

ENVIRONMENT DESIGN GUIDE

AN INTRODUCTION TO SOCIALLY RESPONSIBLE PLANNING AND URBAN DESIGN

Jenny Donovan

Jenny Donovan, BSc (Hons), Dip UD, MA, MPhil, MPIA is an urban designer and principal of the Melbourne-based urban design and town planning practice David Lock Associates. Jenny has a particular interest in designing built environments that support people to meet their own needs, fulfil their potential and maximise their ability to contribute to society.

Summary of Actions Towards Sustainable Outcomes

Environmental Issues/Impacts

- Planning and urban design can affect people's chances of meeting their needs. This is an important consideration in the context of the triple bottom line (TBL) sustainability framework.
- The built environment often results in undesirable social and environmental impacts. Poor planning and urban design can reinforce social disadvantage for residents.
- Socially responsible planning and urban design can help to restore equity and enable people to meet their needs.

Learnings

- Architects and designers should seek to understand sites and developments in terms of their ability to enable the people who experience them to meet their needs. Where possible, this understanding should be developed and confirmed in consultation with those people who experience the site and will experience the development.
- Architects and designers should be familiar with the theory of human needs and be aware of the ways in which the design of the built environment can affect human needs.
- Architects and designers should plan for 'incidentalality', that is, plan a built environment that meets multiple human needs simultaneously.

Related EDG Papers

- GEN 55, February 2004, 'Mental Landscapes – The forgotten Element in Sustainable Design'
- GEN 70, November 2005, 'Liveable Communities – Fostering Sustainable Cities and Regions'
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The way we form our urban areas, the spaces they create and the values they embody, has a profound effect on the quality of people's lives. To paraphrase Winston Churchill, we shape our cities, and afterwards our cities shape us.

This paper outlines some of the ways in which architects, planners and urban designers, by shaping the built environment, influence the ability of people to meet their needs. The paper draws on Abraham Maslow's theory of human motivations to present a model for socially responsible planning and urban design. The framework is intended to assist existing planning strategies to mitigate various forms of social disadvantage. The model can help improve the prospects of people to meet their own needs, fulfil their potential and contribute to society.

Keywords:

urban design, planning, human needs, Abraham Maslow



Melbourne's Federation (Fed) Square is host to a busy schedule of celebrations and gatherings.

(Image: A Campbell, 2010)

1.0 INTRODUCTION

No-one should be seriously disadvantaged by where they live.

– UK Social Exclusion Unit, Department of the Deputy PM (2001)

Contemporary planning and urban design practices in Australia aim to provide positive economic, social and environmental outcomes for communities. In pursuit of these laudable aims, planning and urban design sometimes produce suboptimal outcomes that reduce the ability of people to meet their needs. Planning is an allocative mechanism that influences how environmental resources are distributed (Harvey 1988) and affects the ways in which people experience

their surroundings and the types of activities that occur there (Rappoport 1977 and Porteous 1977). The design of built environments, therefore, limits or bounds opportunities for individuals (Bentley et al 2003). This paper explores ways for planners to create environments that enable people to meet their needs.

How can planners account for the diverse range of human needs in decision making? Planning and urban design professionals require a framework to guide decision making. This paper draws on Abraham Maslow's hierarchy of needs theory to sketch out what a socially responsible planning and urban design practice might look like.

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As a practicing urban designer, this paper draws on my professional experience and is intended to spark a debate about the best ways to design for the full spectrum of human needs. The paper will outline the problems with current planning practices and explain the imperative for socially responsible planning. It will present a model of socially responsible planning and urban design, identify barriers to its success, and recommend techniques for its application.

2.0 THEORY OF HUMAN NEEDS

Planners and urban designers require a theory of human needs to guide their practice, without which they have no way of gauging the potential impacts of development proposals on the people who will experience the site. What constitutes human needs and theories about how they are formed and ordered is a contested area; however the American psychologist Abraham Maslow provided a major contribution to the field in his paper 'A Theory of Human Motivation' (1943a) and book *Motivation and Personality* (1943b).

According to Maslow, an individual's needs are likely to be varied and constantly changing in response to environmental and physiological stimuli. They will also progress through stages. Maslow suggested that human needs are similar to instincts and play a major role in motivating behaviour. Maslow emphasised that if an individual was to grow and develop as a person and achieve their potential, a process he called 'self-actualisation', a person had to first fulfil their basic physiological and material needs. Failure to meet lower needs stifles the ability of individuals to meet higher-order needs.

