

# Health and Planning for Victoria Park and Green Square Town Centre: A Contextual Review of Planning Strategy Documents

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## **Background to this Contextual Review**

This review was undertaken as part of the Healthy Higher Density Living: Translating Evidence to Support Planning Strategies for Healthy Higher Density Living research project. This \$1.3 million AUD two-year project is being run from the University of Technology Sydney, University of Sydney, the University of New South Wales, and in partnership with Landcom. The project seeks to advance knowledge of the ways to plan higher density precinct development to improve health by enabling industry to identify how health and wellbeing can be integrated into higher density precinct development policies and practice.

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## **Disclaimer**

The authors have used all due care and skill to ensure that the material is accurate as at the date of this report. However, the University of Technology Sydney, the University of New South Wales, the University of Sydney, Landcom and the authors do not accept responsibility for any losses that may arise by anyone relying upon its contents.

The findings outlined in the executive summary at the front of this report are to be read in the context of the entire report and its appendices.

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# Executive Summary

## Aim and Purpose

This Report details the third document review undertaken for the *Healthy Higher Density Living: Translating Evidence to Support Planning Strategies for Healthier Higher Density Living* (HHDL) research project.

The first review (Connon et al., 2018) conducted examined the academic literature related to health and planning for higher density urban living. The second review (Connon et al., Forthcoming) looked at the types of evidence used to link health to planning strategies for higher density development. This third review examines a range of planning documents specific to the two chosen case-study localities – Victoria Park and the Green Square Town Centre – located in Sydney, New South Wales, Australia. The specific aims of this particular review was to assess:

- How higher density living environments are defined and understood by planning institutions involved in the development of each of the two case study localities.
- The extent to which health was a consideration in the development of these two areas; and:
  - a) Whether this consideration was made directly or implicitly; and
  - b) the degree of ease or difficulty in making these considerations and subsequent decisions.

## Methods

The documents examined in this review comprise publicly-available planning strategies, including the initial master plans), and planning strategies sourced internally from Landcom. Both sets of documents were separately examined to ascertain the extent and nature of any content relating to (i) ‘density’, and (ii) ‘health’. The results of (i) were then assessed to determine how healthy higher density environments were defined or conceptualised. The results of (ii) were assessed against the 50 attributes of a health-supportive environment

developed from the earlier review of the academic literature (Connon et al., 2018), and developed into a composite schema comprising the ‘Three Theoretical Frameworks of Health’. In addition, review (ii) also involved canvassing a further set of documents related to the social, economic and planning history of Green Square to assist in answering two further questions:

- What were the factors that assisted or hindered the inclusion of health as a consideration in the planning and development of the two case-study site localities, and;
- To what extent is this experience replicable (and able to be translated) into higher density redevelopments elsewhere.

## **Findings**

The review found that none of the documents assessed included a definition of ‘healthy high density’ and that there was a lack of density definitions based on a specific spatially defined and quantified set of criteria, with only one document, The Victoria Park Master Plan – Background Information (1998) providing a dwellings per hectare calculation. Fifteen of the documents reviewed (seven related to Victoria Park and eight related to Green Square) do not contain any numbers or phrasing that conceptualise density. The types of documents that did not provide any descriptors to aid in the conceptualise density were documents that would not be expected to make reference to such measures, such as a Contaminated Site Summary Audit Report, a Contribution Credit Deed and documents related to resident social activities such as event flyers. The lack of conceptualisation of density in these kinds of documents is generally acceptable. More concerning is the lack of comprehensive density definitions and supporting quantitative and qualitative factors in key planning documents such as the Green Square Planning Proposal.

Given the scope and range of all these documents when considered together, the review took on a networked rather than linear approach. It found that health has indeed been a consideration and includes attributes from each of the three theoretical frameworks of health detailed in Connon et al., (2018). There is however, considerable variation in the form that these inclusions take as sometimes they are quite direct and explicit, but are more often implied rather than expressed directly. The exact form of this ‘implied’ character is often

difficult to assess and can require considerable interpretation when undertaking an analysis. Sometimes a particular implied viewpoint, perception, or predominant ways of understanding by the authors is suggested, but this can be communicated implicitly rather than explicitly. At other times the presence of health results from another intention, either required or desired for other, non-health, reasons. In this sense, health is a co-benefit or additional benefit of a process undertaken with a different or additional goals in mind. Health, as a resulting, co-benefit may be known and be made explicit, but in other situations there appears to be little or no awareness of the health outcomes being an intended co-benefit, with the co-benefit to health resulting by way of a fortuitous chance rather than through particular actions intended to generate particular health outcomes.

This last finding is particularly evident in the more recent documents reviewed. Although health was quite prominent in the master planning documents from the 1990s (and also particularly in the metropolitan plan for Sydney developed in the 1950s), more recent documents tend to be focussed on other matters, such as ecological sustainability, the establishment of communities, place-making, and social and economic activation. Fortunately, these matters also have clear co-benefits for health.

## **Conclusions**

The review found that many documents did not contain clear definitions of density and instead relied on quantitative and/or qualitative descriptors to conceptualise density. It is unclear which of those descriptors (or which combination of descriptors) are most helpful in aiding people in their conceptualisations of density. Also, none of the reviewed provided a definition of 'healthy high density' and there was no evidence in the documents to suggest that consideration of health issues was the driving force behind the proposed density at each site.

A potential dilemma exists in that attention on such sustainability, community and economic development and place-making matters, without a concurrent understanding of both the health co-benefits that can arise and the importance of health generally, risks the possibility that health outcomes will be neglected as a key consideration in any densification process. A similar neglect has been evident in a number of documents reviewed. Supporting this overall concern has been the assessment that:

- There seems to be, particularly in the more recent documents, a lack of a clear *lingua-franca* around what constitutes a health-supportive environment and which would be understood by the diverse range of practitioners involved and be able to be adopted within all stages of a development, and;
- A lack of design investigation and a subsequent diverse ‘tool-kits’ of responses around different models of higher density development and on the implications of *high-rise* high density in particular is evident from the findings of this review

Nevertheless, this review shows that in Green Square there was an identifiable and positive *engagement* with the complexity of high density development by the two main planning institutions involved, Landcom and the City of Sydney. This process has generated the opportunity for useful lessons to be learnt. There is also a caveat to this finding however in that the transferability of the Green Square ‘model’ to other localities may be limited by two other key characteristics:

- the positive, hybrid nature of Landcom itself as an organisation with a wide (legislated) corporate brief as a public authority to not just develop new housing estates but to also establish ‘communities’, and within a triple bottom line accounting regime, and;
- the extensive financial resources available within Green Square to establish health-supportive infrastructure (both ‘hard’ infrastructure such as open spaces and transport facilities, and ‘soft’ infrastructure such as community programs and effective maintenance) given its location within the well-resourced City of Sydney local government authority.

## **Recommendations**

### 1. Examination of descriptors in relation to density

Surveying planning professionals to investigate how they use quantitative and/or qualitative descriptors in text to conceptualise density will help the project team to make more feasible recommendations in regard to how density levels could be better communicated to the

general public. Attitudes towards particular descriptors held by planning professionals could also be collected to assist in understanding the subjective nature of density conceptualisation.

## 2. Investigating the extent to which ‘health’ has determined adopted densities

Interviews with key Landcom personnel would help to reveal the process and thinking behind the determination of density at each site and clarify if there were any influencing health factors that may not have been documented in the Landcom planning documents. These interviews may also provide an opportunity to understand how Landcom defines ‘healthy high density’ at present, as well as during the planning of Victoria Park and Green Square. Any changes in this definition will help to highlight industry responses to health issues over time.

## 3. Undertake comparative reviews of density conceptualisations

The key Landcom planning documents for the two sites were written almost 15 years apart and there is a stark difference in their approach to density discussions, from flexibility at Victoria Park to making the case for increases in the Green Square Town Centre. A study of similar planning strategy documents from 1998 to 2012 from other developments elsewhere in New South Wales or in other parts of Australia might reveal further information in regards to whether: a) there was a uniqueness to the Victoria Park or Green Square Town Centre approach for the time, or b) there had been a general trend towards the Green Square style of proposal in other areas of New South Wales and Australia, providing the project team with a greater understanding of the broader context of each development and how planning proposals and density have evolved.

## 4. Examine the personal attributes required to deal with complexity

From the experience of Green Square as an example of an urban development process that is consciously engaging with the full complexity of urban, and health, issues, an exploration with key Landcom, and potentially also City of Sydney, personnel involved in Green Square to find out which attributes (skills, attitudes and motivations) they have required in order to deal with that complexity.

## 5. Assess the success of the ‘liveability’ intentions of Green Square

To ascertain in more detail the success of the planning intentions to create in Green Square a highly liveable residential environment consistent also with ESD principles. This would



include a review of existing recent studies on resident satisfaction with Victoria Park and Green Square Town Centre, and possibly also other developments in the wider Green Square locality. These studies comprise: (1) recent and proposed studies of residents by Landcom and MIRVAC; (2) the existing City of Sydney My Place and Wellbeing Survey studies; and (3) the Victoria Park component of the Planning and Building Healthy Communities study 2011-2015.

6. Undertake a review assessment focusing on the liveability of the *high-rise* components of Green Square

From the conclusion that there is a lack of current local information on the experience of designing, and living, in high-rise development, the review of the recent existing studies into resident satisfaction mentioned above should include a particular focus on their lived-experience of not just a high density locality but also, for some, apartments in high-rise buildings.

7. Review the literature on high-rise living more widely

A review of the local and international sociological and architectural design literature broadly on high-rise residential buildings. This could include: (1) the work of the (international) Council on Tall Buildings and Urban Habitat and associated CTBUH Journal; (2) the International Journal of High-Rise Buildings; (3) Haddow, A. (2007) *Shall we dense?* The Winston Churchill Memorial Trust of Australia; (4) the references listed in Appendix 4; and (5), for earlier background, Conway, D. (1977) *Human Response to Tall Buildings*. American Institute of Architects Research Programs. Dowden, Hutchinson & Ross, New York.

8. Assess different high density configurations

Another recommendation would be to conduct a comparison of densities within different high-density localities within Sydney of different building shape and treatment of road layouts and car parking configurations to ascertain the extent to which high density development needs to be high-rise.

9. Investigate practitioner knowledge and motivations about health

To explore in more detail the finding that the planning strategy work in Green Square is essentially consistent with the contemporary academic literature on health-supportive environments, interview discussions should be conducted with relevant Landcom, and

potentially City of Sydney, personnel involved in Green Square about: the extent of their knowledge and understanding of health-supportive environments; the extent to which this knowledge is experiential and intuitive or research based or derives from other, and not necessarily academic, documents; the particular motivations for putting such knowledge into practice; the particular personal and institutional enablers and inhibitors that were experienced when seeking to achieve that motivation; and any lingering personal and corporation concerns about what they do not know about health-supportive environments.

#### 10. Explore financing successful high density development

From the knowledge that there are substantial costs involved in the establishment of much of the health-supportive and other infrastructure required in Green Square, and the understanding that any flow-on cost burden on individual owners and renters can itself have detrimental implications in relation to health as a result of financial stress and unequal access to opportunities, a final recommendation would be to conduct a financial assessment that looks at:

- The additional cost per dwelling, and flow-on individual financial costs to buyers and renters, arising from the infrastructure and other establishment costs of Green Square;
- The additional cost per dwelling, and flow-on individual financial costs to buyers and renters, arising from the future costs relating to maintenance and other management of the public domain in Green Square;
- Whether Green Square is likely to have been, and will be, the beneficiary of a unique amount of financial and other resources available to Landcom and to the City of Sydney council; and
- The degree to which this financial experience can be replicated in planning strategies for the development of health-supportive environments elsewhere.

# 1. Introduction

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## Key points:

- This is the third of three review reports conducted as part of the *Healthy Higher Density Living* (HHDL) research project.
  - The two previous reviews examined the existing academic scholarship pertaining to health and planning for higher density urban development. This report differs in that it canvasses a range of planning literature relating specifically to the two case-study locations – Victoria Park and the Green Square Town Centre – with the aim of determining: a) how higher density living environments are being understood by planning professionals, and b) the presence of and conceptual understandings embedded in any references to ‘health’.
  - There are a number of terminologies specific to this review and this report, and which are defined below.
- 

## 1.1 The context and positioning of this report

This report conveys the results of one of three reviews conducted for the *Healthy Higher Density Living: Translating evidence to support planning strategies for healthier higher density living* (HHDL) research project. This is \$1.3 million, two-year collaborative research project being undertaken by the University of Technology Sydney, the University of Sydney, and the University of NSW, and in partnership with Landcom.

The Study aims to advance the scholarship and to assist planning professionals in the development of policies and practice for higher density precinct developments so that they are health-supportive and ultimately improve the health of the growing population.

Two of the three reviews within this series of reports comprise a review of the academic literature:

1. The first literature review report examined the academic literature related to health and planning for higher density urban living.
2. The second review report explored the types of evidence used within the academic literature to link health to planning strategies for higher density development

This third review arises from a recommendation in the first literature review report, Connon et al., 2018: 360, to undertake a context study of government and planning literature focused

on the two higher density case study sites. The aim was to elicit information about how healthy higher density urban environments have been conceptualised and understood within planning documents and to explore whether understandings have changed over time in relation to particular demographic changes and emerging public health challenges.

This third review differs from the previous two reviews in that it focuses on examining a mixed range of documents centred around the two case study locations of Victoria Park and the Green Square Town Centre. The review involved examining both publicly-available and 'internal' Landcom documents that describe the various planning strategies for these locations. The focus was on (i) how high density is defined and understood within these documents, and on (ii) examining the extent to which health was a consideration. Documents reviewed included press releases, marketing documents and planning strategies.

## **1.2 Aims and Objectives**

The initial intention for this report was to canvass, in reference to the two case-study localities, the internal deliberations of Landcom via a review of internal documents in order to answer two key research questions:

1. How were higher density living environments defined and understood by planning institutions involved in the development of each of the two case study sites?
2. To what extent did health feature as a consideration in the development of these two case study sites; and:
  - a) Whether this consideration was made directly or implicitly; and
  - b) the degree of ease or difficulty in making these considerations and subsequent decisions.

However this initial intention was delayed given difficulties in accessing the anticipated documents. As a result, assessment of these questions commenced with reviews of other documentation pertaining to the case study sites:

- The planning documents applying to Green Square and the two case study localities that were publicly available and which primarily comprised the various master plans, and

- A subsequent canvassing of the historical social, economic and planning background to these documents.

The results of this broader review of documents assisted in the understanding and critical interpretation of the contents of the aforementioned Landcom documents in relation to the above two research questions. In addition, they also enabled two further questions to be answered:

- What were the factors that assisted or hindered the inclusion of health as a consideration in the planning and development of the two case-study localities? and
- To what extent is this experience replicable (able to be translated) into higher density redevelopments elsewhere?

One of the objectives of the *Healthy Higher Density Living* (HHDL) research project is to assess definitions of ‘higher density’ and understandings of what constitutes a ‘healthy higher density living environment’ in order to determine if there is a consensus as to a level of density considered optimal for health. The first literature review report found that only one out of 141 academic articles reviewed provided a definition of a healthy higher density urban living environment, and also that the majority of articles did not provide an explicit explanation or understanding of what they considered to constitute a ‘healthy higher density’ living environment. It was therefore important when reviewing planning and strategy documents related to the Victoria Park and Green Square Town Centre case study sites to investigate how ‘healthy high density’ was defined and understood and if there were any key differences between the definitions provided or if, as in the first literature review, there was an overall lack of explicit definitions.

The analysis of the findings for the second research question draws on one of the principle outcomes of the first literature review report (Connon et al., 2018): a schema designed to provide an easy-to-use conceptual structure of the different theoretical understandings of health and of the relationship between human health, the health of the natural environment, and the built environment, as revealed in the academic literature, and focussed in particular on higher density urban environments. This schema is titled the ‘Three Theoretical

Approaches to Health’ and comprises 50 attributes that are characteristic of a health-supportive environment (See Table 3.4 and Appendix 2).

### 1.3 Structure of report

In addition to this introduction (Section 1), the report is structured as follows:

- Section 2 discusses the identification of the case-study sites and provides the background information necessary for understanding the implications of the findings of this review
- Section 3 comprises the methodology that the review
- Section 4 describes the findings of the first research question: How is a high density living environment defined and understood by planning institutions involved in the development of the two case study sites?
- Section 5 focuses on the findings of the second research question: To what extent was health was a consideration in the development of these two areas; and:
  - a) Whether this consideration was made directly or implicitly; and
  - b) the degree of ease or difficulty in making these considerations and subsequent decisions.

In addition, this section also discusses the findings pertaining to the two additional research questions:

- What were the factors that assisted or hindered the inclusion of health as a consideration in the planning and development of the two case-study localities?  
and
- To what extent is this experience replicable (able to be translated) into higher density redevelopments elsewhere?
- Sections 6 and 7 comprise the discussion of the findings and conclusions of this review report. Section 7 also includes recommendations for future investigation within the framework of the *Healthy Higher Density Living* research project

In practice, given the initial difficulties in accessing the internal documents, the chronology of the review of the documents in relation to the second research question differed from how the findings have been structured in the various sub-sections in Section 5. The initial master planning documents (section 5.1), the contextual information documents (section 5.3) and the documents providing additional contextual layers specific to the case study sites (section 5.4)

were reviewed first, followed by the internal Landcom documents (section 5.2). However, the overall conclusions presented in sections 7 were developed from considering all the different groups of documents together.

#### **1.4 A note on some terminologies adopted in this review**

##### **1. Planning Strategies**

‘Planning strategies’, is as defined and reviewed in the first HHDL report (Connon et al, 2018). ‘Planning strategies’ comprises a wide-ranging and composite term and includes both ‘bureaucratic’ strategies and ‘design and action-implementation based’ strategies.

In relation to ‘bureaucratic’ planning strategies, the term includes:

- Legislation,
- Policies,
- Plans,
- Guidelines, and
- Tools

In relation to ‘design and action-implementation based’ strategies, the term includes:

- Land use policies,
- Building controls,
- Standards for green space,
- Preserving open spaces,
- Infrastructure in relation to transport, energy, water, health, education and street connectivity
- Site selection and appraisal by developers
- The design of buildings, streets and landscapes, and the master planning of estates and neighbourhoods,
- Built environment features, such as land use mix and design, as well as
- Participatory processes such as collaborations with stakeholders

Note that this broad composite use of the term is different from the common use of the word ‘strategic plan’ within land use/environmental/‘town’ planning practice, and which is narrower and tends to refer to documents describing and stating future intentions for a locality or other entity (e.g. an organisation).

## 2. Building

‘Building’, as it appears in a number of the attributes in the ‘Three Theoretical Approaches to Health Framework’ (Three Healths Framework), is taken as a generic reference to any built construction or form, including the public domain (streets, plazas, footpaths and parks etc) and infrastructure and design features such as ponds and other Water Sensitive Urban Design (WSUD) elements. This broad, composite reading of the term is used to ensure that all such urban ‘environment’ elements with a potential to impact on both public and ecological health are considered.

## 3. Three Theoretical Approaches to Health Framework

Reference to the ‘Three Theoretical Approaches to Health Framework’ schema developed in the first HHDL Literature Review Report (Connon et al, 2018) and summarised in Appendix 2 is shortened to the ‘Three Healths Framework’ within this report.

## 4. Green Square

The term ‘Green Square’ is used where applicable to refer to the wider Green Square locality within which the two case study localities, Victoria Park and the Green Square Town Centre, are located. Often there is a need in this report to refer to this wider locality as part of the broader, contextual discussion around the two case studies. Explanation of the extent of this wider locality is provided in Section 2 of this report.

## 5. Workshop with Landcom/ Workshop Comment

Coinciding with the beginning of this review of the documents, a workshop was held in July 2018 with Landcom staff involved in the Victoria Park and Green Square Town Centre case study developments. The purpose of the workshop was to introduce the Project and to



canvass, through a participatory exercise, existing understandings amongst those present about the connection between development and health. Advices from this workshop have been used, where applicable, to assist in interpreting and understanding the development processes in the planning strategy documents reviewed in this Report. Specific citations to this workshop in the following sections are generally given as ‘workshop comment, 5.7.18’.

..

## 2. Identification of Case-Study Sites and Background Information

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### Key points:

- ‘Green Square’ is essentially a new name to refer to a planning precinct of 278 ha defined in the mid-1990s based on the Green Square railway station.
  - There have been changes to the precinct boundaries over the years and there are various official and unofficial understandings about the exact locality, which straddles a number of existing official suburbs.
  - Administration has been under various authorities and via a plethora of plans. Many of these were developed iteratively rather than in sequence.
  - The intention is to create a new urban neighbourhood of some 30,000 residents and 15,000 workers by 2030, supported by a massive investment in new public infrastructure.
  - The two case study areas of Victoria Park and the Green Square Town Centre (the nominated ‘Green Square’ is taken to mean the Green Square Town Centre) are only two of a number of sub-precincts. However, Landcom is a common player in both developments.
  - Victoria Park is now substantially complete. The Green Square Town Centre is in early stages of development.
- 

### 2.1 Introduction

The *Healthy Higher Density Living* research project brief refers to both ‘Victoria Park’ and ‘Green Square’ as case study areas. Both localities comprise newly-developed and developing higher density mixed use areas with substantial residential components. However neither of the two localities are officially registered suburb or place names.

That said, Victoria Park as a case study site area is easily identifiable given it represents a discrete large site developed by Landcom and marketed under that name. Development is virtually complete, with most buildings now having been lived in for several years. The first residents moved in around 2003.

Delineating the reference to Green Square is more of a dilemma. It could refer to the very large Green Square Redevelopment Area or Urban Renewal Area as it is variously called (and of which Victoria Park is one particular precinct), and which is quite diverse in its development characteristics. However, it could also refer to the Green Square Town Centre

precinct of the Redevelopment Area and which is more discrete and in which Landcom has been substantially involved.

If the term is used to refer to the Town Centre there is still a dilemma as to whether this means the overall Green Square Town Centre precinct, where Landcom had initial involvement in terms of land amalgamation and provision of basic infrastructure, or only that part of the precinct where the subsequent development of buildings is being overseen by Landcom. This area is still largely under construction. The first residents only moved in May 2017 and this is in respect to only one relatively small part of the entire Town Centre area.

For the purposes of this review, the two case study areas (Figure 2.1) are defined as:

- Victoria Park, and
- The Green Square Town Centre.

This section provides the background information pertaining to this delineation, and describes the recent development history of the overall Green Square Redevelopment Area.

**Figure 2.1: Delineation and context of Victoria Park (in blue) and the Green Square**



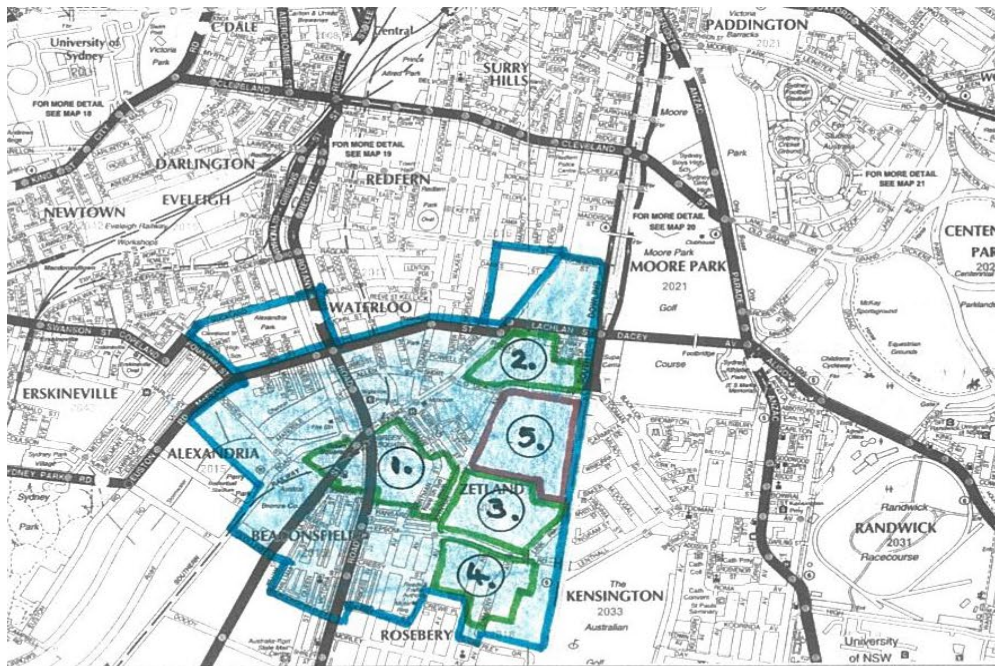
## 2.2 Green Square as a new and fluid entity

The Green Square ‘locality’ is located midway between the Sydney city centre and Sydney airport, 3.5 km to the south of the city centre and 4 km north of the airport (see <http://www.cityofsydney.nsw.gov.au/vision/green-square>). It straddles various existing suburbs. The locality gets its current status as a particular entity from its identification in the 1990s as a major redevelopment area to capitalise on the inclusion of a railway station, now known as Green Square Railway Station, on the new city centre-airport railway line, opened in 2000, and the decline in the then industrial land use activities of this area. The Green Square railway station takes its name from an eponymous adjacent park named in 1938 to commemorate a local mayor.

The Green Square Redevelopment Area is the name given by the City of Sydney to the strategically-planned brown-field locality of 278 ha centred on the Green Square railway station. It covers roughly the same area of earlier similar delineations known variously as the South Sydney Growth Centre and the South Sydney Redevelopment Area (see section 2.6). A dedicated agency known as the South Sydney Development Corporation was established by the State Government in 1996 to oversee the renewal of this area in partnership with the then South Sydney Council (Searle 2007). The intention was to create a new urban neighbourhood of approximately 30,000 residents and 15,000 workers by 2030.

The area covered by the former South Sydney Development Corporation is shaded in blue in Figure 2.2, as described in the *Growth Centres, South Sydney Development Corporation Order 1996*, plus a correction in 1997). This order included a map, which is now difficult to access because it is located in the internal Department of Planning files.

**Figure 2.2: Composite sketch - South Sydney and Green Square redevelopment areas.**



- SOUTH SYDNEY DEVELOPMENT CORPORATION (1996-2005)
- GREEN SQUARE REDEVELOPMENT AREA (Sydney City Council)  
Now, four 'Precincts':
- ① GREEN SQUARE TOWN CENTRE
- ② LACHLAN
- ③ EPSOM PARK
- ④ NORTH ROSEBAY
- VICTORIA PARK

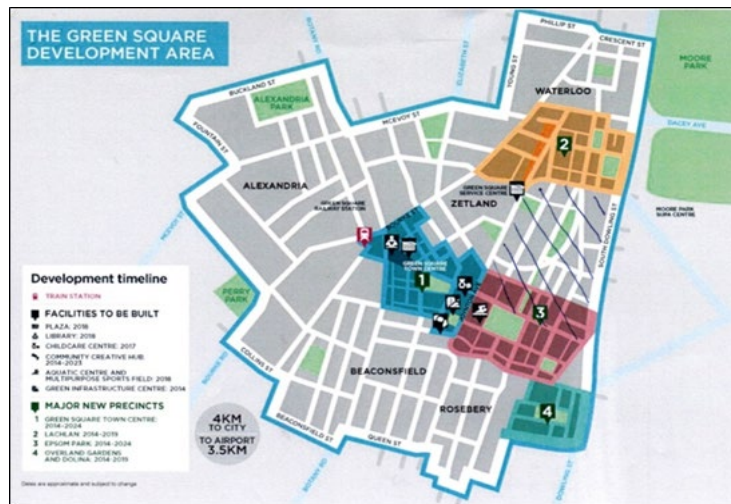
The South Sydney Development Corporation was dissolved in November 2005 (*Growth Centres, South Sydney Development Corporation Order 2005*). Its functions were taken over by the City of Sydney, which established a dedicated strategic planning unit for this work. The City of Sydney itself was newly formed in 2004 as an amalgamation of the previous smaller Sydney City and South Sydney councils.

The term 'Green Square Redevelopment Area' began to be applied to the former Development Corporation area, with two small additions to the north-west to include industrial sites in Alexandria (unshaded areas outlined in blue in Figure 2.2). In practice, references to the Green Square Redevelopment Area now tend to be simply referred to as 'Green Square'.

There is also now some variation in the use of the term Green Square by the City of Sydney. Examples of this variation involve:

- (i) A dedicated Green Square webpage under the ‘Vision’ tab on the Council homepage that describes the future vision for the area and current developments and provides advice about living in this new residential locality (<https://www.cityofsydney.nsw.gov.au/vision>). There is however no map to delineate ‘Green Square’.
- (ii) Maps showing the boundaries of the Redevelopment Area (as per Figures 2.2 and Figure 2.3) in the Council’s planning documents that detail the strategic planning provisions for the area, e.g;
- In the sections in the City of Sydney Development Control Plan (DCP) containing the overall redevelopment strategy and advices about new roads and open spaces ([http://www.cityofsydney.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0013/128020/6\\_Section5\\_DCP2012\\_150917.pdf](http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0013/128020/6_Section5_DCP2012_150917.pdf))
  - In the City of Sydney Section 94 contributions plan (<http://www.cityofsydney.nsw.gov.au/development/planning-controls/development-contributions/contributions-outside-central-sydney#page-element-dload>)
- (iii) Sections in the City of Sydney DCP, and also the equivalent section of the Green Square webpage, containing the detailed development/building controls just refer to four precincts. Each precinct has its own particular planning controls. These precincts are identified in Figures 2.2 and 2.3. They are:
1. Green Square Town Centre
  2. Lachlan
  3. Epsom Park, where the swimming centre and sports fields that are now under construction are also located
  4. North Rosebery, the boundaries of which have changed over time and now seem to follow the remaining larger non-residential sites to be redeveloped.

**Figure 2.3: Green Square Redevelopment Area and the current four development ‘precincts’**



This map was sourced from the City of Sydney website in 2014 when preparing the UNSW *Planning and Building Healthy Communities* study reports. This particular map has since been removed. The hatching is meant to show the Victoria Park development, but is not accurate in terms of the southern boundary (see figure 2.4).

Other than in respect to the overall strategic and s.94 provisions mentioned above, development control within the remaining areas of the Green Square Redevelopment Area comes under the planning regime applying generally to the City of Sydney local government area. There has been substantial individual site redevelopments in all these areas, and this is on-going.

The Victoria Park locality, identified as 5 in Figure 2.2, is not identified separately as one of the Green Square precincts given it is now largely fully developed. Future development and amendments to existing development in this area will now also come under the planning regime applying generally to the City of Sydney.

In addition to these more ‘official’ uses of the name, ‘Green Square’ appears to be applied colloquially (e.g. in real estate advertisements, business names, and some external review documents) to an otherwise undefined locality larger than the Green Square Town Centre precinct, but not as large as the overall Green Square Redevelopment Area which includes areas that are located a considerable distance away from the railway station and which sometimes have their own long-standing local name identifications.

## 2.3 Delineating the two case study locations

### 2.3.1 *Victoria Park*

The area of Victoria Park is outlined in blue in Figure 2.1, and brown with the number 5 in Figure 2.2. Victoria Park is not an official geographical place. It is within the suburb of Zetland. The name was applied by Landcom to both the site and the resultant development (Figure 2.4) when instigating redevelopment after purchasing the land in 1997 - as the first substantial large-site redevelopment within the Green Square Redevelopment Area.

Landcom undertook the role of 'master developer' - undertaking remediation, negotiating with the South Sydney and later City of Sydney councils in regards to the planning controls, and constructing the basic infrastructure. It divided the site into separate smaller areas to be marketed to individual private developers to undertake development consent and construction of the individual buildings, and on-sale of the resultant apartments and commercial and retail spaces.

The name 'Victoria Park' could in effect be regarded as a branding/promotional/marketing tool to:

- (i) give a new identity to what was otherwise a nondescript site within a nondescript industrial area, and
- (ii) give identity to the whole of the (composite) development given it was being constructed by different developers, who also often gave individual names to their particular developments and buildings.

The creation of a particular identity was also likely to have been important in another of Landcom's objectives for the site which was to 'launch' itself as a major development organisation in urban consolidation and urban renewal - hitherto having been primarily involved in 'greenfield' development.

The name Victoria Park was taken from the Victoria Park race course which occupied the site from 1908 until the 1950s when the site was used for a car manufacturing plant. The original race course Tote building was used by Landcom as a site and sales office, and then occupied



by the Council community centre and used as a library, until the library was relocated to a new purpose-built building in the Green Square Town Centre in 2018. The Commonwealth Government naval stores occupied the site from about 1975 to 1997, before being sold by the Commonwealth to Landcom (Karskens & Rogowsky, 2004).

**Figure 2.4: Victoria Park - original master plan boundaries.**



### 2.3.2 Green Square Town Centre

The Green Square Town Centre precinct comprises 13.74 hectares. Landcom is the major single landowner and development agency, now in partnership with the Green Square consortium, comprising two private commercial development companies, MIRVAC and Lend Lease.

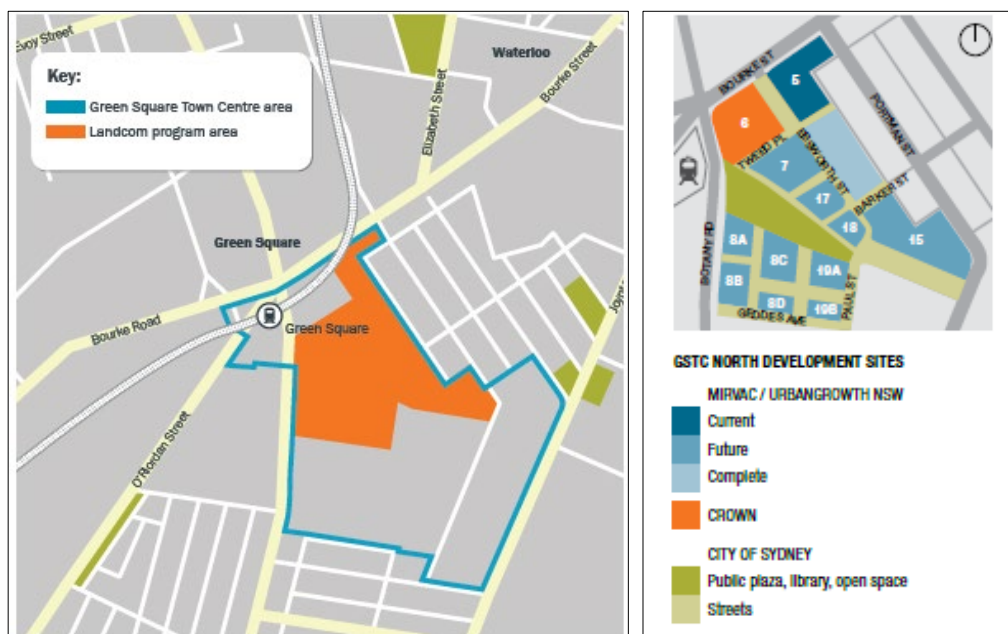
A separate webpage on the Landcom website describes its role and latest developments. This webpage includes a ‘Location Map’ (copied at Figure 2.5). The blue ‘Green Square Town Centre area’ boundary line on Figure 2.5 is consistent with the City of Sydney Green Square Town Centre precinct boundary.

Landcom does not however own or manage all of the Green Square Town Centre precinct – only that part shaded brown and referred to as ‘Landcom program area’ in Figure 2.5. In other documentation, Landcom refers to this area as ‘Green Square Town Centre North’ (For

example, in *Landcom: Green Square Town Centre Fact Sheet. September 2017. Landcom: Green Square Town Centre North. Update 39. 2-15 October (2017).*

Within the Landcom program area there are a number of different development sites (see Figure 2.5). The City of Sydney is the authority largely responsible for the Town Centre plaza area. Development of the surrounding commercial/residential/retail sites is being undertaken by separate developers. Crown Group is the developer of ‘Infinity’, the high-rise mixed-use development currently being constructed on Site 6. MIRVAC is the developer of the ‘Ovo’ building on Site 5 and the subject of one of the Green Square Town Centre documents reviewed (Document #14).

**Figure 2.5: Green Square Town Centre: The Landcom ‘program area’ (Green Square Town Centre North) and associated development parcels in the Landcom ‘program area’**



\*Please note the reference in Figure 2.6 to ‘UrbanGrowth NSW’ is to Landcom’s previous corporate structure

## 2.4 Official naming proposals

The Green Square Redevelopment Area falls within the suburbs of Zetland, Beaconsfield, Alexandria, Waterloo and Rosebery. Green Square does not have a separate post code (See Figure 2.6).

Following a request by then UrbanGrowth NSW (now Landcom) in June 2013, the City of Sydney applied to the NSW Geographical Names Board in 2014 to have the Green Square Town Centre precinct (registered as a new suburb, called ‘Green Square’. This was not for the whole of the Green Square Redevelopment Area, in deference to the long-standing surrounding communities identifying with the existing suburb names. UrbanGrowth NSW had sought the change in order to establish a more definite identity, or ‘branding’ for the locality (see *Report to City of Sydney Corporate, Finance, Property and Tenders Committee 18.8.14* on a naming proposal for Green Square Town Centre). The Geographical Names Board refused this application, but indicated it would support a request to have the name applied as a ‘place’ name after further advertising. In September 2015, the Council resolved to discuss the matter further with the Board. However, no further action has taken place as yet (email advice from Tim Wise, A/Manager Major Projects Strategic Planning & Urban Design, 11.4.18).

In June 2016, the Council resolved to refer to the area covered by the former South Sydney Hospital (within the Green Square Town Centre precinct) as the ‘Green Square Community and Cultural Precinct’. This action did not need to be registered with the Geographical Names Board.

**Figure 2.6: Suburb boundaries applying to the Green Square Redevelopment Area and Town Centre.**



\* Sourced from report to City of Sydney Corporate, Finance, Property and Tenders Committee 18.8.14 on a naming proposal for Green Square Town Centre.

## 2.5 Boundaries associated with other relevant studies being undertaken in Green Square

### 2.5.1 *The University of New South Wales Planning & Building Healthy Communities study*

The boundaries of Victoria Park shown in Figure 2.4 were adopted by the then Healthy Built Environments Program, now City Wellbeing Program, at the City Futures Research Centre, University of New South Wales (UNSW) for its 2011-15 study, *Planning & Building Healthy Communities: A multi-disciplinary study of the relationship between the built environment and human health*. This study included Victoria Park as one of four case study areas (See Figure 2.7).

This study involved:

- A detailed site audit of Victoria Park that involved assessing the quantity and quality of health-supportive features;

- Interviews with 20 residents, asking them about their own health behaviours and the degree to which they were helped or hindered by the design of Victoria Park and the nearby surrounding area; and
- A workshop with 12 residents that explored the results of the audit and interviews in further detail.

**Figure 2.7:** Victoria Park - Healthy Built Environments Program case study area boundary.



\*Sourced from: City Futures Research Centre (2016): *Planning & Building Healthy Communities: Study Area Findings for Victoria Park*.

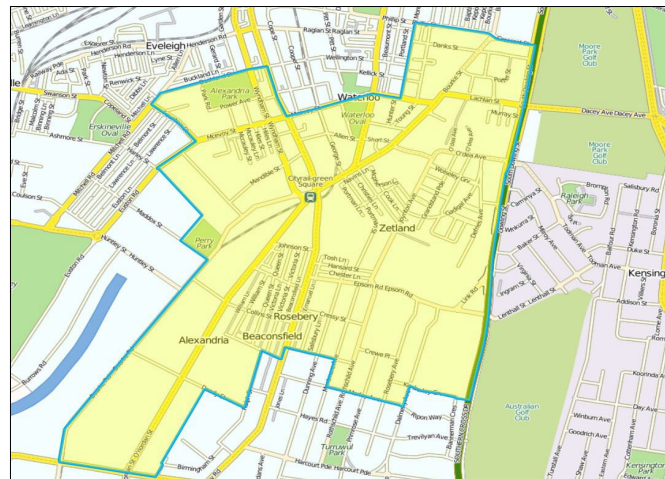
### 2.5.2 The City of Sydney 'My Place' longitudinal community surveys

The UNSW City Futures Research Centre has been contracted by the City of Sydney to undertake a series of longitudinal community surveys of residents ('My Place') within Green Square. Two surveys have been conducted to date: one in 2014 and one in 2017. The surveys use the boundaries of the Green Square Redevelopment Area as shown in Figures 2.2 and 2.3 (City Futures Research Centre (2018) *MyPlace: Green Square Community Survey 2017. Final Report*).

The *My Place* survey area falls within 29 Australian Bureau of Statistics *Statistical Area Ones* (SA1s) statistic areas (Figure 2.8). The composite of the 29 SA1s is consistent with the

boundaries of the Redevelopment Area except that the SA1 areas also include land to the west and southwest. The *My Place* study does however note that currently there are no residents in these areas, being remaining industrial and commercial sites.

**Figure 2.8: Boundaries of composite of Statistical Area Ones within the ‘My Place’ Community Survey area.**



\* Sourced from: City Futures Research Centre (2018): *MyPlace: Green Square Community Survey 2017*. Final Report. p.50.

## 2.6 A brief administration and development history

Green Square is currently located within the City of Sydney local government area, and the suburbs of Zetland and Beaconsfield, and parts of Waterloo and Alexandria. These inner-urban suburbs have been progressively built up since the first settlement of Sydney, and have been subject to constant change, including degradation and renewal (Ashton 1995). The result is a tightly mixed and often quite dense (in Australian terms) urban form. In Green Square, this has comprised large and small scale industrial sites with intervening ‘pockets’ of residential dwellings. In the early part of the 20<sup>th</sup> century, the overall scale and intensity of the industrial uses and activity led to the locality being referred to as the ‘Birmingham of the South’ (Karskens, 2004). In later town planning documents it was referred to as the ‘central industrial area’ or sometimes as the ‘southern industrial area (i.e. to the north of the commercial city centre when referenced in relation to the local government area of the City of Sydney. The poor condition of much of the housing stock in conjunction with its close

proximity to the then highly polluting industry and lack of community open spaces and other facilities meant that much of the residential areas were identified as 'slums' in various planning reviews from the late 1800s up until the County of Cumberland Plan in the mid-1950s. In the last 30 years there has been significant, and on-going, change, comprising a conversion of industrial land to residential uses and the creation of a new large mixed-use urban centre - the Green Square Town Centre. It includes the following elements:

- A change in the wider economy reflected in the nature of industrial activities and employment, leading to the vacating of the existing industrial premises and generating brown-field sites available for redevelopment (Fagan 2000).
- An increase in demand by residents wishing to live closer to the city centre coupled with a broader metropolitan planning need to increase housing densities in existing areas to reduce urban sprawl, thus resulting in an increase in land values (Daley and Pritchard 2000). This increased densification is termed urban consolidation. thus also resulting in an increase in land values.
- As a result of this increase in land values and a need to be closer to a shifting residential location of their workforce, a re-location of continuing industrial activities to elsewhere in Sydney has occurred (Fagan 2000).
- The proximity of the locality's to the city centre and airport and associated employment floor space demands, are now also associated with the 'global' economy status of Sydney (Daley and Pritchard 2000).
- Prompted by the forthcoming Olympic Games, the decision by the State Government in 1995 to build a new railway between the city centre and airport was made. Construction was completed in 2000 and included the Green Square railway station.

These changes have occurred under various administrative regimes:

- The State planning department (under different names);
- The South Sydney Council from 1989 to 2004;
- The South Sydney Development Corporation between 1996 and 2005, in parallel with the South Sydney Council and responsible to the State planning department; and
- The City of Sydney from 2004, following amalgamation.

The South Sydney Development Corporation (SDDC) was established following planning studies in the early 1990s of the ‘corridor’ between the city centre and the airport by the then NSW Department of Planning, prompted by the proposed new railway. The Corporation was to work with the South Sydney Council to guide and promote the anticipated changes in land use. In this sense, it was different to the earlier City West Development Corporation established to oversee a similar redevelopment of Ultimo-Pyrmont, and which was subject to criticism as not being sufficiently consultative with the local community and had unreasonably taken away local Council powers over development (Searle 2006). The area covered by the Corporation was delineated in legislation and known as the South Sydney Growth Centre. The purpose of the Corporation was as set out in the *Growth Centres (Development Corporations) Act 1974* and applying to all development corporations: to promote co-ordinate, manage and secure the orderly and economic development of the growth centre (Section 7 of the *Growth Centres (Development Corporations) Act 1974*). A description of the Corporation in the later Green Square Town Centre Master Plan states that as part of its functions it:

‘... [E]ncourages innovative, good quality development ... which is sustainable, sensitive to existing urban character and contributes positively to the quality of the environment and to the lifestyles of the people who live, learn, work and play in Green Square’ (p. 08-08).

The South Sydney Council developed a set of planning documents (*The South Sydney Plan*) for the Council area in the 1990s. These comprised a comprehensive strategy, and an accompanying (statutory) local environmental plan (LEP) and development control plan (DCP). This strategy identified the then industrial land in what is now Green Square as suitable for redevelopment. In 1996, the Council commissioned consultants to prepare a strategy specific for this area. The Council initially referred to this area as the South Sydney Redevelopment Area, but the resultant strategy was called the Green Square Structural Master Plan. The area covered in the South Sydney Redevelopment Area and subsequent Green Square Structural Master Plan was similar to, but not exactly the same as that covered in the initial gazettal of the South Sydney Growth Centre. This plan was adopted in 1997. It identified the area adjacent to the new Green Square railway station as a new ‘local activity centre’, consistent with the terminology used in *The South Sydney Plan*. Gradually, the



proposed role and function of this area expanded and became known as the Green Square Town Centre.

Also, in 1997, Landcom purchased the large industrial site now known as Victoria Park with the purpose of carrying out a major residential and part commercial development, consistent with a recent change in its organisational brief to become involved in sponsoring development that would assist with the government's urban consolidation policies. Victoria Park was seen as a potential catalyst for the residential development of Green Square as a whole, and as a way to mark Landcom's entry into this new development process (Landcom n.d.). The commercial viability of such development at that time in Green Square was also somewhat unknown. As such, and although the Victoria Park site was purchased on a competitive basis on the open market, Landcom intended to use the development as a benchmark, with high standards of design that gave emphasis to liveability rather than necessarily maximising density outcomes, and a focus on the remaining limited heritage building and character – so residents would feel it fitted into the area (workshop comments, 5.7.18). This intention was also carried through in the marketing of Victoria Park as 'the natural neighbourhood'.

Meanwhile, a priority of the Development Corporation, on instruction from the then Minister for Planning, was the delivery of the Town Centre (Endelman 2004), which was to (SSDC 2002):

- Be the commercial, retail and cultural hub of Green Square;
- Provide sufficient mix of uses to attract and sustain other development in Green Square;
- Be a focus for South Sydney and other communities; and
- Be a major transport interchange supporting a transit orientated sustainable future.

