outdoor space):

- Fenced dog exercise area;
- Tilled land and/or planter boxes for gardening (with adequate aisles in between for wheelbarrows and gardening tools and for walking or manoeuvring a wheelchair);
- Snack or coffee kiosk, or space where a mobile food truck could set up and be visible; and
- Links via footpaths to residential areas and to other parks and greenspaces to create an open space network.

Depending on their size, not all neighbourhood parks can accommodate all of the features listed above. Limits to local council funding for maintenance can also restrict the kinds of amenities that neighbourhood parks can offer. However, needs assessment and attention to local context can ensure that neighbourhood parks are designed to accommodate as many of the diverse needs of local residents as possible, reaffirming their important role in the greenspace network. These parks are a complement to, rather than a substitute for, on-site shared outdoor space and should not be used as a substitute for providing that shared outdoor space specifically on the sites of medium-density housing developments.

3.3.4. The need for post-occupancy evaluation

There is a need for better understanding of residents' needs for access to open space in medium-density housing, and, in particular the role of on-site open space. This need could best be informed by systematic post-occupancy evaluation (POE). A POE is a systematic evaluation of a designed and occupied setting from the perspective of those who use it (Cooper Marcus and Francis 1998). A POE can tell us what works, what does not and what has been overlooked in the design and programming of outdoor space. The U.S.-based Project for Public Spaces (PPS) uses POE methods to evaluate how well public open space works from the perspective of a variety of user groups and offers ways to improve both the design and the programming to make parks, plazas and other spaces more accessible and successful. These methods include: participant observation in the public space; interviews with users; activity mapping; and a method called Rapid Ethnographic Assessment Procedures (REAP), pioneered within the U.S. National Park Service, to identify issues and build bridges between parks and local communities and to illuminate significant cultural values and meanings embodied by parks (Taplin, Scheld and Low 2002).

Despite extensive overseas research identified in the Issues Paper, there is limited research generally of this kind on the issues of the use and quality of shared open space in medium-density housing in SEQ. Research by Kennedy and Buys (2010) conducted in six inner city Brisbane neighbourhoods[3] in Brisbane (2006-2009) suggests that most residents prefer to keep to themselves and valued privacy in shared spaces, not liking the idea of sharing communal space with others. While they appeared happy to address neighbours, they tended to seek a sense of community in their neighbourhood, rather than the development. (This view is supported by a wide literature on the concept of 'community'.) The Kennedy and Buys research suggests further that desire for social contact with neighbours may reflect the views of older residents, rather than younger ones.

In interpreting these findings, it is important to note that the areas investigated were inner city settings (other than Hamilton). The majority of respondents were singles or couples, with very few families with children younger than 18 years (and only one interview with a parent with young children).

We can surmise, therefore, that these findings are unlikely to reflect the needs of households with families or how residents' attitudes may possibly change throughout their life cycle. Research commissioned by the Gold Coast City Council (Integrated Open Space Services, 2007b) into use of shared open space by occupants of low-rise (<5 storeys) and high-rise (5+ storeys) housing had a higher representation of families with children in medium-density housing, even allowing for visitor populations. By contrast, with Buys and Kennedy's findings, this research suggests that respondents both highly valued and highly used shared open space. Relaxation, outdoor enjoyment and socialisation were the key recreational activities in shared spaces. Occupants in 5+ storey apartments were the highest users of shared spaces. They also valued areas for outdoor exercise and gardening. Outdoor areas for children's play and teen recreation were also valued by both residents and visitors (but to a lesser extent by residents than visitors).

[3] Highgate Hill/West End, Tenerife, New Farm, Kangaroo Point, Fortitude Valley and Hamilton

Neither of these pieces of research allows clear conclusions about the relative value or role of open space or their inter-changeability to meet the needs of residents. Access to POE using rigorous methodology to study individual residential developments would offer some meaningful and valuable insight to inform planning for residents' open space needs.

The absence of POEs conducted in medium-density housing in SEQ may well be resulting in the misunderstanding of the needs of residents in relation to open space, particularly shared open space. Rather than the poor use of shared open space reflecting that it is not needed (as perceived by developers, designers and Local Government planners – see Section 3 of this *Issues Paper*), it may indeed be that these spaces are not used because of poor design. POEs in SEQ may also reinforce the literature findings that on-site shared open space and public open space are not interchangeable, but instead play distinctly different roles in supporting the open space needs of people living in medium-density housing.