Maslow's hierarchy of needs is usually expressed as a pyramid (figure 1). The foundations of the pyramid are made up of the most basic needs, while the higher-level, more complex needs are located at the top of the pyramid. As people progress up the pyramid,

needs become increasingly psychological in nature and relate to people's emotional and social condition. Consequently, the need for love, friendship and intimacy become important once basic needs are met. Further up the pyramid, the need for personal esteem and feelings of accomplishment take priority.

These needs fall into two categories: the bottom three levels are *deficiency* needs that a person becomes aware of when they are not met, for example hunger and thirst. Maslow's hierarchy suggests we are motivated to satisfy these basic needs in order to avoid unpleasant feelings or consequences that will distract a person from meeting higher order needs. The other levels represent *growth* needs. These do not stem from a lack of something but rather from a desire to grow as a person.

Physiological Needs

Physiological needs form the foundation of Maslow's hierarchy. These serve basic functions that are vital to survival, such as the need for water, air, food and sleep. Maslow believed that these needs are the most basic and instinctive needs in the hierarchy because all needs become secondary until these physiological needs are met.

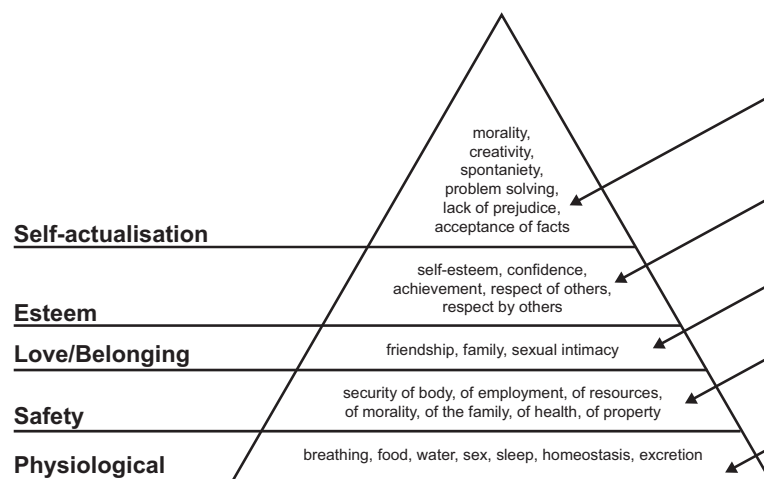
Security Needs

These include needs for safety and security. Security needs are important for survival, but they are not as demanding as the physiological needs and tend to have a more intellectual component. Examples of security needs include a desire for steady employment, health care and a safe neighbourhood.

Social Needs

Social needs relate to our connections with others and sense of belonging. They include needs for involvement with others, to love and be loved, and to offer and receive affection. Maslow considered these needs to become more pressing motivations once physiological and security needs are met. The ability to make

Needs category



Some indicative planning and design considerations to meet those needs

- Opportunities to participate and engage in society
- Opportunities to learn skills and meet challenges (universities, sports grounds etc.)
- Buildings and spaces that reflect the values of the people that experience them (religious buildings, monuments).
- Design for privacy, adequate housing, opportunities for a wide range of social interactions
- Overlooking of public realm, controls on vehicle behaviour, adequate supply and access to healthy food and water, good access to transport, opportunities to engage in business
- Shelter, access to food, pollution control/minimisation, climate mitigation, waste removal and processing infrastructure

Figure 1 Maslow's needs hierarchy (adapted from Maslow, 1943b)

relationships such as friendships, romantic attachments and families help fulfil this need, as does involvement in social, community or faith groups.

Esteem Needs

Esteem is the first growth need and becomes a more important motivation once the first three needs have been satisfied. These include the need for self-esteem, personal worth, social recognition and achievement that is recognised by others.

Self-Actualising Needs

This is the highest level of Maslow's hierarchy of needs. Self-actualising people are self-aware, aware of their latent talents and limitations and interested in fulfilling their potential.

3.0 THE PROBLEM

A planning and urban design practice that is focussed on helping people to meet their needs, requires a theory of human needs to guide it. While we acknowledge that the theory of human need is contested, we argue that the best designed site is one which enables its inhabitants to progress through Maslow's hierarchy. Conversely, a poorly designed site is one which *inhibits* the ability of people to progress through Maslow's hierarchy.