It was seen that this area would need its own master plan and accompanying planning controls, consisting of an LEP and a DCP, prepared on its own timeline separate from the rest of Green Square, as well as a specific implementation strategy (SSDC 2002). The South Sydney Development Corporation contracted Landcom to prepare the master plan. This work was undertaken over four years, with an initial exhibition in 2000. The initial arrangement between Landcom and the Corporation was to last to the adoption of the Master Plan and associated LEP (Landcom 2003: 08-01). A subsequent arrangement was then made to

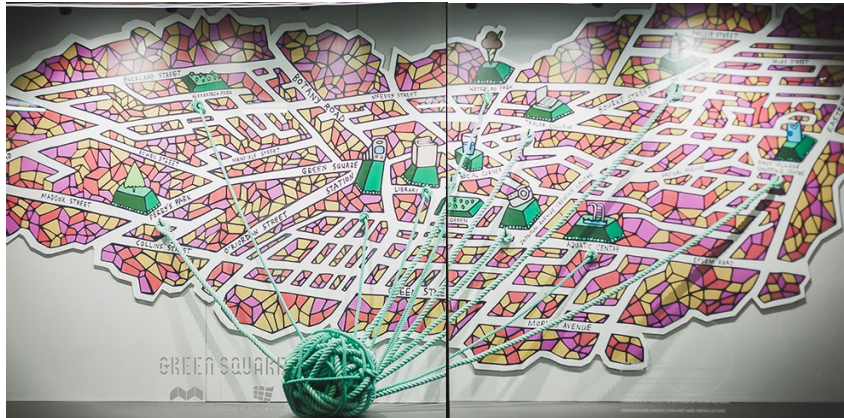
provide initial seed funding and project manage the delivery of the required infrastructure (Landcom, 2003: 08-08). All these roles were on the basis of Landcom's 'corporate charter' to assist the Government in resolving 'complex urban renewal projects' (Landcom, 2003:08-08).

Following dissolution of the Development Corporation in 2005, the City of Sydney has effectively taken on its responsibilities in relation to the Town Centre, and has entered into its own arrangements with Landcom to partly deliver the project. The scale and function proposed for the Town Centre and for the development of Green Square as a whole, was somewhat experimental in relation to the then development of brown-field sites in Australia. The success of Green Square was seen to depend to a large extent on the success of the proposed Town Centre. In response, the then Development Corporation determined there was a need for a distinctive catalyst for the Town Centre. In 2001, it conducted an international urban design competition for the area of the central 'town square', plus the Green Square railway station opposite, across Botany Road, and some adjacent individual building sites. The competition area comprised 3 ha out of the overall 14 ha of the Town Centre site. A review of the Development Corporation was undertaken in 2004 following difficulties regarding the financing of the Town Centre given the Corporation's lack of ability to raise revenue, which included not having any substantial government land under its control (Searle 2006). Also in 2004, the South Sydney Council was amalgamated with the City of Sydney. The new expanded City of Sydney objected to a proposal to expand the responsibilities of the Corporation as a way to address its difficulties (Searle 2006). As a result, the Corporation was dissolved in 2005, with much of its geographical area, but not the main Green Square locality, taken on by the new Redfern-Waterloo Authority. The City of Sydney assumed responsibility for the Green Square area. The Council now uses the name Green Square Redevelopment Area for this area, or, in its shortened version, 'Green Square' (to assist the confusion, the area now within 'Green Square' is similar to, but not exactly the same as, the area originally gazetted as the South Sydney Growth Centre).

The planning administration of Green Square has, in effect, been a process of interaction between these different planning administrations, and then with Landcom as a major player both of its own accord in relation to Victoria Park and with specific engagements with, first, the South Sydney Development Corporation and then the City of Sydney in relation to the Town Centre. Anecdotal evidence suggests that one outcome of this iterative process has been

an embedding into the City of Sydney planning controls various initiatives by Landcom in the development of Victoria Park and the Town Centre (workshop comment, 5.7.18). Another iterative component was the conduct of the international design competition for part of the Town Centre. The outcome of this was used to inform the Green Square Town Centre Master Plan. There was also an unexpected delay to the overall development process, which occurred when a major developer successfully appealed the provisions listed in the 1997 South Sydney LEP requiring the inclusion of affordable housing in development approvals either directly or by way of a monetary contribution. In upholding the appeal about this particular provision, the Court determined that the whole South Sydney LEP was actually invalid and not just the affordable housing provisions, thus reinstating the former industrial land use zonings within Green Square. Resolution required the LEP to be re-made and, in respect to reinstating the affordable housing provisions, an amendment to the Environmental Planning and Assessment Act (ISRCSD 2000).

## **Box 2.1: Green Square – the name, and some implications**



*Like places, diseases (and health) are not fixed realities but are situated and socially produced in particular historical, social, economic, cultural and political contexts (Smyth 2005: 490).*

The official (registered) place that is Green Square is a small, landscaped but otherwise unused piece of open space in the middle of a traffic intersection named after a local Mayor and MP from the 1930s in recognition of his campaigns for local jobs, particularly during the Great Depression (Endelman 2004).

The expansion of the name to now cover a wider locality already well-named with existing ‘official’ and long-standing suburb names (Zetland, Beaconsfield and parts of Alexandria and Waterloo), has been cited as causing a considerable ‘disquiet’ in those existing communities (ISRCD 2000):

‘The name ‘Green Square’ has seemed like a god-send to some involved in the redevelopment of that area. They could best be described as “town boosters”. Green Square would negate the idea of the industrial origin of these areas ... Common usage amongst planners and developers has meant the term “Green Square” has become synonymous with the area. ...

There is a fear that this usage will eventually become so commonplace that the names of the existing suburbs could fall into disfavour ...’

Historian Grace Karskens (2004: 9) suggests this extended usage is actually ‘contested’, comprising a place that is only ‘partly-real and partly-imagined’ when in fact ‘these are old working class suburbs [and] many of the residents there do not want their local identity submerged in an imposed new name ... triggering associations with clean, green, sustainable urban visions. It seems artificial ...’

Place association is important in contributing to environments that are health-supportive (Frumkin 2003). Karskens notes two concerns about the spread of the name Green Square, and the reason for her ‘Green Square’ history project (Karskens and Rogowsky 2004): (i) the potential loss of identity amongst the existing embedded communities, each with a rich local history, and (ii) a need to establish a place identity, embedded in the old, for those residents moving into the new developments:

‘... new residents will most likely be young urban professionals ... There is little likelihood of shared or inherited local memories, experience and culture. New and old will not easily engage. Surveys and anecdotal evidence reveal that new residents have little or no idea of the history of their new homes, but indications are that they are curious. In the documentation for Green Square, planners ... repeat over and over again the importance of historical understandings to ‘create roots’ and a ‘sense of belonging’ and, rather grandly, that arrangements must be made ‘for the acknowledgment and recognition of the physical, social and cultural history of the site...and its people’. (Karskens 2004: 9)

It remains to be seen whether, as the new developments mature, and with less need for ‘promotional’ planning, the more expansive Green Square name takes over or contracts to the Town Centre only; leaving the original suburb names to reassert themselves.

\* ‘The Green Thread’ (artwork, 2018): Cook, J., Tierney, M. & McCann, J. Located at Epsom Street, Zetland.  
( refer: <https://greensquare.mirvac.com/art-and-installations> )

### 3. Methodology

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#### Key points:

- This review canvassed, as raw data, a range of planning strategy documents related to the two case study sites, and comprising the site master plans, other similar documents, and then also various internal Landcom documents relating to the implementation of these planning strategies
  - The first objective of the review was to ascertain how healthy higher density urban living environments were defined.
  - This second objective was to ascertain the extent to which, and in what form, health figured in the planning and development of the two case study sites.
  - Each document was reviewed for definitions of ‘healthy higher density’ and ‘high density’ and for qualitative and quantitative descriptors used to conceptualise density.
  - Health has been a consideration, but usually indirectly, with these considerations becoming evident via reference to other terms and via co-benefits from other actions.
  - A similar approach was taken to the assessment of all these various documents, though with some particular variations to address their differing natures and orientation. This included scoring health references against the 50 attributes of a health-supportive environment in the ‘Three Healths Framework’.
  - The review then explored the circumstances that led, or required, the practitioners to include or not include the various attributes of health. This included reviewing a wide-ranging and eclectic array of documents relating to the social, economic and planning background of Green Square and its geographical and administrative locality.
  - Three difficulties, presenting issues for replicability, are identified and addressed.
- 

#### 3.1 Introduction

This review comprises two components. The first component examines what a healthy higher density living environment is understood to constitute according to a sample of existing planning strategy documents for the two case study sites of Victoria Park and the Green Square Town Centre. The second component examines the same documents to ascertain the extent to which health has been included or not included within the development processes applicable to the two case study sites, the character of any inclusion, and assessments about likely underlying motivations and interests.

The overall objective of both components was to shed light on the ways in which health evidence can be better translated and integrated into higher density development processes.

Part of this required drawing conclusions about the extent to which the processes evident within the two case-study sites can be replicated elsewhere. As such, the review then also looked at the context of these documents in order to gain an understanding of the wider milieu relating to both the Green Square locality and to development planning itself.

As such, the review considered three key groups of documents:

1. Group 1 documents: Publicly available planning strategy documents applying to Green Square and the two case study localities. These primarily comprised the various master plans.
2. Group 2 documents: Documents applying to the two case study localities sourced from the internal files of Landcom. These documents mainly comprised planning strategies orientated to the ‘implementation’ of the master plans.
3. Group 3 documents: A range of documents from both academic and non-academic sources relating to the historical social, economic and planning background to the planning of Green Square.

The original intention was to review the second group of documents first. However, because of difficulties in accessing these documents and subsequent time delay, initial attention was given to the publicly-available documents that now comprise group one. Sections 3.2 and 3.3 list the documents reviewed and explain how they were sourced for the group 1 and group 2 reviews respectively. Section 3.4 describes the sourcing of the third group of documents. Section 3.5 describes the methodology of the review and subsequent analysis.

### **3.2 Group 1 documents: Publicly-available documents applying to the two case-study localities**

The planning of Green Square has been characterised by a plethora of planning strategy documents. Broadly, they comprise:

- Statutory (legislated) local environmental plans (LEPs) and associated development control plans (DCPs) (See Table 3.1);

- Master plans, which also have a statutory basis but which are more detailed and site-specific in content; and
- A wide range of documents that are generally non-legislated and which relate to the on-going implementation of the master plans, and comprising infrastructure plans, management plans, and actions relating to place-making, as well as and social and economic activation of these newly-establishing localities.

In addition, many of these documents are or have been subject to numerous and on-going reviews. These two characteristics - the quantity of documents, and their fluidity - present an immediate practical difficulty for a review, such as in terms of dealing with the volume and currency of information as data.

A decision was made that the review in this review that group 1 documents primarily comprise the master plans applying to the two case-study localities (Table 3.1) rather than the various subsequent LEPs and DCPs, as a result of their particular fluidity (Box 3.1) and essential consistency between the master plans and the LEPs and DCPs which meant that both will have similar content in terms of this review. That said, in order to provide added contextual data, the review included various earlier master plans and the initial South Sydney Council LEP and DCP applying to broader Green Square (Table 3.1).

The two site-specific master plans were prepared as a result of a requirement in the then applicable South Sydney DCP 1997 and continued now the City of Sydney DCP 2012 that such planning be undertaken before a development application could be lodged where the site area exceeded 5,000 m<sup>2</sup>. Victoria Park and the Green Square Town Centre fall within this provision. However, even if this had not been a requirement it is likely that master plans would have been prepared in any case as accepted good practice for such large sites where there would be a range of development possibilities within the statutory (LEP) zonings and various other controls. The Master Plan for Victoria Park was prepared in 1998 and adopted by the South Sydney Council in 1999 and the Master Plan for the Green Square Town Centre was adopted in 2003. The Victoria Park Master Plan has been amended twice, first in 1999 and later in 2003, with the main implications for the purposes of this review being various changes in the floor space ratio (FSR) – being an initial clarification of an FSR of 2.5:1, which was then reduced to 1.8:1 in the second amendment (Table 3.1).

### **Box 3.1: Statutory and associated planning documents applicable to Green Square**

When under the administration of the former South Sydney Council (1989-2004), the planning documents applying to Green Square comprised *The South Sydney Plan* adopted in 1995 and comprising a strategy document (Strategy for a Sustainable South Sydney), the statutory LEP gazetted in 1997, and associated DCP adopted in 1997.

The on-going and complex nature of development planning for the Green Square Town Centre however meant a separate LEP and DCP also applied to this specific area.

Following the amalgamation with the City of Sydney in 2004, the South Sydney LEP and DCP was subsequently reviewed and consolidated into a new Sydney LEP and DCP which took some years to complete. Again, separate LEPs and a separate DCP apply to the Green Square Town Centre.

The current (2018) applicable planning documents are:

- Sydney LEP 2102;
- Sydney DCP 2012;
- Sydney LEP Green Square Town Centre 2013;
- Sydney LEP Green Square Town Centre-Stage 2 2013;
- Green Square Town Centre DCP 2012.

The LEP applying to the Green Square Town Centre is structured so that it is progressively applied precinct by precinct through individual gazettals that are only undertaken once planning agreements about developer contributions to broader Green Square infrastructure are agreed and executed, and which has been the case of the Stage 2 LEP listed above and applying to the lands now being developed by Landcom. Until that time the existing earlier LEP provisions still apply, thus contributing to the overall plethora of planning strategy documents.

The master plans are in effect transitional documents. The Victoria Park Master Plan has now effectively become redundant given development is now substantially complete. New proposals within Victoria Park are now assessed more or less against the planning controls applying generally to the City of Sydney. Development of the Green Square Town Centre is still in its early stages and will likely take some 25 years to fully achieve. It can be expected that the Green Square Town Centre Master Plan will remain for the duration of this period. Further, given its detailed and complex nature, many of its provisions will likely be specifically included into the wider City of Sydney planning controls when the Town Centre finally moves from an area in transition to an area which is fundamentally established. This situation is similar to how other areas in Green Square are dealt with in the Sydney DCP 2012, with those areas which are still to undergo major redevelopment being subject to particular ‘precinct’ controls, whereas those areas that have already undergone redevelopment and are more established, including Victoria Park, being subject simply to the overall DCP provisions as applicable to the whole of the Council area. The results of the group 1 documents review are described in section 4.



**Table 3.1: Group 1 documents considered for review**

Document name, author & date	Responsible authority	Extent of review in this Study
<b>New Southern Railway Urban Planning Strategy 1994</b> NSW Department of Planning (1994)	NSW Department of Planning	Not reviewed.  Primarily covers broad structural matters, with the health implications of this able to be covered in the review of the New Southern Railway EIS (which references this Strategy document).
<b>New Southern Railway Environmental Impact Statement</b> Kinhill Engineers P/L (1994)	State Rail Authority of NSW	Reviewed.  (Though again concentrates on broad structural land use planning matters)
<b>Planning for the Future</b> South Sydney Council (1991)	South Sydney Council	Reviewed.  Initial Discussion Paper to precede The South Sydney Plan. Included a 'feedback/response' form for public comment and submissions.
<b>The South Sydney Plan:</b> <ul style="list-style-type: none"> <li>▪ Strategy for a Sustainable South Sydney 1995</li> <li>▪ South Sydney LEP 1997</li> <li>▪ South Sydney DCP-Urban Design 1997</li> </ul> South Sydney Council (1995)	South Sydney Council	Reviewed.  (Also reviewed in conjunction with this Strategy was the later South Sydney Social Plan (2001-2003) which included demographic data from the 1990s).
<b>Green Square Structural Master Plan</b> Stanisic & Turner/Hassell (1997)	South Sydney Council	Reviewed.  The draft is dated May 1997, with the final version dated August 1997.
<b>Green Square Infrastructure Strategy and Plan</b>	South Sydney Council/City of Sydney	Reviewed.  These documents have changed over time in conjunction with the progression of the overall planning and development of Green Square. Not included as a separate section but referenced in relevant other sections.
<b>Victoria Park Master Plan and Background Information</b> Landcom (1998)	Landcom	Reviewed.  Includes useful comparisons of density and open space with existing nearby redevelopments.  The initial Master Plan (1998) was adopted by Council in Feb. 1999. There were two subsequent amendments: <ul style="list-style-type: none"> <li>▪ a 'refined' master plan by Hassell (architects) which included a 2.5:1 FSR adopted in Dec. 1999, and</li> <li>▪ by Johnson Pilton Walker (architects) in 2003 in relation to the commercial sector, and including a reduced FSR of 1.8:1.</li> </ul>
<b>Green Square Town Centre Master Plan</b> LFA (Pacific) for Landcom (2003)	South Sydney Development Corporation (SSDC)	Reviewed.  Prepared by Landcom, with consultants, on behalf of the SSDC. Includes 13 supporting/contributory studies by separate consultants.
<b>Green Square Town Centre. Diary of a Competition.</b> South Sydney Development Corporation (2002)	South Sydney Development Corporation (SSDC)	Reviewed  (Relates to the international design competition for the Town Square component of the Green Square Town Centre).
<b>Sydney Local Health District Strategic Plan (draft)</b> Sydney Local Health District (2018)	Sydney Local Health District	Reviewed  (Included in section 6.8)

### **3.3 Group 2 documents: The ‘internal’ Landcom documents applying to the two case-study localities**

#### ***3.3.1: Sourcing the documents and ensuring confidentiality***

The aim of this part of the review was to ascertain from the wording of available internal Landcom documents the degree to which health figured, explicitly and implicitly, as a consideration in the design, development and marketing of the two case-study localities, plus an assessment as to the reasons.

Documents were sourced from the internal files held by Landcom in consultation with Landcom staff and following completion of a confidentiality agreement. This agreement was a requirement by Landcom given the potential that as otherwise non-public documents, at least some of the content would need to remain confidential. As it turned out, this was applicable to only a small percentage of documents, and mainly to the more extensive array of documents that were sourced in respect to Victoria Park. In practice, it meant a conscious judicious use of explicit information from those documents and a favouring of more generalised statements of content. In addition, this Report will be subject to review by Landcom staff as part of the collaborative nature of the project, thus allowing for the editing of any remaining information not appropriate for public access.

It should be noted that, in the opinion of the research team, this confidentiality process has not affected the robustness of the data. It should also be noted that this process has meant the documents sourced in respect to the Green Square Town Centre cover a more limited range of matters than those sourced for Victoria Park (see below).

It was initially envisaged that this review would involve an extensive ‘trawl’ through Landcom’s paper copy and electronic files in respect to the two case study sites, in two stages:

- Stage one: Undertaking of a broad scan of the files to identify documents likely to be of interest for more detailed review. The choice of documents here would relate to their applicability in explaining the internal decision-making processes, values and criteria of Landcom.

- Stage two: Undertaking a more detailed review of each document for evidence in respect to how higher density was defined and understood and whether health figured, or not, and whether explicitly or implicitly, in the design, development and marketing of the two sites, plus any other information, including the general ‘feel’ of the document, that would indicate the reasons.

However, this intention was not fully achieved due to a difficulty in accessing these documents. This was because:

- The development processes relating to the two sites are now some 10-20 years ago, and access to documents of that age was difficult. Although development of the Green Square Town Centre is current and on-going, many of the initial decisions were taken in the 2000’s. Hard copy files, mainly applicable to the older Victoria Park development, if still existing, are now located in an off-site repository. Here it is also noted that 20 years is past the statutory time for the retention of many files.
- Around the time of the initial development of the two sites there was also an organisational change from paper copy files to an electronic system. Perhaps due to the newness of the system at the time, it would appear that not all paper documents were transferred to electronic (digital) format. In addition, not all electronic documents had been electronically filed. Where electronic files were accessed in respect to Victoria Park, many folders were security locked and other folders were either empty or the documents that were included were about minor matters and not useful for the purposes of the project. The use of email as a correspondence system was also becoming more prominent at that time. Again, perhaps also due to the new-ness of email, it would seem that not all such correspondence was filed.

As it eventuated, different people were involved in the initial cull or choice of documents for the later more extensive review. For Victoria Park, this was undertaken by two research staff in conjunction with two Landcom project liaison staff. For the Green Square Town Centre, this was undertaken by Landcom project liaison staff only. This is likely to have influenced the outcome whereby the *range* of Victoria Park documents, although still limited in number, is more extensive than the range of matters covered in the Green Square Town Centre documents made available.

The initial cull resulted in 18 documents relating to Victoria Park (See Table 3.2) and 16 documents relating to the Green Square Town Centre (See Table 3.3) for further review. The number of Victoria Park documents subsequently reviewed totalled 19, given:

- One document from the initial scan (Doc no. 20) was considered not relevant to this review – a presentation to students on Green Square generally. The content of this document was covered in other documents specifically orientated to Victoria Park.
- Two other documents (Docs no. 18 and 19) already held by the research team from their involvement in the earlier City Futures Research Centre *Planning & Building Healthy Communities* study were added. *The Planning & Building Healthy Communities* study (2011-2015) researched the ‘health-supportive’ attributes of four residential estates in Sydney in which Landcom is involved and including Victoria Park (<https://cityfutures.be.unsw.edu.au/research/projects/planning-and-building-healthy-communities-a-multidisciplinary-study-of-the-relationship-between-the-built-environment-and-human-health/>). It was considered that these documents included useful information for this review, however, because of the similarity in wording, only Doc no.18 was subsequently scored against the attributes of a health-supportive environment (see section 6).

The 16 Green Square Town Centre documents were reduced to 14 given two documents (Docs no. 15 and 16) were not considered relevant - the results of the *MyPlace* Community Survey conducted by the City of Sydney, and a note advising of the proposed *Healthy and Inclusive Places* survey to be conducted by Landcom over various of its developments, including ‘Green Square’. Notwithstanding these limitations, the documents that were available were considered to have proved sufficient to give advice in respect to the original objectives and questions.

The results of this group 2 documents review are detailed in section 5.

### ***3.3.2: The documents relating to Victoria Park***

Table 3.2 lists the documents accessed from the Landcom files relating to Victoria Park, plus the additional Landcom documents (No. 18 and 19) already held by the research team.

The total number of documents provide a useful cross-section of material, comprising detailed descriptions and reviews of outcome of the development overall as well as specific components (e.g. site remediation, water management, ESD provisions), management and organisational processes, the marketing vision, and early community development activities.

**Table 3.2: Landcom documents reviewed relating to Victoria Park**

	<b>Document name, author &amp; date</b>	<b>Type of document/matters covered</b>
1	<b>Victoria Park Zetland</b>  Landcom (2005)	PowerPoint presentation by Landcom to the CoS (16 slides). <ul style="list-style-type: none"> <li>▪ Includes Landcom Vision ('to create a memorable and sustainable urban community') &amp; Role (master planner, master developer, delivery partner).</li> <li>▪ Details site history and master plan variations.</li> <li>▪ Good summary of processes and progress, including numerical advices on resultant FSR's etc. and financial aspects of the public domain.</li> <li>▪ References ESD and WSUD provisions.</li> <li>▪ Summary of agreements with Council (s.94 reimbursement, Landcom to maintain public domain to 30.6.09 – see #7).</li> <li>▪ Lists FSR'S of individual developments.</li> <li>▪ Total forecast FSR to be 1.9:1 (incl. commercial) – being only 75% of total available GFA.</li> <li>▪ 40% of site as public domain (roads-27%, public area-13%).</li> <li>▪ Interesting statistics that 27% of the site is roadway, and that some individual developments have FSRs up to 4.24:1.</li> </ul>
2	<b>Untitled briefing note</b>  Landcom (n.d.)	3-page briefing note to Kevin Sproats (whose role is not stated - maybe a design adviser). Summarises the history of Landcom's development process in Victoria Park. Not dated, but probably post-2003.
3	<b>Summary of Landcom Board Papers</b> re Victoria Park  Landcom (various dates from 1997-2007)	Summaries in WORD document (27 pages).
4	<b>Victoria Park Project. A Review of the Victoria Park Development, Zetland. 1997-2010.</b>  Landcom (n.d.) (late 2010)	PDF of 16-page WORD document (see also Doc no. 5).
5	<b>Victoria Park: Post Project Review</b>  Landcom (2010)	PowerPoint presentation (27 slides) comprising summary of Doc no. 4. Dated Sept. 2010.
6	<b>Contaminated Site Summary Audit Report.</b>  Landcom (?) (1999)	11-pages WORD document in the form of a briefing dated 11.6.99 describing the review by a consultant auditor of the remediation consultant's report and proposals.  Lists various early deficiencies in the remediation plan, plus a summary of actions to address these dating from initial commission in Sept 1988.
7	<b>Victoria Park Residential Contribution Credit Deed</b>  Blake, Dawson, Waldron (lawyers) (2007)  July 2007	22-page WORD document dated July 2007 comprising a deed of agreement ready for signature between Landcom and CoS.  Addresses an earlier agreement with then South Sydney Council to transfer to Landcom s.94 contributions collected by Council - to compensate for Landcom's provision of public domain works. Provides a good summary of these works and financial arrangements. This copy does not include signatures.

8	<b>‘Victoria Park Zetland’.</b> Landcom (?) (n.d.)	6-pages of draft marketing images and wording.  Includes extensive evocative ‘health’ and ‘wellbeing’ related imagery and text.
9	<b>Proposed (Victoria Park) Home Page</b> Landcom (?) (n.d.)	Draft Home Page webpage for proposed marketing website for Victoria Park.  Includes: (i) caption: ‘Life Regeneration in Progress’ (ii) a link to a sub-page titled: ‘Your Lifestyle’
10	<b>‘The Water Cycle’.</b> Landcom (?) (n.d.)	2-page WORD document describing ‘Landcom’s vision’ for the treatment and disposal of stormwater.  Aim is to return site to its ‘natural heritage’ by managing quantity & quality of water leaving the site. References bio-retention swales, electromagnetic filtration, and use of macrophytes to reduce nutrients.
11	<b>‘Start a resident group’</b> Landcom (n.d.)	1-page WORD document.  Appears to be a draft of a notice in a future edition of the Victoria Park resident newsletter. Advises that anyone wanting to start a local group can advertise in the newsletter. Includes the following wordings: <ul style="list-style-type: none"> <li>▪ ‘...[N]ow it’s over to you’.</li> <li>▪ ‘[S]tay tuned’ for future events planned by Landcom for residents.</li> </ul>
12	<b>‘Free Christmas BBQ’</b> Landcom (2006)	2-page WORD document of a draft illustrated 2-sided post card advertising a ‘free Christmas BBQ’ Sunday 17.12.06 at Tote Park – sponsored by the ‘Victoria Park Community Group’ and Landcom.  Includes reference to (then) website: www.vicpark.com.au.
13	<b>‘Victoria Park Life. Spring edition 2006’</b> Landcom (2006)	4-page WORD document of a draft of the Spring edition of the ‘Victoria Park Life’ newsletter to residents.  Includes: <ul style="list-style-type: none"> <li>▪ Description of WSUD system and advice that it was not operating properly because there had been fish released into it – meaning it needed to be drained and cleaned.</li> <li>▪ Description of Victoria Park Community Group convened in Nov. 2005, and up-coming activities.</li> <li>▪ Listing of new shops and cafes</li> <li>▪ Update on new development.</li> </ul> (Refer also Doc #14).
14	<b>‘Vic Park August Newsletter’</b> Landcom (2006)	1-page WORD document of an internal email 21.8.06 from Landcom Social Sustainability Manager re proposed newsletter content (Doc no.13).  Relates to: (i) details about Pilates classes (ii) advice Farmers Market unlikely to start soon due to Council’s park hire fees.
15	<b>Notes Re Presentation to SSDC</b> Landcom (n.d.)	1-page WORD document comprising an internal note re: (i) need to raise with South Sydney Development Corporation issue of paving standards, including works by utilities – concern that quality is not sufficient. (ii) issue of paving choice – bitumen not acceptable on ESD grounds, but proposed alternative too expensive (@ \$3,000 per dwelling)
16	<b>Independent Architect Review</b> Architectus (2009)	2-page letter dated 20.7.09 to Landcom by Architectus.  Comprises a review, commissioned by Landcom, of the design of a proposal by Anglican Retirement Village (ARV) for 200 units and 136 age care spaces in a 20-storey building on Joynton Ave.  The review concludes the proposal is deficient in terms of:

		<ul style="list-style-type: none"> <li>▪ scale and resultant shadows to open space and neighbours</li> <li>▪ ‘substantial departure’ from the Master Plan with resultant detrimental impact on surrounds</li> <li>▪ low internal amenity from low natural light, single-aspect units, long corridors and street frontage units.</li> </ul>
17	<b>Victoria Park. UTS. Sustainable Urban Development.</b>  Landcom (2011)	PowerPoint presentation (19 slides) dated 13.5.11 by a Landcom Senior Development Manger to students at UTS.  Gives a summary history of Landcom’s operations, the Green Square locality, and the Victoria Park development.
18	<b>Welcome to Victoria Park the natural neighbourhood</b>  Landcom (2008)	2-page WORD document ‘fact sheet’ (version 4).  Gives a concise but detailed description of the development process and resultant built, environmental and social aspects of Victoria Park in promotion and marketing style. Similar in wording to the earlier Doc no. 19, but with considerable additional descriptions, expressed in marketing terms.
19	<b>Victoria Park</b>  Landcom (n.d.)	3-page WORD document including a birds-eye image of the intended completed development.  Describes, mainly in point form, key aspects of the development process and intended built, environmental and social outcomes (with the overall status stated as ‘[under] construction’). Not dated, but the PDF title is dated Sept. 2004. The content is largely as per the later Doc no.18 – and so not separately scored as part of this review (see section 6).
20	<b>Green Square</b>  City of Sydney (2017)	PowerPoint presentation (61 slides) on Green Square by City of Sydney to UTS landscape architecture students, 11.8.17.  [Not considered relevant for this review, and not further analysed]

### 3.3.3 The documents relating to Green Square Town Centre

Table 3.3 lists the documents accessed from the Landcom files relating to the Green Square Town Centre. Of the 16 documents:

- As noted above, the subject matter of two documents was not considered relevant to this review (Docs no. 15 and 16).
- A further document (Doc no. 2) contains information extracted from Doc no. 1 and so has not been separately counted in the scoring process, as described in section 3.5 below.

The 14 remaining documents cover a reasonable range of matters and as such are able to generate a reasonable picture of health-related matters in the Green Square Town Centre development, particularly when considered in conjunction with the associated review of the master planning documents for this precinct. However, that said, this range is not as comprehensive as those accessed for Victoria Park:

- None of the documents are actually authored by Landcom alone, and only three of the 14 documents are authored by Landcom in conjunction with others (Docs no. 2, 4 and 11).

As such, although they are able to advise on the extent and possible motivation of the inclusion or not of health-related matters, they are limited in respect to providing advice about these matters in relation to Landcom as an organisation.

- The majority of documents (9 out of 14, or 65%) deal with what could be described as a single similar matter - being, variously, ‘place making’ (five documents) and ‘activation’ (four documents).

**Table 3.3: Landcom documents reviewed relating to the Green Square Town Centre**

	Document name, author & date	Type of document/matters covered
1	<b>Planning Proposal - Town Core Sites within Green Square Town Centre</b>  SJB Planning P/L (2010).	83-page planning report by consultants for the Green Square Consortium & Landcom* as part of an application to CoS for new GSTC planning controls.  Provides good descriptions of the history of the Green Square redevelopment, relevant planning controls, Landcom’s involvement (including its initial <i>necessary</i> involvement to facilitate the Town Centre precinct development), and intended development outcomes.
2	<b>Green Square Town Centre – Town Core Sites. Statement of Community Benefits and Contributions</b>  Green Square Consortium & Landcom (n.d.). The Green Square Consortium comprises the Landcom development partners for the Green Square Town Centre, and comprises the private development companies of MIRVAC & Leighton Properties.	3-page statement (audience unknown, possibly the City of Sydney). The main content of interest has been extracted from p.7 of Doc no. 1.
3	<b>Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan (Sept. 2012) (Main Report)</b>  Parsons Brinckerhoff (2012)	190-page planning report prepared by consultants for Transport for NSW to consider the implications of the increased development density proposed in changes to the GSTC controls (see Doc no. 1).
4	<b>‘Your Green Travel Guide - Green Square’</b>  MIRVAC & Landcom (2018)	Double-sided pamphlet to inform residents and workers.
5	<b>Position Description - Place Manager, Green Square Town Centre</b>  MIRVAC (2016)	5-page WORD document, possibly a draft, for inclusion in advertising of the Place Manager position required by the planning agreements relating to the development.  This position now occupied since February 2017 by Rosa Han (see Doc.#13).
6	<b>Green Square Placemaking. Vol. 1: Framework</b>  City of Sydney (n.d.)	64-page draft document detailing background, priorities and proposed actions.  Although the title refers to Green Square it is mainly about the GSTC. The accompanying ‘action plan’ makes reference to numerous other ‘plans’ now applicable to Green Square.
7	<b>Green Square Place Strategy – Part 1. Creating Great Spaces for Life.</b>	49-page WORD document in presentation format - mainly graphics and short accompanying notes.



	MIRVAC (n.d.)	Essentially details how MIRVAC will meet its 'place making' and 'activation' responsibilities. Only a few pages are applicable to the scoring exercise.
8	<b>GSTC Placemaking Workshop #1 April 2017</b>  (Author and date not stated - possibly City of Sydney)	1-page graphic document summarising ideas, priorities and 'next steps' from a workshop.  Participants not stated but likely to have been CoS, (then) UrbanGrowth NSW and MIRVAC. Likely precedes Doc#7.
9	<b>Green Square Town Centre Early Activation Strategy</b>  Right Angle Studio (2016)	45-page presentation prepared by consultants. Mainly graphics. Dated October 2016.  The intended audience not stated – probably Landcom and MIRVAC. Includes a 'mission' statement by the consultants: 'to understand and improve life in our cities'.
10	<b>Green Square: The Social Corner Activation Brief</b>  MIRVAC (2017)	8-page A4 document prepared for the seeking of proposals to 'activate' The Social Corner space. Dated September 2017.  The Social Corner had already been established by Landcom in May 2017.
11	<b>Green Square Activations &amp; Events</b>  MIRVAC & Landcom (n.d.)	1-page PowerPoint slide describing seven actions.  All actions seem to have already taken place, in 2017/18.
12	<b>Green Square Summer Festival Plan, November 2017</b>  MIRVAC (n.d.)	6-page A4 WORD presentation document summarising proposed publicity, events and budget.
13	<b>Green Square. Placemaking-2018 Plan.</b>  Rosa Han (MIRVAC) (n.d.)	22-page presentation document. Mainly graphics and short accompanying notes.
14	<b>956-960 Bourke Street, Zetland. Sites 5A &amp; 5B Green Square Town Centre Redevelopment. Development Application Design Report.</b>  fjmt (Francis-Jones Morehen Thorp, architects) (2014)	100-page document (includes architectural drawings) for inclusion with the development application by MIRVAC for the first major GSTC 'core sites' high-rise development.  This is the 'Ovo' development, currently under construction.
15	<b>MyPlace Green Square Community Survey 2017 Final Report</b>  City Futures Research Centre (2018)	145-page report for City of Sydney describing results of a 2017 resident and worker survey (following on from a similar 2014 survey).  <i>[Not considered relevant for this review, and not further analysed]</i>
16	<b>Key messages - Healthy &amp; Inclusive Places survey 2018</b>  Landcom (n.d.)	1-page A4 document describing a proposed survey of eight Landcom developments, including 'Green Square'.  Survey proposed to be carried out in March & April 2018. Aim is to ascertain whether Landcom's 'healthy and liveable places' targets are being met.  <i>[Not considered relevant for this review, and not further analysed]</i>

### **3.4 Group 3 documents: The review of current and historical contextual documents applying to Green Square**

A key aim of the review of the various planning strategies was to make an assessment of not just the extent to which health-related matters have been included, but to also gain some understandings as to the motivations and interests behind those inclusions or decisions not to include them. In this regard, it has been understood that an appraisal of the written documents themselves would only ever be able to give partial advice in this regard, and that a more complete answer would also necessitate subsequent face-to-face discussions with the personnel involved in reference to this appraisal of documents.

In addition to any such future discussions, the review also came to the conclusion that it may be possible to glean some indications as to these motivations and interests by also reviewing a further, and larger, group of documents available in the public realm – documents relating to the contextual history of the planning and development of Green Square in general, including the wider South Sydney locality within which Green Square is embedded. The use here of the descriptor ‘embedded’ as different to, say, ‘located’, is intentional, and comes from one of the understandings from these reviews. Green Square comprises a totally new, almost alien, type of development when compared to what was existing before and to its past and current surrounds. An initial reaction would be to presume that its determinants arose from prompts that were similarly detached from its locality. However, and as detailed in section 6, while this is the case in many regards, it was also found that Green Square is very much a product of its time and of its place in South Sydney.

The documents reviewed in group 3 were sourced via a number of prompts:

- As a result of being referenced in the documents, primarily in document group 1;
- By way of searching visible published material relating to the historical development and planning of Green Square;
- Through key word searches on the internet to search out more obscure documents; and
- The personal knowledge of the researchers as a result of experience in professional practice as a strategic planner including at the time many of these documents were being prepared.

The result was an eclectic array of material, including in addition to refereed and non-refereed books and journals, articles in often well-researched and long-standing magazines from local active community organisations, and documentary films.

The results of this third group of documents are detailed in section 5.

### **3.5 The first review component: assessment of Healthy Higher Density definitions**

As mentioned previously, the first literature review report produced as part of the *Healthy Higher Density Living* research project analysed the way ‘healthy high density’ was defined in the academic literature pertaining to urban planning. The conceptual framework developed as part of this literature review was used as a basis to assess, in this third report, the conceptualisations of density in the documents reviewed in this first component.

This gave constancy between the project reports and allowed for consistent comparisons between ‘healthy high density’ definitions from different types of literature. In the event, this conceptual framework proved robust enough to manage the expected variations in density conceptualisations, including the provision of enough scope to categorise documents that did not include any definitions of higher density, or even density, let alone a definition of ‘healthy higher density’.

The documents in this first review component comprised the ‘internal’ Landcom documents related to Victoria Park and the Green Square Town Centre (group 2 documents – see Tables 3.2 and 3.3) and, in addition, the two Master Plans relating to the two sites (refer group 1 documents - Table 3.1). An initial sample of ten ‘internal’ Landcom documents was undertaken, using the same categories for defining density that were used in the first literature review. Discussion of the results with the project team resulted in the formalisation of four density definition categories as a basis for classifying each of the Landcom documents:

- Density is defined according to a specific spatially defined and quantified set of criteria;
- The term density is used but not defined;

- Quantitative descriptors OR qualitative descriptors OR quantitative and qualitative descriptors are used to conceptualise density;
- No reference is made to density.

An excel spreadsheet was created to record document details (folder; file name; document title; document type; author; year; and internal/external distribution) as well as relevant quotes related to the conceptualisation and their location in each document. The order of group 2 documents earlier decided upon by the project team when conducting the analysis of health considerations (Tables 3.2 and 3.3) was retained for the analysis of density definitions. Once all the documents had been reviewed, the document details and the quotes recorded were transferred to a word document so that phrases could be coded using the highlight feature (only whole cells can be coloured in excel). The colour coding used is provided in Table 3.4 below:

**Table 3.4: Healthy High Density Definitions Coding Scheme**

Category and Coding Colour	Coding Colour	Example
Density is defined according to a specific spatially defined and quantified set of criteria	Dark Blue	total population and number of units per area
The term density is used but not defined	Red	High density, development density
Quantitative descriptors that provide a measure of an aspect of the site	Purple	floor space ratio, site area, gross floor area, number of storeys, building height in metres.
Quantitative descriptors that provide a count of an aspect of the site	Light Blue	40 parks, 1800 dwellings, 4000 workers
Qualitative descriptors that indicate size or scale	Yellow	neighbourhood, major centre, tower
Qualitative descriptors that indicate changes in size or scale	Green	growing, transforming, renewal, developing

This approach revealed that many documents utilised a number of different definition categories. As the style of the first literature review was by categorisation type rather than by individual document, the results from coding each of the individual documents were then grouped by density definition category as a basis for developing the findings and recommendation sections of this report.

### **3.6 The second review component: assessment of the presence of health in the documents**

The second review component also canvassed the documents in group 2 (Table 3.2 and 3.3) plus the two Master Plan documents from group 1 (Table 3.1), though now with a focus on health and also with the inclusion of certain additional documents relating to the wider development of Green Square (included in group 1, see Table 3.1). The process of undertaking the review of documents in groups 1 and 2 was similar, though with some differences given the nature of the documents and as a result of the different chronological sequencing of the review itself. Also as with the first review component, the content of each document was considered as ‘raw data’ for subsequent assessment.

The process undertaken for the documents in group 3 was different given the different character of these documents and the different intention for including these documents. This intention comprised two aspects. The first was to collect a wide range of background information that would assist in the interpretation of the health-related aspects of the documents in groups 1 and 2. The second was to provide free-standing information about the historical inclusion, if any, of health in planning strategy processes generally, as relevant to Green Square.

The remainder of this section describes the assessment process in relation to health undertaken for document groups 1 and 2 and includes a review of any implications relating to the overall robustness of this review.

#### ***3.6.1: The assessment process 1: Initial identification of ‘health’ references***

The assessment of documents commenced with a process of categorisation, undertaken in two stages. The first stage reviewed each section of each document to locate references, if any, to health matters. An immediate difficulty here was that such references could be either explicit or, the majority as it was found, more implicit.

Explicit references were those that referred directly to health or associated wording. A separate compilation was also kept of references to the more general term ‘wellbeing’, given

its increasing recognition in broader aspects of health promotion and as often viewed differently to health for the purposes of intervention in relation to specific physical or mental health issues.

Implicit references were generally in relation to health-supportive implications arising as co-benefits from other non-health planning strategy actions. The review of implicit references required various qualitative judgements as a result of:

- The age of many documents, up to 20 years ago for some, and whether, at that time, there may have been an underlying health intention;
- The variation in language with possible health intentions, such as ‘wellbeing’, ‘liveable’ and ‘amenity’; and
- The number of different characteristics of environments that are fundamentally health-supportive, particularly those where the health benefits arise as co-benefits.

This judgement process drew on a composite understanding of what makes a health-supportive environment sourced from the following particular background documentation:

1. Three separate but broadly consistent schemas dated between 2007 and 2011 developed to provide useful collective composites of the extensive literature on health-supportive environments (Figure 3.1),
2. The range of possible word variations around each different broad component of a health-supportive environment, in particular the table of variants developed by Wheeler (2011) (Figure 3.2); and
3. The range of language and action-orientated variations around health arising from the more recent review of literature carried out specifically for this Study (Connon et al. 2018) and which includes its own new schema (the Three Healths Framework) (refer to Table 3.4 and Appendix 3).

**Figure 3.1: Three schemas used in understanding the nature of a health-supportive environment**

Name	Checklist for healthy and sustainable communities	CHES	Three Domains of Healthy Built Environments
Source	Capon and Blakely (2007)	Thompson and McCue (2008)	Kent, Thompson and Jalaludin (2011)
Components	<ul style="list-style-type: none"> <li>▪ Outdoor air quality</li> <li>▪ Water supply and sanitation</li> <li>▪ Housing and buildings</li> <li>▪ Food</li> <li>▪ Local shops and services</li> <li>▪ Schools and other educational institutions</li> <li>▪ Community spaces</li> <li>▪ Transport and street connectivity</li> <li>▪ Communication technology</li> <li>▪ Economy and employment</li> </ul>	<p>Environments that are health-supportive are:</p> <ul style="list-style-type: none"> <li>▪ Connected environments</li> <li>▪ Healthy Eating environments</li> <li>▪ Safe environments, and</li> <li>▪ Sustainable environments</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Physical activity</u>: Facilitate active transport, and recreational physical activity</li> <li>▪ <u>Connect &amp; strengthen community</u>: Facilitate incidental social interaction and interaction with nature, make community spaces, and build for crime prevention</li> <li>▪ <u>Provide healthy eating options</u>: Facilitate access to healthy food, and promote responsible food advertising.</li> </ul>

**Figure 3.2: Potential variations in the wording of health-supportive matters (Wheeler 2011:26).**

SEARCH TERM	VARIANT(S)
Health	healthy, healthier and healthiest
Wellbeing	well-being and well being
Liveable	liveability
Connect	connects, connected, connecting, connectivity, connector(s), connection(s), interconnect(s), interconnected, interconnecting, interconnectivity, interconnector, interconnection(s), reconnect(s), reconnected, reconnecting and reconnection(s)
Eat/Food	eats, eating, eater(s), eatery, foods
Safe	safety, safer, safely, safest, safeguard, safeguarding, safeguarded and unsafe
Sustainable	sustainable, sustainably, sustainability and unsustainable
Climate Change	climate changes
Walk	walks, walking, walker(s), walkway(s), walkable and walkability
Cycle	cycles, cycling, cyclist(s), cycleway(s), bicycle, bicycling

**Table 3.5: The three conceptual frameworks of a health-supportive built environment (Connon et al. 2018)**

1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation
		1.1.2 Improvements to infrastructure and transport provision
		1.1.3 Solve problems resulting from changing urban demographic population profile
	1.2 Promotes positive physical health	1.2.1 Good air quality
		1.2.2 Adequate outdoor space
		1.2.3 Pedestrian friendly outdoor spaces
		1.2.4 Safety
		1.2.5 Adequate indoor space
		1.2.6 Low neighbourhood traffic levels
		1.2.7 Access to quality food
	1.3 Promotes positive mental health	1.3.1 Good air quality
		1.3.2 Adequate outdoor space
		1.3.3 Pedestrian friendly outdoor spaces
1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space		
1.3.6 Low neighbourhood traffic levels		
1.3.7 Low crime levels		
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	
	1.4.2 Future-orientated	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing
		2.1.3 Promotes human happiness
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing
		2.1.5 Promotion of active transport
		2.1.6 Enhances social Interaction, including at different stages of the life course
	2.2 Positive physical health	2.2.1 Provides access to public and active transport
		2.2.2 Building design and access to space promotes positive behaviour change
		2.2.3 Enables access to fresh food
		2.2.4 Limits exposure to air pollution
	2.3 Positive mental health	2.3.1 Decreases social isolation
		2.3.2 Limits noise pollution and other environmental stressors
		2.3.3 Reduces crime and fear of crime
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design
		2.3.5 Decreases suicide rates through effective building design
	2.4 Health equity	2.4.1 Age and health
2.4.2 Gender and health		
2.4.3 Socio-cultural factors and health behaviours		
2.4.4 Socio-economic inequalities and health		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment
		3.1.2 Promoting long-term food security
		3.1.3 Enhancing air quality and reducing atmospheric pollution
		3.1.4 Improving water quality
		3.1.5 Promoting human and environmental flourishing for long-term quality of life
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature
		3.2.2 Promotes urban greening
		3.2.3 Promotes local food production
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases
	3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy
		3.4.2 Innovative environment-ally-friendly building design



This process also drew on one of the researcher's own previous involvement in the preparation of a set of indicators of a 'healthy built environment' and which adopted the earlier (2011) *Three Domains* schema (as shown in Figure 3.1). The Healthy Built Environment Indicators were developed in 2015 by the then Healthy Built Environments Program at the City Futures Research Centre at UNSW for the NSW Ministry of Health (<https://cityfutures.be.unsw.edu.au/research/city-wellbeing/city-wellbeing-resources/healthy-built-environment-indicators/>).

The references, explicit and implicit, were highlighted on paper copies of the documents and then recorded in table format for each relevant document. This format differed for document groups 1 and 2, although in both cases the tables include a commentary about the decision made in respect to the choice of the non-explicit health references.