4. THE POLICY AND DELIVERY FRAMEWORK IN SOUTH EAST QUEENSLAND

Local Government plays a leading role in the regulation of multi-unit housing and the provision of open space for community use. It does so within the policy framework described below.

4.1. The Statutory Framework

4.1.1. Sustainable Planning Act 2009 (SPA 2009)

The SPA 2009 is Queensland's primary legislation guiding planning and development assessment in Queensland. It is a whole of government framework that aims to deliver comprehensive and integrated assessment and decision making. This is achieved primarily through Local Government planning schemes and development assessment activities.

Medium density housing is regulated through typical provisions of a planning scheme, including location, density, building height and bulk, setbacks, site cover and car parking provision, amongst other considerations. Open space is addressed in two main ways:

1. Through provisions for communal and private open space within the site of multiple unit developments, through provisions typically specifying minimum allocations of shared open space and private open space; and
2. The provision for public open space as part of a greenspace network planned and managed (in the main) by Local Governments, funded in part through infrastructure charges allowed under the Act.

The SPA 2009 provides a range of powers for imposing charges, conditions and agreements relating to development infrastructure servicing the local area, including the networks associated with water cycle management, transport and public parks and land for local community facilities. Infrastructure planning forms an integral component of land-use planning and the preparation of Planning Schemes, with all Council's required to prepare a Priority Infrastructure Plan (PIP). However, recent changes to infrastructure charging arrangements under the Sustainable Planning (Housing Affordability and Infrastructure Charges Reform) Amendment Act 2011, establish limits on the amount Local Government can levy for trunk infrastructure[4]. Funds raised through infrastructure charges can contribute to the cost of providing open space in accordance with the trunk infrastructure provided for in the PIP. Local Government may also use credits and offsets, allowing payment of charges at a different time, the direct supply of infrastructure or the supply of land and / or embellishment of land in lieu of payment.

In addition, Local Government can impose conditions for non-trunk infrastructure (SPA 626A) or enter Infrastructure Agreements (SPA 660), which are not limited to trunk infrastructure (and generally associated with larger developments).

A PIP sets the desired standards of service (DSS) for public park infrastructure. The DSS can include requirements for a park network that accommodates a range of park types (e.g. informal use, sport, corridor link, etc) and for different park catchments (i.e. local, district, metropolitan or regional). Different DSS can be set for different parts of the Local Government area (e.g., general urban areas, Centre locations).

4.1.2. SEQ Regional Plan 2009 - 2031

The SEQ Regional Plan is the pre-eminent plan for the SEQ region and establishes dwelling targets that should be achieved through Local Government plan making and development assessment activities. Powers are provided via provisions included in the Sustainable Planning Act 2009 (SPA).

The SEQ Regional Plan identifies diverse and affordable housing as an important issue and supports the development of a more compact urban form through increased provision of infill and medium-density housing. The Plan also establishes the importance of an integrated public accessible greenspace network to cater for community and environmental needs. This refers to land which serves multiple purposes including creating a sense of place, promoting quality of life, protecting biodiversity and natural areas, along with supporting adaptation to the impacts of climate change.

4.2. Other State Planning Instruments

The SPA 2009 enables the preparation of statutory Regional Plans (RPs), State Regulatory Provisions (SPRPs) and State Planning Polices (SPPs) to promote consistent

[4] Defined as development infrastructure identified in an approved PIP, adopted infrastructure resolution, or a condition imposed by a Local Government. Where a Council does not have an approved PIP, the Draft State Planning Regulatory Provision (Adopted Charges) applies.

regional outcomes. Of greatest relevance to open space and medium-density housing planning are the following:

- SEQ Regional Plan 2009 - 2031 - discussed above; and
- SPP 1/07 Housing and Residential Development: the focus is on planning schemes addressing the need for housing diversity.

In addition, the State Government has developed the Queensland Planning Provisions, which set out standardised definitions, zones and format for planning schemes and a requirement to include a strategic framework for the overall policy direction described therein.