Sites do this by the way they distribute environmental 'goods' and 'bads' and the way they frame the options open to the people that experience them. Any intervention in the built environment is likely to affect the distribution of environmental goods (fresh air, clean water, experiences of nature, beauty etc.) and environmental bads (pollution, social disadvantage etc). For example, the construction of a fast road may improve the access of someone living at its end to get to places where they can experience these goods, but the new road may also result in the people living nearby being more affected by environmental bads such as noise and pollution. The design of that same road may also make it difficult for people to cross it, deterring them from accessing and benefitting from whatever opportunities that lie on the other side. When distance or barriers deny people access to the experiences they need to thrive (e.g. education, healthy food, job opportunities, exercise) their wellbeing is something that happens despite and not because of their surroundings.

The social symptoms of built environments that fail to offer their inhabitants the opportunities they need have been documented by Jackson (2002), Louv (2005) and Kavanagh et al (2007). The problems that correlate with a poor quality physical environment include poor nutrition, poor physical and psychological health, lower educational attainment, lower rates of social engagement, increased rates of alcohol consumption and lower life expectancy. These problems are often exacerbated by the workings of the market and the way planning and urban design occurs. Present planning practices and property development and real estate market outcomes often compound disadvantage, where

the poorest and most marginalised communities are also those with the lowest levels of environmental quality (Kavanagh et al 2007). This creates a vicious cycle, which must be broken to achieve improved outcomes for the people that the built environment is meant to serve. The UK's Commission for Architecture and the Built Environment (CABE 2006a) states that if the negative cycle is maintained it 'is likely to have significant adverse environmental, social and even economic effects'.

This paper suggests that a dysfunctional relationship between people and place is a contributing factor to adverse planning outcomes. Where a place does not help its occupants to meet their needs, the capacity of those occupants to maintain that place is diminished. This situation represents a 'toxic' relationship where the people have a negative impact on their surroundings and those surroundings have a negative impact on them. Trubka, Newman and Bilsborough (2010) argue that low-density peripheral urban development, rigidly segregated with poor connections to transport and commercial activity, locks people into disadvantage.

The undesirable outcomes of poor urban design are likely to be compounded in the future when peak oil and climate change make it increasingly difficult to service our cities in their present form. The increasing cost of fuel and transport threatens mobility, and the increased cost of electricity threatens comfort of homes in extreme weather events. The increasing competition for scarce resources will mean that people living in peripheral, low-income, low-density and car-dependent suburbs will find it increasingly difficult to travel and enjoy a good quality of life. With reduced ability to use a car, it will be harder for those people to access opportunities for social interaction and exercise, get to meaningful employment or education, or to access healthy, tasty food (ITPOES 2010).

The VAMPIRE index (Vulnerability Assessment for Mortgage, Petroleum and Inflation Risks and Expenses) developed by Jago Dodson and Neil Sipe (2008) of Griffith University demonstrates these risks. The index identifies the relative degree of socio-economic stress in suburbs in Brisbane, Sydney, Melbourne (Figure 2), Adelaide and Perth and concludes:

The result is a highly regressive pattern in which the impacts of higher fuel costs and increased interest rates fall on those with least capacity to absorb these impacts. Worse, the deficits in urban infrastructure and services meant the more vulnerable households had less ability to adapt to higher fuel costs by taking public transport.

(Dodson and Sipe 2008)

The collective effects of poor planning and urban design borne by society are documented by the British Commission for Architecture and the Built Environment report, *The Cost of Bad Design* (CABE 2006a). These include:

- higher management and maintenance costs
- higher policing costs, e.g. greater crime and