This part of the review was not so concerned about the actual number of references given the lack of any benchmark against which such numerical figures might be assessed, and because the intention of the review here was more about the nature of the references, if any.

### ***3.6.2: The assessment process 2: Categorisation against the 'Three Healths Framework'***

The second stage of the assessment of documents involved categorising the identified health references, both explicit and implicit, against the 50 attributes of a health-supportive environment defined as part of the three conceptual frameworks of health and the built environment schema identified as part of this review from the first literature review report (Connon et al. 2018) (Table 3.5)

Here the categorisation process differed slightly between document groups 1 and 2. This was largely due to logistic reasons, given the source of the documents within each group and the sequencing of the assessment work relative to the development of the 'Three Healths Framework'.

In respect to group 1, the categorisation process commenced early in the review. However, completion was deferred once it was realised that such categorisation alone was resulting in an incomplete picture and thus response to the contextual question then arising as important for the translational aims of the Study; that is: what was happening in the world of the

practitioners preparing these plans to motivate or require them to include – or not include – provisions relating to health. This realisation led to a more unmediated stepping back from these known criteria, and, more in the manner of an inductive analysis, a closer engagement with the *experiences* behind these documents. This realisation, and the subsequent response, also arose, in part, at the time as a result of the developing findings from the review of group 3 documents, and which had then recently commenced. The categorisation of group 1 documents in relation to the ‘Three Healths Framework’ was then returned to at the end of this review. The results of this categorisation are shown in the table in Appendix 3.

The assessments in Appendix 3 also include the understandings from the similar qualitative review of group 2 documents. However, the assessment of these group 2, internal Landcom, documents also included an additional more quantitative approach on the basis that it was considered that this may yield additional indications as to the motivations and interests of Landcom in respect to their health-related content. This additional assessment involved scoring each health reference, whether explicit or implicit, against the 50 ‘Tier 3’ attributes listed in the ‘Three Healths Framework’ (Table 3.5) and involved:

- Establishing a separate tally sheet for each document;
- Noting for each document by hand on the tally sheet the number of times there was a consistency with each attribute; and
- Totalling the respective scores for each ‘Tier 3’ attribute and then also for the total number of references within each ‘Tier 1’ category (i.e. the Global public & population health, Socio-ecological determinants of health, and Planetary health categories).

In addition to indicating the extent to which individual documents referenced the particular ‘Tier 1’ conceptualisations of health, this scoring process also allowed for a separate assessment of those attributes that were not referenced within each document. The assessment of these group 2 documents are detailed and discussed in section 5. The hand tally sheets have been converted into WORD documents and are included in Appendix 5 for reference.

### ***3.6.3: Difficulties encountered in the scoring process***

There were three particular practical difficulties in undertaking and then using the results of the scoring component of the review. These difficulties arose in relation to:

- The identification of the health-related content in the first place; and then
- The subsequent assessment of consistency against the 50 attributes in the ‘Three Healths Framework’.

The latter was most particularly an issue in the more detailed quantitative use of these attributes in the review of the group 2 documents.

The first difficulty comprised a logistical problem arising from the nature of the attributes themselves. The other two arose from the characteristic overall lack of preciseness of wording in the majority of the documents. As discussed further in section 8, this characteristic is perhaps not to be unexpected given the focus of the documents reviewed here is on the complexities of the actual practice of urban and social development, and further, the expression of this focus is from the perspective of the practitioners themselves rather than the more, in a sense, disciplined academic viewpoint of the documents from which the ‘Three Healths Framework’ was developed. The commentary relating to the group 2 documents illustrates the inherent difficulty in undertaking such an exercise given, variously, the vagueness and/or composite nature of many of those references.

Each of the difficulties present some concerns about replicability of the review work in relation to the likelihood of others coming to a similar decision when assessing the same data against the ‘Three Healths Framework’. However, given the nature of the documents, as described above, they also need to be accepted as an inherent and perhaps unavoidable part of the exercise. The following notes describe the three difficulties in more detail and how they were addressed.

#### 3.6.3.1: The logistics of the attributes

This is related to the mechanical logistics of the scoring process, in particular:

- The need to keep in one’s head each of the large number (50) of attributes,

- The need to also remember that some attributes were repeated between or within the three ‘Tier 1’ and 12 ‘Tier 2’ categories of the schema. Some of these 50 attributes appear more than once, i. e. within different ‘Tier 2’ categories, either exactly or with small variations. Subtracting the attributes which are repeated exactly, such as good air quality, adequate outdoor space, adequate indoor space, low neighbourhood traffic levels, and pedestrian friendly outdoor spaces, yields a total of 45. A further nine attributes have some similarity, including those related to food, crime and safety, active transport, and air pollution.
- The wording of some ‘headings’ or ‘titles’, mainly for the ‘Tier 3’ categories, does not fully prompt all of the intended content, requiring further memorisation.

Resolving the last of these aspects was assisted by compiling a new reference table (Appendix 2) comprising the three tiers plus a summary explanation of the content of the Tier 3 attributes sourced from the initial literature review (Connon et al. 2018).

### 3.6.3.2: A substantial need for interpretation

Substantial interpretation was often required to assess the extent and scope of the matters being referenced, prior to then making an assessment of whether there was a health connection and prior also to the scoring against the 50 attributes. This was particularly the case in respect to many of the Green Square Town Centre documents where, as discussed above and in section 5, there was a greater tendency for imprecise wording. Examples include the use of composite words such as community, urban design and sustainability; whether references to ‘ESD’ were the same as a reference to ‘climate change’, as related to some of the attributes in the Tier 1 *Planetary health (relational ecology)* category; and whether references to ‘sustainable community’ include ecological sustainability and hence the possibility also of matters to do with climate change.

This difficulty was addressed in two ways:

- By constant reference to the known attributes of a health-supportive environment, as discussed above. For this a composite process was adopted, involving looking for references in the planning strategies consistent with the known attributes of a health-supportive environment and/or looking for single words or suites of words that were

consistent with the descriptors in the Tier 3 categories and attributes in the ‘Three Healths Framework’.

- By considering the particular words in the documents not solely by themselves, i.e. in isolation, and by also scanning ahead and behind in the document to glean any additional understandings about the intention of a particular word or reference.

### 3.6.3.3: The potential for double-scoring

This difficulty also became evident as the work progressed and was often associated with the difficulty of interpretation. It was particularly evident in relation to the Green Square Town Centre documents, as well as some Victoria Park documents. Again, there were a number of aspects:

- The documents tend to cover a limited range of topics, meaning that the same planning strategy might often be detailed more than once, or a number of documents dealt with particular components of the same strategy. Examples include the ‘place activation’ and ‘place-making’ aspects of the Green Square Town Centre and which comprised a large proportion of Green Square Town Centre documents overall.
- Often there might be repetition within a single document of ‘once-removed’ descriptions about essentially the same planning strategy as different to the initial detailing of the strategy.
- Some of the Green Square Town Centre documents (Doc no. 1, 3, 6 and 13) include, in addition to descriptions of the planning strategies they are proposing, and which were readily scored, assessments of those strategies against criteria in other separate planning strategy documents, including legislation and master plans.

Resolution of this difficulty was not as easy as simply identifying one reference to a particular planning strategy and scoring that reference only. Sometimes the same strategy would be described differently in different locations of the document, and therefore might also contain references to different and additional health-related aspects. Furthermore, the frequency of multiple scores can both assist and hinder subsequent interpretations. Too many double-coded numerical scores might risk disguising, in a similar way to averaging, various subtleties in the frequency of references. It was also thought that it would be useful to gain some idea of the broad frequency of health references throughout an individual document and

notwithstanding the lack of any benchmark against which such numerical figures might be assessed.

One result of addressing these difficulties was that each document was considered, somewhat simultaneously, in two ways. The first involved considering the advices and data contained within each document when looked at as a whole, that is, as an overall entity in itself. The second way considered the various individual component sections and phrases and words within each document on the basis that each potentially contained their own additional sets of advices and data, and which may not necessarily be the same as that conveyed when looking at the document as a whole. As a conceptual prompt when undertaking this approach, each document, and then also the various individual components, was considered in the nature of a holon, Koestler's (1978) schema devised to resolve the inherent difficulty of the relationship between parts and wholes and where each element is looked at as comprising both a whole in itself, warranting assessment, and a part of a larger whole containing its own advices and therefore warranting its own separate assessment.

### **3.7: Workshop with Landcom Personnel**

A three-hour workshop was held with Landcom staff who had been involved in the development of Green Square Town Centre and Victoria park on the 5<sup>th</sup> of July 2018. This workshop coincided with the beginning of the review of the documents. Participants also included applicable former staff, in particular in relation to the older development of Victoria Park. This workshop involved (i) seeking advice about the history and background of Landcom's involvement in the two case study developments, and (ii) exploring, through a participatory exercise, existing understandings amongst those present about the connection between development and health. The findings from (ii) were, where applicable, drawn on to assist with the interpretation and understanding of the planning strategy documents reviewed in this Report.

#### **4. Findings 1: How is a high density living environment defined and understood by planning institutions involved in the development of the two case study sites?**

##### **4.1 The review of internal Landcom documents**

A total of 36 documents were reviewed to assess how healthy high density was defined by Landcom. Twenty-two documents were associated with the development at Victoria Park and 14 were related to the Green Square development. None of the 36 documents included as part of this analysis included a definition of ‘healthy high density’ and as a result the findings from the review are focused on the definition and conceptualisation of density in documents related to the case study sites. For each site, any definitions of density according to a specific spatially defined and quantified set of criteria are first discussed, followed by an examination of any inclusion of the term density. Qualitative descriptors related to the conceptualisation of density are words or phrases that may illustrate or evoke a vision of the development such as ‘towers’ or ‘high rise’. In addition, qualitative descriptors may be words or phrases that describe a change on site, such as ‘growing’ or ‘transforming’. Numerical information about the site, such as area, floor space ration and building heights are all classified as quantitative descriptors are counts. In the absence of clear density definitions, qualitative and/or quantitative factors are used by authors and readers to conceptualise the density of a site.

##### ***4.1.1: Victoria Park***

22 documents were reviewed in relation to Victoria Park. These comprise the 20 ‘internal’ Landcom documents as listed in Table 3.2 plus the two key planning documents for the site, the Victoria Park Master Plan – Background Information (1998) and the Victoria Park Refined Master Plan (1999) as listed in Table 3.1. The 20 internal documents, comprising of reports, presentations, briefing notes and marketing material are discussed as a group below. The master plan documents are discussed individually below.

##### *Density undefined*

None of the 20 documents reviewed defined density according to a specific spatially defined and quantified set of criteria. The word ‘density’ was used in four out of 20 documents as a descriptive term and without clear definition. The minutes for the meeting held 20 July 1998 in the Summary of Landcom Board Papers (1997-2007) state it ‘was considered prudent that higher densities should be factored in early’ without clarification about what constitutes higher density. Similar, the *Victoria Park Project. A Review of the Victoria Park Development, Zetland 1997-2010* (2010: 5) states that the vision for the site was to ‘create a memorable and sustainable urban community incorporating medium to high density living with abundant public open space in an inner-city urban development’ without clarification of what might be considered medium and/or high density living. The end of the report remarks that Victoria Park is a ‘proven example of higher densities in a functional, cohesive and attractive development’ (2010: 10), again, without detailing the level of development that would be classified as higher densities. The documents *Welcome to Victoria Park the natural neighbourhood* (2008) and *Victoria Park* (n.d.) both use the phrase ‘medium to high density living’ without outlining what constitutes medium or high density living.

Seven of the 20 documents do not contain any numbers or phrasing that conceptualise density. These documents include a Contaminated Site Summary Audit Report, a Contribution Credit Deed, a document on the treatment of stormwater, an internal memo related to paving standards and three items related to resident social activities. Of the remaining 13 documents reviewed, two documents use only qualitative descriptors to conceptualise density, two documents use only quantitative descriptors to conceptualise density and nine documents utilise both quantitative and qualitative descriptors to conceptualise density.

### *Qualitative Descriptors*

Eleven documents use qualitative descriptors to assist in the conceptualisation of density at Victoria Park. Five of these documents utilise words such as ‘renewal’, ‘transform’ and ‘fast-growing’ to indicate that changes will be occurring in the area, with one marketing document included the phrase ‘life regeneration in progress’. Nine of the 11 documents included terms that helped to illustrate the look and scale of the development, such as ‘landmark ‘slim-line’ towers’, ‘terraces, walk-up, mid-rise and high-rise units’ and ‘taller tower’. These documents included an internal briefing note, two documents related to the



Victoria Park post-project review, an independent architectural report related the Anglican Retirement Village and three fact sheets/newsletters.

### *Quantitative Descriptors*

Twelve documents utilise quantitative descriptors to aid in the conceptualisation of density. A summary of the types of quantitative descriptors used in the Victoria Park documents is provided below in Table 4.1:

**Table 4.1: Summary of Quantitative Descriptors used in Victoria Park Documents**

Quantitative Descriptor	Document Number
Floor Space Ratio	1, 2a, 4, 5, 17
Site Area	1, 2, 2a, 3, 4, 5, 17, 18, 19, 20
Area of residential, commercial, retail or open space	1, 2, 2a, 3, 4, 5, 16, 18, 19
Number of storeys	2, 2a, 4, 5, 16, 18
Building height	-
Percentage of site	1, 2, 2a, 5, 19
Number of apartments or dwellings	1, 2, 3, 4, 5, 13, 16, 17, 18
Number of residents	18, 20
Number of workers	4, 5, 20

Five documents discuss the floor space ratio either across the whole site or when referring to individual buildings. These documents included two PowerPoint presentations (one for the City of Sydney and one for students at UTS) two documents related to the Victoria Park post-project review and one internal briefing note. Ten documents provide the area of the site in hectares and nine documents include areas of residential, commercial, retail or open space in metres squared or hectares. For example, the PowerPoint presentation for the City of Sydney includes the total site area, '24.46ha' (2005: 7) as well as outlining the estimated total yield of apartments, FSR and retail space in metres squared for each of the different buildings at Victoria Park. While six documents refer to the expected number of storeys of buildings across the site, no documents refer to building heights in metres. Of the six documents that

referred to the expected number of storeys of buildings at Victoria Park, one document was an internal briefing note and the other five external documents comprised of two documents related to the Victoria Park post-project review, one independent architectural review of the proposed Anglican Retirement Village and one promotional/marketing fact sheet, indicating that this approach to describing building height is used in industry documents as well as for information prepared for the general public.

Five documents, comprising of the PowerPoint presentation for City of Sydney, two internal briefing notes, one document related to the Victoria Park post-project review and one fact sheet, provide a percentage of site that will be dedicated to residential, commercial, retail or recreational uses. The PowerPoint presentation for City of Sydney and the fact sheet both state that 40% of the site will be dedicated to the public domain. The fact sheet, prepared for the wider public, does not provide a further breakdown of public domain elements, whereas the PowerPoint presentation, delivered to the City of Sydney, clarifies that the 40% of the site comprises of '27% roads and 13% parks/public domain lots' (2005: 8). Nine documents estimate the total numbers of apartments or dwellings in Victoria Park. Two documents approximate the total number of future residents and the estimated total number of future workers is outlined in three documents.

The individual quantitative descriptors do not provide a calculation of density for Victoria Park. Figures quoted in each document may give readers a sense of the scale of the development, but the resulting conceptualising of density would be dependent on an individual's understanding of each quantitative factor and their own interpretation of density levels. For those documents where particular combinations of quantitative descriptors are provided, such as site area and number of dwellings, a reader could perform a rough calculation of density. Eight documents (no. 1, 2, 3, 4, 5, 17, 18 and 20) include two quantitative descriptors that could be used to estimate density. However, it should be noted that there is nothing in the original documents to suggest that the figures provided should be used in such calculations.

#### ***4.1.2: Green Square Town Centre***

Fourteen documents, as listed in Table 3.3, were reviewed in relation to Green Square. Two key planning documents for the site, the Planning Proposal – Town Core Sites within Green

Square Town Centre (2010) and the Green Square Urban Renewal Updated Transport Management and Accessibility Plan (2012) will be discussed individually. The remaining 12 documents, comprising of reports, statements and marketing material are discussed below.

### *Density Undefined*

None of the 12 documents reviewed defined density according to a specific spatially defined and quantified set of criteria. The word 'density' was used in two out of 12 documents. The document *Green Square Placemaking Volume 1: Framework* (n.d: 9) stated that the Town Centre would be a 'high density, quality live/work environment that is expected to accommodate 6450 residents and 9000 workers'. Though resident and worker figures are included in the sentence that mentions 'high density', these figures do not constitute a definition of density. A reader could use the total site area found on page two of the document to perform a rough estimate of density but there is no indication in the document that the figures should be used in such a way. When addressing the principles of SEPP 65, the document *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* (2014: 46) it is stated that proposed 310 apartments provide 'a good diversity and density of apartment types'. The total number of apartments alone does not provide a definition of density and it would be difficult to quantify what 'good' density was.

Eight of the 12 documents do not contain any numbers or phrasing that conceptualise density. These documents include a Statement of Community Benefits and Contributions and seven documents related to the social activation and 'placemaking' program at Green Square. Of the remaining five documents, two documents use only quantitative descriptors to conceptualise density and two documents utilise both quantitative and qualitative descriptors to conceptualise density.

### *Qualitative Descriptors*

The document *Position Description - Place Manager, Green Square Town Centre* (2016: 1) refers to the Green Square Town Centre as 'one of the largest urban renewal projects in NSW and Australia. While this description does not define the density of the site, positioning it as 'one of the largest' may give readers a subjective sense of the scale of the project. The

document also states that the process will ‘rejuvenate industrial precincts and uplift the value of government lands at Green Square’ (2016: 1) which indicates that there may be a change or intensification of uses on the site but does not provide a clear indication of the expected density of Green Square. The document *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* (2014: 46) refers to the ‘tower form’ of the buildings on Sites 5A and 5B. While this does not provide a measure of density, the description of the buildings as towers may again trigger a subjective sense of the scale of the project in readers of the document.

### *Quantitative Descriptors*

Four documents utilise quantitative descriptors to conceptualise density. A summary of the types of quantitative descriptors used in the Green Square documents is provided below in Table 4.2.

**Table 4.2: Summary of Quantitative Descriptors used in Green Square Documents**

Quantitative Descriptor	Document Number
Floor Space Ratio	14
Site Area	5, 6, 10, 14
Area of residential, commercial, retail or open space	5, 6, 14
Number of storeys	14
Building height	-
Percentage of site	-
Number of apartments or dwellings	5
Number of residents	6
Number of workers	5, 6

The document *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* discusses the ‘achieved floor space ratio’ of ‘3.97:1’ (2014: 52) when referring to buildings on Site 5A and 5B. Four documents provide total area figures for various divisions of the site. *The Green Square Placemaking*

*Volume 1 Framework* outlines the total area of the Green Square Urban Renewal Area as ‘278 hectares’ (n.d: 2), with *the Position Description – Place Manager* document providing the total area of the Green Square Town Centre as ‘14ha’ (2016: 1). *The Social Corner Activation Brief* highlights the area that Mirvac and Landcom are developing as ‘5 hectares of the Green Square Town Centre’ and the 956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report states that the total areas of sites 5A and 5B are ‘2285.3m<sup>2</sup>’ and ‘1784.4m<sup>2</sup>’ respectively (2014: 8). Three documents, the *Position Description – Place Manager*, the *Green Square Placemaking Volume 1 Framework* and the *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* all include areas of residential, commercial, retail or open space in metres squared for each of the different classifications of the site as discussed above. While the document *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* refer to the expected number of storeys of buildings on Site 5A and 5B, no documents refer to building heights in metres.

The percentage of total site area that will be dedicated to residential, commercial, retail or recreational uses was not provided in any of the Green Square documents reviewed. The *956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report* estimated the total numbers of apartments or dwellings on Site 5A and 5B in Green Square as ‘245 apartments’ and ‘65 apartments’ respectively (2014: 28). *The Green Square Placemaking Volume 1 Framework* approximates the total number of future residents in the Green Square Town Centre as ‘6,800 people’ (n.d: 36) and estimates the total number of future workers as ‘8,500’ (n.d: 36). *The Position Description – Place Manager* estimates the total number of future workers in the Mirvac and Landcom development area as ‘6,000’ (2016: 1).

#### **4.2: Victoria Park Master Plan – Background Information (1998)**

The *Victoria Park Master Plan* was the only document out of the 22 Victoria Park documents reviewed that provided a definition of density according to a specific spatially defined and quantified set of criteria. The Master Plan provides for a variety of development scenarios and acknowledges that start dates and market conditions (1998: 38) will have an influence on the final overall density of the site. Landcom references previous work in Pyrmont, where a

‘target of 65m<sup>2</sup> of gross floor area per resident’ (1998: 38) was identified and uses this as the basis of density calculations for Victoria Park. Using this target, three development scenarios were presented: 2500 units, 2000 units and 1500 units, with variations made to the average unit size and open space provision to accommodate increasing numbers of units. The density of the site, expressed in dwellings per hectare, is provided for only the 1500 unit scenario (97 dw/ha) and the 2500 unit scenario (162 dw/ha). Table 4.3 the Comparative Densities Urban Developments of the Master Plan compares these two possible development scenarios to other development projects in surrounding areas, highlighting that although the proposed development at Victoria Park will have similar building heights to Moore Park Gardens, Crown Street Housing and Crown Gardens, the resulting density will be substantially lower than these developments that have a density of 219, 234 and 262 dwellings per hectare respectively.

Although the Master Plan refers to the density of development at Victoria Park as ‘high density urban development’ (1998: 26), the document also refers to a need to ‘develop a product which differs from the concentration of high density apartments’ (1998: 38). This statement seems contradictory and may result in confusion for readers as the sites of these existing high density ‘products’ are never identified, defined or contextualised. As discussed above, the Master Plan makes reference to the pliability of the final overall density at Victoria Park. That is, where density levels have been left flexible to accommodate changing of market conditions. At times it also refers to the possible level of development as ‘low rise/lower density residential dwellings’ (1998: 29) or describes the certain project scenarios as ‘lower density’, indicating that these conceptualisations of density are all relative to the context of the document. In contrast, the term density is used to indicate a growth in the number of new residents, such as ‘increase the density around the Green Square Station’ (1998: 3) and ‘encourage a higher density built form’ (1998: 3).

While the Master Plan does provide a proposed level of density at Victoria Park, some qualitative descriptors are still used to assist in the conceptualisation of density. For example, as part of the analysis of the State Government Statutory Framework, the development at Victoria Park is described as a ‘significant increase in the residential population’ (1998: 2) and will ‘play an important part in the delivery of additional housing (1998: 2), highlighting the proposed changes to the area. Wording that indicate the size or scale of the development are also used, such as ‘high quality urban place for both living and working’ (1998: 3) and

‘one of the largest single development parcels in South Sydney’ (1998: 9) but overall the Master Plan is less reliant on these kinds of phrases as the density of the site has been provided, along with other supporting quantitative descriptors.

Quantitative descriptors that are used to provide additional dimensions to the conceptualisation of density include total site area ‘24.3 hectare site’ (1998: 9) and total open space area of ‘4.6 hectares’ (1998: 31). Discussion regarding the three development scenarios concludes that the total commercial floor area might range from ‘50,000m<sup>2</sup> to 115,000m<sup>2</sup>’ (p37) but that ‘70-80,000m<sup>2</sup> of commercial use is the most optimal in the current market’ (p38). The Master Plan makes reference to the density studies included as part of the Green Square Structural Master Plan 1997 which indicated that a ‘2.5:1 floor space ratio over the whole site would be difficult to achieve without reducing residential amenity’ (1998: 32) and that a gross floor space ratio of 1.5:1 would be more likely. Building height limits are provided in both metres, ‘under the existing LEP 114 buildings may be developed up to 21 metres’ (1998: 15) and number of storeys, such as on page 37 where the tallest building proposed for development is 14 storeys.

#### **4.3: Victoria Park Refined Master Plan (1999)**

It should be noted that the copy of this document provided was missing four pages and so the sections on Building Design, Parking, Traffic and Water Management could not be reviewed.

While the Refined Master Plan does not provide an overall calculation of site density, the document does include an open space density calculation when it states that there will be the provision of ‘more than 12 square metres of public open space per person’ (1999: 6) in Victoria Park. Variations of the word ‘density’ are only included twice in the report, first in the background statement where the phrase ‘densely populated’ (1999: 8) is used to describe the site in the future, and second as part of discussions on infrastructure provisions where it is stated that future works should ‘allow for possibility of staged upgrading of services if achieved densities vary’ (1999: 43).

Both qualitative and quantitative descriptors are used in the Master Plan to assist in the conceptualisation of density. Quantitative descriptors, such as the total site area of ‘24.47 hectares’ are provided, along with an estimate of ‘611,700 square metres of floor space for

residential, business, retail and community uses’, which the plan states is a ‘maximum possible development scenario using a 2.5:1 floor space ratio’ (1999: 6). The total number of dwellings (1800), residents (3060) and workers (3000) are also outlined. Building heights, ranging from 3 to 14 storeys across the site, are provided but there is no reference to proposed building heights in metres (1999: 34). While it is acknowledged that there are pages missing from this project’s copy of the report, it is unlikely that this information would have been presented under the headings of building design, parking, traffic or water management.

Qualitative descriptors are also used to aid in the conceptualisation of density. The words ‘transformation’ (1999: 4) and ‘transition’ (1999: 8) are used to highlight that the uses on site are changing. Reference to the residents and works collectively as a community on page 4 (‘vibrant mixed use community’) and page 8, (more densely populated and vibrant, predominantly urban community’,) provide an indication of the scale of the development. Words to describe the form of the site include terraces, townhouses, low-rise apartments, mid-rise units, high-rise units, tower units and slim-line towers, offering readers an idea of the scale of development at Victoria Park.

The combination of quantitative and qualitative descriptors utilised in the Victoria Park Refined Master Plan do assist in the conceptualisation of density but do not provide a clear definition of density across the site.

#### **4.4: Green Square Town Centre Planning Proposal 2010**

Qualitative and quantitative descriptors assist in the conceptualisation of density for the Green Square Town Centre in the Green Square Planning Proposal 2010, as the document does not provide a measure of density for the site according to a specific spatially defined and quantified set of criteria. The term density does feature in the planning proposal but is used to describe the general intensification of uses occurring in the area. For example, the phrase ‘proposed increase in development density’ is featured five times in the 83-page document (2010 pages 43, 57, 58, 59, 76). The Planning Proposal does include the terms ‘high density’ and ‘higher density’ but these levels of development are not defined, and the terms are used only in general discussions surrounding necessary transport and infrastructure provisions from the South Sydney Local Environment Plans (LEP) and the Green Square Town Centre Infrastructure Strategy, rather than in the context of explicitly defining the site as a high



density development. For example, the LEP is described as enabling ‘a higher development potential to encourage high density redevelopment’ (2010: 11) and the infrastructure strategy is reported as recognising ‘that the identified infrastructure is essential to achieve appropriate public amenity and meet basic needs to support higher density development’ (2010: 12). These references to higher density are not site specific and are not accompanied by a definition of what constitutes higher or high density.

The first quarter of the Planning Proposal focuses on existing planning controls that apply to the site and relies heavily on quantitative descriptors to aid in the conceptualisation of density. The total area of the Green Square Town Centre is provided, ‘13.74 hectares’ (2010: 11) and the total gross, commercial, retail and residential floor areas, as well as floor space ratios, for each of the 19 development sites from the South Sydney Local Environment Plan 1998 and the Green Square Infrastructure Strategy are provided across three tables. The maximum building heights from the LEP are illustrated by a map and key with maximum building heights expressed in metres rather than as storeys. The remainder of the document utilises quantitative descriptors to justify why the development should be granted approval to vary the development standards and increase the floor space and maximum height allowances. ‘achieve a development outcome that is commercially feasible and responds to market conditions and expectations’ (2010: 14). Gross floor measurements are used to illustrate the proposed increases to commercial space, ‘from 12,100m<sup>2</sup> to 15,600m<sup>2</sup>’ (2012: 39) and retail space, ‘18,405m<sup>2</sup> to 58,943m<sup>2</sup>’ (2012: 41) and job targets outlined in the City of Sydney’s Capacity Study 2008 are used to justify the increases in commercial and retail floor space, with the Planning Proposal stating that an ‘the increase in commercial employment, arising from the additional 40,538m<sup>2</sup> is estimated to be 2,433 jobs’ (2012: 42). The proposed increase in residential floor space of 17,922m<sup>2</sup> is stated to potentially accommodate ‘an additional 180-220 dwellings’ (2010: 42). The table and corresponding map that outline the proposed increases in building heights present the information as number of storeys rather than in metres, which was the measure earlier in the document. This makes comparison between the LEP standards and the proposed allowances difficult, as readers can only make a rough estimate of how many metres tall a 21 or 22 storey building might be. Floor space ratio (FSR) is only referred to twice in the document, firstly on page 47 where the LEP FSR provisions of 3.11:1 are compared to the proposed FSR of 4.31:1 and secondly on page 81 where it is requested that future LEP provisions nominate maximum FSRs.

Qualitative descriptors included in the document also assist in the conceptualisation of density on the site. Words that have been commonly used in the Victoria Park and Green Square documents such as ‘revitalised’ (2010: 11) and ‘renewal’ (2010: 11) or ‘vibrant town centre’ (2010: 20) and ‘major centre’ (2010: 54) do feature in this document but unique phrases such as ‘sustainable commercial centre’ (2010: 48) and ‘increase the quantum of commercial floor space’ (2010: 62) are also included.

#### **4.5: Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan 2012**

The Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan 2012 (TMAP) does not include a calculation of density for the subject site based on a specific spatially defined and quantified set of criteria. Two non-site-specific density calculations are referred to in the document, the first is a reference to a provision from the Draft State Environmental Planning Policy No. 66 Integration of Land Use and Transport that states ‘the achievement of minimum gross densities of 15 dwellings per hectare’ (2012: 13) must be considered and the second density calculation is an employee density calculation from the Danks Street precinct that was used in the TMAP as part of the modelling assumptions used calculating potential gross floor area yields across the greater Green Square area.

The TMAP is one of the few documents reviewed that specifically states that the development at Green Square is ‘high density’. When describing the future land use at Green Square the TMAP states that the site will change from ‘largely industrial to commercial, retail and medium to high density residential (2012: 10) and later in the document as ‘from an inner-city employment zone with factories, large-sized government operations and pockets of older-style town houses to a high-density residential and mixed land use precinct’ (2012: 50). Though the TMAP goes on to describe Green Square as having a ‘slightly higher proportion of high-density dwellings than the City of Sydney average’ (2012: 50), what constitutes as high density is never defined. Reference is made to the Australian Bureau of Statistics therefore the definition of high density is most likely taken from census definitions.

A range of quantitative descriptors are included in the TMAP that assist in the conceptualisation of density for the site. The document methodically analyses the various

planning instruments and proposals for the site, summarising the proposed changes using quantitative descriptors such as gross floor areas and percentage change. The TMAP reviews the revised Planning Proposal for the Green Square Town Centre from 2011 (the 2010 version was the document reviewed above) and summarises the proposed increase in gross floor area (2012: 17) (See Figure 4.1)

**Figure 4.1: Proposed increase in gross floor area for Green Square Town Centre**

Land use	Current LEP floor space (m <sup>2</sup> )	Proposed floor space (m <sup>2</sup> )	Increase	
			m <sup>2</sup>	%
Commercial	18,405	58,943	<b>40,538</b>	220%
Retail	12,103	15,623	<b>3,520</b>	29%
Residential	130,592	148,514	<b>17,922</b>	14%
<b>Total</b>	<b>161,100</b>	<b>223,080</b>	<b>61,980</b>	<b>38%</b>

Note: These sites do not cover the entire GSTC. Please refer to Table 2.2 for overall changes to floor space in the GSTC.

Gross floor area potential yields from various sites within the greater Green Square area are presented in Table 2.2 of the TMAP, providing a comprehensive understanding of the different developments in the area. The inclusion of total site area or floor space ratio for these sites would have further aided the readers ability to conceptualise the density of the area. Forecasts of the total number of dwellings, residents and employees are also provided in table format. These figures are then used as a basis for analysing the potential trip generation numbers and providing recommendations for future transport access across the site. The TMAP represents one of the best uses of quantitative figures to assist in illustrating the levels of development that are proposed at Green Square Town Centre.

Qualitative descriptors similar to those used in other documents reviewed are also utilised in the TMAP to describe the process of change occurring at the site, such as ‘largest urban renewal site’ (2012 p1) and ‘one of the inner city’s fastest growing areas’ (2012: 1). In addition, qualitative descriptions are provided in the summary of assumptions underpinning the TMAP process in lieu of quantitative descriptors. For example, ‘reduced average apartment sizes, yielding more dwellings from the same total floor space’ (2012: 4) and ‘reduced average space per employee, meaning more jobs could be accommodated within the

same total floor space' (2012: 4) illustrate that the density of dwellings and employees will increase. The TMAP is the only document reviewed to use qualitative descriptors in this manner.

## **5. Findings 2: How is health considered and understood in relation to higher density for the two case study sites?**

### **5.1: Health and the Initial Master Planning Documents (Document Group 1)**

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#### ***5.1.1 'New Southern Railway' Environmental Impact Statement (1994) and Urban Planning Strategy (1994)***

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**Key points:**

- Included as background on the intended more intensive land use changes to be prompted by the new airport railway.
  - No references to health, though there are health co-benefits from its urban consolidation outcomes.
- 

The Environmental Impact Statement (EIS) for the then proposed 'New Southern Railway' was prepared by consultants Kinhill Engineers for the then State Rail Authority in 1994. The EIS referenced a wider 'New Southern Railway Urban Planning Strategy' prepared by consultants Peddle Thorpe for the NSW Department of Planning in 1993, and adopted by the Department in 1994, in relation to the anticipated changes in land use that might follow opening of the railway and, in respect to Green Square, the inclusion of a station in Beaconsfield.

There are no explicit references to health effects from the proposal in the EIS.

Attention is however given to the impact of the new railway on overall urban form, whereby the railway was anticipated to lead to substantial changes in land use in what was then still called the 'central' industrial area. The New Southern Railway Urban Planning Strategy envisaged new 'medium-high density' residential development in Waterloo and Zetland, replacing existing industrial uses, with an anticipated population of 32,300 people in 14,000 new dwellings, plus 800 workers in 10,000m<sup>2</sup> of floor space, although the future use of the area that is now the Green Square Town Centre is still indicated as being for mixed commercial and light industrial use – and as such of a lower scale – rather than residential.

These wider changes in urban form would have an implicit macro-beneficial effect on health by generating a more compact city, although this is unstated in the EIS. Locally it would also assist in generating additional employment opportunities in an area that was characterised by social and economic disadvantage, with then associated poor health. As the Strategy suggested, the new railway and associated land use changes had ‘... the potential to revitalise the region and stimulate growth in housing, small business and airport-related business’, and lead to the ‘creation of a more efficient and compact city’ and the ‘stimulation of urban containment and urban renewal in the central industrial area’ (Kinhill 1994:(i)).

### ***5.1.2: Green Square Structural Master Plan (1998)***

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#### **Key points:**

- Prepared for South Sydney Council in 1997 and adopted in 1998 to guide this major redevelopment area as identified in The South Sydney Plan of 1995.
  - Focussed on ‘environmental sustainability’, ‘community wellbeing’, and ‘social interaction’ – all with implicit health benefits, but with no explicit mention of health other than in respect to actual ‘facilities’.
  - At this stage references to overall scale of development is relatively low-key with a ‘suburb’ rhetoric and a low scaled employment and ‘activity node’ proposed on what is now the Town Centre site.
- 

The Green Square Structural Master Plan was prepared for South Sydney Council by consultants Stanisic+Turner (S+T) (architects) and Hassell (architecture and planning), appointed in 1997 (<https://www.stanisic.com.au/projects/project/green-square-masterplan>). The aim was to provide a ‘community based strategic planning framework for Green Square derived from an urban design vision’ (S+T, 1997: 2). Preparation was undertaken ‘within the framework’ of The South Sydney Plan and guided by a steering committee comprising South Sydney Council, the South Sydney Development Corporation, the Department of Urban Affairs and Planning, and a local community representative (S+T, 1997: 2).

Three urban design options were generated in an initial report and exhibited for public comment: ‘Current development path’, ‘Residential consolidation’, and ‘The global city’. The final master plan incorporated desired features from each of these options and was adopted by Council in early 1998 (Endelman 2004). Prior to preparing the master plan, Council in 1988 conducted a ‘Visions for Green Square’ competition, open to the

community, schools, universities, and design professionals, to seek ideas for an ‘imaginative, affordable and sustainable urban living space for the area surrounding the proposed railway station at Green Square’. Thirty-eight proposals were submitted, however there is little evidence of much being done with them (Endelman 2004). The competition winner was Simpson-Wilson Architects (<https://www.simpsonwilsonarchitects.com/awards>). Rod Simpson is now the Environment Commissioner for the Greater Sydney Commission.

As with The South Sydney Plan, and later Victoria Park Master Plan, and consistent with the then planning ‘zeitgeist’, the Vision Statement for the Master Plan demonstrates a close nexus between ecological considerations and overall community wellbeing, particularly social wellbeing (S+T, 1997: 3):

‘The primary goal ... is to establish an environmentally sustainable suburb which supports the well-being of present and future communities as well as providing a complex urban environment for encouraging social interaction.’

Here also it is noted that, and notwithstanding that a ‘global city’ option was canvassed, the Master Plan did not label the area that is now the Green Square Town Centre as a ‘town centre’ but as a ‘local activity centre’, consistent with The South Sydney Plan. The relatively low proposed FSRs and building heights are consistent with this image; and the references to ‘suburb’ and ‘local activity centre’ are, arguably, more consciously ‘local’ and ‘people’-centred than the other, concurrent, references to Green Square as ‘growth centre’ and ‘redevelopment area’; and as such also consistent with the community-focus in the South Sydney Plan.

Endellman (2004: 119) noted the Green Square Structural Master Plan underwent various revisions following adoption ‘despite the Council’s earlier commitment to adhere to it’, and that these were prompted by plans by ‘at least two key developers’. In a way this is not unexpected given the early and somewhat experimental nature of a development the anticipated size of Green Square. The Green Square Structural Master Plan is now basically an historical document, with its intentions taken over by, variously, the master plans developed for each major development site, and the general precinct-specific development provisions in the current City of Sydney LEP and DCP.

The Master Plan established three ‘key concepts’ and nine ‘principles’. The key concepts were:

- Diversity – ‘underpins a vibrant city that offers complex experiences and social contact’
- Connectivity – good connections between and within public spaces and streets, and
- Interdependency/Compatibility – as relating to the interactions between social and physical environments.

The principles were:

- Urban Pattern – reinforce and supplement the existing urban pattern
- Public Open Space – create a network of significant public spaces and streets
- Built Form – encourage a diversity of built form
- Social Infrastructure – reinforce the unique social environment of South Sydney as a ‘diverse and vital place’ and provide appropriate facilities.
- ESD – promote environmentally sustainable development, especially water and energy management.
- Movement Networks – improve pedestrian and vehicular connectivity, reinforce pedestrian emphasis, and reduce car dependency.
- Public Transport – encourage maximum utilisation of existing and future facilities.
- Land Use and Population – encourage compatible mixed uses to ‘create a place with vibrant urban life’.
- Physical Infrastructure – provide sufficient energy, stormwater, sewer and waste infrastructure for the increased population.

Table 5.1 reviews the content of the Master Plan in relation to its health ‘intentions’ (ordered as per the sections in the Master Plan, which differed from the listing of principles). The entries in the Table draw on the Master Plan wording, but are paraphrased for clarity and conciseness. As with the principles, there is generally no explicit mention of health outcomes, except for a section on ‘health facilities’. The overall impression is that this is very much an urban design-led document, consistent with its authorship by architectural consultants, and also the urban design orientation of the South Sydney DCP of the time. There are however, as noted in Column 3, significant health co-benefits from the particular urban design approach adopted.



**Table 5.1: Health and the Green Square Structural Master Plan (1998)**

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
Urban strategy	None	A transit-orientated mixed use area with a predominance of residential uses.  Support existing and create new ‘activity centres’.	The reference to ‘transit-orientated’ may indicate an awareness of the health benefits from ‘active transport’.
Public domain	None	Address existing under-provision of public open space generally (target 0.6ha per 1,000 persons), and in active recreation facilities.  Include a public art strategy, as per the existing South Sydney Council policy.	The need for active and passive recreation space is a long-standing component of planning, for implicit health reasons.
Urban form	None		Proposes:  <ul style="list-style-type: none"> <li>▪ an average FSR of 1.25:1, and</li> <li>▪ building heights to rise to a 10-storey ‘edge’ adjacent to the Green Square railway station.</li> </ul>
Social infrastructure	Includes a section on ‘health facilities’, noting: <ul style="list-style-type: none"> <li>▪ the existing Zetland Community Health Centre will need expanding.</li> <li>▪ ‘there are clear opportunities for an integrated planning model to be developed here which links environmental and human services planning in Green Square precinct as a major community health initiative.’</li> <li>▪ the Local Health Service has a particular interest in expanding its role in environmental health as part of a broader emphasis on a</li> </ul>	Notes the area contains small existing communities, and that new communities are to be established.  ‘While the provision of an appropriate range of facilities is a priority, important that the broader context of the social environment is understood. The concept of ‘street-life’ at its best exemplifies the notion of a social environment’.  Social mix ‘has been a central component of South Sydney’s culture’.  Facilities to be well integrated rather than stand-alone.  Commercial and community uses to be	The need for such social infrastructure is a long-standing component of planning, for implicit health reasons.  The Local Health District now applying to Green Square is the Sydney LHD. The suggestions in the Master Plan are consistent with its recent (draft) Strategic Plan (see section 2.7).

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
	<p>population health approach.'</p> <p>Includes 'preventative health' in the list of facilities that should be included on the Victoria Park site (see next column).</p>	<p>mixed to promote 'an energetic' range of activities, and increase customers for all services.</p> <p>Give attention to 'anchor' tenants and services as a way of establishing a robust base for facilities.</p> <p>Need for 'interactive planning' involving key human services providers.</p> <p>Public buildings to have a clear interface with the public domain.</p> <p>Importance of open space in providing venues for community activities.</p> <p>Lists as community facilities needing to be provided, including reference to the former hospital site and what is now to be the aquatic and sports field area.</p> <p>Specific reference to the 'Naval Stores site' (now Victoria Park) to include aged persons housing with a community room, an occasional child care centre, and a 'neighbourhood retail area' with space for: classes, training programs, preventative health, relaxation and small seminars.</p> <p>Social housing to be provided consistent with Council's Affordable Housing Strategy (with a target of 5% of dwellings to be 'affordable').</p>	
<b>Movement networks</b>	None	<p>Emphasis on 'bikes and pedestrians'.</p> <p>Reference to the South Sydney Bike Plan.</p>	<p>The reference to 'bikes and pedestrians' may indicate an awareness of the health benefits from 'active transport'.</p>

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		Need for 'a pedestrian friendly environment' – improved connections, quieter roads and environments, good access to parks & buses & the railway station, and closeness of dwellings to shops and other facilities.	
<b>Implementation</b>	None	<p>Council's Section 94 contributions plan will need to be reviewed in order to generate sufficient funds for needed infrastructure.</p> <p>But also: 'a balance will need to be struck between obtaining acquisition and maintenance funds through Section 94 for open space and encouraging redevelopment activity by offering concessions on development contributions where appropriate.'</p> <p>A 5% affordable housing target, with a possible 'density bonus' to assist achieving this.</p>	

### 5.1.3: Victoria Park Master Plan (1998)

All page references in this section are to the Victoria Park Master Plan document

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#### Key points:

- Prepared by Landcom in 1998 after purchase of the site in 1997.
- A clear line of sight with the South Sydney Plan and DCP, but with higher densities than originally envisaged in the Green Square Master Plan influenced it has been suggested, by Landcom itself.
- A focus on quality urban outcomes and 'community building', given the un-tested market for such a brown-filled development at that time. Considerable attention to the design of the individual buildings and dwellings, with a range of dwelling types and public green open spaces to be provided.
- Only few specific health references, though with many implicit health co-benefits.

- Conveys the sense of a close ‘feel’ for the way in which it will be inhabited by the author.
  - The provisions were stated as being fluid to an extent to respond to changes in the (then uncertain and unstable market.
  - The constructed estate was financially successful, has won numerous awards, and has a high degree of satisfied residents.
- 

The Master Plan for the then future development of the former Commonwealth Naval Stores site on the eastern ‘edge’ of Green Square and subsequently referred to as ‘Victoria Park’, after the eponymous racecourse that formerly occupied the land was prepared by Landcom in 1998 following purchase in December 1997. The preparation of a master plan was a requirement of the South Sydney DCP 1997, though it is likely that such a master plan would have been prepared in any case as good practice.

Victoria Park was the first major site to undergo development in Green Square and as such was somewhat experimental. Its timing also meant it was prepared somewhat in parallel with preparation of the draft LEP for Stage 1 of Green Square, and refinement of the Green Square Structural Master Plan by South Sydney Council, the Department of Urban Affairs & Planning and the South Sydney Development Corporation (p.1). Furthermore, Victoria Park was the first project Landcom undertook as part of its then new brief to engage in inner urban renewal, as part of Government urban consolidation policies (Searle 2007). Probably as a reflection of this the Master Plan exhibits a particular attention to detail. The Victoria Park development is now substantially complete, and Landcom itself has conducted an internal appraisal of its success (Landcom, n.d. – see text box).

The Master Plan provided for 2,500 dwellings and 115,000m<sup>2</sup> commercial floor space, yielding a total FSR of 1.5:1; although noting that individual development parcels may have an FSR in excess of 2.5:1 (p.36). Building heights were to range from two to 14 storeys, but mainly 4-8 storeys. Development was to occur across 19 separate residential parcels and 7 commercial ‘parcels’ plus an additional retail area on the northern street frontage (p.37). Landcom was to construct the public domain and essential services in stages, and the development parcels would be sold to individual private sector developers to develop the adjacent buildings on (p.3). The Master Plan was however also up-front in stating that it was also, in effect, a ‘responsive land use strategy’ (p.6) to ‘... be developed [ie. amended] subject

to the market conditions and development context at the time' individual development applications (DAs) were prepared (p.3). A refined master plan was adopted in 2003 (Landcom n.d: 5).

The Master Plan references Landcom's corporate objectives as being to 'develop urban communities which are sustainable economically, socially and environmentally' (p.1). Consistent with this, the aims and objectives stated for the development of the estate include, in addition to the financial imperative to 'optimise return on investment [and] optimise development opportunities' (p.5), three broad components, which are also seen as interconnected:

- To integrate with the existing South Sydney character as well as stimulate the future development of Green Square;
- Residential liveability; and
- Environmental responsibility.