Relevant State Government Strategies

While beyond the statutory ambit of the SPA 2009, the *Queensland Greenspace Strategy 2011-2020* is a key outcome of the Queensland Growth Management Summit, which seeks to help secure and provide better public access to greenspace in Queensland and recognises the effects that continued strong population growth in SEQ would have on demand for greenspace. The scope is publicly accessible land and does not include shared open space. The Strategy establishes key directions for enhancing access to greenspace across the State. These include securing more greenspace for public recreation through land purchase and other initiatives (such as the use of surplus government land) and facilitating better access to State and private land for recreation.

A further strategy is to seek improved open space outcomes through the planning framework established under the SPA 2009, by preparing regional open space network plans at the regional level for key growth areas, including SEQ. These plans will seek no net loss of open space within the network, support for ecosystem services, connectivity through an integrated network and community engagement.

The Strategy also recognises the diversity of attributes that contribute to high-quality open space to support urban communities and promotes a guideline used in the planning for greenfield growth areas in SEQ administered by the Urban Land Development Authority (ULDA). The *Park Planning and Design, ULDA Guideline No. 12* (ULDA, 2011) establishes 6 principles for park design, defines a series of park types and roles and sets out planning and design standards for each (both quantitative and qualitative). While not applicable beyond Urban Development Areas, the Guideline is also referenced by local developers and practitioners.

The Queensland Government has also developed the *South East Queensland Outdoor Recreation Strategy 2010*. Outdoor recreation refers to recreation or sport activities undertaken in natural, rural and urban open space that does not significantly alter those places. While its focus is primarily on the use, access to and management of recreation areas, like the Greenspace Strategy, it seeks integration of recreation infrastructure development through the State's planning system.

4.3. Council of Mayors (SEQ) Initiatives

4.3.1. Next Generation Planning Handbook (NGP Handbook, 2011)

The *NGP Handbook* (Council of Mayors, 2011a) is a recent initiative promoting new ways of planning for the suburbs, towns and cities of SEQ, addressing concepts of affordable housing, smart growth, form-based codes and an SEQ Place Model. The intention is to provide guidance on both strategic and statutory planning to Councils. *The NGP Handbook* describes a series of urban places and proposes performance outcomes for development within the context of these places.

The Urban Neighbourhood is the place most typically associated with medium-density living. Performance outcomes of relevance are defined for row houses, low-rise apartments and medium-rise and high-rise apartments. Table 1 summarises the relevant outcomes and assessed implications of these for open space provision and the development of the *Toolkit* as part of this project. As indicated, the *Toolkit* is likely to provide further advice to build upon that provided in the *NGP Handbook* for Low Rise Apartments.

Table 1: Lot and Building Scale Modules for Open Space Provision (NGP Handbook)

Module: Primary elements	Implications
Row house or terrace house • 70% maximum site cover • 30m^2 minimum private open space per dwelling (at rear) • No specification for shared open space	– No constraints to high-quality open space presented. – Appropriate not to include shared open space in row or terrace house dwelling type. – No difficulties for preparation of the *Toolkit*.
Low rise apartment • 60% maximum site cover • 16m^2 minimum private open space per dwelling (verandah / balcony) • Shared open space at ground level of 50m^2	– Amount of shared open space not differentiated for different size developments (i.e. same for 10 or 100 dwellings). – Private open space adequately provided for. – Site cover likely to constrain opportunity to plan for high-quality shared open space (supported by illustration of setbacks and site cover). – *Toolkit* likely to provide contrary advice on shared open space supply and possibly site cover (flagged in this Paper as a matter needing further investigation).
Medium-rise and high-rise apartments • Maximum site cover not specified • Generalised guidance for private, communal and public open space	– Limited guidance, no identifiable constraints. – No difficulties for preparation of the *Toolkit.*

4.3.2. LCCP Policy Position Paper

The LCCP Policy Position Paper (October, 2011) reports the results of research conducted to date by the COM (SEQ) as part of the LCCP, including aspects of the housing market that influence housing affordability, demand for medium-density development and price and viability drivers. It concludes with a series of recommendations for increasing medium-density housing that address practice, policy and market practices. A number of these recommendations have implications for open space.

Recommendations to improve current practice in design provide opportunities, including development of a portfolio of good practice (PR3), design principles (PR4) and a demonstration project (PR5). Each of these initiatives could help to address current inadequacies in the design and development of on-site open space (shared and private). Similar opportunities are presented in the marketing opportunities recommended (LCCP, 2011:61), in particular the suite of marketing tools (M1).