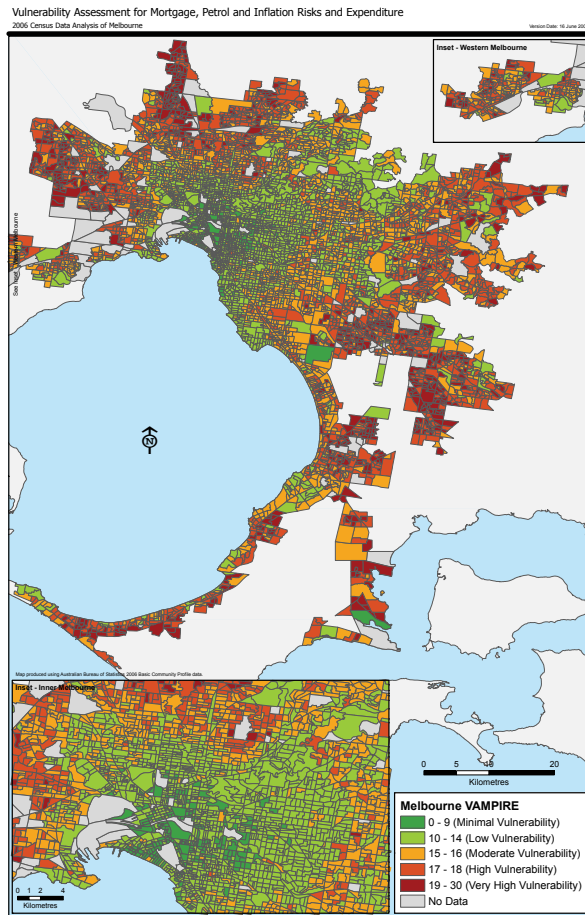


Figure 2 Vampire Index for Melbourne
(Image: J Dodson and N Sipe, 2008)

vandalism in marginalised communities

- increased healthcare costs, e.g. the costs associated with increased incidence of illnesses
- costs associated with failed attempts at remediation
- the cost of early replacement of housing stock for housing providers and individuals
- higher environmental costs as people are forced to travel far afield to meet their needs
- financial and social costs for residents resulting from developments that foster a poor image, crime and stress

Such costs are borne disproportionately by the poorest in the community. These outcomes are profoundly unjust, rendering our poorest citizens less likely to fulfil their potential, contribute to society or reach goals other people in more fortunate areas can realistically aspire to. This impoverishes us all, and demands the attention of planners and urban designers and everyone who has a say in the design and management of our cities.

4.0 A MODEL OF SOCIALLY RESPONSIBLE PLANNING AND URBAN DESIGN

Built environment practitioners have an opportunity to consider and address the adverse effects of the built environments and urban form. A good planning and urban design practice would take steps to minimise adverse outcomes and maximise positive ones. Better urban design which considers social needs can help cultivate a healthy relationship between people and place, empower citizens, and address the risks of oil shocks, recession and climate change.

This paper sketches out an approach to planning and urban design that gives explicit recognition to the fact that the built environment affects human needs. This approach will be referred to as socially responsible planning and urban design (SRPUD) and contends that good design is design that supports rather than thwarts people's ability to meet their needs, thrive, and fulfil their potential. SRPUD would seek to nuance conventional design by increasing the emphasis placed on people's needs and the relationships people have with their surroundings. It seeks to complement other approaches like universal or inclusive design (Burton and Mitchell 2006) (CABE 2006b), which is the design of products and environments able to be used by all people, irrespective of age or ability.

4.1 SRPUD in Context

While planning decisions play a role in influencing people's ability to meet their needs, they are not the only factors that affect these variables. The best possible environment could be designed but if the people within it felt at risk from attack because of factors such as their race, gender or sexuality, they are less likely to be able to enjoy the qualities of that environment. Likewise economic factors influence the ability of planners to implement plans and people's ability to find rewarding work. Consequently planning is only a part of what is necessary to meet people's needs, and so it should be part of a broader suite of strategies to address these wider issues. For example, political priorities, fiscal incentives, health promotion and marketing campaigns are all essential components in enabling people to make informed choices and exercise the opportunities open to them. In other words, planning is a critical component to respond to these issues but is not sufficient to produce desirable outcomes without other measures. As a result, SRPUD is an approach to planning and urban design that seeks to complement other measures and create the optimal circumstances for them to take effect. By putting these issues explicitly on the planning agenda SRPUD may also provide a focus for integrating policy initiatives to get it happening.

4.2 Incidentalities

An implication of Maslow's theory is that planning interventions aimed solely at meeting one need might inadvertently reduce the ability of people to meet other,

higher-order needs. Architects and designers must consider the interdependency of needs when designing for the built environment.

Given the interconnected and fluid nature of our needs (sometimes our most pressing need is for shelter, sometimes privacy, sometimes shade, sometimes rest, sometimes exercise), a SRPUD model can guide decision making to help planners to plan for 'incidentalness', that is, a built environment that meets multiple needs simultaneously.