This focus is reflected in the following descriptions of intended outcomes:

'... [a] vibrant mixed use community with a distinctive and memorable character which integrates into the existing fabric of South Sydney. As such it seeks to act as a catalyst for the transformation of the Green Square area.' (p.2)

'... [E]nsure that the quality of life is enhanced by the environmental approach that will improve the amenity of both public and private spaces.' (p.5)

'An appropriate pedestrian environment is also essential to achieving the liveability and environmental aims of the design team, community and all levels of government.'  
(p.40)

The Master Plan contains nine sections. Table 5.2 reviews the content of each section in relation to its health 'intentions'. The extracts in the Table draw on the wording in the Master Plan, paraphrased for clarity. Although there is no separate 'social matters' section, as will be noted, and consistent with the idea of co-benefits, the health outcomes of many of the actions in different sections overlap and social matters are mentioned in a number of the entries.

**Table 5.2: Health and the Victoria Park Master Plan (1998)**

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
<b>Land use</b>	None	<p>An integrated mixed use community.</p> <p>Distinctive and identifiable neighbourhoods.</p> <p>Appropriate residential densities with high amenity.</p> <p>Broad range of housing types. (p.6)</p> <p>Include ‘activity strips’. (p. 11)</p> <p>Solutions and products which cater for families are encouraged. (p. 14)</p> <p>Retail elements are an essential element in a cohesive and vibrant community. (p. 15)</p> <p>Commercial and retail uses have an important role in contributing to employment in South Sydney region and for local residents. (p. 13)</p> <p>Development to include ‘key community facilities’ (multi-purpose hall, tennis courts, meeting rooms, and a variety of passive and active open space). (p. 9)</p>	<p>The nature of the references here may indicate an awareness of the health benefits from each of these components.</p>
<b>Public domain &amp; open space</b>	None	<p>Integrated and legible open space networks for active and passive recreation. (p.6).</p> <p>Minimise overshadowing of the public realm. (p.6)</p> <p>Encourage passive surveillance. (p.20)</p>	<p>The nature of the references here may indicate an awareness of the health benefits from each of these components.</p> <p>The percentage of site area to be dedicated as open space (20%) is however to include the</p>

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		<p>The public realm to mature into a safe and enjoyable setting. (p.5)</p> <p>Public open space to have a frontage to a road or pathway on three sides. (p.16)</p> <p>Every development block to have an 'open space interface'. (p.14)</p> <p>A range of shared and private open spaces that maximise liveability and environmental quality. (p.26)</p> <p>Open space based on 12m<sup>2</sup> per person. (p.16)</p> <p>20% of site area as open space. (p.9)</p> <p>Reduce the road footprint to maximise open space. (p.40)</p> <p>Link open space to existing South Sydney networks. (p.18)</p> <p>Create habitat and biodiversity opportunities (eg. continuous native tree canopies). (p.20)</p> <p>Public BBQs and a junior sporting field in Joynton Park. (p.22)</p>	<p>footpaths of adjacent roads, child care and community centres and access thereto, and 'public use commercial uses' (eg. cafes in parks) (p.16).</p>
<b>Built form</b>	None	<p>A clear and recognisable image. (p.27)</p> <p>Each stage to have its own individual and complete identity. (p.7)</p> <p>Each precinct to relate to a green open space. (p.35)</p> <p>An acoustic buffer to South Dowling St. (p.8)</p>	<p>The nature of the references here are consistent with the nature of a health-supportive built form and may indicate an awareness of the health benefits from each of these components.</p>

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		<p>The guarantee of adequate solar access is a fundamental element in the overall amenity of residential developments. (p.38)</p> <p>Private open space (can be balconies) of 20m<sup>2</sup> per dwelling. Balconies to have a minimum depth of 2m. (p.26)</p> <p>Communal facilities (eg. picnic areas, BBQs, courts, swimming pools) <i>shall</i> be included in each multi-unit development for residents' recreation and leisure. (p.26, emphasis added).</p> <p>Internal courtyards to be suitably scaled to allow sunlight. (p.31)</p> <p>No car parking to be visible within internal courtyards. (p.26)</p> <p>Maximise street activity by having pedestrian entrances at regular intervals. (p.27)</p> <p>Towers over 8 storeys as point form rather than slabs to ensure appropriate scale. (p.31)</p> <p>Maximum 50% of open space overshadowed between 10am - 2pm at the equinox. (p.38)</p> <p>Maximum of 20% of units to be south-facing. (p.38)</p> <p>Min. 60% of external living area walls to receive min. 2 hours sunshine between 9am - 3pm at equinox. (p.38)</p> <p>Minimise direct overlooking of main</p>	



Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		internal and external living areas. Stagger windows to improve privacy. (p.39)	
<b>Circulation &amp; access</b>	Cycling should be encouraged because of benefits to community and personal wellbeing (p.50)	<p>Safe, secure streets with high pedestrian amenity. (p.7)</p> <p>Encourage as many trips as possible by walking. Maximise enjoyment of walking, jogging and cycling. (p.40)</p> <p>Footpath width to be min. 1.75m. (p.40)</p> <p>Encouraging use of public transport and minimising car use. (p.7)</p> <p>Maximise permeability to reduce car dependence. (p.5)</p> <p>‘Cycling should be encouraged because of benefits to community and personal wellbeing, ESD, reduction in car dependency, equity of a travel mode for economically disadvantaged groups, and low adverse impacts on residential amenity.’ (p.50)</p>	<p>The nature of the references here may indicate an awareness of the health benefits from each of these components.</p> <p>The particular inclusion of a reference to ‘personal wellbeing’ in relation to cycling but not to other aspects of the ‘active transport’ modes described here is curious – and prompts speculation of a personal interest in cycling by the author.</p>
<b>Infrastructure</b>	None	<p>All open space areas identified (in a plan) as ‘community-based detention’. (p.55)</p> <p>Appropriate shelter for bus passengers (p.48)</p> <p>Notes the locality is a largely ‘industrial’ and ‘working class neighbourhood’, with ‘little community infrastructure’ (child care, community halls, activity centres), and no local school. (p.11)</p>	<p>The nature of the references here may indicate an awareness of the health benefits from each of these components.</p> <p>The reference to ‘community-based detention’ relates to WSUD principles.</p>
<b>Heritage</b>		Enhance heritage. (p.7)	Action in this regard basically comprised retention of the existing

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
			fig trees, and the original Tote building for refurbishment.
<b>Ecological sustainable development</b>	<p>Include passive building design which will have amenity results, eg. from shading to north and west. (p.59)</p> <p>Encourage a mix of uses to allow good quality of life not wholly reliant on private car use. (p.59)</p> <p>Optimise density to create a liveable urban environment. (p.59)</p>	<p>Re-establish biodiversity through remediation, high quality water management, public transport links, optimise solar orientation and building energy performance, appropriate and renewable sourcing of materials. (p.7)</p> <p>Comprehensive development of the site must address the environmental challenge ... maximise water conservation, biodiversity conservation, energy efficiency, efficient transport, contextual social planning. (p.58)</p> <p>A diversity of spaces that can be used in many ways and adapted over time. (p.59)</p> <p>A range of community services with flexibility to meet the communities [sic] needs. (p.59)</p>	<p>References to ‘amenity’, ‘quality of life’ and ‘liveable’ are here taken as the equivalent of ‘healthy’.</p> <p>The nature of the references to other matters here may indicate an awareness of the health benefits from each of these components.</p> <p>The range of matters listed as being part of ‘ecological sustainable development’ suggests an inherent understanding of the ‘triple bottom line’ view of ESD.</p>
<b>Site remediation</b>	None	Notes the site has a relatively low level of contamination (p.17.	The need for remediation is now a given (as a result of State legislation in 1997, and different to earlier periods in Sydney’s development). It is not a matter for determination by individual land owners or developers. This legislation itself has an inherent health basis.
<b>Staging</b>	None	<p>Retail component to be included in commercial stage 1 (though all stages to respond to market demand (p.61)</p> <p>Notes: ‘The medium density market, in particular high rise, is</p>	The intention (though not achieved due to market difficulties) to have early provision of local retail suggests an awareness of the importance of this in establishing community,

Master Plan component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		believed to be heading into oversupply, but the townhouse and 3-4 storey market is undersupplied. Therefore the early stages are to be low rise/lower density'. (p.29)	and local 'active transport' habits.

The provisions in the Master Plan exhibit an inherent consistency with The South Sydney Plan (1995) and the Green Square Structural Master Plan 19980 in terms of the overall close-knit and walkable development form to be achieved and the addition of non-residential uses. In this sense they also reflect the particular planning zeitgeist of the time. That said, there are also some key differences, largely to do with the scale of development. This is arguably a result of the (non-market based) intentions of The South Sydney Plan and the Green Square Structural Master Plan coming up against the market realities as experienced by Landcom, including the financing of the substantial costs of providing new public infrastructure on this 'vacant' site and the required remediation, in a period of variable and somewhat unknown market demand for such development (Landcom, n.d). Importantly, the overall supply and quality of this infrastructure – and its associated positive health outcomes – was carried through. Also, important to note is that part of the reason for this may well have been a particular imperative for Landcom as an organisation to demonstrate its credentials as a new player in inner urban brown-field development (Landcom, n.d).

Although there are only a few explicit references to health, the overall flavour of the content and design orientation of the proposed development form suggests an implicit understanding of a health-supportive built environment, even prior to the now substantial literature and associated development guidelines on this topic. Arguably, this is as a result of the sense that the Master Plan – and its preparation – is infused, like The South Sydney Plan before it, with an inherent, if not always stated, concern for the welfare, liveability and wellbeing of the future residents. This is consistent with Landcom's corporate brief. It is also fortuitous that this concern is in effect closely aligned with the market imperative of Landcom's work. Landcom prepared its own review of the outcomes in Victoria Park (undated, but in c. 2010 or 2011). This review does not mention health explicitly, but concentrates on urban design, environmental, social and financial outcomes, and which consistent with its corporate

objectives. It claims that the development was highly successful against each of these criteria, with some ‘lessons learnt’ (p.2) in relation to: achieving a better ‘balance’ between tenders lodged and actual developers who undertook work, delays in realising the retail component and the need to accept a reduced scale in the retail, a lack of car parking for residents and visitors, and not being able to achieve the initial intention to have the affordable housing component scattered throughout the estate rather than concentrated in two buildings as result. In terms of overall ‘liveability’, included in the review under social outcome and which could be said to have the closest immediate impact on residents’ health, the review notes that (p.10-11):

- Victoria Park provides ‘a proven example of higher densities in a functional, cohesive and attractive development;
- The pattern of streets, open spaces and casual surveillances that result ‘builds to the development of walkable neighbourhoods’;
- The establishment and funding of a community group in 2005 comprises residents from the whole development; and
- Residents have commented favourably on the ‘landscaped, well-planned development, well-designed, low rise buildings, and the well-designed, larger apartments with views and ventilation’.

In a 2004 survey, drawbacks’ were seen by residents to have been the lack of retail amenities, and the ongoing nature of construction. Both of these matters are now essentially historical.

The ‘success’ of Victoria Park has also been measured independently by others:

- It has won a number of awards for design excellence (refer to Box 5.1), and various individual developments have also won awards on their own accord.
- It is included as a case-study on ‘density done right’ on the Heart Foundation ‘Healthy Active by Design’ website (<http://www.healthyactivebydesign.com.au/case-studies/victoria-park>)
- Two of the individual residential buildings, along with two other developments elsewhere in Green Square, are used as case studies of successful designs using the State Government *Good Design Guide*, in a follow-up review of that guide (Department of Infrastructure, Planning & Natural Resources, 2004) (Figure 5.1). The *Good Design*

*Guide* is part of State Environmental Planning Policy No.65-Design Quality of Residential Apartment Development.

- Residents of Victoria Park have indicated high levels of satisfaction in separate evaluation studies by Jigsaw Strategic Research for Landcom in 2004; by the City Futures Research Centre in 2014 as part of the larger *Planning & Building Healthy Communities* study; and as part of a larger *Green Square My Place* survey by the City Futures Research Centre for the Sydney City Council in 2015 and 2017.

**Box 5.1: Design awards received for Victoria Park (as sourced from Landcom (n.d.) *A Review of the Victoria Park Development, Zetland. 1997-2011***

- South Sydney Development Corporation Environmental Development Award (2000)
- RAPI Commendation for Excellence in Planning: Urban Design-Plans & Ideas (2001)
- UDIA Excellence: Professional Consultancy Commendation (2001)
- The Francis Greenway Society Green Buildings Awards Gold Medal (2002)
- Planning Institute Australia Merit Award for Urban Design Excellence (2002)
- Stormwater Industry Association Award of Excellence for Water Sensitive Urban Design (2002)
- Lloyd Rees Award for Outstanding Urban Design (2003)
- Australian Property Industry Environmental Development Award (2003)
- AILA Environment Award (2003)
- C & CAA Public Domain Awards: Precincts Commendation (2003)

**Box 5.2: Key points from: *A Review of the Victoria Park Development, Zetland. 1997-2011* (Landcom, n.d.)**

### Summary

... a landmark development project for Landcom and has set the standard for urban renewal ... achieved the highest development margin on a percentage basis of any Landcom urban renewal project ... It is an outstanding example ... and it raised the respect for Landcom in the industry.

A decade after its inception, Victoria Park continues to be a benchmark for premium residential estate living in Sydney's ... inner South. Its status as 'the natural neighbourhood' continues to set the development apart with its range of innovative measures ensuring that it is ecologically sustainable and energy efficient.

### Urban design outcome

- All urban design objectives met, except for the commercial/retail component.
- The extent of anticipated commercial did not occur, and the retail precinct was delayed due to market forces. Some of the commercial/retail precinct now converted to residential.
- Insufficient on-street parking – as a result of Council's regulations.
- Landcom's marketing strategy was aimed at the long term, with a clear brand vision that would last. This was successful.
- A design review panel ensured on-going quality and consistent built form.
- Has won a number of awards.

### Environmental outcome

- Achieved all commitments to: pollution minimisation, biodiversity conservation, sustainable quality of life, resource conservation, bettering BASIX water usage targets, using WSUD principles, bettering set energy targets, and encourage renewal energy technologies. .
- Established leading-edge WSUD processes which were a 'first' for Australian urban redevelopment – now used on all Landcom projects.
- The integration of environmental principles with urban development is of national significance as a benchmark. \*

### Social outcome

- Achieved commitments to: meet the Green Square Affordable Housing Standard of 3% of dwellings, include 5% of all housing for Moderate Income housing, provide up to 20% of dwellings as adaptable, and have 40% of site as public domain.
- A great success, particularly when compared with nearby new development.
- Public domain of higher standard than if delivered by Council.
- Post-occupancy survey in 2004 found residents were 'largely satisfied'.
- Would have preferred the Affordable and Moderate Income housing to be 'peppered' through the estate, but this was not able to be achieved (now concentrated in two buildings).
- Established a Victoria Park residents community group.
- Embraced principles of green, open space, design excellence and a cohesive sense of community.
- A negative has been the failure to early establish community and retail facilities.

### Financial outcome

- Successful financially - total project costs were less than anticipated, and revenue higher.
- Two market downturns delayed certain stages, and caused additional infrastructure costs and delays.
- Poor quality control in installing some service infrastructure required later relocation and cost increases.
- Undertook a Planning Agreement to install infrastructure instead of s.94 contributions, with Council collecting contributions from individual developers and then reimbursing Landcom.
- An agreement with Council that Landcom maintain roads and parks till 2009 assisted marketability.

**Figure 5.1: Extracts from Improving Flat Design: a progress report. (DIPNR, 2004)**

**Location**  
3 Victoria Park Parade  
Zetland



**Height**  
5 storeys with semi-basement parking

**Uses**  
Residential only

**Apartment number / mix**  
119 apartments comprising 14 x 1BR, 82 x 2BR, 16 x 3BR and 2 x 4BR

**Description**  
The building is part of the Victoria Park redevelopment with 3,500-4,000 apartments planned for the next 5-10 years. It is a full block perimeter development set around two internal courts. It is only half a kilometre from Green Park Station in South Sydney and adjoins the newly-created Joynton Park.

**Developer**  
Wallcorp

**Architect**  
Turner Associates  
Landscape Architect  
McGregor Partners

**Builder**  
Walter Construction Group

**Approval Date**  
July 2001

**Council Area**  
South Sydney

### 17.Nova, Zetland



Double-height framed masonette balconies project over footpaths. This provides strong corner definition and, together with the adjoining development, a gateway to the park. (p.89)



Facades relate to orientation and context. Balconies are provided with sliding louvered screens for sun protection and offer an alternative apartment style to adjacent 'Amis' block. (p.87-1)



Recessed balconies provide residents with enhanced privacy and more useable outdoor area. (p.87-1)



Generally cross-ventilating dual aspect apartments. (p.87)



The missing and strong horizontality of the apartment block provide the adjacent park with a strong sense of enclosure. (p.24)



Top floor defines the corner and helps to modulate the roof form and has access to roof terraces. (p.86,91)

Ground level apartments are raised half a level above street level to enhance privacy but still provide visual surveillance. (p.56,58,78)

Discreet parking entry off rear street. (p.65)

**Location**  
102 Joynton Avenue  
Zetland



**Height**  
2-4 storeys with basement car parking

**Uses**  
Residential only

**Apartment number / mix**  
47 single-level apartments and 18 x 2 and 3 storey terrace style apartments

**Description**  
Part of the rapidly changing Victoria Park redevelopment, about half a kilometre from Green Park Station in South Sydney. Adjoins superb row of street trees and Tote Park. Great diversity of dwelling types in the building form with a central landscaped courtyard.

**Developer**  
Austrocorp / Landcom

**Architect**  
Tonkin Zulaikha Greer in association with LFA (Pacific)

**Landscape Architect**  
LFA (Pacific)

**Builder**  
St Hillers Constructors Pty Ltd

**Approval Date**  
May 2000

**Council Area**  
South Sydney

### 20.Centric, Zetland



Facades to each street respond to orientation and setting. (p.74,88)



Ground floor apartments are half a level above street to enhance privacy of apartments and passive surveillance of street. (p.56,58,78)

Contrasting brown bricks give strong base to the building. (p.89)



Vertical coloured accents to balconies add interest. (p.89)



Closed lobby 'bridges' between apartment blocks allow views of street trees from court and from lift lobbies. (p.89)



Basement car park in 'bout' plan allows 'deep soil' zone. (p.82)



Courtyard entirely located on 'deep soil' zone and provided with pergolas, water features, native and exotic planting. (p.44,86)



Roof tops are utilized as terraces. (p.85)

Most apartments are cross or corner cross ventilated. (p.87)

'Pebble and dish' textured render wall finish to north side of terrace-style apartments matches adjoining heritage form. (p.24)



Balconies provide recessed and projecting form which allows for weather protection as well as facade interest. (p.71)

Small flush punched windows contrast with large verandas. (p.88)

Gently curved blue-coloured glazed brick facade with contrasting projecting flat-topped yellow-painted balcony soffits creates a dynamic composition. (p.89)

Flow of existing fig trees is retained, and with new sun planting enhances privacy and outlook of apartments as well as creating a beautiful park-like streetscape and noise buffer. (p.46)

#### **5.1.4: Green Square Town Centre Master Plan (2003)**

Page references in this section are to the Green Square Town Centre Master Plan document, expressed in its format of ‘section-page number’

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#### **Key points:**

- Prepared by Landcom 1998-2003 under contract to the South Sydney Development Corporation, with then a further contract to provide seed funding and initial delivery of infrastructure.
- Included 11 detailed studies covering a range of associated development issues.
- The Town Centre concept was a significant extension of the ‘activity node’ of the earlier Green Square Master Plan.
- Very much an urban design plan, albeit with strong social and ecological objectives, but also detailed and innovative ‘behind the scenes’ work required to resolve infrastructure and funding issues involving contributions by all Green Square developments.
- Few explicit health references, but extensive references to social activity/interaction, an active transport environment where private cars would be unnecessary, and ESD and ESD rating system included to test all building proposals, all of which have explicit health co-benefits.
- The first developments arrived in 2017, with completion scheduled for over 20 years.

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The establishment of the Green Square Town Centre was a component of the Green Square Structural Master Plan prepared by South Sydney Council, although referred to in that Plan as an ‘activity centre’. In turn, delivery of the Town Centre became a priority of the South Sydney Development Corporation – on instruction from the then Minister for Planning (SSDC 2000). The Town Centre was to (SSDC 2002):

- Be the commercial, retail and cultural hub of Green Square;
- Provide sufficient mix of uses to attract and sustain other development in Green Square;
- Be a focus for South Sydney and other communities; and
- Be a major transport interchange ‘supporting a transit orientated sustainable future’.

It was seen that to be successful, this area would need its own master plan. In any case, this was a requirement of the South Sydney DCP 1997. It also required accompanying specific planning controls (an LEP and a DCP) and an implementation strategy (SSDC 2002). Initial



work commenced in 1998, with a draft exhibited in 2000. The final Master Plan was adopted in 2003 (Landcom, 2003).

The Development Corporation engaged Landcom to prepare the Master Plan and associated LEP (p.08-01). A subsequent arrangement was then made with Landcom to provide seed funding and project manage the delivery of required infrastructure (p.08-08), on the basis of Landcom's 'corporate charter' within Government which including solving complex urban renewal projects' (p. 08-08). Following the dissolution of the Development Corporation in 2005, the City of Sydney has responsibility for the Town Centre, and has entered into its own arrangements with Landcom to assist.

Similar to Victoria Park, as a brownfield site of formerly low-density and low-intensity industrial uses, development of the Town Centre requires a significant investment in new infrastructure. In addition, its location on former wetland and a dam site has generated significant hydraulic issues. These factors have required detailed and complex funding arrangements with the various landowners and with developments in wider Green Square which will benefit from the new Town Centre (p. 08-01). In particular, resolution has been required in respect to (p.08-02):

- The high water table;
- Remediation of industrial contaminants;
- Multiple ownerships;
- Cross-site flooding; and
- Lack of urban infrastructure and any public domain.

At initial glance, the Master Plan can appear as very much an urban design plan, albeit with strong social and ecological objectives. It includes a highly detailed set of guidelines and controls establishing the desired urban form and scale of the sites to be privately developed and for the land now to be part of a new public domain. There is also a fairly lengthy philosophical discussion, under the heading the challenge on how urban design responses might best respond to and accommodate contemporary ways of living; and notions of social connection, noting: 'Contemporary approaches to design of the public realm have undergone a paradigm shift informed by the limitations of modernism, the fragmentation of traditional

social structures and the challenges inherent in new forms of urban life' (p. 06-01). (See Box 5.3 for an extract from this discussion).

However, behind this urban design façade is a substantial amount of earlier work to resolve the critical site-specific matters listed above. Many of these are technically complicated, requiring detailed and innovative resolution. In addition, the completed master plan also contains a substantial component (though appearing lesser if simply measured by number of pages or words or drawings) relating to implementation. This includes the need for (p.08-01):

- An equitable method for delivering the new public domain land;
- A method for funding the essential services infrastructure and new public domain infrastructure; and
- An organisational structure to design and build the public domain, resolve cross-site flooding issues, and ensure a continued high quality to the public domain.

The first two aspects are addressed in more detail in the Green Square Town Centre Infrastructure Strategy (2006), which includes detailed costings and contribution responsibilities (See the following for further information - [http://www.cityofsydney.nsw.gov.au/data/assets/pdf\\_file/0004/195646/Green-Square-Town-Centre-Infrastructure-Strategy-2006-DRS.pdf](http://www.cityofsydney.nsw.gov.au/data/assets/pdf_file/0004/195646/Green-Square-Town-Centre-Infrastructure-Strategy-2006-DRS.pdf)). Also, given that the individual developments within Green Square will take place over a number of years, the costings and contributions in this Strategy include an indexing arrangement with the Consumer Price Index.

In relation to the third aspect, the Master Plan recommends the establishment of a dedicated Green Square Town Centre Place Manager 'responsible for managing all Council's activities and responsibilities in the Town Centre', with an associated dedicated Town Centre budget (p.08-08). This position was established in 2015 by the City of Sydney, although is currently vacant. The Master Plan also includes a set of criteria against which actual development applications for individual developments both public and private are to be assessed, and which are intended to operate in addition to the matters in Council's own planning instruments. Many of these considerations are similar, but the additional criteria go explicitly to the Master Plan objectives and content (see below).

**Box 5.3: Discussion in the Green Square Town Centre Master Plan on the ‘challenge’ in designing the public realm for contemporary ‘social interaction’ (p. 06-01, emphasis added).**

Contemporary approaches to design of the public realm have undergone a paradigm shift informed by the limitations of modernism, the fragmentation of traditional social structures and the challenges inherent in new forms of urban life. Rapidly changing technologies, morphing relationships between work, leisure, and travel now challenge traditional notions of the private and public realms, natural and constructed environments, and indeed the fashion, and secondly, overlay a changeable skin which can be shed, updated and reinstalled as fashion and community needs evolve. The built structure and environmental attributes are therefore long life, but the skin is loose fit.

Responding to its role as the heart of a new and evolving inner city region characterised by a transition from gritty industrial to urban green, the Green Square centre public realm must be linked to the existing social grain and industrial context of the Green Square area. Success of the public realm will be judged on how well it accommodates the new and existing communities. Most importantly, spaces need to be adaptable and flexible allowing for unforeseen and unexpected uses.

Adaptability by end users is paramount to allow customisation and acceptance. Movable components including planters, furniture, lighting, and plug in objects which cater to the requirements of changing tenancies should be incorporated. Users can therefore participate in and create custom solutions which respond to the particular ways spaces become inhabited. The public realm will need to express multiple roles supporting a vital, rich and dense mixture of complementary uses distributed over the vertical nature of ‘real’, virtual, and imagined spaces.

Work and leisure are now increasingly blurred as faster access to data over ever increasing band width decreases in cost. SoHo is now more than ever a viable option, decentralizing and shifting the work place. Travel is also a location for work as laptops miniaturise and wireless technologies continue to evolve. In turn, these changes are resulting in the emergence of an ever more pluralistic urban society characterised by the formation of new and complex urban communities. Individuals increasingly belong to multiple communities associated with factors such as lifestyle choices, levels of affluence, ethnicity, age and gender.

Lifestyle choices in particular are an increasingly globalised phenomenon. Mass global culture is driven more and more by fashion, technology and media. Commerce harnesses and predicts trends in mass (urban) culture. Consumer products are designed and launched to anticipate demand. Product lifecycles are becoming increasingly shorter and components designed to be disposable. Consumerism is driving depletion of non-renewable resources and waste is a growing environmental threat to local and global communities. In this race for change the importance of retaining significant elements of heritage and the memories associated with them becomes more crucial. In every community, quality of life depends upon the *health*, breadth and depth of the human interactions it can support. How then in our throwaway society do we create spaces and places that transcend the moment and that can continue to meet the (static) environmental and (changeable) social needs of an evolving and fragmented community? Given the pace of change, how do we design public realms that are relevant to their place, connect to existing communities and allow for future needs that are difficult to predict or anticipate?

Preparation of the Master Plan included 11 associated studies, covering:

- An acoustic assessment, focused on existing noise impacts on future development, and the potential noise impacts from the new development;
- Overall architectural design;
- Ecological assessment;

- The establishment of an ESD rating scheme;
- Services infrastructure: sewerage, water, gas, electricity, telecommunications;
- Site remediation;
- Public art;
- An assessment of the potential market for retail uses;
- Social considerations;
- Stormwater management;
- Transport; and
- Implementation.

These studies were undertaken by individual consultants, who are not listed here. The text of each study plus the Master Plan itself and a draft LEP for the Green Square Town Centre were collated by the South Sydney Development Corporation on a CD-ROM (SSDC 2003). In addition, as the development of the Master Plan progressed it became apparent that realisation of the Town Centre would benefit from an initial catalyst (p.04-01). In response the Corporation held an international urban design competition for 3 ha of land in the central part of the Town Centre, basically the proposed ‘town square’. The Master Plan contains only a small number of explicit references to health:

- In the urban design philosophical discussion section: ‘In every community, quality of life depends upon the health, breadth and depth of the human interactions it can support. (p.06-01). This reference is more a descriptor to the main topic of social interaction however.
- In the ESD principles, given as (p. 06-03):
  - To create a healthy and environmentally aware community;
  - To develop healthy buildings and urban spaces for visitors, workers and residents;
  - To develop a healthy urban habitat for flora and native fauna;
  - To explore opportunities for environmental education within the urban habitat.
- In certain of the matters included in the ESD rating scheme. These criteria are based on the similar, earlier, scheme developed for Melbourne Docklands. Explanations are given in the contributory study on the rating scheme:

- In relation to indoor air quality: ‘To improve the health of building users by providing improvements to the quality of air inside buildings’ (p.14).
- In relation to natural lighting: ‘To improve the health and comfort of building residents by providing natural light to interiors’ (p.14).
- In relation to paints, though less explicitly: ‘To encourage use of paints with less polluting elements to building interiors. Interior paints that do not give off gas ...’ (p.15).

That said, the urban environment envisaged in the Master Plan has a high resonance with the idea of a health-supportive environment, and there are numerous words in the Plan that arguably have an equivalent meaning, such as ‘amenity’, ‘comfort’ and ‘quality of lifestyles’. In a co-benefit sense, there are also direct health benefits from the considerable attention given in the Master Plan to:

- Ecological sustainable development.
  - The intention here includes not just that individual developments, and the Town Centre overall, contributes to the resolution of environmental wider issues, but also that the Town Centre acts as an educational prompt to ‘create [an] environmentally aware community’.
- Generating a busy and highly social environment generally based inherently on getting around by walking, and also with lesser reference to cycling cycling and public transport.
  - The aim here suggests an understanding of the importance of active transport modes and the provision of as many opportunities as possible for Incidental (casual) social contact, and the necessity to provide places people *actually want to go to* in order to achieve this.

The Master Plan comprises an initial Vision statement and set of objectives, followed by sections roughly organised around the matters for which the supporting studies were undertaken (as listed above). The Vision Statement is quite lengthy. The components that relate directly to how the Town Centre is used are extracted below, with particular health-orientated inclusions emphasised (pp. 01-01, 01-02):

‘The vision for the Green Square Town Centre is that of a vibrant residential, commercial, retail and cultural heart of the future South Sydney. It will be a place where people want to live and work and a place to go to, during the day and in the evenings, to eat out, for entertainment and, occasionally, for cultural and community activities. It will be a place where people go – not only the local population – to involve themselves in the civic life of South Sydney and to take advantage of the services provided by South Sydney City Council and others. It will be a place to shop, to meet people and to be engaged in a wide range of pursuits.

Green Square Town Centre will be easy to get to by public transport ... People from the local area will find it convenient to walk there and some may arrive by bike. Once they are there, it will be an attractive place to walk around. People will prefer to walk and will find it easy to understand what is there and where they want to go.

Green Square Town Centre will not feel like any other town centre. It will have its own special sense of place. People will recognise that there are aspects of Green Square Town Centre that are unique. ... But while Green Square Town Centre will be recognisable, it will [also] join up seamlessly with surrounding neighbourhoods. Buildings at the edges of the Town Centre will be in scale and character with the buildings alongside. ... At street level near the station and along the major transport routes there will be lots of different types of activities. People will use the Town Centre for a variety of different purposes. Some will live in the Town Centre ...

There will a network of public open space ... This will provide places for relaxation and recreation as well as venues for community events. ... The Town Square will be the primary venue for cultural activities – film, music and the visual arts – as well as for pubs, clubs, cinemas, restaurants and retail activity, including outdoor market shopping. ...

The aim is for Green Square Town Centre to be a clean and green environment. There is a commitment to best practice environmental design to help achieve ecologically sustainable development. The social and economic sustainability of the Town Centre has also been a central concern, with efforts to ensure that practical measures are put in place to achieve these outcomes.’

The objectives of the Master Plan are listed as achieving a Town Centre that (p. 01-02, paraphrased, and again with particular health impacts emphasised):

- Promotes *ease and convenience of access for pedestrians, cyclists, public transport* and other vehicles.
- Provides *public spaces that are safe and pleasant* and provide *settings for a range of community activities*.
- All users are easily able to find their way to, from and around.
- Accommodates *activities for a wide range of users* including younger people, older people, those with disabilities; working and residential populations, and visitors; and a range of services and facilities to help meet existing and future community needs.
- Provides *a wide range of employment, recreational, educational, living and other opportunities*.
- Creates a special sense of place, easily recognisable as ‘Green Square’.
- Acknowledges the historic background of the site and surrounds.
- Provides a *mix of housing types*.
- Is a new built environment, integrated with existing surrounding neighbourhoods.
- Promotes *ecological sustainability* through environmentally responsive design.
- Provides for *management of stormwater*.

Table 5.3. reviews the content of the Master Plan in relation to its health intentions. The sections in the Master Plan differ somewhat from the subject areas of the individual supporting studies. For ease, these subject areas of the studies are used to order this Table, which covers the content in both the Master Plan and the individual studies. Please note that extracts are paraphrased for clarity or conciseness.

**Table 5.3: Health and the Green Square Town Centre Master Plan (2003)**

Master Plan (and/or Study) component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
Acoustic assessment  (Addresses existing noise impacts on future development & potential)	None	The assessment of the proposals against established dBA standards.	It is curious that: <ul style="list-style-type: none"> <li>▪ the underlying human health implications are not mentioned in the supporting study (merely assumed)</li> </ul>

Master Plan (and/or Study) component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
noise impacts from new development)			<ul style="list-style-type: none"> <li>▪ recommendations in the supporting study regarding noise ratings for materials and glazing are not included in the Master Plan itself.</li> </ul>
<b>Urban design principles and outcome</b>	<p>‘In every community, quality of life depends upon the <i>health</i>, breadth and depth of the human interactions it can support. ...</p> <p>The public realm will need to express multiple roles ... the public plazas, civic spaces and up into the <i>library, gym</i> and <i>cinemas</i>’ (p. 06-01, emphasis added).</p>	<p>... The multi-cultural flavour of life which characterises South Sydney should inform the basic grain of the public spaces.</p> <p>... environmentally and socially sustainable’ (p 06-01).</p> <p>Listing of the following criteria as having informed the urban design plan components in the Master Plan:</p> <ul style="list-style-type: none"> <li>▪ accessibility</li> <li>▪ connectivity</li> <li>▪ permeability</li> <li>▪ integration</li> <li>▪ legibility</li> <li>▪ safety.</li> </ul>	<p>Overall, the Master Plan appears to be implicitly aware of the inherent connection between a ‘lively’ place and the positive outcomes for health coming from high levels of socialisation and ‘active transport’ (though this latter term, which has an inherent health focus) is not used.</p> <p>Although it is stated that shadow diagrams had been prepared, and photos of shadowing models are included, there is no advice as to the criteria used to assess acceptability.</p>
<b>Ecological assessment</b>  (The supporting study is explicitly focussed on ecological features, and compliance with the <i>Threatened Species Conservation Act 1995</i> )	None	Recommendation for retention of existing native trees, and planting of new native trees to encourage native birds.	<p>The study concludes there are no ‘ecological features’ on the site.</p> <p>The list of recommended native tree species is not carried into the Master Plan (though probably already included in existing Council provisions).</p>
<b>ESD rating scheme</b>  (To be applied to all development applications)	<p>Mention of the need to reduce use of CFC’s because they deplete the ozone layer, and so results in higher rates of skin cancer.</p> <p>Criteria relating to indoor air quality (basically to achieve natural air access) is ‘To improve the health of building users ...’ (p. 14)</p> <p>Criteria relating to natural lighting is ‘To improve the health and</p>	All other content	<p>It is curious that no explicit mention of direct health benefits is made when discussing, for example, ratings related to: encouraging bicycle use, natural ventilation (rather ‘amenity of occupants’ is used), and ‘low emission’ paints (instead, ‘less polluting’ is used), and thermal comfort (instead, ‘comfortable living spaces’ is used).</p> <p>It is curious that although the supporting study</p>



Master Plan (and/or Study) component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
	<p>comfort of building residents ....' (p. 14)</p> <p>Criteria to provide long-distance views in commercial spaces is because 'Long distance vision is important for healthy eyes ...' (p. 15)</p>		<p>documentation refers to 'health' in relation to indoor air quality, the corresponding ESD rating itself refers to providing '... a comfortable environment for ... occupants.' (p. 06-03).</p> <p>The reference in Column 3 to 'all other content' is on the understanding that positive ESD outcomes will inherently yield positive global health outcomes.</p>
<p><b>Services infrastructure</b></p> <p>(Sewerage, water, gas, telecommunications and electricity)</p>	<p>None</p>	<p>Water and sewerage services infrastructure</p>	<p>The positive health outcomes of proper water and sewerage services is now taken as a given in urban development (as different to earlier periods in Sydney's development – see sections 3.1 &amp; 3.2). The supporting Study advises that existing services are adequate for the new development.</p>
<p><b>Social infrastructure</b></p>	<p>The sub-section on 'education, health &amp; welfare' infrastructure notes:</p> <p>(i) the existence of the RPA &amp; Prince of Wales hospitals in the vicinity,</p> <p>(ii) the Local Health Service will retain the hydrotherapy pool at the old South Sydney Hospital (but now to be re-located to the new aquatic centre),</p> <p>(iii) there will be opportunities for 'general practice' services to locate in the commercial spaces to be built in the Town Centre, and</p> <p>(iv) there are existing welfare services in the locality.</p>	<p>Open space for active and passive recreation to be provided.</p> <p>Notes an initial aim of the Government in establishing the Town Centre was to improve employment opportunities and 'general amenity'. The Development Corporation is looking at ways to connect new jobs with locals.</p> <p>Notes the Council's Section 94 planning has 'flagged' as necessary the following new facilities: sports facilities, library, cultural/arts spaces, general community, family and childrens' spaces – and that the Town Centre would be a</p>	<p>The references here may indicate an awareness of the health benefits from each of these components.</p> <p>The hydrotherapy pool is to be re-located to the new aquatic centre across the road. The specific master plan for the old Hospital site identifies space for a future community health centre, however this will now be replaced with a primary school, with space for the health centre to be located within the Town Centre.</p> <p>An aquatic centre and sports oval adjacent to the Town Centre is to open in 2019. Community spaces on the old Hospital site, and a</p>

Master Plan (and/or Study) component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		likely location for some of these.	library in the Town Centre opened in 2018.  The Development Corporation was dissolved in 2005. It is not known whether any mechanism to ensure jobs for locals was established.
<b>Contamination</b>	None	Notes that remediation is required under relevant State legislation.	The need for remediation is now taken as a given in urban development (given State legislation, and different to earlier periods in Sydney's development). It is not a matter for determination by individual land owners or developers. This legislation itself has an inherent health basis.
<b>Public art</b>	None	Reference in the supporting study and the Master Plan (p.06-03) to art as providing an 'emotional interaction'.	Public art can assist with establishing community identity, which has a positive health co-benefit, however the Master Plan does not make mention (explicit or implicit) of this.
<b>Heritage</b>	None	None	There are no significant heritage aspects in relation to the Town Centre (other than the adjacent old Hospital site, which now has its own master plan by the City of Sydney, and which is also the owner).
<b>Potential market demand for retail activities</b>	None	Will assist in establishing viability and attractiveness of places to go to and socialise in.	As with the Urban Design Principles, the Master Plan there appears to be implicit awareness of the connection between a 'lively' place and positive health outcomes.
<b>Social impact assessment</b>		Inclusion of 'Safety & Security' matters in list of development assessment criteria (including use of CPTED principles and 'crime risk' assessment).  Notes DCP 'Social Impact Assessment'	The Master Plan may be aware of the inherent connection between most social criteria and positive health outcomes.

Master Plan (and/or Study) component	Content with a stated health aim	Content with unstated health aims or co-benefits	Gaps? / Comment
		<p>provisions apply (these contain some explicit health references).</p> <p>Mention of existing problems of affordability of housing for low income groups; noting also the Town Centre is subject to the LEP provisions re affordable housing contributions.</p>	
<b>Stormwater management</b>	None	<p>Considerable attention is given to proper stormwater disposal (in this flood-prone area) – which will reduce potential for personal health impacts from flooding</p> <p>Attention to overall improvements in water quality in Alexandra Canal and Botany Aquifer – which will assist global health outcomes.</p>	<p>There may be an implicit awareness of these two points.</p> <p>No stated awareness of potential for mosquito-borne disease from the on-site water detention systems (with associated design and management implications).</p> <p>The term WSUD is not mentioned, though the proposals are consistent with this approach.</p>
<b>Transport</b>	None	<p>The whole design vision based on the achievement of a high degree of ‘walkability’, use of public transport, and some use of cycling.</p>	<p>Discussion of this aspect seems to be mainly around achieving good ‘activation’ of the Town Centre.</p> <p>The current term ‘active transport’ (which has an inherent health focus) is not used.</p> <p>Although provisions for cycling are to be made, this is not given as much attention as walking.</p>
<b>Implementation</b>	None	<p>Establishment of mechanisms to ensure the public domain is maintained to a high level of quality.</p>	<p>There may be an implicit awareness of the need to maintain a high level of attractiveness to ensure the Town Centre remains as a place to go to – with social interaction co-benefits.</p>

### ***5.1.5: Green Square Town Centre design competition (2001)***

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#### **Key points:**

- Applies to the central town square area of the Town Centre, with the intention of informing the Green Square Town Centre Master Plan.
  - Conducted in 2001 by the South Sydney Development Corporation in recognition of the need to have a world class catalyst to prompt development.
  - Won by a local/international consortium from 25 entries.
  - Very much an urban design plan, though with strong social and ecological objectives and an innovative approach.
  - As with the Green Square Town Centre Master Plan, competition entries contained few if any explicit references to health, but extensive references to social activity/interaction, an active transport environment - all of which have explicit health co-benefits.
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In 2001, as part of the process of preparing the Green Square Town Centre Master Plan, the South Sydney Development Corporation conducted an international competition for the design of the central part of the Town Centre, basically that part where the central ‘town square’ would be located, but also extending to the Green Square railway station across Botany Road plus some adjacent individual building sites. The competition area comprised 3 ha out of the overall 14 ha of the Town Centre site. Twenty-one entries were received of which five were invited to make a further detailed submission. The winner was Turner-Arets-McGregor-Holos (SSDC 2002).

The competition brief was guided by the Green Square Structural Master Plan (1998) and the then work to date on the Green Square Town Centre Master Plan. The competition brief has not been able to be accessed for this review. Each competition entry included a ‘potted summary’ of its design intention/philosophy. These are shown, with original set out, in Table 5.4 to illustrate the orientation of urban design thinking at that time. The winning entry is shown in dark shading. The other four entries invited for further submission are shown in light shading.

The entries are all very much urban design-led, with in most cases also a simultaneous emphasis on social activation and ecological sustainability. There are no explicit references to health. Most summaries however mention attributes that relate to the activation of spaces,

the importance of social networks, ecological awareness, and sustainability – all of which are an inherent component of health-supportive environments. An attempt was made to identify text that *possibly* came closest to a direct statement about health outcome. As it turns out there are very few of these. They are shown in bold in the Table.

**Table 5.4: Summary, within each competition entry, of its design intention/philosophy.**

This place contains all we need: beauty, delight, surprise, ambience, linkage, people.	pluralism social condenser water generator cultural terrains permeability social/environmental sustainability	Discovering the reality throughout the virtuality of our cities
A <b>vital</b> 24 hour urban hub, a meeting place for people and ideas	The future of town centres: projecting community aspirations for a sustainable future.	Catalyst Explode Regeneration Sustenance Community Bright Interactive Energy <b>Oxygen Life</b> Eternity
Sustainable Enduring Heroic Harmonious Viable Inspirational Provocative Robust Diverse Visionary Appropriate Order	Urban ecosystem: public-realm through organic-mass, landscaping and multi-use enclosures	Elevated floating garden Flexible modular stack Skydeck urban screens Inspiration Integration
Context is mediated by space <b>Life</b> passes from past to future	Miscellany of leisure and work, wilderness and architecture, creating an identifiable character	Keywords: art, urbanism, botanics, modernity, heroic, icon, contrast, identity, synthesis, celebration
End of 'town squares', replaced by strands/viruses weaving through existing fragments	Focused Public Place over Transport Interchange in activity layers concludes the axis	Imagine there's no boundaries. Only... <b>WATER</b> wind <b>SUN</b> light <b>EARTH</b> energy <b>STORM</b> clouds <b>HUMAN</b> intelligence <b>SHELTER</b> architecture
a town centre is much more than the sum of its parts	Our approach weaves the spirit of these concepts: PLACE-MAKING AGENCY PEOPLE SYSTEM	A high-energy condenser sculpted by hanging gardens, canals, pedestrian networks and history
<b>Live</b> Eco-Market signature building Square @ centre Trees to south Main Street	Defined nucleus within the urban continuum, underpinned by social and ecological principles	Architecture is Landscape is Infrastructure is Urban Planning

## 5.2 Health and the Internal Landcom Documents Relating to the Case-Study Localities (Document Group 2)

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### Key points:

- This review considered internal Landcom documents to seek to understand the ‘role’ of health in internal considerations. Although these documents contain useful details, they are often limited in the range of subject matter, particularly for the Town Centre.
  - Taken as a group, again it was found that health has a generally constant presence, however it is more implicit than explicit, particularly in respect to the Town Centre, and when compared to the earlier master planning documents.
  - The current lack of specificity of health in these more recent Town Centre documents may be of concern about the extent to which the health considerations are perceived and understood, and possibly also carried through in the long term.
  - Present day attention tends to be more explicit around matters of place-making, social activation, and ‘green’ transport.
  - Although a number of health-supportive matters were identified as having little or no presence, most of these are dealt with through other actions outside of Green Square.
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### 5.2.1: *Introduction*

This section details the data from the review of ‘internal’ Landcom documents for the case study localities of Victoria Park and Green Square Town Centre. The data comprises:

1. A tally of direct (explicit) references to ‘health’, and to ‘wellbeing’;
2. Other, more implicit references to planning strategies which are health-supportive;  
and
3. A consideration of health-supportive attributes not canvassed.

Each of these data sets are discussed below.

### 5.2.2: *Direct references to health and to wellbeing*

Tables 5.5 and 5.6 detail the direct references to, variously, health and wellbeing in the Victoria Park and Green Square Town Centre documents respectively. Each Table also

provides a commentary as to the consistency of those references with the 50 attributes in the ‘Three Healths Framework’ (See Appendix 2). In addition to that commentary, the following generic points from the analysis are made:

1. There is only limited explicit reference to either ‘health’ or ‘wellbeing’ in the documents.
  - Of the 17 documents relating Victoria Park, only three documents (or 18%) include a reference to health; and there are no references to wellbeing.
  - Of the 14 documents relating to the Green Square Town Centre, only eight documents (58%) include a reference to health, although when taking into account that some documents contain multiple references the total number of references is 12. In relation to references to wellbeing, there are seven references across five documents – though in two cases (Docs no. 8 and 9) these references are coupled with references also to health.
  
2. Many of even this limited number of references are to quite specific or specialised components of health.
  - For example in relation to Victoria Park, of the three references, one is explicit to the remediation of site contaminants from earlier non-residential uses (although the reference here does look at multiple health outcomes, being in relation to implications for both the natural environment (water, soil and air pollutants) and then humans); the other is explicit in relation to a particular ecological health issue in the WSUD water treatment ponds situated in the public domain (parks) arising from the introduction of ornamental fish (presumably from residents thinking they were ‘doing a good thing’); and the third is a reference to a document ‘outside’ of the immediate Victoria Park development – the Landcom ‘Healthy Development’ policy.
  - In relation to the Green Square Town Centre, of the 12 references, two are quite limited in their scope. One (in Doc no. 1) seems to attach ‘healthy’ only, or simply, to ‘walkable’ environments; and one (in Doc no. 13) merely refers to a preference for ‘healthy’ lunches when describing the characteristics of one of the main ‘personas’ living in Green Square and who are termed ‘Fit and Fab’.