Some recommendations may potentially conflict with achieving high-quality, on-site open space outcomes (as described in Section 3 of this paper):

- Recommendation PP1, which suggests exploring opportunities to increase freehold tenure as part of medium-density development and the potential implications for the provision of shared open space (as discussed above in Section 4); and
- Recommendation P012, suggesting exploring the opportunity to relax planning scheme requirements for shared open space for medium-density development where adequate private space or access to public open space in close proximity to the site is available - which has given rise to this Open Space and Medium-Density Living Study.

5. CHALLENGES AND OPPORTUNITIES IN SOUTH EAST QUEENSLAND

To understand the challenges and opportunities facing open space provision in medium-density neighbourhoods, consultations were held in December 2011 with Local Government land use, open space and community planners from SEQ, the Queensland Parks and Leisure Association, the Department of Local Government and Planning, the Department of Communities, the Urban Development Institute of Australia and the Queensland Conservation Council (see Appendix 1: Stakeholders Consulted). The findings are summarised below.

5.1. On-Site Shared and Private Open Space: Challenges

There are significant challenges to achieving high-quality open space on-site, within medium-density housing developments in SEQ. These challenges are attributed to competing priorities for available space, perceptions of the value of open space and limited understanding of residents' needs, as follows:

Competing priorities and relative merit

- The quality of shared open space is considered by Local Government participants to be poor, while the development industry views it as mixed. The former perceive shared open space to be undervalued by developers, with shared open space often considered after landscape buffers, car parking, clothes drying and other service areas, water tanks and on site drainage have been planned.
- Cost is a primary driver of on-site open space outcomes for developers. In a soft market such as at present, price sensitivity is high and developers are likely to design to the minimum, seeking savings through reducing car parking, balcony size and shared open space, particularly at the low end of the housing market. While the industry reports no particular issues with current requirements for open space provided on-site, it seeks a balance between flexibility and liveability in any new regulatory environment;
- On-site open space is an 'after thought' and should be planned as an integral part of overall site planning, maximising opportunities for multiple functions of shared open space (such as leisure and water-sensitive design).
- The capacity of Councils to challenge priority given to on-site open space is constrained by performance-based planning which offers little guidance on the quality or functional attributes for that space, especially regarding shared open space. The capacity to achieve better outcomes within Local Government is further challenged by limited appreciation by decision makers of the value of open space, time constraints in processing development applications and limited staff resources. Setback requirements are relied on by some development assessment officers to leverage ground-floor shared open space.
- There is a lack of clear and strong direction within planning schemes to leverage better quality outcomes that include the functional qualities required of the space provided. An evidence base for shared open space to support this is considered important to influence both developers and Council decision makers;
- Policy conflicts occur between State Government requirement for rainwater tanks (ground-floor) and bio-retention in shared areas, compromising land available for high-quality shared open space. One solution to this could be to request advice on how building matters will be addressed at a high level at the development application stage.
- Higher land prices in the inner city limits the affordability of ground-level shared open space; and
- Shared open space in small developments is difficult to incorporate, detracts from yield and adds little to amenity.

Residents' needs

- Developers are providing communal facilities such as gyms (in lieu of shared open space) which may aid with marketing, but are not meeting resident needs (and are often unused). Further, the structured use of shared spaces (such as for a swimming pool or mini-golf) restricts the use of these spaces by diverse groups;
- Inner city units are developed primarily for the investment market, with planning for medium-density housing targeting single adults and couple adults with no children. There is a need to provide for more diverse households beyond this demographic to accommodate changing household needs over time, as well as to cater for more diverse households attracted to medium-density living.

- The use of space by different cultural groups must also be considered: BBQs and swimming pools are unlikely to appeal uniformly to diverse cultural groups;
- That shared open space is generally unused is considered a reflection of a lack of need for such a space. However, that may also reflect its design: it may not invite use by residents; and
- Space-saving measures to increase housing affordability (such as in reduced storage, shared car parking and fewer rooms) are leading to a 'spill-over' effect on shared and private open space.