Fundamentally, this means that whatever the principal objective of a development – whether, for instance, to house people or to provide employment – a SRPUD design considers how it can meet secondary or incidental needs. This makes it possible for someone whose primary purpose for going to a place to meet a particular need to also have other needs met, meaning there is no opportunity cost for meeting a particular need. An example would be a walk to a station (getting to the train being the primary purpose) that took people along a route that was lined with native trees, adjoined a nature reserve, tennis courts and a café. Such a route may incidentally allow a commuter to experience nature and seasonal change, hear bird song, obtain exercise, watch people and build up social bonds with no or very little opportunity cost. Likewise public art or activities at the station can provide people with opportunities to do something while they wait for the train and enrich what may otherwise be wasted time.

In order to facilitate 'incidentalness' and allow people to meet multiple needs effectively, planning interventions would benefit from considering the following questions:

- How does the development enhance people's ability to meet their needs when compared with the pre-existing condition? Even in areas of high social disadvantage, places that appear unutilised may have informal uses that are valued by the local community (examples include spaces that are used as an occasional gathering place, place for celebrations, informal community gardens, or places which have an association with historic events). Being aware of these uses or values may help the designer reconcile them into the design either onsite or elsewhere.
- How does the development create the optimal circumstances for people to engage with it? In particular this means designing to ensure that a person is not subject to unreasonable discomfort and perceptions of risk that might deter them from using a space or travelling to a place required to meet their needs.
- How well is the development integrated with its surroundings? Good integration requires careful consideration about how the development can minimise conflicts and maximise opportunities for users and passers-by to benefit from its amenity, social or cultural value.
- Do the spaces created foster social interactions? This requires the provision of safe, accessible comfortable and attractive spaces that could be occupied by individuals or groups of different sizes that are adjacent to, but off line from, areas of high pedestrian volume.
- Does the development utilise the natural environment (such as trees to provide shade, filter pollution, buffer intrusive uses or buildings) to help meet the needs of the people that experience the area with minimal ecological cost?
- Does the development provide for signage or structures that communicate any points of interest about the history of the site?
- Does the development promote a sense of ownership for the people who use the space? Do opportunities exist for them to contribute to its design, maintenance and use?
- Does the sites manager's utilise metrics and qualitative analytical tools to assess the effectiveness of SRPUD measures and facilitate the meeting of standards?

4.3 Cultural Inclusiveness

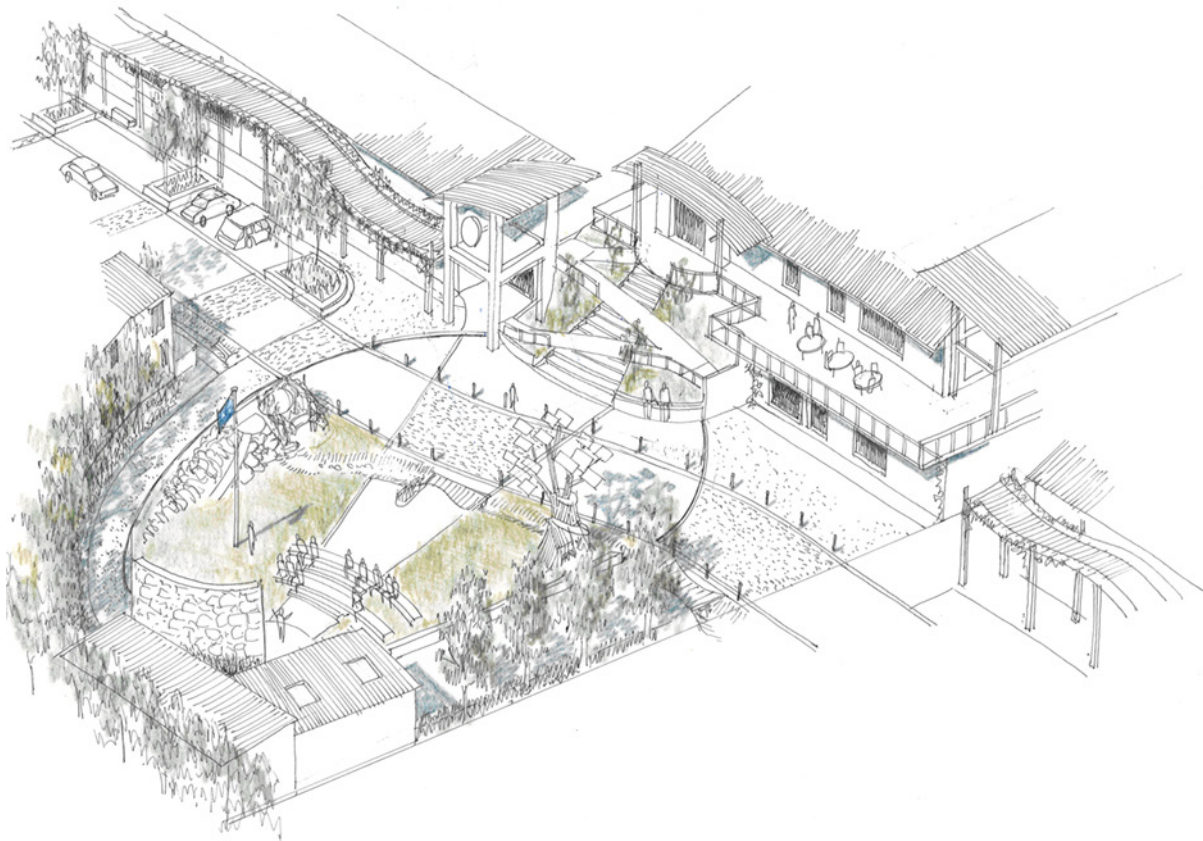
The filters with which an individual draws conclusions about their surroundings will be informed by their cultural experiences and values (Porteous 1977). Consequently, different people will perceive the same environment in different ways. The cultural make up of urban communities typically evolve at a faster rate than the built environment that houses them. For example, Footscray has been the home to several different ethnic communities – Italian, Vietnamese and East African – in recent years, each one inheriting effectively the same built environment the previous community called home. SRPUD requires design to be adaptable to the changing cultural values of the incoming community rather than 'hardwired' for a particular culture. Suggestions for a process of design that can accommodate these values and characteristic products are outlined below in section 5.