3. Conversely, but in a sense perhaps just as limiting, many of the references in the Green Square Town Centre documents were difficult to categorise given a *lack* of specificity.
  - This was apparent in five of the eight documents that actually reference health (Docs no. 5, 6, 7, 8 and 9). These documents tend to cover the planning strategy areas of place-making and social activation. These are necessary composite activities, and as such it could be expected that there would be consistency with, possibly, a large number of the 50 attributes in the three health framework (and which was the case in two other documents, Docs no. 2 and 13). However, the difficulty experienced with these documents related to something else. It was found that there was insufficient delineation of each of the references to health (and also at times to wellbeing) to ascertain the exact meaning that was intended, thus limiting the ability to score against the 50 attributes – but with the possibility also, and similarly undefined, that the intention behind the reference might actually be to all, or at least a considerable number, of the attributes.

Notwithstanding the limited number of explicit references to health as discussed here, this does not necessarily mean that health is ignored. Rather, a feature of how health is actually dealt with in these documents is that there are a considerably larger number of non-explicit references, in particular when the idea of co-benefits is also introduced – whereby one health-supportive action may well induce any number of other health-supportive impacts without necessarily any particular or explicit reference to these. These non-explicit, and as it was revealed, in number more considerable references are dealt with in the following section 5.2.3.

**Table 5.5: Direct references to ‘health’ and to ‘wellbeing’ in the Victoria Park documents**

	Document	Direct reference(s) to ‘health’	Direct reference(s) to ‘wellbeing’	Relevant attributes in the ‘Three Health Framework’
1	Victoria Park Zetland Landcom (2005)	Nil	Nil	
2	Untitled briefing note Landcom (n.d.)	Nil	Nil	



3	Summary of Landcom Board Papers re Victoria Park  Landcom (various dates from 1997-2007)	Nil	Nil	
4	Victoria Park Project. A Review of the Victoria Park Development, Zetland. 1997-2010.  Landcom (n.d.) (late 2010)	Nil	Nil	
5	Victoria Park: Post Project Review  Landcom (2010)	Nil	Nil	
6	Contaminated Site Summary Audit Report.  Landcom (?) (1999)	One (though referred to twice): <ul style="list-style-type: none"> <li>▪ 'Both the human health and ecological risk assessments conclude that the concentrations and range of chemicals present ... do not propose a [sic] unacceptable risk to human health or the environment.' (p.12)</li> </ul>	Nil	As related to urban development of contaminated former industrial lands: <ul style="list-style-type: none"> <li>▪ Focussed on solving public health challenges resulting from increased urbanisation. (1.1.1)</li> <li>▪ Reduces fear of health risks associated with environmental hazards through appropriate building design. (2.3.4)</li> </ul>
7	Victoria Park Residential Contribution Credit Deed  Blake, Dawson, Waldron (lawyers) (2007)	Nil	Nil	
8	'Victoria Park Zetland'.  Landcom (n.d.)	Nil (Though does include extensive imagery relating to health and wellbeing).	Nil (Though does include extensive imagery relating to health and wellbeing).	
9	Proposed (Victoria Park) Home Page  Landcom (?) (n.d.)	Nil	Nil	
10	'The Water Cycle'.  Landcom (?) (n.d.)	Nil	Nil	
11	'Start a resident group'  Landcom (n.d.)	Nil	Nil	
12	'Free Christmas BBQ'  Landcom (2006)	Nil	Nil	
13	'Victoria Park Life. Spring edition 2006'	One (though relates to ecological rather than human health):	Nil	<ul style="list-style-type: none"> <li>▪ Improving water quality. (3.1.4)</li> </ul>

	Landcom (2006)	<ul style="list-style-type: none"> <li>▪ ‘Help us keep Victoria Park’s eco-friendly pond clean and healthy for us all to enjoy.’ (p.1)</li> </ul>		<ul style="list-style-type: none"> <li>▪ Promoting human and environmental flourishing for long-term quality of life (3.1.5)</li> <li>▪ Provides opportunities for accessing and attending to nature. (3.2.1)</li> <li>▪ Promotes adaptation to climate change. (3.3.1)</li> <li>▪ Innovative environmentally-friendly building design. (3.4.2)</li> </ul>
14	‘Vic Park August Newsletter’ email Landcom (2006)	Nil	Nil	
15	Notes Re Presentation to SSDC Landcom (n.d.)	Nil)	Nil	
16	Independent Architect Review Architectus (2009)	Nil	Nil	
17	Victoria Park. UTS. Sustainable Urban Development. Landcom (2011)	<p>One:</p> <ul style="list-style-type: none"> <li>▪ Reference to Landcom’s ‘Healthy Development’ policy under ‘Major initiatives’.</li> </ul>	Nil	<p>In relation to the adoption of the Policy itself (not an analysis of its provisions):</p> <ul style="list-style-type: none"> <li>▪ Focussed on solving public health challenges resulting from increased urbanisation. (1.1.1)</li> <li>▪ Promotion of liveability and quality of life rather than disease prevention. (2.1.1)</li> <li>▪ Emphasises a two-directional relationship between the built environment and human wellbeing. (2.1.4)</li> </ul>

\* To assist readability, the direct references to ‘health’ are shown in the shaded cells.

**Table 5.6: Direct references to ‘health’ and to ‘wellbeing’ in the Green Square Town**

**Centre documents**

	<b>Document</b>	<b>Direct reference(s) to ‘health’</b>	<b>Direct reference(s) to ‘wellbeing’</b>	<b>Relevant attributes in the ‘Three Health Framework’</b>
1	Planning Proposal - Town Core Sites within Green Square Town Centre  SJB Planning P/L (2010).	One: ‘... healthy (walkable) outcome.’ (p.47)	Nil	<ul style="list-style-type: none"> <li>▪ Pedestrian friendly outdoor spaces. (1.2.3 &amp; 1.3.3)</li> <li>▪ Low neighbourhood traffic levels. (1.2.6 &amp; 1.3.6) (<i>as a potential co-benefit</i>)</li> <li>▪ Promotion of active transport (2.1.5)</li> <li>▪ Provides access to public and active transport. (2.2.1)</li> </ul>
2	Green Square Town Centre – Town Core Sites. Statement of Community Benefits and Contributions  Green Square Consortium & Landcom (n.d.)	Two (p.3): <ul style="list-style-type: none"> <li>▪ ‘Providing a bicycle to each new household within the Town Centre Core Sites to support sustainable and health [sic] transport options.’</li> <li>▪ ‘Consulting with independent experts...to ensure a safe, healthy and inclusive design.’</li> </ul>	Nil	<ul style="list-style-type: none"> <li>▪ Promotion of active transport (2.1.5)</li> <li>▪ Provides access to public and active transport. (2.2.1)</li> <li>▪ Low neighbourhood traffic levels. (1.2.6 &amp; 1.3.6) (<i>as a potential co-benefit</i>)</li> <li>▪ Safety. (1.2.4)</li> <li>▪ Safety and human interaction. (1.3.4)</li> <li>▪ Reduces crime and fear of crime. (2.3.3)</li> <li>▪ <i>Potentially all 4 Health Equity attributes. (2.4.1 – 2.4.4)</i></li> <li>▪ <i>Potentially all attributes in relation to reference to ‘healthy’ – however exact meaning behind its use here is not known.</i></li> </ul>
3	Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan (Sept. 2012) (Main Report)  Parsons Brinckerhoff (2012)	Nil	Nil	
4	‘Your Green Travel Guide - Green Square’  MIRVAC & Landcom (2018)	Nil	Nil	

5	Position Description - Place Manager, Green Square Town Centre  MIRVAC (2016)	One: 'Experience of initiatives to encourage healthy and active living for new residents.' (p.4)	Nil	<ul style="list-style-type: none"> <li>▪ <i>Potentially all attributes in relation to reference to 'healthy' – however exact meaning behind its use here is not known.</i></li> <li>▪ <i>Similarly, reference to 'active' could be only to physical activity, but also to social activity and being active by being ecologically aware – but the exact meaning behind its use is not known.</i></li> </ul>
6	Green Square Placemaking. Vol. 1: Framework  City of Sydney (n.d.)	Two: <ul style="list-style-type: none"> <li>▪ '... strong local partnerships are essential to the process of creating dynamic, healthy public spaces that truly serve a community.' (p.3)</li> <li>▪ 'What are the attributes that makes a good Town Centre? ... Health and recreation/Walkable/ Late openings ...'. (p.47)</li> </ul>	Three <ul style="list-style-type: none"> <li>▪ 'places [that] support a sense of wellbeing within the community'. (p.3)</li> <li>▪ '... quality of [cleaning and public domain] services contributes to the community identity and wellbeing.' (p.6)</li> <li>▪ 'establish an environmentally sustainable suburb which supports the wellbeing of present and future communities...' (p.40)</li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Potentially all attributes in relation to reference to 'healthy' – however exact meaning behind its use here is not known.</i></li> </ul>
7	Green Square Place Strategy – Part 1. Creating Great Spaces for Life.  MIRVAC (n.d.)	Two: Both in relation to two of the identified 'top 5 personas' within Green Square (p.8): <ul style="list-style-type: none"> <li>▪ 'Healthy Wealthy and Wise. ... social and health conscious.'</li> <li>▪ 'Social Academics. ... interested in socialising, technology and their health.'</li> </ul>	Nil	<ul style="list-style-type: none"> <li>▪ <i>Potentially all attributes – where applied at a personal individual level – however exact meaning behind its use here is not known.</i></li> </ul>
8	GSTC Placemaking Workshop #1 April 2017 (one page)  (Author and date not stated - possibly City of Sydney)	One: <ul style="list-style-type: none"> <li>▪ 'Placemaking is ... creating places that positively impact peoples' health &amp;</li> </ul>	One: <ul style="list-style-type: none"> <li>▪ 'Placemaking is ... creating places that positively impact peoples' health &amp; wellbeing.' (Listed</li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Potentially all attributes – however exact meaning behind the reference to health here is not known.</i></li> </ul>

		wellbeing.’ (Listed as being one of eight attributes of ‘place-making’).	as being one of eight attributes of ‘place-making’).	
9	Green Square Town Centre Early Activation Strategy Right Angle Studio (2016)	One: ▪ Reference to the City of Sydney 2030 Vision which includes – ‘creating public spaces that promote people’s health, happiness and wellbeing.’ (p.44)	One: ▪ Reference to the City of Sydney 2030 Vision which includes – ‘creating public spaces that promote people’s health, happiness and wellbeing.’ (p.44)	▪ <i>Potentially all attributes – however exact meaning behind the reference to health here is not known.</i>
10	Green Square: The Social Corner Activation Brief MIRVAC (2017)	Nil	One: ▪ As one of the stated Green Square ‘brand values’: ‘Holistic, wellbeing, socially aware, wholesome.’ (p.5)	▪ <i>Potentially all attributes – however exact meaning behind the reference to wellbeing here is not known.</i>
11	Green Square Activations & Events MIRVAC & Landcom (n.d.)	Nil	Nil	
12	Green Square Summer Festival Plan, November 2017 MIRVAC (n.d.)	Nil	Nil	
13	Green Square. Placemaking-2018 Plan Rosa Han (MIRVAC) (n.d.)	Two: ▪ When describing one of the identified ‘top personas’ within Green Square: ‘Fit and Fab. ... Their lunches are healthy ...’ (p.6) ▪ As one grouping of activities associated with ‘Connecting Community’: ‘Healthy & Wellbeing’. (Yoga, meditation, and promotion of Social Corner events are listed). (p.13)	One: ▪ As one grouping of activities associated with ‘Connecting Community’: ‘Healthy & Wellbeing’. (Yoga, meditation, and promotion of Social Corner events are listed). (p.13)	In relation to the first reference: ▪ Access to quality food. (1.2.7) ▪ Enables access to fresh food. (2.2.3) ▪ <i>Additional references difficult to determine – the reference appears to relate to personal physical activity, which is not well-covered in the attributes (only in part under 1.2 (Promotes positive physical health) and 1.3 (Promotes positive mental health).</i>
14	956-960 Bourke Street, Zetland. Sites 5A & 5B Green Square Town Centre Redevelopment. Development Application Design Report. fjmt (Francis-Jones Morehen Thorp, architects) (2014)	Nil	Nil	

\* To assist readability, the direct references to ‘health’ and ‘wellbeing’ are shown in the shaded cells

### ***5.2.3: Other, more implicit references to planning strategies which are health-supportive***

Following on from the exercise described above to identify any direct references to, variously, ‘health’ and ‘wellbeing’ in the Victoria Park and Green Square Town Centre documents, a subsequent exercise to similarly identify more ‘hidden’ or implicit references was undertaken. Tables 5.7 and 5.8 detail these references in relation to Victoria Park and to the Green Square Town Centre respectively.

Each Table includes commentary as to the consistency of those references with the 50 attributes in the Three Healths Framework. This commentary, given in the right-hand column of each Table, also draws on the scoring exercise described in Section 3 whereby each document was reviewed against the list of 50 attributes in the ‘Three Healths Framework’ (See Appendix 2).

In addition to that commentary, the following generic points from the analysis are made:

1. There is a good coverage of/consistency with the various 50 attributes of health in the ‘Three Healths Framework’. This is notwithstanding that:
  - There were few explicit references to health (discussed above); and
  - Only very few documents in themselves covered a wide range of attributes.

The analysis found that when taken overall, the documents indicate that the planning strategies as applying to Green Square do have a high degree of adoption of the attributes of a health-supportive environment, and this is notwithstanding that this particular schema was developed very much independently from the planning strategy processes in Green Square. One possible explanation for this is that the various documents reviewed here were developed under the ‘umbrella’ of the earlier Victoria Park and Green Square Town Centre master plans, reviewed in Section 5.1, and which demonstrated a reasonable focus on health matters, which was seen also to have continued a clear ‘line of sight’ in relation to population health considerations from the 1995 The South Sydney Plan and even the 1951 County of Cumberland Plan before that. This earlier review found that overall these

‘master planning’ planning strategies themselves had a high degree of consistency with the Three Healths Framework. Other explanations are possible and suggest a further potentially worthwhile exploration with the two principle planning agencies, Landcom and the City of Sydney, to investigate this further. This suggestion is carried into Section 7 (Conclusions).

2. The language of most documents is focussed around non health-specific matters, in particular urban design, ecologically sustainable development (ESD), place-making and ‘activation’. Further, the documents are written by practitioners from these fields rather than from the practice of health. As such it is also not unexpected that there are limited only specific references to health. This feature of the documents does however lead to the difficulty discussed in section 3 (Methodology) around the need for often an extensive degree of interpretation on the part of the researcher to determine whether the inclusion of a matter does represent a health implication or motive, and in turn the ‘coding’ of that matter against the 50 attributes in the ‘Three Healths Framework’. An additional consideration here relates to the possibility that the authors themselves had a realisation that specific urban design or ESD or other matters had an embedded health implication or potential co-benefit – and considered it unnecessary to further identify that in the text.
3. Most documents were focussed on the long-term, and as such ‘fell’ within the attribute 1.4.2, *Future-orientated*, and as practice documents were also consistent with attribute 1.4.1, *Action-orientated*. In addition, it was discerned from the text itself that most also had an awareness that each planning strategy was very much orientated towards addressing the contemporary and very immediate complex issue of urban development and, in response, the development of a new and effective pattern of ‘urban consolidation’ (attribute 1.1.1 *Focussed on solving public health challenges resulting from increased urbanisation*).
4. There was some difference between the documents related to Victoria Park and those related to the Green Square Town Centre. Victoria Park presents as a more discrete development give its predominant focus as a residential neighbourhood (notwithstanding that it also has a commercial component).

The documents relating to Victoria Park were also somewhat easier to review given the area is now substantially complete with an established residential community. By comparison, the Green Square Town Centre is still very much in construction stage, and with a specific focus on community and economic ‘activation’. In this regard, also there are noticeable examples of where lessons from the Victoria Park development have influenced various strategies in the Green Square Town Centre, such as the early establishment of The Social Corner and associated program of events, the early establishment of a supermarket, and also the proposal to have temporary pop-up fresh food retailing within existing buildings adjacent to the Town Square prior to being demolished and redeveloped.

In addition to the data relating to the implicit references to health discussed in this section, the scoring process also allowed for a separate assessment of what attributes were *not* referenced within each planning strategy document. The results of this assessment are given in section 4.4.

**Table 5.7: Implicit references to ‘health’ and to ‘wellbeing’ in the Victoria Park documents**

	Document name, author & date	Key broad/generic health-related points	Assessment against the ‘Three healths Framework’
1	<b>Victoria Park Zetland</b> Landcom (2005) (PowerPoint presentation).	<ul style="list-style-type: none"> <li>▪ Health matters potentially implied in references to ESD and WSUD principles.</li> <li>▪ References Landcom ‘Vision’ - ‘to create a memorable and sustainable urban community’.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Principal focus is on <i>Planetary health (relational ecology)</i> matters.</li> <li>▪ Other main references to ‘liveability’ matters under the <i>Socio-ecological determinants of health</i>.</li> </ul>
2	<b>Untitled briefing note</b> Landcom (n.d.) (WORD document)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ Victoria Park as a first example to deliver on an aspiration to ‘have a very real and positive impact on improved urban and social outcomes’ and ‘quality urban communities that are sustainable economically, socially and environmentally.’</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive range of references consistent with all attributes under the <i>Socio-ecological determinants of health</i>, and most under <i>Planetary health (relational ecology)</i>.</li> </ul>
3	<b>Summary of Landcom Board Papers</b> re Victoria Park Landcom (various dates from 1997-2007) (WORD document summaries)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ Main issues that were repeated/claimed attention were: urban domain matters, remediation (including reference to asbestos), the affordable housing component, and provision of retirement housing (not achieved).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Principal focus is on <i>Planetary health (relational ecology)</i> matters.</li> <li>▪ Other main references to ‘liveability’ matters under the <i>Socio-ecological determinants of health</i>, with some also to the ‘global challenge’ (of urbanisation) under <i>Global public &amp; population health</i>.</li> </ul>
4	<b>Victoria Park Project. A Review of the Victoria Park Development, Zetland. 1997-2010.</b>	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ Describes the project and key lessons in relation to: <ul style="list-style-type: none"> <li>• urban design outcomes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Principal focus is on <i>Planetary health (relational ecology)</i> matters.</li> <li>▪ Other main references to ‘liveability’ matters under the <i>Socio-ecological determinants of health</i>, with some</li> </ul>



	Landcom (n.d.) (late 2010) (WORD document)	<ul style="list-style-type: none"> <li>• environmental outcomes</li> <li>• social outcomes</li> <li>• financial outcomes.</li> </ul>	also to the 'global challenge' (of urbanisation) under <i>Global public &amp; population health</i> .
5	<b>Victoria Park: Post Project Review</b>  Landcom (2010) (PowerPoint presentation)	See above Doc.#4.	See above Doc.#4.
6	<b>Contaminated Site Summary Audit Report.</b>  Landcom (?) (1999) (WORD document)	<ul style="list-style-type: none"> <li>▪ Includes an explicit reference to 'human health' in terms of setting/measurement of contamination levels following remediation:</li> <li>- 'Both the human health and ecological risk assessments conclude the concentrations and range of chemicals present in groundwater do not propose an unacceptable risk to human health or the environment'.</li> <li>- Includes a 'worse case' scenario of 'child residents cultivating home grown produce using irrigation water from ground water'.</li> <li>- EPA procedures have been followed.</li> <li>- '...the auditor is comfortable ... this site is suitable for medium density residential development'.</li> <li>▪ However does not include any advice on how to implement the recommendation that there be on-going monitoring.</li> <li>▪ Extensive early deficiencies in the remediation plan only resolved following extensive discussion with the auditors.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very specific focus on site remediation means most references relate to the various specific environmental 'stressor' attributes where occurring under all of the three health frameworks.</li> </ul>
7	<b>Victoria Park Residential Contribution Credit Deed</b>  Blake, Dawson, Waldron (lawyers) (2007) (WORD document)	<ul style="list-style-type: none"> <li>▪ No explicit or implicit references to 'health' or 'wellbeing'.</li> <li>▪ However the public works in question include the public parks and WSUD features, with health co-benefit implications.</li> <li>▪ Interesting example of a process of financing these works: (i) to a higher standard than the developer (Landcom) thought Council would achieve, (ii) where development is drawn out over a period of time, and (iii) through the mechanism of s.94 which can only be levied at DA stage and only by the Council (ie. not by Landcom).</li> </ul>	<ul style="list-style-type: none"> <li>▪ References are quite specific and 'specialised' to implementation matters.</li> <li>▪ Has implicit relevance to a few only attributes under <i>Socio-ecological determinants of health</i> and <i>Planetary health (relational ecology)</i>.</li> </ul>
8	<b>'Victoria Park Zetland'.</b>  Landcom (n.d.) (draft marketing images and text)	<ul style="list-style-type: none"> <li>▪ No explicit references to 'health' or 'wellbeing'.</li> <li>▪ However extensive health and wellbeing related imagery and captions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extensive implicit references to 'liveability', 'positive physical health' and (certain) 'positive mental health' attributes under <i>Socio-ecological determinants of health</i> and to all attributes under <i>Planetary health (relational ecology)</i>.</li> <li>▪ Also very much 'action' and 'future'-orientated (<i>Global public &amp; population health</i>).</li> <li>▪ No particular references to indoor design or equity matters.</li> </ul>
9	<b>Proposed (Victoria Park) Home Page</b>  Landcom (n.d.) (draft webpage)	<ul style="list-style-type: none"> <li>▪ No explicit references to 'health' or 'wellbeing'.</li> <li>▪ However, interesting reference to 'life regeneration' – as a suggested outcome of living in Victoria Park.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The focus of the very limited content is very much on liveability and behaviours (<i>Socio-ecological determinants of health</i>) and human and ecological quality of life (<i>Planetary health (relational ecology)</i>).</li> </ul>

10	<b>‘The Water Cycle’.</b>  Landcom (n.d.) (WORD document)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ However, co-benefits: <ul style="list-style-type: none"> <li>- at a macro-level – in relation to regional water quality &amp; use of non-chemical processes.</li> <li>- at a local level – in relation to water features that mimic the ‘natural environment’.</li> </ul> </li> <li>▪ Aim is to return site to its ‘natural heritage’ by managing quantity &amp; quality of water leaving the site.</li> <li>▪ Includes references bio-retention swales, electromagnetic filtration, and nutrient reduction via use of macrophytes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very specific orientation to water-related (and ESD) attributes under <i>Planetary health (relational ecology)</i>; including references to being ‘action’ and ‘future’-orientated (<i>Global public &amp; population health</i>).</li> <li>▪ No references to possible <i>Socio-ecological determinants of health</i> co-benefits.</li> </ul>
11	<b>‘Start a resident group’</b>  Landcom (n.d.) (WORD document)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ However, shows attention/support for encouraging social interactions and building community in early stages of habitation of Victoria Park.</li> <li>▪ Includes advices: <ul style="list-style-type: none"> <li>• ‘...now it’s over to you’.</li> <li>• ‘stay tuned’ for future events planned by Landcom for residents.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Quite focussed and limited content – relates to ‘liveability’ and ‘positive mental health’ attributes under <i>Socio-ecological determinants of health</i>.</li> </ul>
12	<b>‘Free Christmas BBQ’</b>  Landcom (2006) (draft 2-sided postcard)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ However, shows attention to social/community development aspects in early stage of Victoria Park.</li> <li>▪ BBQ to include ‘vegetarian options’; and the ‘free drinks’ do not include alcohol (though not clear whether this also means alcohol is not allowed).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quite focussed and limited content – relates to ‘liveability’ and ‘positive mental health’ attributes under <i>Socio-ecological determinants of health</i>.</li> </ul>
13	<b>‘Victoria Park Life. Spring edition 2006’</b>  Landcom (2006)	<ul style="list-style-type: none"> <li>▪ Includes a reference to keeping the WSUD retention ponds ‘clean and healthy for us all to enjoy’.</li> <li>▪ Potential direct health benefits (though not identified in that way) from the references to Pilates classes and forthcoming Farmers Market (see document #14), new cafes, and keeping the WSUD system operating correctly.</li> <li>▪ An example of Landcom’s active engagement in establishing community.</li> <li>▪ Interesting that the integrity of the WSUD system was compromised by some an individual(s)’s ‘good (?)’ intention to introduce fish into it.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quite focussed content, as applicable to matters of then current interest or relevance.</li> <li>▪ These relate mainly to ‘liveability’ and ‘positive physical health’ (and partly ‘positive mental health’) attributes <i>Socio-ecological determinants of health</i>.</li> <li>▪ Also a specific issue at the time about proper management of the WSUD features brings in some <i>Planetary health (relational ecology) attributes</i> – and takes an ‘educational’ stance in this regard.</li> </ul>
14	<b>‘Vic Park August Newsletter’</b>  Landcom (2006) (WORD document)	<ul style="list-style-type: none"> <li>▪ As above Doc#13.</li> <li>▪ Shows attention to detail on social/community development aspects.</li> <li>▪ Interesting financial/management point about the proposed Farmers Market was being hindered by Council’s fee structure.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As above.</li> </ul>
15	<b>Notes Re Presentation to SSDC</b>  Landcom (n.d.) (WOD document)	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ Though co-benefits from the aspiration for an overall high level of amenity – in this case the quality of footpath paving.</li> <li>▪ Interesting attention to detail re quality of public domain and using ESD criteria to state that bitumen paving was not acceptable.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Very specialised content relating to paving materials and maintenance. Health implications mainly got to ‘liveability’ attributes under <i>Socio-ecological determinants of health</i>.</li> </ul>

		<ul style="list-style-type: none"> <li>▪ Interesting calculation of cost per dwelling of a proposed alternative paving – that @\$3,000 per dwelling would be too expensive – with implications for affordability for individual buyers.</li> </ul>	
16	<p><b>Independent Architect Review</b></p> <p>Architectus (2009) (WORD document letter)</p>	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ The Master Plan included anticipated aged accommodation – which is health-supportive in itself. However this has not eventuated.</li> <li>▪ This review was of one proposal.</li> <li>▪ The review concludes the proposal is deficient in terms of: <ul style="list-style-type: none"> <li>▪ scale and resultant shadows to open space and neighbours</li> <li>▪ ‘substantial departure’ from the Master Plan with resultant detrimental impact on surrounding public domain and other development sites</li> <li>▪ low internal amenity from low natural light, single-aspect units, long corridors and street frontage units.</li> </ul> </li> <li>▪ Of interest is the extent of variation to the Master Plan by the proposal, and Landcom’s process of engaging critical independent review.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specialised content relating to liveability impacts in relation to internal building design and effects on the public domain.</li> <li>▪ Consistent with related attributes under both <i>Global public &amp; population health</i> and <i>Socio-ecological determinants of health</i>.</li> </ul>
17	<p><b>Victoria Park. UTS. Sustainable Urban Development.</b></p> <p>Landcom (2011) (PowerPoint presentation to students)</p>	<ul style="list-style-type: none"> <li>▪ Reference to Landcom’s ‘Healthy Development’ policy in a list of ‘major initiatives’.</li> <li>▪ Otherwise, health and wellbeing not specifically mentioned, but inherent in the adopted TBL approach to sustainability.</li> <li>▪ A graphic of Landcom’s ‘sustainability model’ (slide #4) is as used in the Landcom ‘Healthy Development’ policy, but with the central (Venn diagram) overlap identified as ‘sustainability’ rather than ‘sustainability=health’.</li> <li>▪ References to Landcom’s ‘holistic approach’, implementation as an ‘ongoing balancing act’, being ‘pragmatic’, and that Landcom ‘walks the talk’, with a ‘focus on delivery’.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extensive references to all attributes under <i>Socio-ecological determinants of health Planetary health (relational ecology)</i> (and, where occurring, to similar broader public space and air quality matters under <i>Global public &amp; population health</i>).</li> </ul>
18	<p><b>Welcome to Victoria Park the natural neighbourhood</b></p> <p>Landcom (2008) (WORD document ‘Fact Sheet’)</p>	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ However virtually the entire content is consistent with the 50 attributes of the ‘three conceptual frameworks of health’, and with all attributes covered except for traffic levels, air quality and food matters.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extensive references to various attributes under all three frameworks (<i>Global public &amp; population health, Socio-ecological determinants of health and Planetary health (relational ecology)</i>) - - but also with particular omissions within each, where relating to air quality, local traffic, active transport, safety and food matters.</li> </ul>
19	<p><b>Victoria Park</b></p> <p>Landcom (n.d.) (WORD document)</p>	<ul style="list-style-type: none"> <li>▪ Largely similar content to Doc#18.</li> <li>▪ Though also includes interesting references to: <ul style="list-style-type: none"> <li>- the larger Green Square area as ‘the Green Square Suburbs area’, and</li> <li>- the development itself as comprising ‘individual neighbourhoods, each with its own distinctive character, form an identifiable community...’</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ As above.</li> </ul>

		(and which is consistent with the Master Plan intentions).	
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**Table 5.8: Implicit references to ‘health’ and to ‘wellbeing’ in the Green Square Town Centre documents**

	Document name, author & date	Key broad/generic health-related points	Assessment against the ‘Three Healths Framework’
1	<p><b>Planning Proposal - Town Core Sites within Green Square Town Centre</b></p> <p>SJB Planning P/L (2010). (WORD document - planning report)</p>	<ul style="list-style-type: none"> <li>▪ One explicit reference to ‘health’ but only in conjunction with a reference to ‘walkable’ outcomes (p.47).</li> <li>▪ Many of the various descriptions of the proposal are as assessments against planning criteria/requirements in other documents, and which in themselves do not have an explicit focus on health.</li> <li>▪ Exceptions are the implicit health outcomes from SEPP 65 (relating to apartment design), the draft sub-regional strategy (which is more about metropolitan-scale implications), and the CoS Sydney 2030 Strategy.</li> <li>▪ Also interesting reference for need for early access to fresh food outlets.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extensive correlation with each of the three frameworks, but with differing rates of specific inclusion of individual attributes.</li> <li>▪ In relation to <i>Global public &amp; population health</i>, inclusions are principally about being ‘global-challenge responsive’ and ‘focussed on long-term health outcomes’, and with some relevant to the public space entries under promoting positive physical and mental health.</li> <li>▪ All attributes in respect to <i>Socio-ecological determinants of health</i> are covered, except for air pollution and design to limit suicide.</li> <li>▪ In relation to and <i>Planetary health (relational ecology)</i>, inclusions are principally about climate change and urban greening (rather than air and water quality and food security).</li> </ul>
2	<p><b>Green Square Town Centre – Town Core Sites. Statement of Community Benefits and Contributions</b></p> <p>Green Square Consortium &amp; Landcom (n.d) (WORD document, extract from Doc.#1)</p>	<p>Not separately discussed given the content of this document is largely extracted from Doc#1.</p>	
3	<p><b>Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan (Sept. 2012) (Main Report)</b></p> <p>Parsons Brinckerhoff (2012) (WORD Document)</p>	<ul style="list-style-type: none"> <li>▪ Considers the implications of the increased development density proposed in changes to the GSTC controls. An example of the complexity arising from the need to achieve all of the exhaustive array of considerations in the development of this area, and then how this is all funded – while still meeting the implicit health-supportive objectives in the initial master plan</li> <li>▪ Modelling concludes the increase in density will only work with a very high active transport modal split – which is inherently health-supportive.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quite specific content related principally to provision of infrastructure for, and promotion of, active transportation – and relevant to these (limited) attributes under <i>Global public &amp; population health</i> and</li> <li>▪ Though also consistent with ‘liveability’ and ‘addressing climate change’ attributes under <i>Socio-ecological determinants of health</i> and <i>Planetary health (relational ecology)</i>, respectively.</li> </ul>

4	<p><b>‘Your Green Travel Guide - Green Square’</b></p> <p>MIRVAC &amp; Landcom (2018) (WORD document, pamphlet)</p>	<ul style="list-style-type: none"> <li>▪ Advocates/facilitates the required active transport modal split (Doc#3) – so is inherently health-supportive.</li> <li>▪ Includes references to various co-benefits, eg. ‘our streets are made for walking’; ‘connect with the things that matter most: community, family and friends’; and use of ‘green’ in the title suggests ecological benefits.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As above, though with, in this promotion and advocacy document, particular emphasis on ‘liveability’, ‘positive physical health’ and ‘positive mental health’ attributes under <i>Socio-ecological determinants of health</i> and, where relevant, <i>Global public &amp; population health</i>.</li> </ul>
5	<p><b>Position Description - Place Manager, Green Square Town Centre</b></p> <p>MIRVAC (2016) (WORD document)</p>	<ul style="list-style-type: none"> <li>▪ Describes both the role of the proposed (now filled) Place Manager-Green Square position, plus the particular desired skills and experience of the successful candidate.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Includes roles consistent with each of the ‘three conceptual frameworks of health’, though mainly in relation to broader ‘liveability’ and ‘health equity’ attributes under <i>Socio-ecological determinants of health</i>, and some quality of life and ESD (climate change) matters under <i>Planetary health (relational ecology)</i>.</li> <li>▪ Explicit reference to encouraging ‘healthy and active living’. The latter is consistent with specific attributes relating to active transport under the <i>Socio-ecological determinants of health</i>. It also may be that it includes a reference to being ‘socially active’ (also under <i>Socio-ecological determinants of health</i>), and/or to also be more encompassing to include ‘active engagement’ generally, for example with ecological attributes <i>Planetary health (relational ecology)</i> - consistent with its ‘pairing’ here with the reference to ‘healthy’. However, the document is unclear on this.</li> </ul>
6	<p><b>Green Square Placemaking. Vol. 1: Framework</b></p> <p>City of Sydney (n.d.) (WORD document)</p>	<ul style="list-style-type: none"> <li>▪ Includes extensive use of evocative words that echo many of the ‘three conceptual frameworks of health’, particularly ‘socio-economic determinants’ – however there is an overall lack of concrete meaning due to frequency of use and lack of preciseness.</li> <li>▪ Reference to the importance of good on-going maintenance of the public domain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explicit reference to ‘dynamic, <i>healthy public spaces</i>’ (p.3) + 2 references to ‘wellbeing’ of the community (p.3) and residents.</li> <li>▪ Includes numerous, repeated references to <i>certain</i> of the attributes under each of the three health frameworks. These principally relate to: <ul style="list-style-type: none"> <li>• the challenge of urbanisation</li> <li>• the public domain, safety and liveability,</li> <li>• active transport promotion</li> <li>• equity of access and provision of services</li> <li>• interaction with nature, and</li> <li>• addressing climate change.</li> </ul> </li> <li>▪ As would be expected, does not cover matters relating indoor spaces, but also does not cover traffic issues, air quality, food matters, nor any <i>specific</i> reference to ‘social isolation’.</li> </ul>
7	<p><b>Green Square Place Strategy – Part 1. Creating Great Spaces for Life.</b></p> <p>MIRVAC (n.d.)</p>	<ul style="list-style-type: none"> <li>▪ Only a few pages are applicable to the scoring exercise.</li> <li>▪ Additional emphasis on generating ‘learning outcomes for the broader community’ (interesting from a ‘learning environment’ point of view).</li> </ul>	<ul style="list-style-type: none"> <li>▪ No explicit references to ‘health’ or ‘wellbeing’.</li> <li>▪ Unlike the document above (Doc#6) covering the same subject, most proposed actions relate principally to the <i>Socio-</i></li> </ul>

	(WORD document)		<p><i>ecological determinants of health</i>, predominantly the more social ‘liveability’, ‘positive mental health’ and ‘health equity’ attributes.</p> <ul style="list-style-type: none"> <li>There is little coverage of attributes relating to ‘positive physical health’ and <i>Planetary health (relational ecology)</i>.</li> </ul>
8	<p><b>GSTC Placemaking Workshop #1 April 2017</b></p> <p>(Author and date not stated - possibly City of Sydney) (Graphic presentation document)</p>	<ul style="list-style-type: none"> <li>Explicit reference to ‘creating places that positively impact people’s health &amp; wellbeing’ amongst 8 other attributes listed as comprising the activity of ‘placemaking’.</li> </ul>	<ul style="list-style-type: none"> <li>Similar to the document above, most references relate only to the <i>Socio-economic determinants of health</i>, and then mainly limited to certain of the ‘liveability’ attributes.</li> <li>No reference to attributes under <i>Planetary health (relational ecology)</i>.</li> </ul>
9	<p><b>Green Square Town Centre Early Activation Strategy</b></p> <p>Right Angle Studio (2016) (Graphic presentation document)</p>	<ul style="list-style-type: none"> <li>Most content is too vague to code.</li> <li>Interesting inclusion of references to fresh food outlets as catalysts, and a pop-up garden space that would ‘celebrate’ ‘wild organic growth’.</li> </ul>	<ul style="list-style-type: none"> <li>Where able to code, most relate to ‘liveability’ attributes under the <i>Socio-economic determinants of health</i>.</li> <li>There are some references that utilise attributes under <i>Planetary health (relational ecology)</i> relating to urban greening and biodiversity and food, as potential catalysts for ‘early activation’.</li> </ul>
10	<p><b>Green Square: The Social Corner Activation Brief</b></p> <p>MIRVAC (2017) (WORD document)</p>	<ul style="list-style-type: none"> <li>Most content is too vague to code.</li> <li>Includes a summary description of The Social Corner space in the Green Square Town Centre, and of the make-up of the existing (new) Green Square community.</li> <li>Proposes a ‘pop-up garden’ as per Doc#9).</li> </ul>	<ul style="list-style-type: none"> <li>No explicit references to ‘health’ or ‘wellbeing’.</li> <li>Where able to code, most content relates to various of the <i>Socio-economic determinants of health</i>, similar to Doc#9, but in a more limited way given its focus on The Social Corner only.</li> <li>The ‘pop-up garden’ would achieve certain of the <i>Planetary health (relational ecology)</i> attributes. It could also achieve attributes relating to access to healthy food, however there is no indication whether the garden is to include food plants.</li> </ul>
11	<p><b>Green Square Activations &amp; Events</b></p> <p>MIRVAC &amp; Landcom (n.d.) (single PowerPoint slide)</p>	<ul style="list-style-type: none"> <li>The actions listed here appear to have mainly already occurred or be on-going).</li> <li>The listed actions relate to particular social group or whole community events.</li> </ul>	<ul style="list-style-type: none"> <li>No explicit references to ‘health’ or ‘wellbeing’.</li> <li>The listed actions are consistent with various attributes mainly related to ‘liveability’ (and also reduction of social isolation) under the <i>Socio-economic determinants of health</i>.</li> <li>No references to attributes consistent with <i>Planetary health (relational ecology)</i>.</li> </ul>
12	<p><b>Green Square Summer Festival Plan, November 2017</b></p> <p>MIRVAC (n.d.) (WORD presentation document)</p>	<ul style="list-style-type: none"> <li>Specifically focussed on one ‘social activation’ event.</li> <li>Of interest primarily as an example of community development/social activation-with then health co-benefits.</li> </ul>	<ul style="list-style-type: none"> <li>No explicit references to ‘health’ or ‘wellbeing’.</li> <li>Consistent with various attributes related to ‘liveability’ (and also reduction of social isolation) under the <i>Socio-economic determinants of health</i>.</li> </ul>
13	<p><b>Green Square. Placemaking-2018 Plan.</b></p>	<ul style="list-style-type: none"> <li>Details proposed actions over 2018 year.</li> <li>Three explicit references to ‘health’, two as a pair with ‘wellbeing’.</li> </ul>	<ul style="list-style-type: none"> <li>All but one action falls within attributes under <i>Socio-economic determinants of health</i> – as</li> </ul>

	Rosa Han (MIRVAC) (n.d.) (Graphic presentation document)	<ul style="list-style-type: none"> <li>▪ This document is primarily of interest as an example of community development/ social activation - with health co-benefits.</li> <li>▪ Includes an assessment of 4 'top personas' in the locality.</li> <li>▪ Includes a reference to a talk held at The Social Corner on 'how to live more sustainably'.</li> </ul>	<ul style="list-style-type: none"> <li>related to 'liveability', 'decreasing social isolation' and 'health equity' (but missing matters related to 'positive physical health' and other mental health attributes.</li> <li>▪ The single <i>Planetary health (relational ecology)</i> matter relates to the talk on living sustainably.</li> </ul>
14	<b>956-960 Bourke Street, Zetland. Sites 5A &amp; 5B Green Square Town Centre Redevelopment. Development Application Design Report.</b>  fjmt (Francis-Jones Morehen Thorp, architects) (2014) (WORD document)	<ul style="list-style-type: none"> <li>▪ Specific subject matter related to the description of a residential development.</li> <li>▪ Of limited use to the Study – mainly in relation to references to apartment design/amenity; and design/amenity of surrounding public space plus any potential negative impact for residents.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No explicit references to 'health' or 'wellbeing'.</li> <li>▪ Relevant health-associated references cover all three frameworks of health, though with <i>Planetary health (relational ecology)</i> to a lesser degree and mainly in relation to energy efficiencies and renewable energy generation.</li> <li>▪ <i>Global public &amp; population health</i> and <i>Socio-economic determinants of health</i> references primarily relate to public domain matters.</li> </ul>

#### 5.2.4: Health-supportive attributes not canvassed

The exercise of identifying within each document explicit and implicit references to health-supportive actions, and then scoring these against the various attributes from the Three Healths Framework also allowed an assessment of what health-supportive attributes were not included or otherwise canvassed within those documents, and thus also planning strategies. The results of this component of the scoring exercise are illustrated in Appendix 5. The colour highlighting used in Appendix 5 gives a ready way to discern in a quick glance those attributes not covered. However, it also risks a false understanding when only looked at document-by-document. Taking this perspective gives rise to an initial conclusion that there is a substantial number of attributes that are not dealt with in the individual strategies, and this is correct in relation to those strategies when considered individually. Again, this would not be unexpected. Most documents, particularly those for the Green Square Town Centre, deal with strategies focussed on particular matters or issues or components of a larger strategy, and as such would not typically cover a wide range of the attributes from the Three Healths Framework.

When looked at overall in a composite way in relation to the two analyses above, it was found that there were much fewer matters (attributes) that were not canvassed either not at all or only infrequently in the planning strategies overall. Further, a lack of specific attention in

these documents does not necessarily mean that there are no related actions, either by way of co-benefits from other actions or because they may be embedded within necessary compliances with other, generally higher level, planning strategies and because of that embedded characteristic there is are few subsequent specific references. Those matters which have been identified as receiving little or no attention are discussed below.

Please note that the three-digit numbers refer to the attribute referencing in Table 3.4.

- **External air pollution/air quality** (1.2.1, 1.3.1 and, partially, 2.2.4).

Improvements in air quality will be a co-benefit from the establishment of Green Square as an initiative in response to State government urban consolidation policy, one of the objectives of which is to reduce metropolitan air pollution levels through reductions in distances travelled and the facilitation of increased use of non/less-polluting active transport modes. This process has in effect already been established. Other than local strategies to facilitate active transport, and which are also well established, there is limited ability of the development itself to affect local air quality and it is perhaps not surprising that this matter receives little attention.

Polluting industries are being replaced by the new residential and commercial developments, and in any case emissions from such uses are now well regulated. The Green Square development perhaps assisted closure of the Waterloo Incinerator on the Town Centre site in 1997, however this use was already subject to scrutiny and protest on health grounds.

Some Victoria Park residents have expressed concerns about air quality – as emanating from the locality as a whole rather than the case-study sites. Green Square is placing more people in this situation. Increased tree planting may assist in mitigation.

- **Safe public environments** (1.2.4, 1.3.4, 2.3.3)

Consideration of the public safety aspects of public spaces is now well-established (since the 1970s) in particular through ‘Crime Prevention Through Environmental Design’ (CTED) considerations (Kent & Wheeler, 2016). Both the Victoria Park and Green Square Town Centre master plans, considered in a separate context analysis report, include specific reference to ways to improve safety in public spaces and CPTED



assessment is specifically mentioned in the Town Centre master plan as an additional development assessment criteria. 'Safety and security' is also one of the design 'principles' in SEPP 65 (Design Quality of Residential Flat Development), with which all developments must comply, and the associated Apartment Design Guide.

It is in this capacity that the attributes on 'safety' are identified in relation to the document detailing the development application for Sites 5A and 5B in the Green Square Town Centre.

However, the 'embeddedness' now of the principles behind CPTED in urban design planning strategies generally may well explain why there is little or no mention in the other documents. In this regard, the public spaces in both Victoria Park and the Green Square Town Centre are designed to maximise the potential for human interaction and to have an open feel with therefore also good sight-lines.

- **Indoor air quality** (1.2.1, 1.3.1, and partially 2.3.4)

The ESD criteria within the Green Square Town Centre master plan are designed to improve indoor air quality through reductions in PVC and paint emissions, and through requirements for cross-ventilation/operable windows. The Victoria Park master plan included similar considerations. Cross ventilation standards are also included in the NSW Apartment Design Guide associated with SEPP 65 (Design Quality of Residential Flat Development) with which all developments must comply.

Again, reference to this matter within the documents reviewed applies only to the single document comprising the development application for Sites 5A and 5B in the Green Square Town Centre. It is noted here however that this criteria does not reference materials that might have in themselves a positive impact on occupant health, as is now realised is the case with exposed timbers.

- **Adequacy of indoor space** (1.2.5, 1.3.5)

Standards in relation to indoor room sizes and configurations are established in long-standing State Government legislation, including SEPP 65 (Design Quality of Residential Flat Development), with which all developments must comply, and the

associated Apartment Design Guide. It is not unexpected therefore that this attribute is not further raised in the planning strategies reviewed here.

- **Effective building design to inhibit suicide (2.3.5)**

This is a highly particular design consideration, and, in this sense, perhaps more narrowly focussed than many of the other attributes. There is no reference in the planning strategies reviewed here to this need or, and as such, any particular need for design solutions.

This may well be a criteria to address in the design component of this Study, most particularly in the special needs within high-rise developments of good balcony design (refer to section 5.2.6).

- **Local traffic levels (1.2.6, 1.3.6)**

This matter has largely been addressed within the master plans applying to Victoria Park and the Green Square Town Centre and reviewed in the earlier context report. Both sites have been designed as essentially ‘enclaves’ from the surrounding heavily-trafficked arterial roads - the Town Centre has a substantial central car-free area, and in both locations streets designed as short lengths and primarily for local traffic, although some concerns have been expressed by residents in Victoria Park that the main street is being used to by-pass the adjacent through routes.

Local strategies to facilitate active transport should also assist in minimising local traffic volumes.

There is therefore reduced relevance of this matter to the planning strategies reviewed here and so it is not unexpected that receives little further attention.