That development cost and scale are significant factors influencing provision of on-site open space was confirmed in investigations into the feasibility and viability of medium-density development in SEQ (Place *et a.l,* 2011), which found the following:

- Viability is more difficult to achieve on small sites (<800m^2);
- The most sensitive variables influencing feasibility are: building cost, land cost, sales rates, interest rates, density yield, car-parking provision and planning time frames; and
- Car parking provided most commonly at 1.25 spaces per dwelling, adding between $25,000 and $50,000 per dwelling (the latter for basement parking).

This study also identified scope to improve development feasibility for medium-density housing by raising site cover from 30 - 50% (typically in SEQ) to 60 to 80% and reducing car parking provision to 1.25 spaces per dwelling. Such measures would further increase pressure on on-site open space.

5.2. Public Open Space Network Development: Challenges

Local Government open space and land-use planners report difficulties in planning for open space networks to support increased population density associated with medium-density housing. As with common and private open space, these difficulties can be attributed to the cost of supplying and maintaining open space and the perceived relative value of open space. In the face of these challenges, many in Local Government are seeking pragmatic solutions that are altering expectations for the likely achievement of quality and quantum of open space. Some are reconsidering fundamental approaches to planning for open space, away from a standards-based approach to a one more focused on the quality of outcomes; some still prefer a standards-based approach.

Other solutions include the following:

- Setting different Desired Standards of Service for parks in different locations (e.g. between Greenfield / general urban areas and higher density/ activity centres)
- Increased access to park types that can't be accommodated in medium-density neighbourhoods but serve these resident's needs (e.g. district sport parks, or nature parks)
- Identifying ways to achieve more permeable walking and cycling networks at a finer grain to promote these forms of recreation (e.g. requirements for mid-block links and connected pathways).

The challenges identified include the following:

Costs vs. Benefits

- Difficulties are now likely to increase, with limited funds available through infrastructure charging to secure open space and the belief that funds for open space will be capped. Capped charges mean greater difficulty for open space to compete for limited funds with other trunk infrastructure (such as roads);
- The timing for purchase of open space after the development has occurred is a further challenge;
- There is a need to raise awareness amongst developers and decision makers of the important role of open space in supporting community wellbeing, biodiversity and climate change adaptation (reducing heat sink and heat island effects) and the need for evidence to support the cases for on-site open space;
- Structural changes, including population ageing, climate change, Peak Oil and food security add to the demands being placed on on-site open space within the community; and
- There is a widely held view that open space 'comes last', after planning for traffic, water, drainage and water sensitive urban design.

Quality of Open Space

- Concerns about the over burdening of existing open space resulting from increased population density and underlying risk of the contested use of open space;
- Conversely, some parks are not well used, primarily because they are not well designed for use that is relevant to residents. There is also a need for variety in the function and type of park experience being offered to provide communities with diversity; and
- The view that trade-offs are essential in terms of quality and/or standards of provision for open space, in favour of more pragmatic solutions, such as providing fewer, larger, connected spaces with strong neighbourhood pedestrian and cycle linkages. However, the fragmented supply of open space creates a significant challenge to achieving the desired connectivity.
  Staging of infill redevelopment can see the prime 'easy' sites (e.g. Albion Flour Factory, Milton Railway) being redeveloped many years in advance of the more difficult surrounding areas (e.g. where land amalgamations, remnant landholders exist), making it more difficult fiscally to achieve good public outcomes as well as leading to the loss of key central spaces.

Planning Approaches

- The quantitative standards-based approach of providing a certain amount of open space *per capita* is not delivering good outcomes for some: little diversity of experience is offered in local parks (especially for children) and needs to be achieved across an open space network; open space provided by developers continues to be poorly located (left-over) spaces in some cases, although this is becoming less so under the guidance of PIPs; and small pocket parks are expensive for Councils to maintain, although they are perceived as preferred by developers for marketing purposes;
- Selection of areas for medium-density housing must consider the capacity to provide open space either to support increasing demand or to recognise that higher

density housing changes the nature of the demand for and use of open space (e.g., the use of a park [rather than the backyard] for a BBQ);

- Planning for regional-level open space needs is rarely adequately undertaken and is limited by cross-boundary (Local Government) issues;
- Different contexts have different needs for open space. For example, differences exist between public open space opportunities in medium-density living in the inner city and that in middle-ring suburbs (with fewer options for outdoor activities and events); and
- Limited capture of unused and/or unallocated space (such as surplus government land) for increasing open space (e.g., Fitzgibbon Chase and school sites) or valuing the inherent worth or intrinsic value of existing space (e.g., for biodiversity or conservation purposes).