4.4 The Barriers to SRPUD

There are a number of barriers to implementing a SRPUD approach.

Despite the fact that no-one sets out to design socially irresponsible environments, they often occur. The built environment is extremely complex and our interactions with it cannot always be predicted, as they are drawn through people's unique combination of values and perceptions (Porteous 1977). Even well meant design sometimes has unintended consequences.

It is difficult to measure the extent to which built environment design choices are responsible. It is possible to measure many of the factors that influence people's ability to meet their needs, such as housing diversity and affordability, quality of housing, accessibility of local services and facilities, road configuration and allocation to modes, landscaping and distance to employment opportunities. However,



Extract of concept design for a community hub, reconciling diverse and complementary uses to create an attractive focal point for the local community (Illustration: J Donovan, 2010)

the actual outcome and interplay of these factors is harder to understand and measure. Moreover, the UK Commission for Architecture and the Built Environment (CABE 2006a) observes that resources tend not to be allocated to achieving benefits that cannot be quantified.

The UK Commission for Architecture and the Built Environment also states:

isolating the value added by good design is not necessarily simple. Often, in the private sector, it will be someone other than the developer who benefits, especially if returns from good design are slow to come through or the added value arises after the development has been sold to an end user or investor. This problem is compounded by valuation and accounting methods often give low priority to design quality as a generator of value to business.

(CABE 2006a)

Furthermore, places that are experienced holistically (such as a neighbourhood or town centre) are typically in multiple ownerships, and while this diversity is what brings vitality and richness, it also brings complexity in the timing of investment and development, the prioritising of appropriate initiatives, and the integration, coordination and management of initiatives.

Lastly, developers do not have to bear the long-term cost of development that is not socially responsible,

as this accrues to the community. This can lead to situations in which designing to minimise long-term running costs and social implications is not as high a priority as keeping down building costs or responding to current market conditions. Developers may therefore not recognise the value of good design or they may discount it because it is hard to measure or because they perceive limited benefit to themselves. As noted by the Commission for Architecture and the Built Environment:

A firm that does not have shareholders willing to defer immediate profit in exchange for extra community value later on, or which doesn't have the capital to carry higher initial costs, may not see the benefit of investing in good design. This is, of course, an important reason why the planning system has to inject the requirement for quality into the system by insisting on good design.

(CABE 2006a)

5.0 SOME TECHNIQUES FOR IMPLEMENTING SRPUD

Creating a socially responsible planning and design approach that accounts for human needs is a work in progress. What follows is intended as a starting point to help planners cater for the needs of inhabitants.



VegOut Community Garden St Kilda, combining social and aesthetic objectives and providing people with incidental opportunities to grow food (Image: J Donovan, 2010)

A city designed to SRPUD standards would seek to create a level playing field of opportunity for people to meet their needs locally, with little opportunity costs. It would seek to ensure that every space and building within a city is effective in supporting people to enjoy a good quality of life and fulfil their potential. Identifying these actions is a matter of getting the process and the product of SRPUD right.