### 5.3: Health and the Wider Contextual Influences on the Planning Strategies

#### 5.3.1: Summary overview: *Green Square as part of Sydney as ‘metropolitan muddle’, and ‘accidental’ city*

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##### Key points:

- Health is indeed present as a consideration, and in various conceptualisations, in the plans for the case study sites – but mostly in a non-explicit way as co-benefits and/or as references to other objectives such as ‘wellbeing’, ‘liveability’, and ‘sustainability’.
  - Inclusions often also present as somewhat accidental, and often as a muddle – and in this sense also consistent with descriptions of how Sydney has been planned since its beginning.
  - There are many aspects to this ‘muddle’, arising from the history of South Sydney and from the nature of the planning ‘zeitgeist’ when Green Square was being planned.
  - Nevertheless, there has also been a consistent long-standing and fundamentally health-supportive overall vision for Green Square, as well a (helpful) continuity of key personnel.
  - In addition there are various influences quite specific to the two case study localities (and which are dealt with in the following sub-section).
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‘... we need to look back and understand that in the medium to long term, it’s always been the conditions of the social and the natural environment in which we live that have created the conditions for health and disease .... That’s so today, we still live accountable to the conditions of the environment around us in an ecological sense and that’s a lesson that we’ve got to learn from the past in order to cope with ... otherwise uncertain futures’. (McMichael 2001)

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‘In Australia we have had the privilege of spreading out ... and creating large spaces for our families ... the cost is being measured in the calories we are carrying into our hospital wards, the insecurity and loneliness many feel in their daily lives, and the petrol we burn on the short trips we could easily walk if walking were safe, easier and fashionable. ...

... We are now only starting to appreciate the impact our ‘car-focussed’ development is having on our lives and health. ...

In the rush to house people, the rest of our lives are often overlooked. Where will our young ... learn to play? Where will our dogs stretch, our mums meet with their strollers, and our unique parrots congregate?’ (Leeder and Ward 2006)

To support the interpretation of the planning strategy documents applying directly to the two case-study localities, in particular to assist in drawing conclusions as to the motivations and interests underlying the references (or not) to health in those strategies, this review also canvassed a much broader and eclectic range of documents applicable to the history and planning of Green Square. This section (section 5.3) details this review. Chronologically, it was carried out concurrently with the review of the more specific Green Square planning strategies as detailed in the previous two sub-sections. To assist in understanding the outcome of this review, the following provides an initial overview of findings.

The current condition of Green Square is a result of a rich mix of contributory factors. The findings of this more networked background review often presented as akin to an earlier description of planning and development in Sydney as a ‘metropolitan muddle’ (Atkins 1961). Freestone (2000: 123) has similarly referred to a changeable ‘milieu of planning’. On the one hand it was found that there are indeed some clear ‘lines of sight’ from earlier planning regimes and objectives to current documents. Here the background review also led back further than initially anticipated – not just to The South Sydney Plan developed in the 1990s but also to the experiences of the South Sydney community, and still in living memory of some residents, going back to the slum clearance programs instigated in the County of Cumberland Plan in the 1950s. Karskens (2004), in a history of Green Square, notes the close nexus between these local experiences and the social, economic and built form – and planning and management – history of wider Sydney itself:

‘... the forces which shaped Green Square’s history are complex, intertwined and ongoing. [Our essays exploring these forces] tell a dynamic story about environmental change and radical transformations of landscape. They track the movement and experience of successive waves of people, and the meanings this place held for them. [Green Square] ... offers a microcosm of the development of Sydney as a whole.

... at Green Square we can actually witness the spectacular, strange and often poignant process of social, physical and economic transformation. It is a case study of a process which has occurred in Sydney since its inception.’ (p.9)

Notwithstanding this local-metropolitan symmetry, the South Sydney experience is also quite distinctive, and layered. In turn, arguably, these local influences, stretching back now half a century or more, mean that the strategic planning responses now apparent within Green Square would likely have been quite different if Green Square had been located elsewhere within the Sydney metropolitan area. If, for example, Green Square had, say, been located in a middle or outer ring suburban area where there was no existing ‘tradition’ of medium density mixed-use and walkable neighbourhoods that would, as it did in The South Sydney Plan, then serve as a model for future development; where private car use was more prevalent, thus potentially de-emphasising the inclusion of the active transport modes which is a feature of all the master plans; and where there was not a history of resident and local government activism in order to address local issues of poverty, poor health and low-standard housing. A comparison of the proposals planned for Green Square with the quite different configuration of development now largely constructed in the new residential estate and town centre at New Rouse Hill in outer Sydney, and coincidentally also planned and developed by Landcom), for instance, serves as an example of such differences. For example, the report on New Rouse Hill in the 2011-15 Planning & Building Healthy Communities study: <https://cityfutures.be.unsw.edu.au/research/projects/planning-and-building-healthy-communities-a-multidisciplinary-study-of-the-relationship-between-the-built-environment-and-human-health/>, describes how the ‘shape’ of the residential component of New Rouse Hill is essentially low density, with individual car access to each dwelling and, despite design attempts to the contrary, characterised by a high rate of trips undertaken by private vehicle, and low rates of physical activity.

As the background review progressed, two other broad influences on the content of these documents also became apparent. One is the particular nature or ‘zeitgeist’ apparent within planning at the time of their development, in particular, a new growing awareness about the importance of sustainability, urban design, and integrated practice. The other influence comprises some important site-specific factors in relation to the two case studies. Although both sites are fundamentally embedded within the inner-urban ring and within Green Square itself, they also have a slightly different development context compared to most of the

remainder of Green Square. Both have comprised, for their recent history, large sites of more or less single (industrial) land use rather than many closely-packed mixed uses; and also, except for two small areas adjacent to the Town Centre site, there is no immediate (neighbouring) residential development to have to respond to in terms of potential amenity impacts. In addition:

- Both sites are located on former wetland, requiring explicit attention to drainage issues disposal, with consequent impact on the design and management of open space areas;
- When Green Square was first proposed, the notion of living in higher density buildings on inner-urban brown-field sites was somewhat experimental, resulting in close attention to detail and quality to assist marketability;
- The involvement of Landcom itself has been as an ‘active player’ in terms of its corporate brief to undertake not just ‘development’ but also the establishment of ‘communities’ and within a sustainability framework; and
- Green Square is located within probably the best resourced local government authority in Australia in terms of its ability to oversee and fund a wide range of services.

These multiple characteristics – and their on-going interplay – have also generated some difficulty in presentation and explanation. Both the Green Square locality itself and the ways in which health has figured in its development comprises a complex mosaic, and with the connections between the various parts not always readily visible. Here, in addition to Atkins’ (1961) suggestion of Sydney as a ‘metropolitan muddle’, the idea of Sydney as an ‘accidental’ city (Ashton 1995) when explaining the ways in which its development form has come about also assists.

In his review of development processes within the City of Sydney from 1788 to the date of his book, Ashton (1995) has suggested that they are characterised more by speculative whims and opportunism (from both public and private sectors) and resultant changeable public policy rather than any notion of planning; and that when planning does occur, it is more an exercise of ‘catching-up’ to address problems and issues that arise. Further, such planning tends to be disjointed and with those plans and schemes that are put in place prone to amendment and early replacement:

‘... Sydney is an accidental city, a city which emerged from a complex web of power relations without recourse to holistic planning. ... Sydney has undergone almost constant piecemeal redevelopment since the second half of the nineteenth century. This process is still at work today. ...

Central to the narrative is the theme of *laissez faire*. *Laissez faire* individualism frustrated effective control of nineteenth century urban growth ... Moreover, the doctrine ... worked effectively against the implementation of planning schemes and concepts in twentieth-century Sydney. ... Planning functions and authority in Sydney have remained fragmented.

At the peak of economic boom, at times of crisis (such as the outbreak of bubonic plague ...) or on the threshold of new enterprises (such as post-war reconstruction), planners have been granted opportunities to voice opinions about or prepare schemes for future development. The vehicles for this, however, have invariably ... [been] ... removed with the occurrence of economic upsets or the onset of new periods of expansion. ... planning practice is often predicated on political agendas. Visions of future development, clear or otherwise, last as long as governments.

... [Sydney] ... has happened by accident rather than by design.’ (pp. 10, 12).

Ashton’s argument, derived here from the development and planning of the City of Sydney local government area (within which Green Square is located), could be equally as well applied to the metropolitan area of Sydney as a whole. Connell (2000: 6), for example, suggests that the current major policy platform of urban consolidation, introduced into Sydney’s metropolitan plan in 1988, was ‘largely unanticipated’. Further, Ashton has now extended his appraisal in a subsequent co-authored paper (Ashton & Freestone 2008) with a modified view: that ‘[f]rom an accidental ‘city without a plan’, Sydney has [now] become a city with many plans. Some would say too many, and there have been endless rounds of planning system reform since the 1980s’ (p. 21).

Nevertheless, Ashton & Freestone (2008: 21) also note two constants. One is that ‘despite the participatory rhetoric of the planning system, the state government maintains the last word’. An example here are the State-appointed ‘development corporations’, of which the South Sydney Development Corporation operating in Green Square was one, applying to various

parts of Sydney (and appointed under the *Growth Centres (Development Corporations) Act 1974*). Searle (2006) has referred to these corporations as creating ‘new state spaces’.

The other constant is that while there are always ‘new sets of pressures’ (citing as examples ‘affordability’, ‘social polarisation’ and ‘impacts of climate change’), many problems seem to remain (here citing ‘development versus environment, local–state tensions, [and] congestion’). However, it could also be argued that the pressures of affordability and social polarisation are not really new and have always been apparent (as will be detailed below). Ashton & Freestone (2008) do not mention health as one of these current issues (as of 2008), though, as also detailed below, it is now seen as important enough to be included in recent metropolitan planning strategies in addition to being a significant part of some earlier strategies.

A further characteristic of the ‘muddle’ is that these various ‘too many’ plans, with their often different underlying values and visions, will often coexist. Auster (1986) suggests that, even where seemingly divergent and contradictory, such plans are not ‘necessarily incompatible’: ‘Forces which are partially or potentially contradictory have co-existed without undue strain’ (p.46); as for example, urban consolidation *and* new land releases on the urban fringe, and which Spearitt & DeMarco (1988: 33) describe as continual tension ‘[between desires] to concentrate or disperse...’. Connell (2000) refers also to a contradiction between the simultaneous construction of motorways to these outer suburbs, and environmental and health concerns at the time, such as high rates of asthma caused by air pollution, as well as with the attention then also being given to broader ecological sustainability matters. Aplin (2000) too notes, with some irony, the existence of an urban consolidation policy at the same that Landom was still involved in encouraging home ownership via the development of estates on the fringe.

As detailed in the subsequent sections, elements of all of the above characteristics can be seen in the evolution of Green Square – and in how health has been included, or not, as a consideration in its conscious development planning.

Here though one also needs to note a caveat. Green Square as a *planned* urban redevelopment project has now had a consistent trajectory for some 25 years – commencing from the first identification of the area as suitable for residential redevelopment in the discussion paper preceding The South Sydney Plan as well as in the supporting documents in relation to the



then proposed airport railway line. There have been issues along the way as could be expected in such a time-frame. A review conducted in 2015 (Warren Centre 2015), of five substantial government-sponsored urban redevelopment projects for example, critiqued the Green Square redevelopment for being too slow. Cited as contributing issues were the dissolving of the South Sydney Development Corporation before the project and the Town Centre in particular was realised, a complex statutory planning framework given the Corporation did not assume the planning powers of the local Council and the use of a bonus floor space scheme to fund the required public infrastructure, and the long time frame for commencement of necessary road and drainage works. Endelman (2004) cites suggestions in the early 2000's, coinciding with various market downturns, that Green Square could turn out to be a 'white elephant'. Others at the time however concluded that Green Square was progressing 'slowly but steadily' (Ashton and Freestone 2008: 20) and that delays were principally in relation to the Town Centre component and were understandable given the scale of difficulties in relation to the different land ownerships, its location on former wetland, and then the global financial crisis in 2007.

In part the trajectory of Green Square has been set by the force – and timing – of its imperative: the need, in Sydney, for urban consolidation to meet continuing population growth, coupled with the ability to capitalise on the public infrastructure of the new railway. Consistent with the idea of the accidental city though there has also been a certain amount of luck. One element is that it is now under the jurisdiction of a powerful and well-resourced administration in the City of Sydney. Another is a consistency in key personnel at both a political and administrative level: the long-standing (since 2004) Mayor of the City of Sydney is a resident and previous councillor of the former South Sydney Council, the also long-standing CEO of the City of Sydney was previously director of community services at the former South Sydney Council, and the current Green Square Manager at the City of Sydney was formerly Council's Green Square project manager and before that was a strategic planner at South Sydney Council involved in preparing the South Sydney Plan.

### *5.3.2: The plague, unsanitary housing, and early metropolitan planning (1900 onwards)*

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#### **Key points:**

- Early planning was prompted by a health emergency - in the plague.
  - Responses included the clearing of sub-standard housing. Replacement housing was a mix of public and private options, and garden suburbs and dense but low-rise apartments.
  - Even then the impact on wellbeing of long travel times to work was considered an issue.
- 

Twentieth century planning in Sydney could be said to have been prompted by a health ‘crisis’: in 1900 Sydney was shocked by an outbreak of the bubonic plague (Curson and McCracken 2000). There were a number of urban planning responses, from both public and private sectors (Freestone 2000).

On the public side was one of the first slum clearance projects undertaken by the State government (in The Rocks where the plague first started). Such projects continued, irregularly, until the last example, in the suburb of Waterloo, adjacent to Green Square, in the 1970s. The resultant social upheaval experienced in Waterloo (Zubrycki 1981) can be said to have had an influence on the planning strategies subsequently developed by the local South Sydney Council in the 1990s – and which in turn have influenced the planning processes in Green Square.

Determination of the appropriate replacement housing for these slum clearances, both in the ‘cleared’ areas and in new locations, demonstrates an on-going and unresolved tension – between a low-scaled suburban ideal and the need for denser multi-unit development aimed at housing more people in a given area. Early public housing responses included both residential flat buildings and low-scaled estates (Zanardo 2010, 2000; Ashton 1995).

Innovative apartment developments were built in inner city Chippendale and Pyrmont from 1914 to the 1930s (Zanardo 2010); and in 1912 a public housing estate based on the garden suburb principle was commenced at Daceyville, just to the south of Green Square.

On the private side, individual entrepreneurs established new outlying residential estates offering more sanitary conditions, improved light and ventilation, and more green space, and epitomising the suburban ideal. Again, some were based on the then urban design ‘innovation’ of the ‘garden suburb’ (Freestone 2000). Haberfield, developed in 1901 was

marketed to the middle classes as ‘slumless, laneless and publess’ (Coupe, S. & Coupe, R., 1988). Rosebery, located to the immediate south of Green Square, was developed in 1911 and was orientated more to the working class. Prior to these developments, a residential subdivision on the higher ridge-land known as Beaconsfield and located immediately to the west of the swampy land now occupied by the Town Centre was privately developed in 1840 and advertised as a ‘working mans’ model township’ (City Plan Heritage 2014). Common to both responses has been the idea of supporting a necessary ‘sense of community’. This was seen as achieved, in part, through the urban form of the ‘neighbourhood’, based first on Ebenezer Howard’s Garden city idea from around 1900 and then the American Clarence Perry’s idea of the ‘neighbourhood unit’ developed in the 1920s (Freestone 2000). The ‘neighbourhood’ has proved resilient. McManus (2005) has noted that it ‘... has been one of the most widely applied [town planning ideas] in Australia’s larger cities. It has been concerned with improving liveability and environmental and social quality’ (p.36). A continuation of this idea can be seen even now in the City of Sydney ‘billing’ Green Square as ‘Sydney’s newest urban neighbourhood’ (refer title page graphic), which is different to earlier references as a new ‘suburb’, and concurrent City of Sydney (and earlier South Sydney Council references) to such areas as ‘villages’. Also common was a concern about the negative impact on community, and households, of long journey-to-work times – and seen, even then, as important to wellbeing. Rosebery for instance included an adjacent industrial area, and was marketed as a ‘garden industrial suburb’.

### ***5.3.3: A Royal Commission (1909)***

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- A Royal Commission in 1909 led to new legislation regarding dwelling construction standards, and early land use controls aimed at preventing growth of new slums.
  - There was though often a significant time delay (sometimes decades) in enactment of that legislation.
  - A characteristic of the time of streets in poorer residential areas being used as places of socialisation, given a lack of alternative public open spaces, was heavily criticised by more middle-class observers, although the socialisation opportunities of streets was later valued in The South Sydney Plan of 1995.
- 

The plague and associated issue of sub-standard housing (amongst other factors) also prompted a comprehensive review of town planning issues in Sydney: the 1909 Royal Commission for the Improvement of Sydney and Suburbs. It could be said that this was the

first comprehensive review of planning issues in Sydney; there were however earlier enquiries conducted in the 1800s to address various matters (Freestone 2000; Ashton 1995). Its report of the same year included eight principal recommendations, three of which can be said to have direct health prompts (Winston, D., 1957: 26, 27):

- (i) gazettal of legislation to control the design and standard of buildings (and eventually implemented via the *Local Government Act 1919*);
- (ii) powers to be given to local Councils to resume and remodel slum areas, and prevent growth of new slums (enabled via the *Housing Act 1912* and the *Local Government Act 1919*); and
- (iii) halt the ‘straggling’ of new suburbs on the fringes of the metropolitan area given the lack of services there (enabled via the *Local Government Act 1919*, the town planning additions to that Act in 1945, and the subsequent establishment of the Cumberland County Council in 1945 and adoption of its County Plan in 1951).

Ashton (1995: 38) notes the close nexus the Commission saw between environmental factors and the wellbeing of individuals. A prominent example, in both writings and photographs of the time, relates to streets being used for children’s play and also for adults to socialise, and which was seen – by more middle-class observers – as comprising the ‘most unpromising school for the production of good citizens’; with the provision of ‘healthy, supervised and didactic playgrounds’ a key necessary response. As Ashton (1995: 38, 39) further notes:

‘Environmental determinism was to have a significant impact on the regulation of development ... . Indeed, it was employed to classify or condemn urban precincts. On ‘social and hygienic grounds’ the Royal commission was to argue, for example, that ‘workmen [and their families] should be encouraged to live in separate houses in the suburbs’. Tenements and overcrowded inner-city areas were associated with disease and degeneracy... ’

### 5.3.4: *The County Plan (1951)*

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#### **Key points:**

- A key prompt for the County Plan is the poor standard of housing in both inner and outer Sydney, and the resultant costs of health dis-benefits.
  - Health is very much to the fore, whether expressed explicitly or implicitly; and the Plan is imbued with a concern for Sydney's residents. Health dis-benefit costs are expressed in financial terms *and* in terms of direct impact on personal and *community* wellbeing.
  - An irony of the proposed slum clearances, which were mostly carried out at a later date, is that they often forcibly dis-located long-established communities, with consequent health impacts.
  - A time delay of 3 years between the draft plan and adoption was due to financing concerns.
- 

The County of Cumberland Plan, comprising a strategic plan – The County Plan – and a statutory planning instrument – the County of Cumberland Planning Scheme, was Sydney's first metropolitan plan (Winston 1957). It was actively engaged, amongst other matters, with issues around human health. It gave particular attention to the creation of a healthy living environment, and to the understanding that an important part of this was the generation and support for neighbourhood community. Equal attention was given to the issue of inner city 'slums' and to the issue of the still un-controlled spread of housing on Sydney's fringes. In relation to the former, the Plan described a band of slum housing around the central city comprising 'conditions far below acceptable Australian standards ... Where homes and industries were 'hopelessly intermingled' (CCC, n.d: 8). In relation to fringe development, although there was more space, the Plan noted a lack of basic services including sewerage, reticulated water, recreational spaces, shops, public transport, paved roads and community services in general (Winston 1957); and emphasised, again, the detrimental effects of long travel times to employment on health and household welfare, and on overall *community*: 'Long journeys to work destroyed the neighbourhood spirit because 'the people next door were strangers who disappeared into the maelstrom each morning'' (Spearitt and DeMarco, 1988: 12, quoting the County Plan).

Descriptions at the time of the deprivations resulting from living in the poorer housing in both the inner and outer areas were remarkably similar, albeit with some differences noted in relation to causal effect (Winston, D. 1957: 41). As in the earlier Royal Commission, a

common feature of both inner city and outer urban areas of adults socialising and children playing in streets due to lack of ‘green’ space was again described as a ‘misuse of suburban streets’ (CCC, 1949), with an implied detrimental impact on wellbeing. And quite contrary to commentary relatively few years later on the make-up of urban ‘life’ by Jane Jacobs in her 1961 book *The Death and Life of Great American Cities* in which ‘streets served as ‘community areas’’ (Rauscher and Momtaz 2015).

The reports accompanying the County Plan (CCC 1948, 1949) contain numerous health-related wording, including direct use of the word ‘health’, descriptions of explicit health issues (e.g. typhoid from lack of sewerage, including a graph showing the incidence of typhoid relative to the number of sewered properties during 1920-29), and the implied (e.g. references to ‘depression’). Examples are included in Box 5.4.

The response of the County Plan, and to Sydney’s future growth in general, was two-fold:

1. To establish new satellite towns in the outer areas of Sydney, developed on ‘garden city’ principles; well-serviced and essentially self-contained with residential, employment, commercial and cultural uses and activities.
2. In the inner areas, improvement of the overall level of health and amenity via a regime of slum clearances, by establishing land use policies separating residential and industrial uses, and by providing more services including open space.

In relation to the latter, substantial numbers of existing dwellings, often in whole precincts, within an inner-urban arc comprising Surry Hills – Waterloo – Alexandria – Redfern – Newtown – Camperdown – and Glebe were considered unfit for human habitation and needed to be demolished. It was envisaged that population densities would have to be reduced by up to 15%, involving a re-location of residents, in order to increase the curtilage around individual, retained and new, dwellings to improve light and ventilation, and provide space for new recreation and other community services (Spearitt and DeMarco 1988: 17). This rationale however differed in the later – and last – slum clearance program proposed in Waterloo in the 1970s. At that time, an additional metropolitan imperative in terms of a denser use of land that was already serviced meant that, as the then head of the NSW Housing Commission stated (Jack Bourke, 1980 in Zubrycki 1981): ‘... we must get more people in these areas ... to increase the population’ (refer also Housing Commission of NSW 1976).

The County Plan recognised the costs would be substantial but paled when considered against the financial benefits. Many relate directly to health, either directly or as a result of a co-benefit. They were listed, with accompanying monetary estimates of savings, as (CCC 1949):

- Efficiency in public utility provision by stopping sprawl;
- Reductions in transport costs, accidents, maintenance of motor vehicles due to stopping and starting, traffic delay, savings on transport of goods, services and passengers;
- Savings in loss of wages from absenteeism due to sickness (with 50% of such absences attributed to ‘nervous illness caused by excessive travelling (to work, due to over-centralisation of employment and poor living conditions);
- Reductions in public health services costs, with approximately  $\frac{1}{3}$  of patients having illnesses arising from unsanitary living conditions, including lack of sewerage, and a ‘low standard of physical fitness ... [due to] ... inadequate facilities for active recreation. Thousands of people, both young and old, cannot get the active recreation they need because of the grave shortage of cricket, football and hockey fields, tennis courts and golf links.’

The vision was well illustrated in a poster (and accompanying explanatory pamphlet) from the time, *You and The County Plan* (CCC n.d.) (Figure 5.2). As Spearitt and DeMarco (1988: 71, emphasis added) note, the vision ‘obliterates [the older housing area] in favour of the apparent safety and clean air of planned communities in the outer suburbs’. No new town quite like that modelled in the illustration was ever built so it is difficult to know how successful they would have been in terms of the health of residents. At first glance the illustration suggests the sort of ‘prairie planning’, perhaps without the high-rise, that urban designer Gordon Cullen concluded, around the same time and drawing on experiences in the United Kingdom, was not conducive to the actual social and community life the County Plan sort to achieve (Cullen 1961): a model of urban planning where buildings and land uses were regarded as individual entities separated by open space, and streets simply for vehicle movements devoid of the beneficial ‘friction’ of adjacent uses and ‘activity’ which, for instance, The South Sydney Plan later recognised as important in the existing urban pattern of South Sydney, and which the Victoria Park Master Plan and in particular the Green Square Town Centre Master Plan now seek to ‘re-create’.

**Box 5.4: Examples of health-related commentary in the County Plan (emphasis added).**

- The Scheme ... give[s] practical effect to the science and art of town planning ... by guiding future development in the interest of economy, efficiency, *health* and convenience.(CCC 1949: 1)
- Adjacent residential and industrial land uses lead to conflict and ‘the *depression* of soot, noise and heavy traffic.’ (CCC 1949: 3)
- Residential areas are ‘sprawled ... without any real identity or provision for *open space, social or cultural life.*’ (CCC 1949: 3)
- ‘The fostering of a *healthy community spirit* by residential development in planned neighbourhoods’(CCC 1949: 6)
- ‘... public health services [are] now greatly taxed because of high incidence of *ill-health* in congested living areas’. (CCC 1949: 9)
- ‘[work] located at convenient distance from places of residence, saving workers the *fatigue* and cost of travel...’ (CCC 1949: 10).
- ‘Smoke nuisance ... not only endanger health ... but damage structures and even the domestic washing.’ (CCC 1948: Photo 61, 62).
- ‘substandard housing’ results in ‘the *vice and crimes* which they have bred...*ill-health* and *premature death* from insanitary living conditions, accidents in twisted streets [resulting in] *death and injury*’. (CCC 1948: 68, 70).
- ‘The cost of slum clearance is enormous, but small compared to retaining the present breeding places of *crime, disease* and *death.*’ (CCC n.d: 5)

**Figure 5.2: Extracts from *You and The County Plan* (Cumberland County Council n.d.)**





That said, it may also have been that the overall (horizontal) scale of such new towns would indeed have been ‘close-knit’ enough to have resulted in a health-supportive environment. As explained in the County Plan: ‘Homes [would be] grouped in Living Areas, around essential amenities of shops, schools, playgrounds, clinics, and cultural centres – without the disturbance of fast traffic noise and factory intrusions’ (CCC 1949: 10). And, as further illustrated in the pamphlet version of *You and The County Plan*, dwellings were envisaged to be not necessarily detached but medium density in scale.

However, how these suburban areas were actually built was quite different. This period of Sydney’s development also coincided with a growth in housing affordability generally and in use of private motor car – notwithstanding the County planners themselves had concluded that the car ‘was not an efficient means of public transport’ (Spearitt and DeMarco 1988: 19). Even though these suburbs did provide affordable dwellings (Mee and Dowling 2000), in itself a factor in positive health outcomes, they have now also generated their own adverse health implications for residents, as described in the introductory quote to this section.

**Box 5.5: A (small) implication of the County Plan in the development of Victoria Park**

The land comprising the Victoria Park racecourse was purchased in 1949 for redevelopment. The main part of the site, comprising the current ‘Victoria Park’, was developed as a car manufacturing plant, commencing in approximately 1952. It was a clear commercial response to the then preferencing of low density suburban development made possible by, amongst other factors, widespread private car ownership. (Although the County of Cumberland Plan attempted to restrain such development in preference to decentralised new towns with clustered activities, serviced by a larger metropolitan rail network, it was unsuccessful. By contrast, such suburban development was largely accepted by the replacement Sydney Regional Outline Plan). This use closed in 1974 and the site was then used as naval stores (City Plan Heritage 2014).

Land between this site and Epsom Road to the south was originally intended to be subdivided, by the same new owner, for a mix of residential and industrial uses. However, this was refused by the local Council on the recommendation of the Cumberland County Council on the basis of its policy to separate industrial and residential uses so as not to repeat the urban land use conditions that contributed to many of the health concerns identified in the County Plan. This land was therefore developed solely for industrial uses, again related to car manufacturing (City Plan Heritage 2014).

Arguably, the refusal to allow residential uses at that time has now made it easier to redevelop this land and the adjacent Victoria Park for largely high density (residential) uses given a lack of existing residential neighbours with potential amenity concerns, and the retention of larger site areas (meaning fewer owners to deal with).

### 5.3.5: *Health and metropolitan planning following the County Plan*

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#### **Key points:**

- The direct ‘empathic’ references in the County Plan to the living needs of Sydney’s residents disappear in its 1968 replacement plan, which takes a more detached and positivist approach, and has a largely singular focus on the structural location of the expanding population.
  - New development is basically green-field, and adopts a model based on low densities, individual dwellings and car ownership. Although providing affordable and equitable home ownership, this model has later also resulted in various health dis-benefits.
  - The reversal of this process – via urban consolidation – has contributed to the need to develop Green Square.
  - The delayed slum clearances, now assisted by Commonwealth funding, adopted, variously, the then fashionable Radburn low density and Le Corbusier towers-in-open space models. Cost cutting often meant that intended community facilities were delayed or omitted.
  - It was not until the mid-1990s that health is again explicit in metropolitan plans, although when occurring tend to be via separate ‘headings’ rather than the ‘infusion’ apparent in the County Plan, now some 65 years ago.
- 

The County Plan was replaced in 1968 by the Sydney Region Outline Plan. It’s replacement was due to a number of factors including underestimation of population growth due to post-war immigration and baby boom, a valuing of the Australian dream of the ownership of a detached house, a valuing of the independence of the private car, conflicts between government departments charged with implementing various urban infrastructure including housing, and a lack of necessary funding (Stretton 1970; State Planning Authority 1967). The Cumberland County Council (1958: 19) itself noted following a tour to United Kingdom, Europe and United States of America: ‘... Australians appear to prefer houses and so far the advantages of flats or high density housing have not become evident enough to justify any expectation of an immediate change in taste.’ As Aplin (2000: 74) also notes: ‘aspirations of home ownership on at least a small plot of land have continued unabated.’

In addition, a reading of the tone of the Sydney Region Outline Plan concurrent with that of the County Plan suggests another possibility: a more overall technocratic view of planning and urban management generally, and consistent with what Bartram and Shobrook (2001: 132) for instance, when looking at the convergence of medical science and planning in the

1940s urban reconstruction of Britain following the Second World War, suggest: ‘reaffirmed [at that time] the role of rational, scientific thinking and the privileged the view of the expert, particularly in relation to healing the body of the city.’ While the County Plan and its supporting documents suggest an ‘infusion’ with a concern for the city residents, as evidenced for example in the substantial space and detail given to health aspects, the Sydney Region Outline Plan suggests an attitude a lot more detached. For example, when reviewing the County Plan, the matter of ‘slum clearance and displaced population’ is ordered sixth, after matters relating to population, employment, development of the CBD, development of supplementary centres, and open space; and the review comment itself suggests a neutral stance to, or even a stepping-back from, the idea of planning as potentially contributing to the issue – and to resolving its associated health implications (State Planning Authority 1967: 74):

‘The County Plan could not, in itself, bring about a widespread rise in housing standards. The main reason why people were living in sub-standard dwellings was that they could not afford anything better. Nothing short of a massive redistribution of income (either direct, or by provision of new dwellings at sub-economic rates) could bring about a large-scale replacement of sub-standard housing. ... There is still a backlog to overcome. ... Because the areas in which these dwellings are located are not generally attractive to private developers, action has been confined mainly to public authorities. ... some old houses have, however, been replaced by privately financed home units and others have been rehabilitated by people who prefer a home close to the City to commuting to expensive sites in outer suburbs. Architecturally, the terrace house, once despised, is being recognised as an appropriate form of high density development, providing greater privacy than a home unit and, in addition, a small backyard. A good example of this revival of demand can be seen in the Paddington district.’

Instead, the Plan was primarily more concerned with the location and phasing of release areas on the fringe to cater for anticipated population increases based around a ‘vision’ (though not stated) of low density and car-orientated suburbs (Auster 1986; Stretton 1970). As the Plan itself stated (State Planning Authority 1968:9), it was based on an ‘assumption that housing densities will not, in general, increase significantly above the levels which have hitherto been

normal in outer areas of Sydney’, and that ‘home units’ would only comprise a small percentage of dwellings, basically because they were not seen as ‘widely acceptable’.

In practice, although the statement above suggests a lack of desire in the Plan to directly address housing issues arising from socio-economic equity factors, it did in effect do so in providing low cost housing on the fringes of Sydney where land was relatively inexpensive and where dwellings could also be constructed relatively cheaply (Mee and Dowling 2000). The result was the rapid growth of new suburbs, but however without any public transport provision; or ‘auto-suburbia’ as Aplin (2000: 73) refers to the result. Further the achieved dwelling densities were actually lower than anticipated leading to a faster overall take-up of land (McManus 2005: 43).

The cumulative effect included, in addition to the adverse health outcomes noted for example by Leeder and Ward (2006), the current pressure for a substantial urban consolidation program – of which Green Square is part – and which was established in the metropolitan plan of 1988 (McManus 2005: 46), 20 years after the Sydney Region Outline Plan. This was given ‘more emphatic’ (Freestone 2000: 129) emphasis in the 1995 plan ‘Cities for the 21<sup>st</sup> Century’, which also was upfront in introducing the goals (17 years after the similar goals in the *Environmental Planning & Assessment Act 1979*) of ‘liveability’, ‘environmental quality’, ‘equity’ and ‘efficiency’ (Freestone 2000). As ‘Cities for the 21<sup>st</sup> Century’ (1995: 80, emphasis added – note there that Green Square is in the airport corridor) put the argument:

‘Construction of a greater stock of multi-unit housing will occur in a variety of ways. ... The compact city includes making better use of existing urban land of many types. Redevelopment of non-residential land such as redundant industrial sites and lands surplus to other requirements can provide a major source of supply. Four current examples...are City West, Rhodes Peninsula on the Parramatta Rive, Olympic Village, *CBD airport corridor*. Each of these redevelopments has generated public debate ...’

### **Box 5.6: The Sydney region metropolitan plans**

1951	The County of Cumberland Plan
1968	Sydney Region Outline Plan
1988	Sydney Into Its Third Century
1995	Cities For the 21 <sup>st</sup> Century
2005	City of Cities: A Plan for Sydney's Future
2010	Metropolitan Plan for Sydney 2036
2014	A Plan for Growing Sydney
2017	A Metropolis of Three Cities – the Greater Sydney Region Plan

Adding to the not uncommon 'plethora of plans', urban consolidation was given separate attention again two years after 'Cities for the 21<sup>st</sup> Century' was published, in the 'Greater Metropolitan Growth Strategy' of 1997 (Connell 2000).

It was also not until the 2010 'Metropolitan Plan for Sydney 2036' that health was again made explicit as a planning consideration, as different to the provision of physical health infrastructure such as hospitals or occurring as a passing mention. For example, the 2005 'City of Cities' included an aim to 'enhance liveability', but this was to be judged against a 'quality of living' index, and although air quality was mentioned as a matter to be considered the accompanying discussion did not include reference to human or ecological health as a particular impetus. The connection between transport and health was however made in a key reference that 'The more people walk, cycle and take public transport, the more community physical and mental health improves' (p.31). By comparison, health was more prominent in the 2010 Metropolitan Plan for Sydney 2036. In a comparative study of five Australian metropolitan plans prepared around that time, Wheeler (2011) counted some 821 health-related references, and which was also substantially ahead of the other plans reviewed (Figure 5.3, which also illustrates the varied nature of these 'health' references).

The 2010 plan includes a specific action to 'Design and plan for healthy, safe, accessible and inclusive places' (although relegated to page 208), and the specific intention, now a substantial change from previous plans, to 'build at least 80% of all new homes within the

walking catchments of existing and planned centres ... with good public transport’ (p.14). By comparison, the 2014 ‘A Plan for Growing Sydney’ includes a, arguably more specific reference, in its Direction - one of 22 directions - to ‘Create healthy built environments’ (p.88). The supporting discussion references the research of the then Healthy Built Environments Program (now City Wellbeing Program) and the three domains of a healthy built environment it delineated. There is however still a sense in this discussion that although the connection between health and physical activity and social interaction (and healthy foods) is made, there is still a lack of conceptual connection to the broader issues of ecological sustainability and of social equity and inclusion, even though these matters are all dealt with, elsewhere in the Plan, as evidenced in the three conceptual frameworks of health developed in the literature review component of this Study (Appendix 2). By being referenced under a separate heading with its own set of actions, the risk is that health may well have been seen as yet another matter for consideration rather than, as for example is apparent in the County Plan of 1952, something that consciously infuses the whole orientation of the plan itself.

**Figure 5.3: A comparison of health references in Australian metropolitan plans**  
(Wheeler 2011:29)

	MELBOURNE (206 pages)	BRISBANE/SEQ (176 pages)	ADELAIDE (244 pages)	PERTH (112 pages)	SYDNEY (267 pages)
Health	65	158	82	21	142
Wellbeing	15	17	12	2	10
Liveable	20	17	59	14	92
Connect	46	88	61	56	142
Eat/Food	1	12	10	3	21
Safe	101	42	29	14	32
Sustainable	144	123	78	33	127
Climate Change	15	85	87	12	96
Walk	59	40	58	28	107
Cycle	69	42	40	29	52
<b>TOTAL</b>	<b>536</b>	<b>624</b>	<b>516</b>	<b>212</b>	<b>821</b>

### 5.3.6: *The South Sydney Experience*

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#### **Key points:**

- The larger Green Square community is a microcosm of the South Sydney community, and in turn the South Sydney community has lived-experience of most of Sydney's planning issues, including health, equity, and substandard physical and natural environments.
  - The following are detailed here: poor residential quality, displacement as slums are cleared, debates over appropriate densities and a lingering 'suburban' ideal, social activism, and gentrification.
  - All experiences influence the later (1995) South Sydney strategic plan.
- 

The suburbs that comprise Green Square are very much of South Sydney. Although located on the eastern edge of both the locality of south Sydney and the administrative local government area of South Sydney, the geographical, economic and mental 'orientation' of Green Square is primarily to the north and west. There are two factors at play here:

1. The industrial nature of its primary historical land uses and resident workforce, part of what was known as the central industrial area. These land uses were predominantly to the west, north (in part) and south, rather than eastwards, except for a couple of sites immediately across South Dowling Street, now redeveloped for other uses. As discussed below, this close-knit make-up of work and living also meant the south Sydney experience was very local, albeit with international and national connections in terms of the flow of goods and materials (Fagan 2000).

This geographical 'sense of place' has, as it turns out, now been continued in the current re-configuration of Green Square, commercially and residentially, as part of Sydney's global economy and the associated planning strategy of the notional 'Global Arc', and which is orientated north to the City and beyond, south to the airport, and to an extent west (and north again) to include the inner-urban creative precincts of Alexandria, Newtown and Surry Hills (Fagan 2000). By contrast, the community to the east, across the 'barrier' of South Dowling Street (see below), although also part of the 'Global Arc', is predominantly low-scale suburban-residential in built form and land use.

2. In more recent times the configuration of South Dowling Street along its eastern boundary as a major traffic thoroughfare generates a significant physical and psychological barrier. This is accentuated by its configuration as a motorway (the Southern Cross Drive to the airport) along the southern part of Green Square, with limited access, higher traffic speeds and sound walls that shut off the few residential houses on the opposite side from view, and also its role as an entry/egress to the Eastern Distributor road tunnel. The land uses to the east across this street also present as barriers: a 'big box' shopping centre (Moore Park SupaCentre) and the use of Moore Park itself as a golf course, which disallows public access.

These 'barriers' are now reinforced in the purposeful configuration of Victoria Park to include the commercial buildings and taller residential buildings along this edge as both a noise and visual barrier.

Green Square, with adjacent areas to the west and north, was administratively part of the City of Sydney until that Council was split in 1988 to form a new separate council for the South Sydney area (see section 2). The new (1989) South Sydney Council commenced an early process to replace the older City of Sydney town planning controls (the principal statutory instrument of which dated from before the *Environmental Planning & Assessment Act, 1979*). The process that was adopted was substantially more than an otherwise narrowly-focused review of land use planning controls. It demonstrated a clear and explicit commitment to broader global issues of sustainability as well as to the fundamental social and economic issues faced by its residents, including direct references to health. Further, these matters were seen as inherently linked. As the then Mayor stated in the Forward to the adopted Strategy (SSC 1995: 3):

'Sustainable development is now widely acknowledged as one of the fundamental goals to protect the environment and ensure the quality of life all Australian's strive for....'

Preparation of the Plan included a substantial public participation exercise including a Discussion Paper, 'Planning for the Future' (SSCC 1991), and detailed demographic and social needs studies.



The Plan itself, 'The South Sydney Plan', adopted in 1995, comprised:

- The 'Strategy for a Sustainable City of South Sydney'
- The statutory South Sydney LEP (gazetted in 1998)
- The South Sydney Development Control Plan-Urban Design (adopted in 1997, with an amendment in 2002 to give specific detail to Green Square).

The LEP and DCP lasted until they were incorporated (with amendment) into the new consolidated City of Sydney LEP and DCP following amalgamation of the two Councils in 2014. A review of the Plan suggests two strong and quite particular influences on the way in which it was prepared and on its resultant content:

- Its place: the South Sydney community with its history as a community actively engaged in local initiatives and even protests in support of its welfare, including explicit health concerns; and
- Then current, expansive and developing approaches to planning and government administration in general, and which, combined, could be said to represent a certain spirit or 'zeitgeist' of the time.

Combined, these influences have arguable resulted in a certain active awareness – particular to that time and place in South Sydney – and then which become evident in the South Sydney Plan, and in the subsequent planning strategies specific to Green Square.

The latter influence is detailed separately, given that this zeitgeist would also have influenced the then decisions within Landcom itself as an organisation involved in both strategic planning and design.

In relation to the lived experiences of the South Sydney community itself, South Sydney as an inner-urban locality has been the place where a number of socio-economic and urban issues have played out – and continue to do so to the present day. One particular over-riding matter has been the general low socio-economic status of much of its population, in particular at the time of preparation of the initial Green Square proposals. A summary, from the later South Sydney Council Social Plan 2001-2003, is included in Box 5.7 for reference (the statistics here were also referenced in The South Sydney Plan).

In addition to these socio-economic factors, the following additional components are noted as likely influences on the content of the Strategy, and therefore also the subsequent master planning for Victoria Park and the Green Square Town Centre:

**Box 5.7: Extracts from the South Sydney Council *Social Plan 2001-2003***

- Main issues summarised as (p.i):
  - homelessness and lack of affordable housing
  - unemployment and lack of sustainable economic development opportunities
  - crime and safety, particularly for physically or socially vulnerable groups.
- In 1996, 50% of adults had a ‘low’ income, 27% of adults had a ‘very low’ income; and were ‘likely to be experiencing various forms of social and economic disadvantage’ (p.37).
- 40% of residents over 15 years were not actively involved in the workforce, with this figure exceeded by people over 55 years and indigenous, non-English speaking and transgender people.
- 57% of adults left school without completing secondary education, and 69% had not been involved in any further education or training.
- That said, there was a growing number of residents with tertiary qualifications or TAFE enrolment.
- As a result of gentrification, ‘distinct social divisions’ were becoming apparent, as well as ‘tensions to avoid escalating crime and violence and dislocation’ (p.37).
- There were high rates of: street crime, break and enter, domestic violence, pedestrian accidents from vehicles, and vandalism (pp.3-4).

*1. The poor quality of the residential environment.*

The constant intensification of development in the inner suburbs as Sydney itself grew led to an early close-knit mix of residential and industrial activities. Adjacent residential dwellings meant close proximity between worker’s residences and employment. This reduced the journey to work; but combined with little or no pollution controls, poor sewerage disposal, inadequate open space and a low socio-economic level it also meant that most of the resultant living conditions were of extremely poor standard. McCracken & Curson (2000: 103) have described the resultant environment as:

‘... not only physically repulsive, but dangerous to human health. Though mortality was somewhat lower in Sydney, living conditions within parts of the city were as

appalling and dangerous as any of those in Old World cities, and the inhabitants' misery was compounded by their underlying poverty and malnutrition.'

In addition, the Cumberland County Council (1958: 28) saw such slum housing and 'factory blight' as a 'wasteful use of very valuable land very close to the city'.

The County Plan report (CCC 1948: 61) also made particular reference to the 'smoke nuisance' from factories that 'not only endangers health by atmosphere pollution but damages structures and even the domestic washing'. This inappropriate proximity of polluting industrial activity and residential uses continued in respect to the waste incinerator (the 'Zetland monster') built on the now the Green Square Town Centre as recently as 1972. It was the subject of various campaigns seeking its closure by local residents, Greenpeace and the South Sydney Council but continued operating until 1996 (City Plan Heritage 2014). The inappropriateness of the use is exemplified now by the recent (July 2018) refusal, on grounds of health concerns, of a similar waste incinerator, although no doubt with more updated pollution controls at Eastern Creek in western Sydney by the NSW Independent Planning Commission.

## *2. Personal and community displacement from slum clearance*

The identification of these areas as slums in the County Plan resulting in progressive 'slum clearance' programs (Allport 1988). Although this alleviated the health issues arising directly from the poor condition of the dwellings themselves, these programs (somewhat ironically, given the otherwise in-depth attention given in the County Plan to health matters in general) failed to recognise the social and mental health effects of the subsequent dislocation of long-term residents from their 'communities':

'... [I]t displaced residents and networks of support-the things that gave 'neighbourhood' its meaning. ... of 288 families resident in the area where Sydney's biggest postwar block of flats, Northcott Place, was built, only 43 were rehoused in the same area. Just as significantly, the planners and politicians missed the point that the problems of slum neighbourhoods were not caused by housing conditions but by the poverty of the residents, which could not be solved by pulling the houses down' (Flood 2003: 7; original emphasis).

Furthermore, the programs, once determined, were legislated; so participation was not voluntary:

‘We were just literally evicted ... You had no choice ... I’m very angry still. I don’t think a lot of thought went into how people were feeling ... People did not want to go but they [the Housing Commission] just laughed.’ (Allport 1988: 111).

The above experience is from someone whose property was resumed in the 1950s. However, a feature of South Sydney is that it also experienced the last of the metropolitan slum clearance programs, conducted in Waterloo in the 1970s (Allport 1988) and involving high-rise high-density development as replacement. This time though the local residents were more active and with the support of a ‘Green Ban’ by the then Builders Labourers Federation (BLF) work on the project was halted, forcing a ‘rehabilitation’ alternative (which also involved new low-scaled buildings) (Burgmann & Burgmann 1998; Allport 1988; Zubrycki 1981). Arguably this experience was still within the clear memory of residents and Council when the South Sydney Plan was prepared.

### *3. The ‘density’ debate*

The slum clearance programs also led to debates about the appropriate type of replacement public housing. Although it was recognised that, in the cleared inner urban areas at least, this needed to be in the form of multi-unit housing, there were differences in opinion about the appropriate form and density.

Schemes implemented in the first half of the 20<sup>th</sup> century were of low scale (Zanardo 2010). However, this was changed in the 1950s and 1960s to a high-rise model as a way of accommodating additional dwellings while at the same time generating additional site area for open space and community facilities. For example, Zanardo (2010: 650) refers to the model as a ‘tabula rasa’ approach, resulting in ‘isolated towers and slabs of housing standing in park-like settings ... at odds with its context,’ and a ‘purging of the traditional city’. A formative example was in Surry Hills where an initial low-rise scheme was replaced by the John Northcott flats, a 12-14 storey development of 430 units based on a Swedish model constructed in 1961 (Fitzgerald 1992: 230). It was however not necessarily any more dense

than alternatives. Indeed, Zanardo (2010: 650) suggests that the resultant population density was only one-third of the ‘Strickland Building’ comprising 71 apartments to various designs (and eight shops) constructed in Chippendale in 1914, and which is only three storeys high (and includes balconies for each dwelling and a roof-top communal area).