5.3. Emergent Approaches and Opportunities

Emergent Approaches

The most significant emergent trend facing open space provision in medium-density housing is the perception of open space as a 'cost burden', with open space viewed as a feature that can be foregone to improve development feasibility and reduce Local Government purchase and maintenance costs. There is a trend towards pragmatic outcomes that intensify the use of existing spaces, while aiming to create better connectivity and accessibility within an integrated open space network.

Another emergent trend is a perceived inter-changeability between public and shared open space, apparently reflecting the belief that one can compensate for the other where supply is limited. This approach is mirrored in the LCCP Policy Position Paper, which suggests the potential to relax requirements for on-site shared open space where public open space is in close proximity. The re-allocation of on-site shared open space to private open space is another emerging practice - for some practitioners, the view is that the most important types of spaces are *public* and *private*.

There is a need for much stronger evidence about the value of on-site shared open space to residents (and therefore to developers) than is presently available. There is also a need for leading practice examples (demonstration projects) where on-site shared open space is well planned, furnished and used.

The form and type of on-site shared open space provision may need to be varied for different scales of development and different urban settings (e.g., inner city and suburban areas). Ipswich City Council is preparing additional guidance to support its current practice of flexibility in applying Desired Standards of Service relative to the prevailing demographic make up of the catchment and associated needs. A related issue is the tension between achieving high-quality provision at the front end of development, whilst retaining the flexibility for future residents to influence the use and design of communal/shared spaces to meet their needs. There is a timing issue between when development approval is granted and when new residents move in.

Councils are finding it increasingly difficult to secure local parks and, faced with seriously reduced budgets for open space, some are moving away from small neighbourhood parks to focus on larger parks in a well-connected open space network. Some councils are being more strategic in purchasing land now, in the knowledge that both demand and land prices will continue to grow increase.

Opportunities

Local Governments are adopting significantly more sophisticated approaches to planning for open space, partly in response to a State Government policy initiative to adopt strategic planning approaches to open space (under the SEQ Regional Planning framework and its more recent Queensland Greenspace Strategy). They are also responding to the limitations of a standards-based approach applied through infrastructure planning (PIP) approaches to date. This approach is resulting in more diverse, locally appropriate outcomes and increased understanding within Council planning departments about the need for open space and the kinds of outcomes that should be sought through development negotiations.

The following initiatives are noted:

- The traditional park-area-*per-capita* approach to providing open space is not achieving adequate open space outcomes. State and Local Governments are developing alternative approaches, focusing on creating an urban open space network based on larger parks with more linkages, better quality and greater accessibility. Shaded streets with wide verges are regarded as important connectors supporting walking and cycling. There is a view that the concept of open space could be broadened to include an integrated and connected network of parks and 'connector' streets;
- There is a focus on qualitative assessment of open space in more recent open space strategies (Moreton Bay Regional Council and Redland City Council). These approaches adopt more sophisticated frameworks (than used previously) and tools to audit the demand, supply and suitability of open space with a focus on quality, diversity and connectivity of open space, rather than solely on the quantum. Associated with this approach is adoption a more strategic approach to open space planning that considers the wider catchment and promotes *landscape-oriented design* seeking greater connectivity between housing and open space networks through urban form;
- The evidence-based and collaborative approach to preparing Redland City's Open Space Strategy provides a good example of developing a more informed and deliberate practice in both planning scheme making and development assessment. Detailed open space planning from broad catchments to neighbourhood level has helped raise awareness of the role and functional needs for open space, increasing Council's development assessment planners' capacities to negotiate better open space outcomes; and
- The adoption of a planning approach that seeks to use open space provision as a key component of the centres of neighbourhoods supported by higher density housing (Ipswich City Council).

The proposed *Open Space and Medium-density Living Toolkit* is perceived as an important opportunity to promote the value of open space and its contribution to health, social and natural values and raise its profile as a legitimate form of infrastructure within the planning and development assessment arena.

Policy recommendations in the Policy Position Paper (LCCP, 2011) addressing marketing and best practice, discussed in Section 4, also provide the opportunity to raise the level of awareness and standard of practice in designing open space to support residents' needs.