5.1 Process

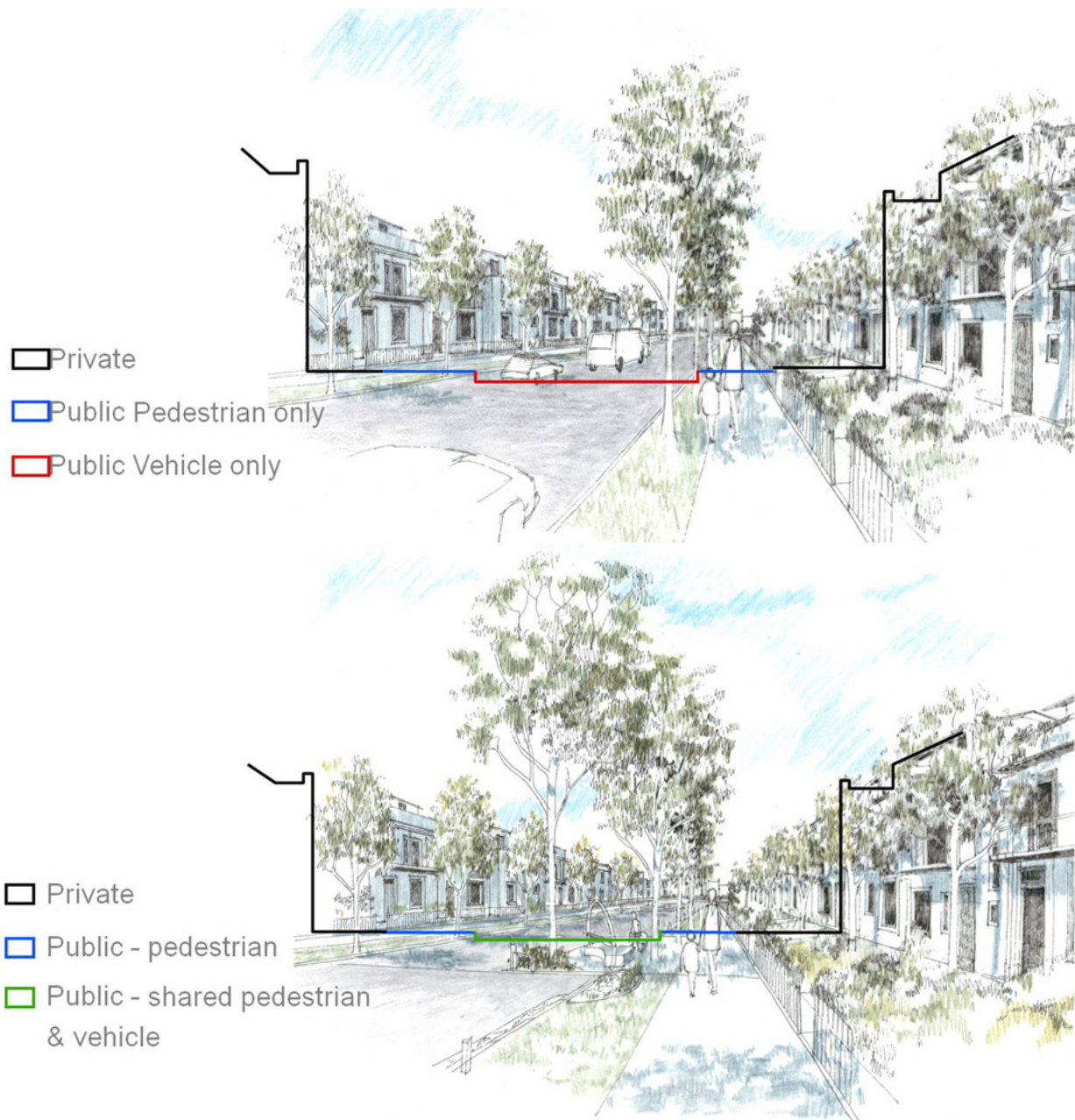
Each and every location has its own unique sense of place and respecting this is an essential component of contributing to environmental quality. This paper suggests that a commitment to SRPUD would be demonstrated by a design process that:

- Examines the values, concerns and hopes of people that will be affected by a development. This should be done with direct reference to the people who already live around development sites. In the case of new greenfield developments, planners would draw on current research to make evidence-based decisions.
- Accounts for the ways in which proposed design solutions address the community's concerns and ensure they can contribute in an informed way to the design process.
- Examines the relationship that people have with their surroundings, and accounts for the ways in which the environment enables or inhibits them to meet their needs.
- Makes the design process empowering the community by making its various stages and connections transparent.
- Considers and resolves local priorities with strategic imperatives.