When a similar high-rise model was proposed as part of the Waterloo slum clearance program in the 1970s, a resident submission objecting to the scheme referred to the Northcott Flats as ‘suicide towers’ (Burgmann & Burgmann 1988: 223; Housing Commission of NSW 1976: 26). Writing about the objections at the time to the Waterloo scheme, Burgmann & Burgmann (1988: 221) cite press commentary referring to a ‘high-rise low-rise battle’, and the then BLF president arguing for ‘cluster-type housing, town house terrace-style buildings with concern for retention of a green area and a general aesthetic consideration over high-rise living.’

These views were supported by other actions at the time elsewhere in the inner city: Federal Government involvement in Glebe and Woollahooloo provided demonstrated examples where the existing, mainly terraced housing, could actually be rehabilitated rather than demolished (Burgmann & Burgmann 1988); and the then ‘gentrification’ movement provided similar examples (Murphy and Watson 1997).

#### *4. The suburban ideal as a lingering presence*

Another aspect of this density debate played out only partially in South Sydney, but nevertheless can still count as a potential influence on its future planning. This is an apparent continuing preference for the individual private house as preferred housing choice. Zanardo (2010) notes the debate about the best approach to new housing, suburban or urban, has existed since the 1909 Royal Commission and before. The former is evident in the ‘garden suburb’ schemes in Rosebery (2011) and Daceyville Gardens (1912), near to Green Square; and in comment from the time, as noted by Fitzgerald (1992: 228), that even though the Strickland Flats (mentioned above) provided private bathrooms and lavatories and rooftop laundries and gardens, ‘in the public’s mind the government’s housing at Daceyville, completed soon afterwards in a suburban setting, was a preferable option.’ Such preferences were advocated also in an influential 1945 book by architect Walter Bunning which described a vision of the low-density detached-house as the healthiest mode of living, able ‘to admit

sunshine and fresh air, to have healthy surroundings, peace and quiet, and to suit our climate and traditions’, and an antidote to the inner cities where children were forced into playing in ‘lanes and alleys’ and their parents ‘to sit on their doorsteps’ (Spearitt and DeMarco 1988: 7-8). This vision of ‘a home in the sun, a car in the garage’ quickly took over (Spearitt and DeMarco 1988: 12) and, combined with post-war population pressures from immigration and a baby boom, and relative ease of subdivision of new land, led to a ‘promiscuous suburbanisation’ (Spearitt and DeMarco 1988: 23), facilitated also by the policies in the Sydney Region Outline Plan. However, as Leeder & Ward (2006) note (refer quote at beginning of this section), the health benefits of such an urban model have been elusive and it is ironic that many of the public housing estates constructed in this format, some using the then fashionable Radburn model of layout are now being demolished and re-built: a 21st century variation on the 20th century slum clearance projects, and similar also to how many of the denser high-rise public housing estates are now being demolished due to resultant poor health and other outcomes (Freestone 2000).

The lingering nature of the suburban ideal has been commented on by Butler (2007) in a review of the brown-field development of London Docklands where, he suggests, it comprises an inherent part of wider ‘gentrification’ processes – where the suburban development form is being invoked to an extent in order to achieve a desire to be close to the city centre but without also having to ‘live in its dirty, crowded and often unhealthy streets and housing’ (p.761). This process may perhaps also be detected in part in The South Sydney Plan in relation to aspects of its provisions for the then industrial lands now occupied by Victoria Park and the Town Centre – in for instance the relatively low FSRs that were proposed, and perhaps also in the general referencing to the developments as creating new ‘suburbs’ (rather than say a ‘new town’), and the references in the initial 1991 Discussion Paper to The South Sydney Plan to extensive ‘avenue’ street-tree plantings and the establishment of ‘landscaped precincts with suburban character’ within what is now the Town Centre site and surrounding lands.

## **Box 5.8: A link between density, affordable housing and built form: 1914 - 2014**

### **A link between density, affordable housing and built form: 1914 - 2014**

The Strickland Flats in Chippendale was the first of a series of affordable workers' housing developments (designed as flat buildings) by the then City Council. In line with the idea of the 'accidental city', Zanardo (2010: 650) notes this comprised 'a brief, yet potent, urban anomaly amongst the predominantly suburban history of affordable housing in New South Wales', and that 'there is much to be learnt from close observation' of the resultant buildings (p.652). The initial design of the Strickland Building was by competition (Cardew 1980). The building is still occupied, and is heritage listed under the Sydney LEP 2015.

Zanardo (2010) makes particular mention of the roof-top laundries and garden space that was provided for residents of the Strickland Flats. It resonates with a similar mention by Bernstone (2018) in a review of the 'Nightingale' development in Melbourne, a four storey residential building (also with ground floor commercial space) built in 2014 and which provides affordable to-purchase apartments: '... the in-built sense of community that results from common rooftop laundries and vegetable gardens.'

The Nightingale development included specifically-designed financial and ownership structures, and which include agreements to ensure the apartments remain affordable throughout the life of the building rather than their value being subject solely to the market. These arrangements, originally developed by Jeremy McLeod of Breathe Architecture, have now been expanded and placed in the public domain for use by others (as the 'Nightingale model') (refer: <http://nightingalehousing.org/>). New projects using this model are now underway in different locations in Australia (Bernstone 2018).

In 2018, Landcom announced that it was investigating the Nightingale model for use in its own projects (Refer: <https://www.domain.com.au/news/four-demo-sites-in-nsw-will-test-innovative-housing-models-to-tackle-affordability-20180501-h0zi4q/>; and <https://www.thefifthestate.com.au/urbanism/planning/landcom-looks-to-nightingale-and-co-housing-for-possible-solutions>).

# Also note the similar aspirations of the *Assemble Communities* model, also from Melbourne (<https://assemblecommunities.com/>).

### 5. *A history of activism, and provision of public 'social' services*

South Sydney has been the site of a long history of grassroots social activism, and as the recipient of public social services provision, many with direct and indirect health objectives. As examples:

- The first baby health clinic in Australia was established near to Green Square in Alexandria in 1914 (Li 2004).
- Erskineville, also near to Green Square was the site of the first New South Wales Lady Gowrie kindergarten, one of a series of centres established in all capital cities in 1940 as 'demonstration centres for children's programs'. The centre was located alongside a public housing estate constructed in the late 1930s by the then Housing Improvement

Board. Both the housing estate and the kindergarten are illustrated in the supporting document for the County Plan as a good example of such public services (CCC 1948: photo 42, 156). The caption to the photograph, in an echo of the vision in the later Victoria Park Master Plan, noted the ‘well-designed flat blocks, surrounded by gardens insulated from through traffic’. The kindergarten still operates as a child care centre, and is included with the housing estate as a Heritage Conservation Area in the Sydney LEP 2012.

- South Sydney has been the location of various other public housing schemes dating from the Strickland Flats in 1914, and including the substantial 1960s and 1970s high-rise developments in Surry Hills (the John Northcott Flats) and, adjacent to Green Square, Waterloo.
- In 1974 local residents supported by an ‘activist’ sociology academic successfully sought Federal government funding to establish a ‘Regional Council for Social Development’ for the inner Sydney area under the then Australian Assistance Plan program. The organisation still exists, based in Waterloo near to Green Square, now under the name ‘Inner Sydney Voice’; and maintains an interest in ‘questions about the intersection of welfare, community and environmental issues’. Since 1978 it has published a journal of the same name. Relevant extracts have been included in this report. The scope of the activities of the organisation is evident in the title of its Autumn, 2018 edition: ‘Developing Sydney. Why building sustainable, resilient communities should be a priority for our inner suburbs.’

In relation to activism, Karskens (2004) lists resident protests against an early sewer line from Sydney proposed in the 1890s (and passing immediately to the west of the Green Square Town Centre); over the high-rise proposals of the NSW Housing Commission in the 1970s; the fight to close the Waterloo Incinerator; and campaigns for Aboriginal civil and land rights in Redfern. Flood (2003) notes that the latter issue led to a street riot in 2001; Morgan (2012: 213) notes another in 2005, with one response being a call at the time from the state opposition leader to ‘bulldoze’ the slums’. The protests against the earlier Housing Commission proposals in Waterloo (documented at the time by Zubryki 1981), also led to a series of Green Bans instigated by the then union of builders labourers (Burgmann and Burgmann 1998). It has been suggested that the Green Bans, along with other social and environmental movements at the time, led to the re-writing of the planning legislation in NSW culminating in the Environmental Planning and Assessment Act in 1979 (Freestone



2000). Jakubowicz (2018, 2016) provides a summary of the convergence, in the 1970s, in the inner city, of various international, national and local movements, and of their continuation in terms of influence on present-day strategies. Although he does not express these directly in terms of health, they can be regarded as inherently health-supportive. As examples, Jakubowicz (2018) notes:

- In the suburb of Surry Hills, near to Green Square to the north, but equally applicable to Waterloo and other areas: ‘...the original plans that would have essentially demolished the suburb and replaced it with high rise towers were abandoned and the ‘village’ concept [now embedded in City of Sydney documents] emerged’, and
- More broadly, ‘... the tumultuous years that created the Regional Council [for Social Development] identified the issues that have continued to be the inner city challenges forty years on – public housing, community empowerment, public transport, sustainable development, diversity, supporting vulnerable people in dignity, and creative participation in an inclusive city.’

Karskens (2004: 12) has also noted that specific histories focussing on health and sickness could be written about South Sydney, and Green Square, given the extent these issues recur in their broader histories; suggesting they could cover themes such as traditional treatment, the rise of modern medicine, public health, hospitals, and planning and environmental implications.

## 6. *Gentrification*

Most of the extensive slum clearances that were proposed in the County Plan did not occur. One reason was a continued issue in relation to public financing (Allport 1988; Coleman 1970). Ashton (1995) also notes that an effect of new landlord and tenancy provisions introduced in 1948 was that owners of large numbers of dwellings in poor repair were encouraged to sell them to their tenants, which in effect would also have yielded a potential positive health co-benefit, making large-scale acquisition for urban renewal then too difficult politically and financially. Later, there was a gradual community acceptance that many of these dwellings had an intrinsic worth, in particular by a new group who sought those out those parts of Sydney that were close to city services, employment and entertainment (Darcy

2000; DEP 1984: 15), and which were also, in Cullen's (1961) terms 'properly concentrated'. This group also usually had the resources and willingness to improve the health standard of these dwellings by making changes to improve light and ventilation and provide basic services. This process was also encouraged by the progressive re-location of adjacent industrial uses and the better regulation of emissions from those that still existed via new pollution control and enforcement legislation (e. g. the *Clean Air Act 1961*; *State Pollution Control Commission Act 1970*).

There were various effects, most of which can be considered to have indirect effects of health:

- Given the new residents were usually of a higher socio-economic status, they had the resources to displace existing, often long-term residents with an established social network or community. Darcy (2000: 226) notes that South Sydney became a 'prime site' for such gentrification, generating a consequent adverse 'upward pressure on house prices and rents'. In addition, with the new and old populations living side-by-side, there was an increase in local inequity, as noted for instance in the South Sydney Council Social Plan 2001-2003). These effects have been exacerbated now in that many of the more recent gentrifying population work in the new global economy of Sydney, with the additional financial resources that result (Murphy and Watson 1997).
- That said, the new population also brought with into the community additional resources that would assist some of the activism already apparent, in particular against high-rise and high-density redevelopment and including, for example, the establishment of 'resident action groups' (Flood 2003; Freestone 2000; Murphy and Watson 1997). Jakubowicz (2018) notes a purposeful movement at the time to forge a 'collaboration between migrant groups, the older Australians and the new 'gentry' attracted to the area'.
- In addition, as noted, this new population also potentially brought with them a certain 'suburban' mentality that sought more open space, quieter streets and more tree planting, all of which for instance were components of The South Sydney Plan.
- This new population was then also was able to avail themselves of the intrinsic health-supportive characteristics of these inner-urban areas: the ability to walk or take other active transport modes to work, entertainment and shopping facilities; and the

incidental socialisation that results from the walkable, busy and close-knit mixed-use urban form.

- It is likely also that there was a decline in population density, as a result of the smaller households living in the now refurbished slum dwellings, meaning an increase in living space per person. As Gleeson (2006: 5) notes:

‘The gentrified metropolitan villages cherished by some as examples of contemporary sustainability began life as teeming slums whose inhabitant abandoned them at first opportunity. They became habitable and renewable when their population densities declined: a shift made possible by suburbanisation.’

- The re-valuing and refurbishment of the existing dwellings provided, along with similar Federal Government-sponsored schemes elsewhere in the inner city (in Glebe and Woolloomooloo), a viable model of urban regeneration that differed to that in the redevelopment proposals then being opposed. As Allport (1988: 116) notes:

‘... the local community not only objected to the planned high-rise towers, it had moved on from the idea that ‘slums’ needed to be cleared at all. Residents’ action groups fought for the preservation of the community and neighbourhood, while at the same time the older inner-city areas were now becoming increasingly popular places to live. Terraces and old warehouses soon became the site of renewal and gentrification as young professionals moved back into the area because of its highly desirable proximity to the city.’

### **Box 5.9: The suburban ideal transferred**

The discussion here has treated the ‘suburban vision’ and ‘gentrification’ separately, simply to clarify these components of the contextual history of Green Square. However in a review of the social and development processes apparent in the very significant brown-field development of London’s large Docklands area, Butler (2007) posits that these two processes are in a sense interlinked in the process of ‘re-urbanisation’ ‘... in which some of the characteristics normally associated with suburban development are being brought to an area near the centre of the city, but in a context more normally reserved for gentrification’ (p.759) and echoing the aspirations of ‘... the classic ‘suburbanizer’-to be near but not in or of the city’ (p.777). In particular he suggests that the ‘suburban ideal’ is often an inherent component of gentrification, with the suburban development form is being invoked in order to achieve a desire to be close to the city centre but without also having to ‘live in its dirty, crowded and often unhealthy streets and housing’ (p.761).

In the context of Green Square it may be that some of the processes apparent in the South Sydney Plan and in the Victoria Park Master Plan fit this idea: such as the proposal for additional tree plantings, the initial perhaps conservative FSR’s, although still higher than typical low density suburban development, and the use of the term ‘suburb’ itself. One of the effects though, as Butler (2007) also suggests, that this now involves a process of ‘class change and de facto replacement of existing populations [ie. gentrification], which was not the case when suburbanization was at its height half a century ago’ (p.762).

As an added note, Butler also canvasses the role, in London Dockland, of the idea of New Urbanism, before concluding that the processes evident in Docklands may well prove to be contrary to the New Urbanism ideal of a re-establishment of local community. In particular he found that a large number of the new residents, especially those working long hours in the global economy, treated Docklands simply as a ‘dormitory’ (p.777) and did not necessarily expect to socialise within Docklands itself, and so also not contribute to a sense of community there nor feel the need for any; and hypothesised that maybe it represented a ‘lifecycle stage’ between others and which may be returned to after a period in the suburbs. This hypothesis echoes historian Karsken’s (2004: 10) passing reference to a certain transitoriness when describing the population of Green Square as: ‘... young urban professionals, eschewing the traditional idea of house and garden in far-flung suburbs’.

### 5.3.7: *The South Sydney Plan (1995)*

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#### **Key points:**

- Like the County Plan 40 years before it, the South Sydney Plan of 1995 and associated LEP and DCP is imbued with a concern, both immediate and long term, for the population it is to serve – but now not just locally but also globally in reference to the need to address sustainability concerns.
  - Health is very much to the fore, whether expressed explicitly or implicitly.
  - These aims are met through various foci: ESD, urban design, and equity.
  - The existing walkable and close-knit built form of South Sydney is valued as an appropriate model to reinforce, and then adopt in the development of the then industrial case study sites.
  - There is a clear line of sight from the South Sydney Plan to the master plans for Green Square and the two case study sites.
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#### 1. *An initial Discussion Paper: Planning for the Future*

Preparation of the South Sydney Plan included an initial Discussion Paper exhibited in 1991. This Paper noted the relative low socio-economic status of the local community, including poverty (p.21), as well as the ‘heightening inequalities’ in this situation as a result of increasing unemployment and dependency on a ‘social wage’ (p.23) and a lack of public transport for those living in the more industrial areas of South Sydney, including Green Square (p.36). At this stage the formal Government decision to proceed on the new airport railway was still imminent. The Paper comprised five ‘Issues and Ideas’ sections:

- Planning for a Healthy Environment
- A Rich Diversity of Land Uses and Roles
- The Urban Environment
- Transport in South Sydney, and
- Community Needs.

It also included maps identifying ‘Issues’ and ‘Opportunities’, and a form for submitting responses.

The placement of ‘... a Healthy Environment’ first is of interest. It is not however explicitly about human health. Rather, it is about the ‘natural’ environment, centred around broader ecological sustainability issues, in particular the minimisation of greenhouse gases. This section covers environmental pollution, transport, drainage, and waste management, and notes that Council already had in place a ‘greenhouse effect’ policy. There are though explicit ‘cross-overs’ with human health in respect to suggestions for the promotion of ‘healthy buildings’, including standards for air conditioners and air quality, encouraging sun protection awareness and increased tree plantings in response to rising incidence of skin cancers, and making cycling and walking more attractive as a healthy alternative to fossil fuel-based transport (p.9).

Human health is dealt with more explicitly under community health in the ‘Community Needs’ section. Factors listed as contributing to poor local health include: low income, high unemployment and drug, alcohol and mental health problems; and, harking back to the County Plan, a continuing lack of adequate and affordable housing, air pollution from industry and traffic, high noise levels, poor road safety, proximity to hazardous goods, and poor nutrition. The waste incinerator then located on the Town Centre site is identified as an ‘environmental hazard’. This section also suggests the development of a ‘Healthy City Policy’ (changed to refer to a ‘Health Plan’ in the resultant Strategy).

The section ‘A Rich Diversity of Land Uses and Roles’ suggests, now, a valuing of the potential positive aspects of closely co-located mixed use inner-urban living:

‘The nature of inner Sydney encourages travel on foot or bicycle. Pedestrians contribute to the vitality of the area and its shopping, commercial and entertainment facilities.’ (p.28)

This valuing of the inner city built environment is almost diametrically different to statements in the earlier County Plan and preceding Royal Commission of 1909, although recognising that these earlier commentaries also sought to deal with the substantial communicable disease and other health problems then evident), but are in turn consistent with Greenpeace Australia’s (1993) proposals for a ‘sustainable Sydney’ and which included reference to ‘pedestrian pockets’ and the ‘advantages of the terrace house form’ (p.13), and ‘urban villages’ (p.16).

The 'Opportunities' map lists a number of actions that, in effect, further embed this mix of activities. Specifically, in relation to the two case study sites, it identifies:

- The then proposed Green Square Railway Station as a 'key development site' and the surrounding locality as a 'new urban node'.
- The investigation of Victoria Park (and adjacent sites to the south) for 'potential redevelopment', also with the creation of new open space.
- The establishment of 'landscaped precincts with suburban character' within what is now the Town Centre site and surrounding lands.

The suburban terminology here is perhaps inconsistent with the earlier reference to valuing inner-city diversity and character, and, as noted above, a continuation of the 'tension' in Sydney's planning aspirations between the city and the suburb. It is though consistent with other aims to increase tree cover and residential amenity generally.

The equivalent 'Strategies' map in resultant Strategy identified these areas (via overlapping graphics) as, variously, 'New growth area around railway station and on large redevelopment sites', 'Major restructuring plan and DCP [required]', and, on what is now the Town Centre site, an 'Activity Node' (pp. 135-135).

## *2. The subsequent Strategy for a Sustainable City of South Sydney*

The Strategy also included statements giving equal weight to, and in a sense combining, ecological and social, and management, considerations. For example:

- The overall aim was given as:  
  
    'To ensure a sustainable City of South Sydney through the efficient and equitable management and allocation of resources to enhance the quality of life and well-being of the local community both now and into the future'  
    (p.65).
- As three 'key principles', it listed: sustainability, equity and efficiency.

- As three ‘ethics’ it sought to adopt, it listed: an environmental ethic, a quality of life ethic and a management ethic (p.55).

In terms of social considerations there is specific early reference to:

- ‘... the relatively low socio-economic status of the South Sydney community and the extent of poverty within the area’ (p.21), and
- ‘heightening inequalities [where] ... poverty is becoming more widespread as a result of increasing unemployment and dependency on a social wage’ (p.23).

Consistent with the earlier Discussion Paper in terms of the urban form to be promoted, there is a particular valuing of the existing urban qualities of South Sydney. The Strategy lists as ‘essential qualities’ of a ‘people’s city’: ‘interaction’, ‘exchange’, ‘complexity’ and ‘diversity’ (p.58); and, key here, notes that these qualities were already evident in those areas of South Sydney which are ‘integrated and compact’ (p.58).

Overall the Strategy itself is quite detailed. Perhaps as a result of this intention its format presents as a mix ranging from the very focussed to a listing of a wide range of future matters to be addressed in subsequent actions and additional plans. Further, there is invariably a repetition of matters between the various strategy ‘process’, ‘vision’, ‘framework’, ‘plan’ and ‘implementation’ sections. Topics relevant to this review are summarised in Table 5.9 using the five separate headings in the ‘Strategy Plan’ section.

**Table 5.9: Health and the ‘Strategy for a Sustainable South Sydney’ (1995)**

Section in the ‘Strategy for a Sustainable South Sydney’	Health-related content
Environment	<ul style="list-style-type: none"> <li>▪ Objectives cover:               <ul style="list-style-type: none"> <li>- air, noise and water pollution</li> <li>- land contamination</li> <li>- energy efficiency and thermal comfort</li> <li>- recycling and waste minimisation, and</li> <li>- flood mitigation.</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>▪ In the reference to ‘energy efficiency and thermal comfort’ it is worth noting the combination of a broader ecological issue with a more immediate human ‘wellbeing’ matter.</li> <li>▪ The reference to flood mitigation foreshadows the extensive role that this matter, and hydraulic issues in general has played in the development of Green Square (see Section 4.1, and reference also to the financial implications in Section 4.4).</li> </ul>
Land Use and Transport	<ul style="list-style-type: none"> <li>▪ Objectives cover: <ul style="list-style-type: none"> <li>- pedestrian ‘networks’</li> <li>- cycling’ facilities’</li> <li>- public transport</li> <li>- to ‘actively discourage’ private vehicles, and traffic management</li> <li>- freight and services issues</li> <li>- mixed use zones</li> <li>- encouragement of urban growth around railway stations, commercial centre and open space, and</li> <li>- advocacy for a new railway station at Beaconsfield.</li> </ul> </li> <li>▪ The new Beaconsfield railway station is now Green Square.</li> <li>▪ An associated map (p.90) identifies areas where existing mixed use zones could be ‘extended’. The Victoria Park site is identified as ‘low-intensity mixed use’; and the Green Square Town Centre site as ‘vertical mixed use’.</li> <li>▪ There is an obvious emphasis on ‘active transport’ modes (though that term was not then used), and in conjunction with the promotion of mixed use nodes reflects the urban design idea of the time of ‘transit orientated development’.</li> <li>▪ The subsequent Strategy Implementation section also includes actions around the promotion of walking and cycling (p.150).</li> <li>▪ Although there is no explicit connection between the low socio-economic characteristics of the community as identified in the Strategy, and this emphasis on ‘active transport’ modes, the later Victoria Park Master Plan does make reference to one of the benefits of walking and cycling is that these modes are available to people on low income.</li> <li>▪ The identification of the Green Square Town Centre as ‘vertical mixed use’ is now consistent with the Green Square Town Centre Master Plan which includes specific drawings showing different uses on various levels in its ‘urban rules’ section.</li> </ul>
Character and Identity	<ul style="list-style-type: none"> <li>▪ Most of the provisions in this section relate to reinforcing the particular ‘character and identity’ that distinguishes those areas of South Sydney that are already built up – whereas the existing industrial character of Green Square area is seen to have only limited identity worth reinforcing.</li> <li>▪ Reference is though made to: <ul style="list-style-type: none"> <li>- the area around the major traffic intersection where the railway station is now located – in terms of enhancing an area of ‘high visibility’, as well as ‘reinforcing and enhancing gateways’.</li> <li>- The potential for Victoria Park to provide a new open space with ‘intensive landscaping’ as part of the Strategy’s ‘city-wide open space network’.</li> </ul> </li> <li>▪ Both of these aims have been achieved in the urban design components of the individual master plans for Victoria Park and the Green Square Town Centre.</li> </ul>
Community Well-Being	<ul style="list-style-type: none"> <li>▪ Overall this section is about the provision of ‘community services and facilities’. It does however, in its recommendations for future strategic actions suggest the development of a number of broad-based policies.</li> <li>▪ Develop a Social Plan (see below).</li> <li>▪ Develop a Health Plan (see below).</li> <li>▪ Objectives also included references to housing, employment and ‘planning and coordination’.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ The ‘planning and coordination’ objective then included an extensive list of matters needing to be included: <ul style="list-style-type: none"> <li>- education</li> <li>- public transport</li> <li>- safety</li> <li>- culture/leisure/recreation</li> <li>- Aboriginal people</li> <li>- older adults</li> <li>- people from non-English speaking backgrounds</li> <li>youth, and</li> <li>- gay and lesbian people.</li> </ul> </li> </ul>
City Management	<ul style="list-style-type: none"> <li>▪ This section principally goes to the delineation of the ‘Structure Plan’ relating to the physical built (and associated social) environment.</li> <li>▪ In relation to Green Square (though not then using that name, with earlier reference to the ‘central industrial area’ (p.12)): <ul style="list-style-type: none"> <li>- under ‘regional strategy’, it notes there needs to be ‘recognition of ... the redevelopment potential of a number of significant large sites ... such as the Navy Stores site in Zetland ...’ (p.130). (Later in the document this site is referred to as ‘Victoria Park’).</li> <li>- under ‘city wide strategy’ it notes that ‘major new growth [to be] channelled to sites ... around selected railway stations’ (p.130).</li> <li>- in the ‘local area strategy’ map it is circled as a ‘precinct’ (p.136).</li> </ul> </li> <li>▪ The ‘local area strategy’ map includes a number of intended (and overlapping) outcomes for Green Square: an ‘activity node’, a ‘local employment zone’, ‘new growth’ around railway station and on large redevelopment sites, and the need for a major restructuring plan. There is also reference that such redevelopment ‘<i>may</i> accommodate increased densities and <i>should</i> contribute <i>significantly</i> to implementing sustainable development concepts’ (p.135, emphasis added).</li> </ul>

A Social Plan was prepared in 2001 for the years 2001-2003. Broadly, the content of the Social Plan covered:

- The provision of facilities to improve community cohesion and development;
- Access and equity to Council’s services and facilities; and
- Community consultation and participation processes.

There were no specific matters raised around the topic of health. The Social Plan did note however that drug and alcohol issues in the community were contributing to the levels of disadvantage, and there was a specific need for health services for homeless people (p.19).

The recommendation to prepare a Health Plan included a statement that it be developed (p.122):

‘... from a holistic perspective, which seeks to provide a physical, economic and cultural environment which is conducive to the maximum health and wellbeing of one community.’

The list of matters to be covered was however more conventional and mostly covered Council's legislated responsibilities. It did however move beyond simply these responsibilities in also mentioning housing issues. The list comprised (pp.122, 124, 127):

- The appropriateness of environmental health standards
- Prevention and control of infectious diseases
- Local food quality
- Community advice on environmental risks, and on good health practices
- Waste management and minimisation
- Health and safety of public housing and public buildings
- Spread of disease from insects and rodents
- Effective immunisation,
- Provision of local health services, including issues about the loss of existing health services, and
- Attention to meet local housing needs, including affordability.

Although no Health Plan was prepared, the Council did adopt a healthy food policy in 1995 which included a substantial range of actions relating to local availability of nutritious and affordable food. Involvement in such matters would have been unusual for local government at that time. The Policy had the following statements as aims:

- To ensure an adequate and nutritious food supply is available to all people of South Sydney;
- To encourage the South Sydney community to eat a healthy diet by improving knowledge of nutrition and skills in food preparation;
- To improve the quality of food available;
- To ensure Council's direct role in food services is appropriate; and
- To support environmentally sustainable food production and delivery.

In addition, the resultant South Sydney DCP included specific sections on food supply and 'health considerations' (see below).

### *3. Implementing the Strategy (1): the South Sydney Local Environmental Plan 1998*

The South Sydney Local Environmental Plan was drafted in conjunction with the preparation of the Strategy, but was not gazetted until 1998, with later amendments to insert provisions requiring contributions to affordable housing by development in Green Square (1999), and in relation to the Green Square Town Centre (in 2002).

The LEP does not make specific reference to any health matters. However certain of its provisions have implicit health co-benefits, including a commitment in the objectives to quality of life and well-being (cl.7), the affordable housing provisions (cl.27L-27R), and the listing of criteria for the assessment of development applications that include whether the proposal includes ‘adequate provision for ... privacy and access to sunlight’ and energy efficiency in terms of ‘natural lighting, ventilation, and heating and cooling’ (cl.28). The Council’s commitment to the statutory implementation of the wider ecological objectives and the local community-based social objectives of the Strategy can be seen in Clauses 7 and 8 of the LEP (emphasis added):

#### 7 Principal objectives

The principal objectives of this plan are:

- (a) to ensure a *sustainable* City of South Sydney through the efficient and equitable management and allocation of resources, and
- (b) to *enhance the quality of life and well-being* of the local community, and
- (c) to *implement the goals and objectives contained in the Strategy for a Sustainable City of South Sydney* published in June 1995 by the Council, and ...

#### 8 Consideration of Council’s strategy

In assessing any development application, the Council *must take into consideration* the goals and objectives contained in the *Strategy for a Sustainable City of South Sydney* to the extent that they relate to the proposed development.

<https://www.legislation.nsw.gov.au/#!/view/EPI/1998/225/full>

The Green Square Town Centre site was deferred from the LEP. A separate LEP applying specifically to Green Square was gazetted in 2002, along with the adoption of a Green Square-specific amendment to the DCP (see below).

#### 4. *Implementing the Strategy (2): the South Sydney Development Control Plan, 1997- Urban Design*

Notwithstanding the statutory weight of the South Sydney LEP, the South Sydney DCP provided the main avenue for translating the ecological and social sustainability intentions of the Strategy into built form outcomes. It is a detailed document of over 100 pages. A later (2002) amendment includes provisions explicit to Green Square.

The DCP contains seven sections. Certain specific references to health matters are included in the Urban Design Principles, Social Planning and the Environmental Design sections. However, as with the Strategy, health-supportive outcomes are inherent in most of the provisions within the DCP given its emphasis on achieving an overall built form that will promote walkability, cycling, social interactions, and access to healthy foods. Two definitions used in the DCP illustrate the underlying connected human *and* ecological-centred intent:

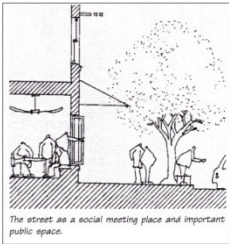
*Amenity*: the enjoyment of the environment ... includes, but is not limited to the enjoyment of sunlight, privacy, views, and residential and community life free from nuisance (p.185).

*Ecological sustainability*: ... in an urban environment ... involves the integration of ecological processes ... with the social, cultural and economic dimensions of human activities to achieve high levels of overall performance (p.186).

The specific health-related references are summarised in the Table 5.10 using the seven sections in the DCP.

**Table 5.10: Health and the *South Sydney Development Control Plan, 1997-Urban Design***

Section in the DCP	Health references, or co-benefit
<b>A. General Information</b>	<ul style="list-style-type: none"> <li>▪ Introductory material only.</li> <li>▪ Reference is made to the DCP being drafted in reference to the Commonwealth AMCORD document of 1995 establishing principles for residential development.</li> </ul>
<b>B. Urban Design Principles</b>	<p>Contains 3 ‘design principles’:</p> <p><b>Reinforce and protect the City’s urban form</b></p> <ul style="list-style-type: none"> <li>▪ Delineates on a map an area titled as ‘Green Square Urban Design competition area’ as a ‘new growth area’ and subject of a ‘major restructuring plan’ (though without further explanation).</li> <li>▪ Distinguishes between the ‘north’ and ‘south’ of the local government area – where new development in the mostly industrial south is to ‘create streetscapes that are <i>suburban</i> in character dominated by landscaped open space and buildings in park like settings’ (emphasis added, and here one can also note a familiarity of the ‘buildings in park like settings’ description with earlier redevelopment models proposed as part of the slum clearance programs).</li> </ul> <p><b>Enhance the city’s urban villages, public spaces and pedestrian networks.</b></p> <ul style="list-style-type: none"> <li>▪ Note now the explicit reference to ‘villages’ to describe the suburban centres (though there is no specific explanation on why this term has been adopted). 16 villages are identified on a map, with each having a specific ‘improvements plan’. Green Square is not identified – as then having no existing centre.</li> <li>▪ Includes reference to respecting the ‘discipline’ inherent in the existing townscape, and ‘local patterns, particularly community meeting places and linkages’.</li> </ul> <p><b>Design for a sustainable, healthy environment</b> (emphasis added)</p> <ul style="list-style-type: none"> <li>▪ Here though the emphasis is primarily on ecological matters – in relation to energy efficiency, stormwater and transport.</li> <li>▪ An additional section on ‘environmental amenity’ though relates to ‘public nuisance’ and ‘risk’ from noise pollution, traffic movements, parking demands, air and water pollution, wastes, dangerous goods storage, air handling systems, site contamination, and working hours.</li> </ul>
<b>C. Public Domain</b>	<ul style="list-style-type: none"> <li>▪ Divides the Council into eight areas, with a ‘public domain plan’ for each.</li> <li>▪ Green Square falls within two areas. The main provisions are: <ul style="list-style-type: none"> <li>- Identification of the Green Square park intersection as a ‘key node/gateway’</li> <li>- Identification of large schematic new open space areas, ‘mid-block connections’ and extensive open space linkages. Those shown for Victoria Park have not been implemented as shown; those shown for the Green Square Town Centre closely resemble what is being implemented.</li> <li>- New ‘avenue’ street tree plantings.</li> </ul> </li> <li>▪ Explicit reference to the ‘public domain’ as a ‘setting’ for a ‘whole range of activities’, that it should be ‘comfortable, safe,</li> </ul>

	<p>attractive and interesting’ and the ‘the street’ is ‘a most important component of inner-city life’, and including the following sketch:</p>  <p>The street as a social meeting place and important public space.</p> <ul style="list-style-type: none"> <li>▪ Includes a specific section on ‘security and the public domain’ listing required design attributes.</li> <li>▪ Includes an ‘implementation’ section referencing the Section 94 plan, but also introducing the possibility of FSR ‘bonus incentives’ as an added mechanism to achieve private funding of a list of desired ‘material benefits to the community’.</li> </ul>
<p><b>D. Design Criteria for Social Planning</b></p>	<ul style="list-style-type: none"> <li>▪ Includes initial statements that developments are not to ‘adversely impact on <i>community health</i>’ (emphasis added), and should contribute to a ‘safe environment’.</li> <li>▪ In addition, though not under a separate heading, there is a provision suggesting Council could require a social impact assessment with development applications, as part of its responsibilities under the ‘social effect’ objectives in the Environmental Planning &amp; Assessment Act. An appendix to the DCP includes a ‘Social Impact Assessment Checklist’ to assist. Broadly it covers, sometimes in more detail, the topics covered in the remainder of this section, but also an additional reference to ‘children’s needs’.</li> <li>▪ These comprise sub-sections on: <ul style="list-style-type: none"> <li>- <b>Access</b> – maximising access to public spaces, and promoting ‘socialisation, a sense of belonging and safety, and civic pride.’</li> <li>- <b>Social &amp; housing mix</b> – to increase housing choice, offer affordable housing, and support high quality public housing. Includes a table of ‘social mix’ requirements (actually bedroom mix requirements) for different areas of South Sydney</li> <li>- <b>Cultural issues</b> – to support cultural diversity and identities.</li> <li>- <b>Community infrastructure</b> – a broad statement about ensuring there is sufficient to meet the population’s needs.</li> <li>- <b>Cumulative impacts and trade-offs</b> – to ensure these are included in considerations.</li> <li>- <b>Economic issues</b> – a brief section seeking support of local employment and local business opportunities.</li> <li>- <b>Food supply</b> – to provide additional fresh food outlets in localities undersupplied as assessed in a Council survey, to provide an average of 2.2 fresh food outlets per 1,000 population, to provide a diversity of food retailing, and to provide community vegetable gardens.</li> <li>- <b>Security</b> – to maximise actual and perceived safety of all spaces.</li> <li>- <b>Health considerations</b> – although the objectives of this section go broadly to ‘creating a physical environment which is conducive to good health’, the specific provisions do not go beyond listing the health legislation for which the Council is responsible (eg. air handling, vermin, standards for particular premises like hairdressers). The Social Impact Assessment</li> </ul> </li> </ul>

	<p>Checklist’ includes the additional matter of ‘access to health services’.</p>
<p><b>E. Environmental Design Criteria</b></p>	<ul style="list-style-type: none"> <li>▪ This section includes the detailed general design controls applicable to buildings and land uses. There is no specific reference to health, however most of the particular standards have immediate implications in terms of generating a healthy built environment in terms of adequate access to sunlight and daylight, private and public open space, and privacy. It is this section that draws most particularly on the AMORD model code for residential development.</li> <li>▪ The topics covered that are most immediately relevant to health are: public and private open space, landscaping, stormwater drainage, site contamination, garbage storage, building height and scale, setbacks, visual and acoustic privacy, safety and security, mobility access, flexible housing layouts, fire, and energy efficiency.</li> <li>▪ An additional section on ‘operational controls’ is specifically focussed on minimising risk to ‘human health, life or property’. Like the sub-section on ‘health considerations’ in Section D, it primarily relates to existing legislative requirements (eg. in relation to air and water pollution, waste storage, noise).</li> <li>▪ This section also includes the FR provisions (see separate discussion below).</li> <li>▪ The Victoria Park and Green Square Town Centre sites are shown as requiring the dedication of land on site for public open space, instead of making a Section 94 contribution for open space (to be then provided elsewhere).</li> </ul>
<p><b>F. Design Criteria for Specific Development Types</b></p>	<ul style="list-style-type: none"> <li>▪ This section contains more detailed standards, generally covering certain matters listed in Section E, in relation to single dwellings, residential flat buildings, industrial and mixed use development, and shopping streets.</li> <li>▪ In relation to residential flat buildings there are detailed provisions relating to: <ul style="list-style-type: none"> <li>- the configuration of building bulk, associated open space areas and setbacks. Allowances are made for the possibility of roof gardens, and the following diagram is included referencing ‘high density development:</li> </ul> </li> </ul> <div> <p style="text-align: center;"><i>High density development can offer a good lifestyle if designed around generous court.</i></p> </div> <ul style="list-style-type: none"> <li>- distances between windows for privacy for habitable and non-habitable rooms.</li> <li>- natural ventilation (though only referring to the BCA in terms of required standards).</li> <li>- Security, including the design of communal areas to encourage activity, reduce ‘anonymity’ and ‘maximise recognition of occupants’. However, the provisions here are descriptive only and do not include any illustrations of design configurations to assist.</li> <li>- Ensuring daylight access to all habitable rooms, noting relevant BCA requirements, plus a maximum depth of about 10-14 metres to ensure penetration.</li> </ul>



	<ul style="list-style-type: none"> <li>▪ The provisions relating to shopping streets are restricted to existing shopping streets identified on a map. Relevant health-related-provisions are those relating to encouraging uses that contribute to street ‘liveliness and vitality’, providing wider footpaths or new public spaces, providing awnings (though curiously the reference for this appears to be about continuity of traditional building forms; there is no mention of the importance of weather protection), and maximising natural surveillance for security reasons.</li> </ul>
<p><b>G. Special Precincts</b></p> <p>(including Green Square)</p>	<ul style="list-style-type: none"> <li>▪ In the initial DCP, these comprise Rosebery, rear lane developments, Ultimo, the Alexandra Canal, William Street, and a former hospital site. There are no specific health-related matters.</li> <li>▪ This section then also included <i>additional</i> specific provisions relating to Green Square, made as an amendment in 2002. These comprise an additional 60 pages. There are no specific health-related matters additional to those in the main DCP and to the overall walkable mixed-use nature of the intended design outcome of Green Square. This is given in a summary statement as (p.10): <ul style="list-style-type: none"> <li>... to establish a transit-orientated ecologically sustainable community, based on a mixed use urban environment with a balance of residential and employment generating activities, achieving by the year 2020-30 a residential population of 27,000 and a working population of 15,000.</li> </ul> </li> <li>▪ Extracts of the overall ‘Green Square Urban Strategy’, and the specific sections on Victoria Park and the Green Square Town Centre are given below.</li> <li>▪ The following additional extracts are also given as a way of illustrating the ‘flavour’ of the intentions: <ul style="list-style-type: none"> <li>- re-establish the stormwater channels as essential elements of the ecosystem of Green Square (p.11)</li> <li>- establish an active, pedestrian friendly mutually supportive town centre (p.11)</li> <li>- maximise accessibility by public transport (p.11)</li> <li>- pedestrians are given priority over vehicles ...; equitable access through provision of continuous paths of travel; an environment that is safe and comfortable with casual surveillance, [and] street activity; wherever possible a bike-path system (p.11)</li> <li>- ration resource-intensive traffic management devices such as traffic light controls (p.12)</li> <li>- create a community where it is possible to live well without a car (p.13)</li> <li>- provide opportunities for structured and unstructured activities (p.16).</li> </ul> </li> <li>▪ Discussion on the FSR provisions is included below.</li> </ul>

The DCP includes the floor space ratio (FSR) provisions controlling scale of building development.

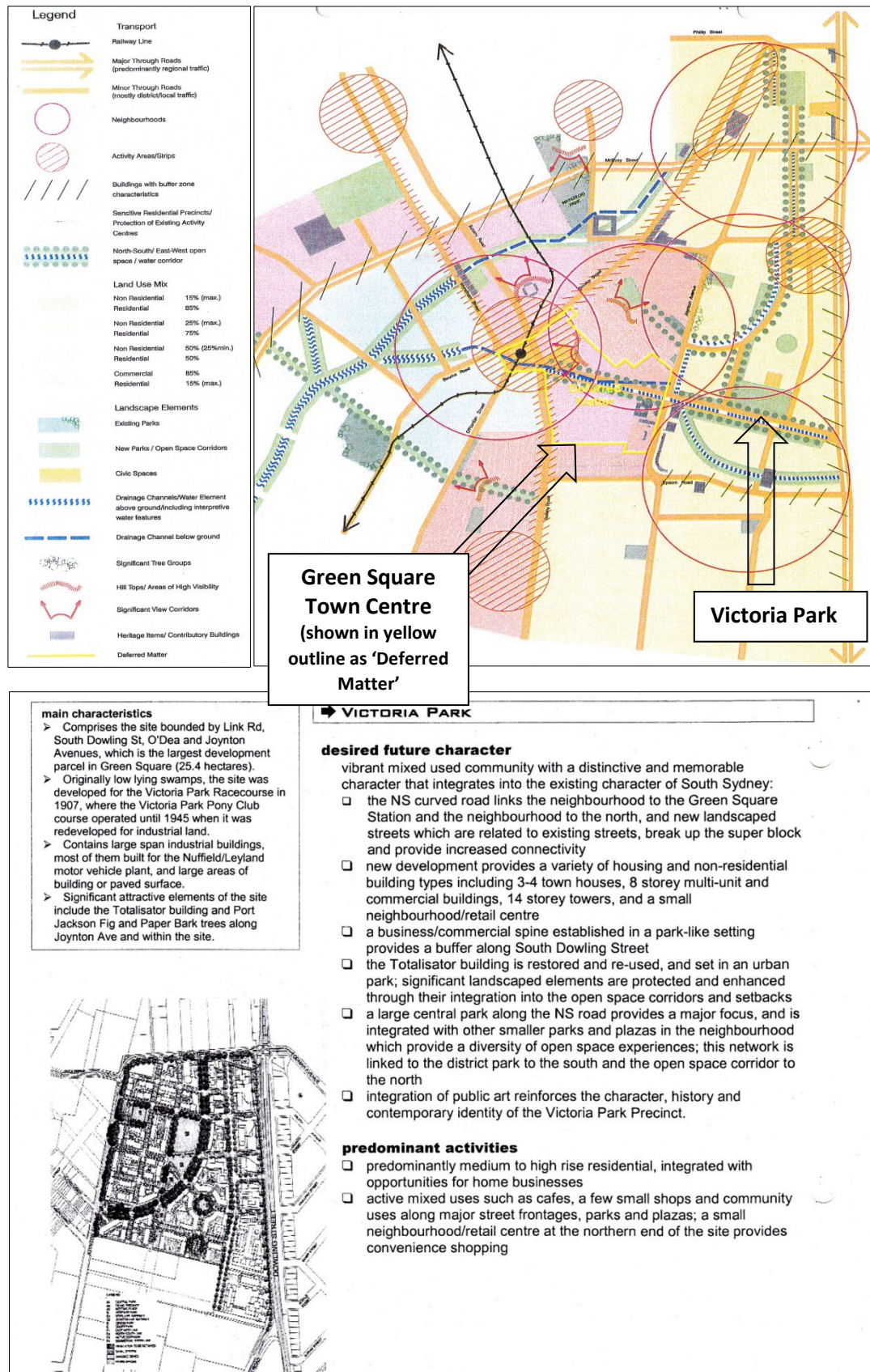
An early edition of the DCP showed a FSR for Victoria Park and the Green Square Town Centre, and most of the rest of Green Square, as 1:1, with the possibility of an additional

bonus of 0.25:1 in return for providing certain facilities in the public good. At first glance this FSR seems to be low and more indicative of suburban-scaled development rather than of the typical medium-scaled development in the areas of South Sydney the Strategy indicated it wanted to emulate. For instance, the FSR's applying in the current Sydney LEP 2012 to surrounding terraced areas in Beaconsfield and the area of Zetland to the north of the GSTC, and which were established to match the typical FSRs of the existing building stock as determined by detailed survey, range from 1:1 through to 1.25:1 and 1.5:1. However, this can also be deceptive given the FSRs for Victoria Park and the Green Square Town Centre apply to the whole of these very large sites – that is, including not just that area to be built on but also the land area required for roads and drainage and open space, and with the DCP also requiring quite substantial open space provision on these sites.

However, a subsequent edition of the DCP dated only one month later shows an FSR of 1.5:1, with the possible additional FSR up to 2.5:1, and with the FSR determination for the Green Square Town Centre shown as 'deferred'. These are the same figures shown in the then later Green Square-specific amendments in 2002. The initial variations though illustrate how the planning controls, and aspirations in terms of scale, for Green Square have been in a sense fluid in the early days pending resolution of the actual vision, and possibly also the appropriate confluence of the local and metropolitan roles of Green Square.