Infrastructure Agreements provide the opportunity to provide an infrastructure credit to a developer that will be refunded over time as other infrastructure contributions are made to Council, allowing greater flexibility to Councils in raising funds to purchase open space.

Innovations

Various innovative ways of improving open space delivery have been identified through consultations:

- Innovative use of space such as the re-use or shared use of school sites, provision of green roofs, capture of in-between spaces between building and building setbacks, along with reclaimed land through road closures, are needed to augment public open space. Other opportunities to innovate in public open space supply may also be available through the Australian Government's Emissions Trading Scheme (ETS) and Waste Levy initiatives;
- Programming and embellishments, such as sufficient electricity supply (i.e. to accommodate evening uses and community events) and Wi-Fi are increasingly important in open space use; and
- The potential for incentives to be provided for 'best practice' shared open space outcomes.

6. MATTERS FOR FURTHER CONSIDERATION

A number of issues have been raised in this *Issues Paper* that cannot be 'answered' or quantified within the Open Space and Medium-density Living Study. These complex issues will require further investigation for us to understand fully the implications of any specific directions provided. Some of the issues identified to date are the following:

1. *Recommended site cover* to accommodate the competing demands of on-site shared and private open space, utility, car parking, water management. Further work is required to test and model different development scenarios to assess development feasibility implications. Nevertheless, there is a need to resolve the apparent conflict between proposed site cover of 60% suggested in the *Next Generation Planning Handbook* for low-rise apartments and the proposal in the LCCP Policy Position Paper;

2. The nature of *incentives* that could be used to encourage best practice provision of shared open space;
3. The need for a *local (SEQ) evidence base* about residents' need for on-site shared open space; and
4. Direction on implications of potential changes to titling arrangements (e.g., from strata to community and / or freehold title) in medium-density housing.

Further, policy debate and resolution is required for what have been identified as the following policy conflicts:

1. The emerging practice and recommendation in the LCCP Policy Paper to relax requirements for on-site shared open space where public open space is in close proximity to a site or where there is adequate private open space (on the basis of a perceived lack of need rather than a sound evidence base that residents *do not want* shared open space). This approach conflicts with best practice that provides evidence in favour of *well designed* on-site shared open space;
2. The *Toolkit* is likely to provide contrary advice to that in the *NGP Handbook* for Low Rise Apartments; and
3. The conflict between State Government policy and Local Government emerging practice to focus on the development of larger, well-connected parks in preference to smaller pocket parks.

The literature scan identifies a range of different roles for open space across the spectrum of public open space, shared open space and private open space, as well as common roles (such as providing greenspace, cooling and ventilation and health benefits). Further clarification of these roles, and guidance on their interplay and potential for 'trade-offs' between these spaces will be articulated in the *Toolkit*.

7. SCOPING THE *TOOLKIT*

It is proposed that the *Open Space and Medium-Density Toolkit* contain the following four components:

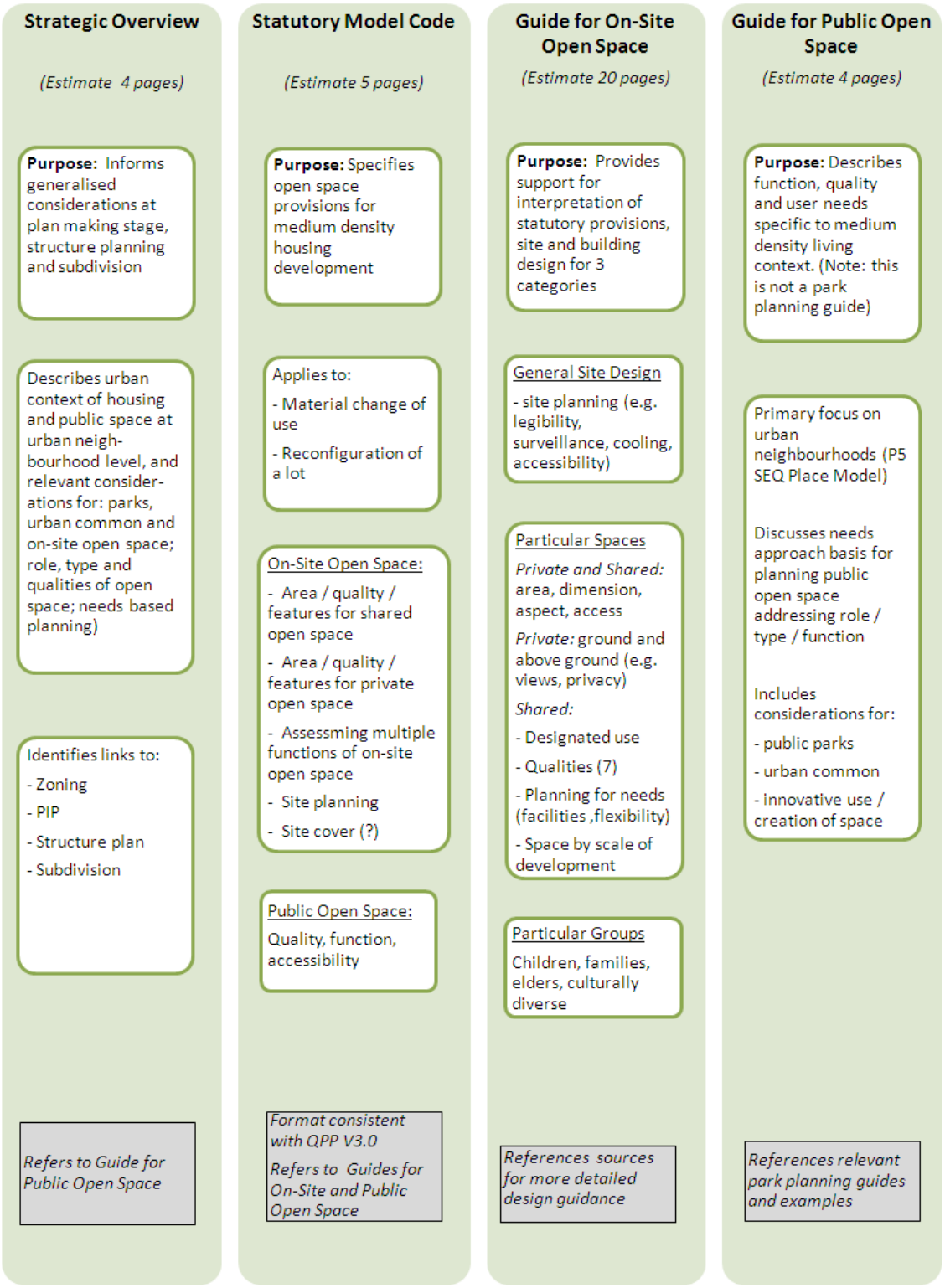
1. A *Strategic Overview* of the urban and planning context for providing open space to support medium-density living;
2. A *'Model Code'* to guide the development of statutory provisions for open space within medium-density housing developments;
3. *A (non-statutory) Guide for On-Site Open Space* to support the interpretation of the statutory model code; and
4. *A (non-statutory) Guide for Public Open Space* specific to medium-density living needs.

Each of these parts is outlined in Figure 1 below, which provides a preliminary outline of the proposed structure and nature of the *Toolkit* contents.

The primary focus of the *Toolkit* is on urban neighbourhoods, aligned with the SEQ Place Model defined in the *Next Generation Handbook* (LCCP, 2011:15), which identifies those neighbourhoods as areas where medium-density housing is dominant.

It is important to clarify expectations about the scope of the *Toolkit*. There is a hunger within Local Government to answer difficult questions associated with the level of on-site and public open space allocations appropriate for medium-density housing areas. The *Toolkit* can address the matter of public open space in a generalised way, as public open space planning involves detailed investigations into need, supply and other local contextual matters. It is appropriate for such work to occur through Councils' own planning processes in developing desired standards of service as part of their infrastructure planning activities.

Figure 1: Proposed Scope of *Toolkit*



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APPENDIX 1: Stakeholder Consultation (December 2011)

Local Government Workshop

Participating Organisations:

Council of Mayors (SEQ)

Ipswich City Council

Gold Coast City Council

Logan City Council

Brisbane City Council

Redland City Council

Queensland Parks and Leisure Association

Carly Jeavons, Moreton Bay Regional Council

Queensland Conservation Council,

Simon Baltais, Member, LCCP Advisory Panel

State Government Agencies

Steve McDonald and Dave Batt, Department Local Government and Planning

Paul Kennett, Department of Communities (Recreation Services)

Urban Development Institute of Australia

Duncan Maclaine, UDIA