5.2 The Product

A city committed to the product of SRPUD would weave the following characteristics into its fabric to ensure that the range of human needs are being met, and allow people to fulfil the higher-order needs theorised by Maslow. The product of SRPUD would:

- Incorporate multiple uses into a single development. An example would be a school that also serves as a community hub, providing social space, opportunities for expression through art, access to sports, libraries and computer facilities. This increases the chances of people being able to meet many needs in a single trip, allowing them to discount the opportunity cost of visiting the hub against many needs.
- Make the uptake of sustainable living more attractive, something to be embraced because of the opportunities it offers.
- Promote active transport through design that makes walking and cycling preferable as a means of travel. It would offer transport equity, particularly in the absence of cars. This means making streets safe, comfortable and attractive places that can be interpreted as accommodating more than just vehicles.
- Facilitate incidental social interactions and enable people that may otherwise be excluded to forge the bonds of community.
- Be food secure, when everyone has access to opportunities to access fresh, tasty and healthy food.
- Utilise natural resources wherever possible to minimise dependence on, and vulnerability to, fossil fuels.



Conceptual image of the three 'domains' of standard streets and streets reflecting SRPUD principals
(Illustration: J Donovan, 2010)

- Offer quality open spaces, when parks, squares and other open spaces are nearby and offer a wide range of qualities and experiences, to play sport, to enjoy nature, relax and gather.
- Embody the values and highest principles of the inhabitants, providing people with a chance to participate in the design, building and management of places, and ensure the people who live in a place can be proud of it and invest emotional capital in their surroundings.
- Be designed not just to minimise the potential for appropriation by one group but to ensure as many people as possible, with diverse needs and priorities, can share the same space.
- Ensure land uses and densities respond to the scarcity of land, and that conflicts are mitigated.
- Offer a wide choice of relevant local recreational opportunities. Opportunities for residents to play on the street, to get involved in gardening clubs or sporting teams can minimise dependence on resource-intensive modes of travel.
- Explicitly address how the market may be led. One of the central concerns of SRPUD is the emotional responses that people will have within a place (does it feel safe, does it feel comfortable, does it contribute to their sense of amenity, are they proud of this place, does it reflect their shared civic values?). Urban design can help to influence the market and cultivate cultural change because



Examples of formal and informal opportunities for social interaction (Image: A Campbell, 2010)

of the way it can evoke an emotional response in individuals.

- Ensure the environments created do not deny people the opportunity to engage with other people within their shared surroundings because of their cultural values or physical abilities.
- Be designed and managed to consider the role of virtual as well as actual communication (e.g. wireless supported places).

Mandating these characteristics will not be without its challenges, but meeting those challenges will incrementally create 'human habitats' that mitigate unfairness rather than compounding it. There are many barriers to giving a greater emphasis to the social impacts of design, such as the difficulties of measuring externalities like social benefits, and a market that gives these features relatively low weight. However if we can overcome these challenges and design for 'incidentalness', we can provide all people – not just the well off – with the best possible chance of meeting their needs.

6.0 CONCLUSION

Planning and urban design influences the opportunities open to people who live in the built environments we create. Drawing on Maslow's hierarchy of needs this paper illustrates that planning and urban design practices do not always adequately create environments that help people meet their needs. This paper outlines a model to start accounting for human needs in urban design, Socially Responsible Planning and Urban Design, or SRPUD, and presents techniques to implement improved practices that are cognisant of human needs.

Creating places that offer people access to relevant qualities, services, activities and events, with minimal financial and non-financial costs, will increase the chances of people being able to meet their needs. People who are meeting their needs will in turn feel nurtured by their surroundings, forge the bonds of community with their neighbours, and develop a sense of meaningful connection with and ownership of their surroundings.

A place that fails to offer these choices will stifle people and deter them from participating in activities essential to meet their needs. Such environments require constant and demanding inputs of time, energy and other resources just to make them work and mitigate their social and economic problems. Our collective ability to afford these costs is coming into question as climate change and peak oil increases our vulnerability to shocks. Adapting our cities to make it easier for people to meet their needs should therefore be a pressing concern for all those charged with designing and managing them.

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