**Figure 5.4: The intended ‘urban strategy’ for Green Square in the *South Sydney DCP***

**1997 (extracts)**



#### main characteristics

- Located at the confluence of major road and rail transport infrastructure.
- Botany Rd and Wyndham/O'Riordan St are important vehicular links carrying high volumes of traffic vital to the continuity and connection between the Sydney CBD and the industrial and transport nodes to the south (ie, Central Industrial Area, Airport and Port Botany).
- Contains some substantial parcels of land such as the former Waterloo Incinerator site owned by Waverly and Woollahra Councils, the Police Service site, and the Fire Brigade site.
- Precinct boundaries are well defined by strong edges, including the residential Beaconsfield precinct which fronts Hansard, Johnson Street and Tosh Lane, and the Zetland residential precinct to the north which fronts Portman Lane.
- It contains defined areas of specific activity such as warehouse/industrial to the south west and east and industrial/commercial to the south and north.
- Landmarks provide points of reference in terms of built form and scale or historical significance, including the Waterloo Incinerator chimney and the Waterloo Primary School.

Note: The Green Square Town Centre area was "deferred" from LEP 1998 and DCP 1997 to allow for the detailed masterplanning of the area and the development of an implementation strategy. This work is being project managed by the South Sydney Development Corporation in consultation with Council, and once complete, new amendments will be publicly exhibited and introduced in LEP 1998 and DCP 1997.

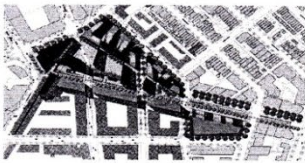


Image of the Town Square, the major focus of the Town Centre. (Produced by the winning team of the design competition run by the South Sydney Development Corporation.)

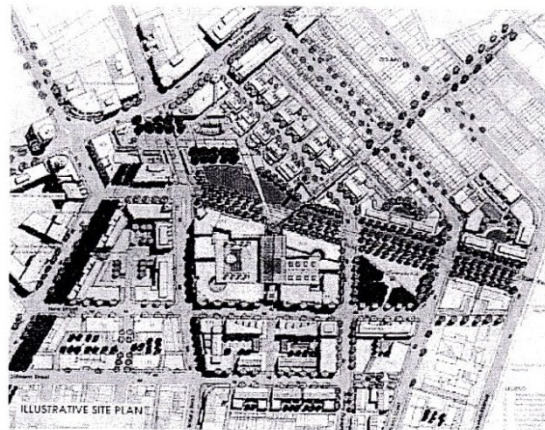
#### ➔ GREEN SQUARE CENTRE

##### desired future character

- ❑ creation of a useable square above the station as a positive urban centre with definable identity, and the heart of a supporting range of economic activities
- ❑ significant pedestrian precinct with amenable pedestrian environment
- ❑ new EW avenue provides link with growth neighbourhoods to the east. This avenue forms a junction with Botany Rd, 100m south of Bourke St. intersection. It has a continuum of retail/commercial activities along its wide footpaths
- ❑ supplemented by interconnected community facilities on sites highly accessible to the Green Square Station
- ❑ landmark elements and tower forms at the Green Square centre create a built form which symbolises the 'mark' of Green Square
- ❑ Public art provides a cultural and social basis that will promote the contemporary identity and social cohesion of the place and provide 'human' elements to the built form.
- ❑ development of a transport node that is efficient and safe allowing for ease of movement and choice of destination
- ❑ local road structure supports as many types of movement as possible (vehicle, pedestrian and cycle) to create a more vibrant space between buildings which is continuously surveilled

##### predominant activities

- ❑ activities that generate high employment, supported by a high number of pedestrian movements and convenient vehicular access. In the centre core this includes a balanced ratio of residential and non-residential uses (eg. entertainment, commercial office and retail at lower levels, and residential in upper levels) which relate to the centre's transport function; to the west of O'Riordan St activities are predominantly employment/industrial
- ❑ highly urban public open spaces that encourage social interaction and support a viable urban culture (eg through the use of public art elements)
- ❑ EW avenue allows for sidewalk activities occurring in association with land uses which support these activities (eg. shops, cafes)



### ***5.3.8: Health, planning and management: the then professional zeitgeist***

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#### **Key points:**

- The South Sydney Plan, and subsequently the master plans for the two case study sites, is imbued with not only the ‘South Sydney experience’ but also then-active movements in planning and management generally – as derived from state, national and international levels.
  - Broadly they respond to a growing interest in community participation, ecological awareness, quality urban environments with a sense of ‘place’, and health as broader environmental and personal wellbeing.
  - The following are detailed here: new environmental planning and assessment legislation, ‘integrated local area’ and ‘community strategic’ planning, place management, sustainable development, healthy cities and environmental health, and ‘new urbanism’ design models.
  - All are now understood as being essential components of what is now understood as a ‘health-supportive’ environment.
- 

The above reviews indicate that The South Sydney Plan of 1995 became a key strategic planning document, no doubt as a result of its generally extensive and thorough coverage of content relating to the actual lived experience of the South Sydney community, as well as to the extensive public participation and consultation process adopted in its formulation. This plan has substantially influenced the content of the subsequent master plans. It also, like the County Plan before it, included substantial references to health matters. To understand the motivation behind this inclusion led to a further extensive review of two matters:

- The socio-economic history and make-up of the South Sydney community; and
- The nature of planning and management processes at that time.

The investigation of each of these strands was again largely directed by following-up leads in documents from the time, and through key word searches. The result was at times an eclectic array of material, including in addition to refereed and non-refereed books and journals, articles in local, and often well-researched and long-standing, magazines from the local ‘active’ community, and documentary films.

This investigation revealed a number of concurrent themes; in particular: the ecological imperative, an emphasis also on social connection and activity, and an inherent urban design approach. The frequency of these inclusions suggested the possibility that their presence was

not simply a product of the particular planning imperatives then needing to be addressed, but that they were also the result of certain, generally unstated, *approaches* inherent within the planning professions at that time. In other words, a certain planning ‘spirit of the times’, or zeitgeist – that would need to be recognised when seeking to draw any lessons from these documents and their subsequent Green Square-orientated development outcomes. The findings from this part of the investigation are presented as eight potential influences. No particular order of importance is intended – it could be argued that all operated together to create the then zeitgeist, and as such influenced the process, structure and content of the Green Square documents under review.

An initial glance at some of the varied dates of documents or legislation or policies relating to these influences may generate some doubt as to the extent to which there was an influential ‘coalescence’ of the matters canvassed here. However, here it is also relevant to note McManus’ (2005: 26) observation that there are invariably time-lags, some short, some longer, between the pervasive development and dissemination of ideas and the resultant development of planning strategies (plans, policies and organisational structures). The specific influences mentioned here generally date from the 1980s and into the 1990s. However, and in reference to McManus’ (2005) comment, it is also worth noting that the decade that preceded these dates (the 1970s) was characterised, according to Freestone (2000:135), by a ‘popular and professional questioning of conventional planning priorities’ - and which no doubt influenced these later trends and resultant strategies.

#### *1. The Environmental Planning Assessment Act 1979*

The common ecological and social orientations of the reviewed documents can be said to be an intended product of the then still relatively new *Environmental Planning Assessment Act 1979*, with its similar explicit orientation to the natural and social environment, and to community and public participation. Freestone (2000) has suggested that the community participation component of the Act was for instance a direct outcome of the earlier Green Bans movement and the rise of ‘resident action groups’ in the 1970s. These matters were included as specific objectives of the Act, which were at the time fairly radical extensions from the earlier legislation. In summary:

- (a) to encourage:

- Proper management, development and conservation of natural and man-made resources ... for the purpose of promoting the social and economic welfare of the community and a better environment
- The orderly and economic use and development of land
- The provision of communication and utility services
- the provision of land for public purposes
- The provision community services and facilities, and
- The protection of the environment.

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government.

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

Although the term ecologically sustainable development was not then used the wording of these objectives cover similar ground; and although there is no specific mention of health it could be said to be intrinsically covered in the words ‘social and economic welfare of the community’.

One outcome of the new Act was that Councils were to prepare new ‘local *environmental plans*’ (emphasis added) and ‘development control plans’; progressively replacing the ‘planning schemes’ of the old legislation (as South Sydney Council intended via The South Sydney Plan).

## 2. *Integrated Local Area Planning*

‘Integrated Local Area Planning’ (ILAP) was promoted in the 1990s by the Australian Local Government Association as a way to improve coordination and integration of activities across all of a Council’s responsibilities, and to improve links across all levels of government (Australian Local Government Association 1993; Margerum 1999). ILAP included seven ‘principles’ (Lavery 1994):

1. Local responses based on need
2. Holistic planning
3. Community involvement
4. Improved coordination
5. Links across Council
6. Being strategic, and
7. Sustainable processes.

The background reports to the County Plan gave considerable attention to the then lack of inter-government coordination (CCC 1949; 1948); an issue that Winston's (1957) review of the County Plan also emphasised. Stretton (1970) attributes the demise of the Cumberland County Council, and subsequent replacement of the County Plan in 1968, to its inability to resolve this issue.

The comprehensiveness of The South Sydney Plan, developed while ILAP was being promoted, illustrates the intention, in that it includes aspects of Councils' responsibilities across a number of areas, not simply town planning; including environmental health, building control, social services and finance. Commenting on the Plan in 1997 when preparing the Green Square Structural Master Plan, consultants Stanistic+Turner (1997: 2) noted how the Plan emphasised performance rather than mere compliance, and that 'In format and content it [more] resembles metropolitan plans at the State Government level'.

### *3. Community Strategic Planning*

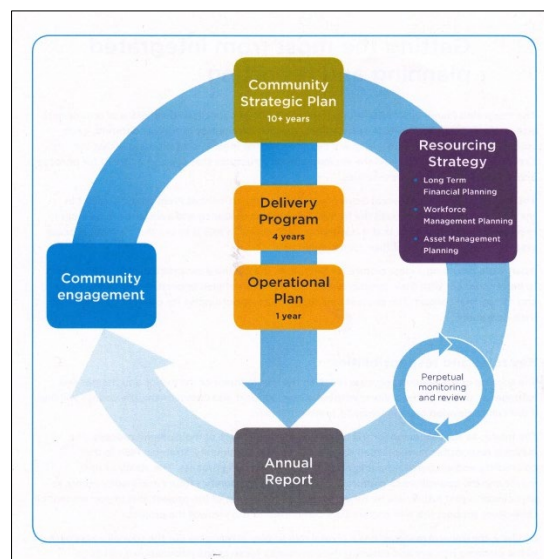
Around the time that ILAP was being promoted, the new *Local Government Act 1993* included new provisions with similar aims, referred to, variously, as 'community strategic planning' and 'integrated planning and reporting'. Councils are required to prepare, in close consultation with their communities, a Community Strategic Plan for the life of the Council plus a resourcing strategy, a delivery program, an annual operational plan, and regular reporting of outcomes and progress (Figure 5.5). A Council's LEP and DCP are seen as one component of how it delivers its Plan.



Consistent with this approach, the Strategy for a Sustainable City of South Sydney included a comprehensive ‘Implementation Plan’ that covered the range of Council activities, not just town planning.

A guide for the inclusion of health matters into Council’s integrated planning and reporting processes has been prepared by the (former) Premier’s Council for Active Living

**Figure 5.5: The structure of ‘integrated planning and reporting’ under the *Local Government Act 1993* (NSW Premier & Cabinet, 2013:9).**



#### 4. Place management

‘Place management’, was promoted in New South Wales (and elsewhere) in the 1990s as a way to address the limitation in urban design and management that there is rarely a clear, agreed – and written – statement describing the intended outcome for particular localities (Collins & Burgess 2007), and that, instead, ‘place’ outcomes arise more by default, as a result of the, usually quite abstract and generic planning provisions that apply. Mant (1998: 30) describes such, needed, agreed statements as detailing the ‘desired future character’ of each area. Further, given responsibility for managing any particular place is invariably split between different professional groups and even organisations, it is difficult to ensure all actions are aligned to any particular desired place outcome. A further intention of place management is to then create a management structure which has a dedicated responsibility to

this desired whole-of-place (Mant 2000). Place management has a consistency with ILAP, and with community strategic planning.

In the 1990s, the NSW Premier's Office appointed a number of 'place managers' in various localities (Collins and Burgess 2007). In South Sydney, this included Kings Cross, following a meeting with the Mayor in 1995, and Waterloo; each had the purpose of improving outcomes in the particular social welfare and equity issues apparent in those areas. The South Sydney Development Corporation, created in 1996, is an example of such place management via the establishment of a dedicated organisation. Searle (2006) has referred to this process as creating 'new State spaces'. The 2005 'City of Cities' metropolitan plan for Sydney included as part of its implementation and governance provisions the establishment of place managers within each local council to assist in coordinating local and State planning.

To an extent, the preparation of 'master plans' for the future development of an area (as required for example for large sites by the South Sydney DCP 1997) is also an example of place management practice. The Green Square Town Centre Master Plan, in its 'implementation' section, recommends the establishment of a 'Green Square Place Manager' position with a dedicated budget. MIRVAC appointed a place-manager in 2018 in response to a planning agreement requirement in relation to the development of the Landcom Town Centre sites. The City of Sydney appointed its own Green Square Place Manager who occupied the position from 2015 to 2017; the position is currently (2019) vacant. The South Sydney DCP provisions relating specifically to Green Square include 'desired future character' statements in relation to each precinct, including Victoria Park and the Green Square Town Centre.

##### *5. Sustainable development*

The notion of sustainable development, in its current understanding, was first proposed in 1987 with the publication of a report (*Our Common Future*) by the UN World Commission on Environment & Development. It became embedded internationally and within national government operations as an outcome of the subsequent UN 'Earth Summit' held in Rio de Janeiro in 1992 and its adopted 'Agenda 21' (an 'agenda for the 21<sup>st</sup> century'). Agenda 21 comprised 40 'chapters' each detailing a key area of action, including: 'protecting and promoting human health' (Chap. 6), 'promoting sustainable human settlement development'

(Chap. 7), ‘integrating environment and development in decision-making’ (Chap. 8), and ‘local authorities initiatives’ (Chap. 28) (Earth Summit ’92, 1992). As part of Australia’s adoption of Agenda 21, local councils were encouraged to prepare their own ‘Local Agenda 21s’ (Department of Environment, Sport and Territories 1994). Ashton and Freestone (2008: 19) note that ‘[t]he 1990s was the decade in which intergenerational equity, resource conservation and sustainability emerged as major planning themes at all levels in the wake of the internationally influential Brundtland Commission’s *Our Common Future*.’

South Sydney Council did not produce a Local Agenda 21. However, its influence can be seen in:

- Being one of the first Councils in Sydney to adopt a ‘greenhouse effect’ policy (in 1992)
- The inclusion of ‘sustainable’ in the title of its planning strategy, and
- The presentation of a paper by two of Council’s senior strategic planners to the ‘Rio+5 years’ Conference held in Newcastle (NSW) in 1997 (Contziu and Bagley 1997).

In 1993 Greenpeace Australia on its own initiative prepared a set of proposals for ‘sustainable Sydney’. Although it did not make specific reference to health, it did note the nexus between the resolution of critical ecological issues and a ‘high quality of life’, and the need to maintain the ‘social fabric’ (p.1).

In 1996, Landcom prepared an ‘environmentally sustainable development strategy’ orientated to the construction of energy efficient and ecologically responsible housing. When Landcom was corporatized in 2002 the relevant legislation (the *Landcom Corporation Act, 2001*) included as one of its corporate objectives:

... (c) to protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development ... (Section 6 of the *Landcom Corporation Act, 2001* (emphasis added))

## 6. *The World Health Organisation (WHO) Healthy Cities program*

The Healthy Cities program was launched by the World Health Organisation (WHO) in 1986 with the aim of promoting the inclusion of health-supportive considerations and actions as an

integral part of existing urban planning and management activities, and expenditure and governance structures. The premise of a healthy city was one in which (Baum and Brown 1989):

- Health is a social rather than a medical matter;
- Health is the responsibility of all city services;
- Health [is] monitored by physical, social, aesthetic and environmental indicators of wellbeing;
- Health is an outcome of collaboration between community members, planners and providers of public and private sector services; and
- The city [is] a cradle of good health and not merely a survival unit.

Also in 1986, the WHO developed the Ottawa Charter for Health Promotion, with the goal of 'health for all' by the year 2000. Baum & Brown (1989) refer to it as a 'Charter for a New Public Health', and list the following components:

- Building healthy public policy: putting health on planning agendas whether they be education, transport, welfare or local government;
- Creating supportive environments: people's total health is recognized as the result of a physical and social environment which enhances their potential for living;
- Strengthening community action: enabling and giving power to citizens to act in the interests of their own good health;
- Developing personal skills: providing opportunities for people to learn to develop their own health skills and to organize their own health environment; and
- Re-orienting health services: accepting that illness prevention and health promotion should be a primary goal for a health service.

The Healthy Cities movement does not appear to have resulted in significant take-up in Australia. Three pilot projects were instigated in 1987 with funding from the Commonwealth Government (Baum & Brown 1989), although it was not until 2007 that an Australian chapter of the International Alliance for Healthy Cities was established. That said, the concept was promoted from the late 1980s by a consortium comprising the Australian Community Health Association, the Australian Local Government Association, and the then Australian Commission for the Future and included an early series of national 'healthy cities'

conferences, which is still continued, although now under the title of ‘making cities liveable’). As such it would be reasonable to conclude the concept was known within local government.

The initial Discussion Paper prepared for The South Sydney Plan suggested the development of a ‘Healthy City Policy’. This was continued into the adopted Strategy for a Sustainable South Sydney in reference to a ‘Health Plan’ and also a ‘local food policy’ (pp.122, 127). The ‘Health Plan’ did not occur, however Council adopted a ‘healthy food’ policy in 1995 comprising a substantial range of actions relating to local availability of nutritious and affordable food. Involvement in such matters would have been unusual for local government at that time, though it did echo, but did not reference, innovative literature at the time around food and town planning, for example Parham (1996; 1992).

#### 7. *Environmental health*

Concurrent with the Healthy Cities movement, and consistent with the idea of a ‘new public health’ (see above), the inherent nexus between human health and the health of the environment was re-visited to give more attention to broader environmental actions rather than simply regulation, under the notion of ‘environmental health’ (Chartered Institute of Environmental Health 1997) (see also Figure 5.6), and supporting also the contention that ‘the view of health as a reductionist science needs to be abandoned’ (Alleyne 1995, in Serageldin & Sfeir-Younis 1995: 101). In Australia, a National Environmental Health Strategy was launched in 1999. This included establishment of Community Environmental Health Action Plans, with the objectives being, as described by Brown et al. (2001: 5, emphasis added): ‘managing *place-based* economic, social and environmental risk, and re-establishing human/environment sustainability. More recently, the peak body of environmental health practitioners in Australia sees the *practice* of environmental health as providing ‘a healthy, safe and attractive natural, built and social environment for all of the communities of Australia.’

**Figure 5.6: The four phases of environmental health practice (Brown (1999:7))**

Phase	ILLNESS	SOURCE	EH RESPONSE
<b>1. Industrial revolution – Control of infectious diseases</b>			
1850 -	Cholera	water	sewerage
	Diphtheria	air	domestic hygiene
	Tuberculosis	crowding	urban design
<b>2. Economic development - Control of diseases of overconsumption</b>			
1930 -	Infectious diseases	regulations broken	inspection, prosecution
	Food contamination	fast foods	laboratory testing
	Cancers	pollutants	regulation, monitoring
<b>3. Local sustainable development – Reduction of environmental risk</b>			
1980 -	Acute toxicity	lead	industry standards
	Lung cancer	asbestos	industry regulation
	Chemical overload	industrial wastes	monitoring, reporting
<b>4. Global sustainable development – Seeking environmental governance</b>			
2000-	Air unsafe	UV radiation transport exhausts	chemical controls airshed management
	Water inadequate	climate change polluted rivers	reduce energy use catchment management
	Soil degraded	industry wastes over-exploitation	precautionary principle remediation

Elements of this expansion in perspectives of health from an established orientation to simply food safety, general sanitation, pests, and noise and air quality issues can be seen for example in in the South Sydney Plan in the expanded list of health-related matters proposed to be addressed in the recommended ‘Health Plan’.

As part of these programmes, those charged with local government public health responsibilities officers started to expand their focus – and titles, with ‘health surveyors’ and ‘public health officers’ progressively becoming referred to as ‘environmental health officers’. It was similar to how town planners expanded their thinking – and titles, becoming known as ‘environmental planners’ – following the introduction of the Environmental Planning & Assessment Act in 1979; and how architects, in a similar broadening of focus away from individual buildings took on the idea of ‘urban design’ (see below). Brown (n.d: 3, 4) (who also was a founding member of the Canberra Healthy Cities project) takes this further, to use the idea of ‘environmental health’ as a prompt to ‘rethink some of the basic tenants of our personal knowledge’ by describing it as each of:

- A personal experience
- A body of knowledge
- A professional practice
- A research framework, and
- A contribution to society.

#### 8. *Urban design, and New Urbanism*

The design concept of New Urbanism originated in the United States in the 1980s in response to issues about the ‘placeless-ness’ of much urban development then occurring, particularly in conjunction with the suburban sprawl, and to growing concerns about sustainability. The concept was also promoted under the banner of liveability, and drew inspiration from the layout of traditional settlements, (McManus 2005), in particular in relation to the walkability and social connectivity that can arise from denser, mixed land use patterns. In Australia the interest in New Urbanism coincided with a rise in interest in urban design generally, for similar reasons. A national Urban Design Forum commenced in 1987; this included publishing a quarterly free newsletter. At a Commonwealth level the Federal Government, via its Building Better Cities program, published the Australian Model Code for Residential Development (AMORD) in 1995 and sponsored a national design competition (Home: a Place in the Urban Environment) that explored new models of denser development in Australian cities. This competition was won by a team sponsored by Greenpeace Australia for a proposal in inner-city Ultimo-Pyrmont and later described in its Strategy for a Sustainable Sydney (Greenpeace 1993:14) (see Figure 5.7). AMCORD is referenced by South Sydney Council in its DCP of 1997. In 2011 the then Federal government prepared a national ‘urban design protocol’ (‘Creating Places for People’). A Commonwealth Parliamentary Report on urban development in September 2018 (‘Building Up & Moving Out’) has included a re-visiting of this protocol as one of its recommendations.

Prompted by the personal intervention of the then Premier after being affronted by the quality of new residential flat buildings in his home electorate (Searle 2007), the NSW Government published the Residential Flat Design Code (the ‘Residential Pattern Book’) in 2002, in conjunction with a legislative requirement that it be used in the assessment of development applications in order to ‘elevate’ (Searle 2007:10).

The aims of this legislation included a mix of interrelated environmental and social objectives:

**Aims, objectives etc**

- (1) This Policy aims to improve the design quality of residential flat development in New South Wales.
- (2) This Policy recognises that the design quality of residential flat development is of significance for environmental planning for the State due to the economic, environmental, cultural and social benefits of high-quality design.
- (3) Improving the design quality of residential flat development aims:
  - (a) To ensure that it contributes to the sustainable development of New South Wales:
    - (i) by providing sustainable housing in social and environmental terms; and
    - (ii) by being a long-term asset to its neighbourhood; and
    - (iii) by achieving the urban planning policies for its regional and local contexts; and
  - (b) to achieve better built form and aesthetics of buildings and of the streetscapes and the public spaces they define; and
  - (c) to better satisfy the increasing demand, the changing social and demographic profile of the community, and the needs of the widest range of people from childhood to old age, including those with disabilities; and
  - (d) to maximise amenity, safety and security for the benefit of its occupants and the wider community; and
  - (e) to minimise the consumption of energy from non-renewable resources, to conserve the environment and to reduce greenhouse gas emissions.

Landcom adopted New Urbanism principles in its work from the mid-1990s, and in doing so also sought to demonstrate its ‘benefits’ to local Councils (O’Toole 1996). Places designed in reference to these principles are seen as being consistent with the idea of a ‘healthy built environment’ (Paine and Thompson 2016). The then interest in urban design generally can be seen in the invariable ordering of design matters first in the reviewed master plan documents relating to Green Square, and in the attachment of the words ‘urban design’ to the title of the South Sydney DCP of 1997, even though it also covers a significant range of other matters.



**Figure 5.7: Extract from Greenpeace Australia (1993:14): *Strategy for a Sustainable Sydney***



*Greenpeace proposal for Pymont.*  
A view of a typical housing block, showing car free streets, shared courtyards and roof terraces.

### model redevelopments

There are a number of major redundant industrial sites due for redevelopment in Sydney and Newcastle. These could be the first examples of environmentally sustainable living.

It is not apparent in current proposals, however, that their particular unique advantages have been sufficiently recognised: they are close to their respective city centres; the State Government is the major land holder; and they can be easily served by public transport.

In 1991, Greenpeace won a national design ideas competition for new forms of housing. The Greenpeace design is for a car-free redevelopment of the inner-city area of Pymont. The State Government's "City West Strategy", which covers Pymont, is not based on ecologically sustainable principles, and although a mix of uses and activities are proposed, conventional apartments and office blocks are currently planned.

The Greenpeace scheme for Pymont proposes the peninsula be car-free because of its close proximity to the city. Carparks are confined to the perimeter of the peninsula adjacent to a new light rail

line linking Balmain, Glebe Island, and Pymont to the city and extending west to Leichhardt. The streets remain trafficable and accessible for deliveries, service vehicles, and residents. The carparks could also serve as storage and workshop sites.

The removal of cars leaves uninterrupted safe access to the waterfront. For even young children it offers the opportunity to explore the street as living space equal to private gardens, balconies, and public parks. It recognises that streets are essential parts of any community, not simply roads to carry traffic.

The increasing desire for individual private backyards has eroded the "public realm" in suburbia and elsewhere. It has placed enormous economic pressures on individuals and community, and has had significant impacts on the natural environment. Swimming pools are an example of a facility that would be better shared.

The Greenpeace design reserved the most prominent parts of the Pymont peninsula for public parks. Even on a peninsula not everyone can have a view and so the best parts of the site were kept public. Some areas were left as wilderness for true "adventure play" by children and youths.

The Greenpeace design is 10-12 times the density of normal suburbia. The majority of buildings, however, are no more than four storeys high, minimising the use of lifts and maintaining contact with the ground. Housing types are designed as flexible terraces and apartments in U-shaped blocks around central shared gardens. Ground floor dwellings also have private gardens and upper level dwellings have access to roof terraces, which are particularly appropriate in the Sydney climate.

A self-contained sewage treatment system is proposed, using advanced micro filtration technology to irrigate parks, gardens and playing fields with treated waste water. As many of the existing industrial buildings as possible are reused and the significant landform is maintained and revealed to conserve the existing character of Pymont. A government heritage study identified 57 items of heritage significance, while the local residents identified 208. Such a discrepancy highlights the importance of community participation in the planning process. In government proposals the magnificent railway cutting, perhaps the most significant trace of former activity on the peninsula, is to be covered over, destroying it as a landscape feature and denying the proposed light rail an open air character which is arguably its most appealing characteristic, relegating it instead to run in a 'concrete basement'.

It is clear the entire City West area needs to be reconsidered if it is to achieve ESD objectives. In Balmain, proposals for medium to high density housing on old

### **Box 5.10: Building materials – another health and well-being nexus**

The health impacts of the materials themselves used in the construction of buildings is not always widely recognised. Here, an additional health implication of the substantial ‘suburbanisation’ of Sydney during the 1950s and 1960s, in particular as a way to generate affordable home ownership, is worth noting: ‘most’ new homes built at this time used fibro-cement as cladding given its cheapness and availability (Mee and Dowling 2000; Spearitt and DeMarco 1988). It is now known that a principle component – asbestos – is carcinogenic; and the environmental health professions are now predicting another forthcoming epidemic – mesothelioma – as (i) infection from those times now becomes apparent within those who worked with the material at the time or have undertaken renovations since, and (ii) these houses, and the fibro material itself reach the end of their lifespan (<https://www.asbestossafety.gov.au/>).

Although the initial Discussion Paper to The South Sydney Plan mentioned a need to ‘develop guidelines to promote ‘healthy buildings’’ (p.9), it did not then identify building materials as an issue, referencing instead standards for air conditioners and air quality. And although the subsequent South Sydney DCP included an objective to encourage building materials that were ‘non-harmful’, the actual provisions dealt with energy efficiency, renewable materials, durability and the like rather than direct human health impacts (p.98).

A similar wider ecological (planetary health) orientation is apparent in the ESD criteria adopted in the Green Square Town Centre Master Plan in respect to building materials, though the ESD Rating Scheme (p.AP-03) does mention ‘PVC minimisation’, which can have a direct impact on indoor air quality; and use of ‘low emission paints’, citing resultant ‘fewer respiratory problems’.

It is also worth mentioning here more recent understandings about the positive direct health benefits and wellbeing for building occupiers from the use of timber construction, including for high-rise development (for a review, see: <https://www.thefifthestate.com.au/tag/timber-building>).

#### *9. The relationship between urban design and crime, safety and security*

The South Sydney Council *Social Plan 2001-2003* made specific mention, when listing local issues, to ‘street crime and safety, break and enters, domestic violence, pedestrian safety (from vehicles), and vandalism’ (pp.3-4). The level of local crime and recidivism was also cited as one of the reasons for the establishment of a local place manager position in Waterloo, the suburb adjacent to Green Square. Crime, safety and security were not however issues for the south Sydney locality alone. Gibson and Connell (2000) give an overview of the occurring prevalence of crime in Sydney generally, citing also long-standing press references to ‘a surging ‘crime wave’’ (p.300).

Crime, safety and security concerns and the potential relationship with urban ‘shape’ were raised earlier, in the 1960s and 1970s, in the United Kingdom and the USA, prompted (amongst other matters) by high crime levels in higher density housing estates coupled with the questioning of the physical design of such developments. This questioning was itself

prompted by Jane Jacob's (1962) advocacy for a neighbourhood pattern or urban design that better reflected the mixed use and highly-trafficked streets typical of inner urban areas, and the highly publicised demolition by explosives of one such estate in St Louis, USA. One response was a series of investigative publications suggesting a direct nexus between crime, safety and urban design (e. g. Angel, 1968; Jeffery, C. R., 1971; Newman, 1972). Jeffrey's (1971) 'crime prevention through environmental design' ('CPTED') terminology is now used as part of a now close collaboration between design, policing and crime prevention disciplines. In addition to direct health impacts from reductions in trauma, successful crime prevention will also have health co-benefits through the facilitation and encouragement of greater outdoor physical and social activity, and reductions in levels of stress.

CPTED is based around four elements: 'territoriality' (or generation of a sense of ownership), 'natural surveillance' ('eyes on the street'), 'activity support' (to discourage vacant premises), and 'access control' (for privacy and security) (Kent and Wheeler 2016). These considerations are now embedded within design practice in NSW with the development, in the early 1990s, of State government 'safer by design' guidelines and a 'community safety audit' process. Both of these programs are referred to in the Victoria Park and Green Square Town Centre master plans (and in the supporting Green Square Town Centre 'Social Considerations' report). These initial CPTED elements have now been extended in 'second' and 'third' generation iterations. The second iteration includes matters related to engendering positive community-based social activities and the encouragement and acceptance of social diversity (Saville 2009). This is consistent with the 'community development' activities adopted in the Victoria Park development, and the similar 'social activation' activities now being adopted in the Green Square Town Centre. The more recent third generation CPTED links the establishment of 'green' environments with crime prevention objectives, on the basis of research showing that the general public perceives such environments as 'safe' (Fennelly and Perry 2018).

There is therefore also a close relationship between CPTED and the concurrent place management and urban design orientations evident in the then zeitgeist, as discussed above. The (potential) relationship between *density* and crime was re-visited in particular in the United Kingdom in the 1980s following a study of high-rise housing estates from the perspective of Newman's (1972) theory of 'defensible space' (Coleman 1985). The study concluded a close connection between high levels of 'social malaise' and the higher the

overall density (number of dwellings) and the scale (number of stories) of such estates as well as what was seen as poor physical design of common area spaces. However these conclusions were also strongly debated at the time, with Newman suggesting that Coleman did not pay sufficient attention to the implications of the socio-economic make-up of residents and, in particular, ‘proper fit’ between apartments and family characteristics: ‘My view is that high-rises per se aren’t bad; it’s just that high-rises for families with children and for lower-income families don’t work. I see high-rises as quite suitable for the elderly, or for working couples and singles ... Alice [Coleman] doesn’t make that distinction’; adding: ‘I’m a little more sceptical about physical design alone rather than physical and social together’ (Newman 1987, pp. 31, 32).

### ***5.3.9: Green Square and health planning***

Issues around health and sickness are a recurring theme in the history of Green Square (Karskens 2004), with Karskens (2004) also noting that a particular history itself could be written around this aspect, including traditional treatments and remedies, the rise of modern medicine, public health and hospitals, and the intersections between health and planning and the environment. Green Square was also the location of the major Royal South Sydney Hospital, opened in 1913 after lobbying by local Mayors and a local businessman. Its functions were progressively re-located during the 1990s following merger with the Prince of Wales Hospital, until its final community health services closed in 2003 with the exception of a hydrotherapy pool. The hospital site is now owned by the City of Sydney and is occupied by the Green Square Community Centre and Cultural Precinct which opened in 2018. It does not include any explicit health services; however it does include implicit health-supportive functions: a ‘creative centre’, a ‘community shed’, a child care centre, and a park. The separate master plan for the site, adopted by the City of Sydney in 2013 originally included a ‘potential’ new community health centre. However, this was amended in December 2017 in order to address a competing, and equally important, public facility – the provision of a new local primary school. The Council report recommending this change noted:

- ‘[E]xtensive evidence supporting the importance of schools as a fundamental building block for local communities. The Green Square Town Centre Integrated School and

Community Facility will make a significant contribution to placemaking and social inclusion in Green Square’; and

- [T]hat the community health centre use could occupy new space being constructed in the Town Centre, although also left the resolution of this to a separate exercise.

Green Square is located on the eastern edge of the Sydney Local Health District (SLHD), which stretches as far west as Strathfield and, to the south-west, to Canterbury). A draft SLHD Strategic Plan for the years 2018-2022 was placed on public exhibition in August 2018. The draft Plan mentions the anticipated population increase in Green Square as a particular issue needing to be addressed in terms of delivering health services. Its overall ‘priorities’ include:

- Adding additional capacity to existing community-based health facilities to meet the growing population throughout the LHD; and
- The development of four new ‘HealthOnes’, including at ‘Green Square/Waterloo’.

In 2017 the Sydney LHD made a contribution to an edition of the local Inner Sydney Voice community newspaper that focussed on the proposed redevelopment of neighbouring Waterloo with high-density high-rise residential buildings (Harris 2017). The article discussed the ways in which the potential health impacts on residents of the redevelopment process could be reduced.

Table 5.11 lists the Goals in the draft Strategy and, where relevant to this Study, associated Strategic Actions. Particular note can be given to the entries regarding supporting the creation of healthy built environments, and on establishing research partnerships.

### **Box 5.11: The history of health in Sydney – constants and variations**

Curson & McCracken (2000), in their history of health in Sydney generally note that while the emphasis on public health has now moved away from the prevention of early death through communicable diseases as a result of unsanitary conditions to more the management<sup>5</sup> of chronic disease, some aspects have remain unchanged: ‘... with the exception of heart disease and cancer, surprisingly little has altered over the last 150 years. In the middle of the nineteenth century, for example, accidents and violence, rheumatic complaints, venereal disease, gastrointestinal and bronchial complaints were the main reasons why people sought medical treatment. Today not much is different’ (p.96).

At the conclusion of their review they do though also make two projections: that the ageing population will increase the incidence of degenerative diseases (such as dementia, physical disability, impaired cardiovascular function and certain cancers), and that increased warming will promote the spread of diseases otherwise found in semi-tropical areas. These will require increasing attention in built environment practice. Mention is made in section 5.1 of the need to address the potential of mosquito-borne disease in WSUD projects. And in relation to aged care, Parramatta Council has already noticed difficulties in carers being able to access and park close to apartments they need to visit in existing higher density (and congested) areas.

Perhaps indicative of its time, it is curious that only passing reference was given to chronic disease, and which is now described as Australia’s ‘biggest health challenge’ (Australian Institute of Health and Welfare 2014). However, and also instructively, Curson and McCracken (2000) do make reference to morbidity due to AIDS, a then relatively new disease without cure (and which the South Sydney Plan of 1995 also referenced). Medical advances have however now alleviated this particular disease.

**Table 5.11: Sydney Local Health District draft Strategic Plan (2018-2022)**

Goal	Strategic Actions ( as relevant to this Study)
A healthy built environment	<ul style="list-style-type: none"> <li>▪ Influence healthy built environmental planning through community engagement and inter-sectoral collaboration with a focus on equity.</li> <li>▪ Advocate for evidence-based strategies to inform urban development.</li> <li>▪ Ensure that health, health services, health infrastructure and service access are considered in urban development and renewal projects.</li> </ul>
Patients can access care as close to home as possible	<ul style="list-style-type: none"> <li>▪ Shift the balance of care and service into our primary, population health, Aboriginal health and care in the community to ensure the right care, at the right time in the right place.</li> <li>▪ Develop additional ambulatory care, hospital-in-the-home and targeted services for marginalised groups and new models of outreach and care in the community.</li> <li>▪ Further develop the health and medical support provided to Residential Aged Care residents to enable them to avoid unnecessary acute hospital admission.</li> </ul>
Drive a culture committed to research, informed by evidence and the consumer experience	<ul style="list-style-type: none"> <li>▪ Engage patients, families and consumers meaningfully in research and evaluation at the policy, planning, service delivery levels.</li> <li>▪ Support an organisational culture that grows and incorporates research as a matter of routine, makes research ‘everybody’s business’ and supports patient/ community participation in high quality clinical trials and research studies.</li> <li>▪ Develop active research strategies/plans for each facility, clinical stream, major department and service that reflect the District Research Strategy.</li> <li>▪ Support interdisciplinary research, including medical, nursing, allied health, social care and care in the community. ...</li> <li>▪ Develop additional co-joint ‘clinician-researcher’ roles across the District. ...</li> <li>▪ Actively communicate, promote and inform the community about the District’s research.</li> </ul>
Collaborative research	<ul style="list-style-type: none"> <li>▪ Inform consumers, their families and carers about the benefits of active involvement in research and encourage informed participation. ...</li> <li>▪ Build our research partnerships and collaborations to achieve scale and develop long-term and collaborative planning for research. This includes collaboration with key partners such as the University of Sydney and the Medical Research Institutes.</li> </ul>

**Figure 5.8: Article by Sydney Local Health District (*Inner Sydney Voice* magazine, Winter 2017)**

## REDUCING REDEVELOPMENT IMPACT ON HEALTH AND WELLBEING

NO MATTER WHO YOU ARE OR HOW YOU WILL BE AFFECTED, THE REDEVELOPMENT OF WATERLOO WILL PRESENT PERSONAL AND COMMUNITY CHALLENGES EXPLAINS ELIZABETH HARRIS.

There will be people living through redevelopment who will not be relocated; some residents who will be temporarily or permanently relocated; and a very large number of new residents to the area. We know that the scale of these changes can have negative impacts on health that can be minimised if they are recognised and addressed.

The poor health of public housing tenants has been well established, with research demonstrating higher rates of infectious disease, chronic illness, mental health disorders, delayed child development, inadequate nutrition and poor oral health, compared to the general population.

This is often seen as resulting from a contest between context and composition. Are these poor health outcomes a result of the poor physical, social and economic environments in which people live that limit their life opportunities (context)? Or is it the composition of the population due to high numbers of people with long term mental illness, drug and alcohol problems, chronic health problems and families experiencing domestic violence that lead to these poor health outcomes (composition)? It is likely to be a combination of both, acting over time, which can leave some families trapped in disadvantage that can become intergenerational. Improving physical conditions are important but if they do not lead to increased opportunities for health through work and education, impacts may be compromised.

The international evidence of improvement of health and wellbeing from redevelopment is mixed and at times conflicting. Some studies such as "Moving to Opportunity" did find improvements in health, but no change in education and employment. A large Scottish study of relocated residents

found that although housing conditions and social cohesion improved, there were no changes to physical and mental health.

An Australian qualitative study of the Minto Renewal Project in south west Sydney found that children and adults who moved into an area of low public housing concentration reported improvements in psychosocial health outcomes. However, uncertainty, delay and ongoing disruption caused by relocation were identified as potential causes of stress, injury and hardship if appropriate services were not in place.

Insights into the health impact can be seen in *The Relocation of Public Housing Tenants in South Western Sydney - A Health Impact Assessment (HIA)* which provided much of the content for this article. Based on a literature review, a demographic and health profile of the Airds Bradbury area, in-depth interviews with employees of health and welfare agencies and residents, they identified six potential health impacts related to: Neighbourhood conditions; Residents response to renewal; Neighbourhood and housing quality; Social networks and community engagement; Access to healthy foods and opportunities for physical activity; and Access to social and health care services.

Analysis of local health data showed significantly higher rates of ill health, chronic disease and behavioural risk factors compared to the NSW average. These patterns of illnesses are often associated with poor living, social and economic factors such as income, education, employment and family type.

Although the health effects of redevelopment have been mixed in Airds Bradbury, all those interviewed acknowledged the process was stressful. This was true in the HIA where many residents reported increased anxiety and stress as a result of delays and

uncertainty of the move. Living in areas with empty housing meant they felt vulnerable to gang violence, vandalism and increased crime. Some residents who had moved to mixed-income communities reported increased access to transport, recreation and supermarkets, and they felt happier and safer. Residents who had been actively involved in the redevelopment and have positive relations with their housing officer seemed more satisfied with the relocation. A personalised approach to relocation is reported to have positive impacts on health and feelings of control.

Improved quality of housing had positive impacts on residents although many reported that the new housing did not meet their requirements for space, size and layout. Noise and dislocation during the redevelopment was also difficult for residents.

In summary the HIA found:

- A personalised approach at all stages of the redevelopment improves satisfaction and outcomes
- Community engagement should be a priority for investment,
- Ensuring uninterrupted access to services is important;
- Environmental and social disruption should be minimised;
- Residents should be rehoused in relation to their needs and preferences; and
- Redesigned neighbourhoods should maximise safety and security and provide opportunities for social interaction.

The HIA makes practical recommendations on how these issues can be addressed. You can see the full HIA at [www.swslhd.nsw.gov.au/populationhealth/PH\\_environments/pdf/RelocationPHTenants.pdf](http://www.swslhd.nsw.gov.au/populationhealth/PH_environments/pdf/RelocationPHTenants.pdf)  
Elizabeth Harris is an Associate Professor in the Centre for Primary Health Care and Equity at the University of NSW and is Director, Health Equity Research and Development Unit, Sydney Local Health District



## 5.4: Four Additional Contextual Layers Specific to the Case Study Sites

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### 5.4.1: Introduction

The previous sections have reviewed how the current development format of Green Square can be traced to particular elements of the zeitgeist prevailing when the planning provisions for Green Square were first instigated, as well as to particular historical planning and social/cultural experiences relating to the South Sydney community – and South Sydney Council, as its representative.

However, by themselves they do not fully explain the development process and outcomes in respect to the two case study localities. Again the idea of a ‘muddled’, ‘accidental’ city, with a plethora of concurrent influences and plans is relevant. As this review progressed, four further aspects, particular to these sites, and at times to wider Green Square, became apparent:

1. The location of Green Square on former wetland, and the application of water-sensitive urban design principles;
2. The experimental nature, at the time, of intensive high-density ‘brown-field’ development;
3. The involvement of Landcom as both a land developer and an ‘active player’ in establishing strategic and quality of living outcomes; and
4. The importance of the availability of, and mechanisms to access, the financial resources necessary for implementation; and the substantial resources now available for Green Square through the City of Sydney.

#### 5.4.2: Location on former wetland: drainage, flood control and industrial pollution issues

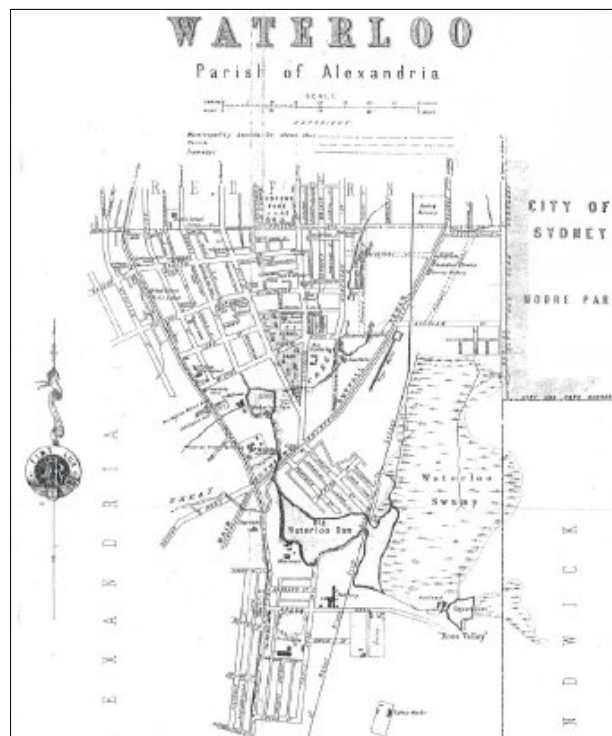
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##### Key Points:

- The case study sites are subject to significant hydraulic issues.
  - The adoption of WSUD principles has allowed for substantial health co-benefits in terms of landscaping, overall 'greening', and the visibility of 'natural' systems.
- 

Victoria Park and the Town Centre are both located on former wetland, the Waterloo Swamp. In appearance at that time it was probably not unlike current-day Centennial Park which is on land formerly known as Lachlan Swamp (Doran 2004), albeit with the water basins there now being constructed as formed ponds. Underlying the area is part of the substantial Botany Aquifer. Surrounding similar areas (e. g. Centennial Park and the Botany Swamps to the south of Green Square) became a part of early Sydney's water supply after the Tank Stream at Sydney Cove (Circular Quay) became polluted despite regulations that to avoid this (Short 2000) - an early example of health-supportive infrastructure.

**Figure 5.9:** The early hydraulics of Green Square (parish map of Waterloo c.1885)  
(Fairman 2004: 56)



Typical of such low-lying land unsuitable for residential uses, the locality was developed primarily for industry in conjunction with land filling. These uses resulted in pollution of the waterways and aquifer, as well as the land itself, requiring subsequent remediation costs in conjunction with current redevelopment. A dam (Waterloo Dam) was established on the Town Centre site to service this industry (Figure 5.9). The Victoria Park area was filled to form a race-course, before then being purchased for industry in 1948 (Frith 2004). A waste incinerator was built on the old Waterloo Dam site in 1972, operating until it was closed in 1996 (City Plan Heritage 2014).

The redevelopment of Green Square needed to address this natural environmental ‘heritage’. On the locality-wide perspective this requires financial contributions to a substantial new stormwater drainage system undertaken jointly by Sydney Water and the City of Sydney. On a precinct scale Victoria Park was an ‘early-adopter’ of Water Sensitive Urban Design (WSUD) principles – as the then most recently-developed evolution of stormwater drainage design and control (although the term itself is not used in the master plan documents). This follows the earlier identification, in the South Sydney DCP 1997, of the site, plus land immediately to the north and south, but not the Green Square Town Centre site, as where new development would need to include ‘stormwater detention with open space’, for the purpose of trapping and removing contaminants and increasing ground infiltration (pp.66, 67).

A key component of WSUD is the management of stormwater to achieve multiple objectives, including overall improvements in water quality and hence the broader ecological environment. It ‘views the urban water cycle as a whole rather than by its individual sectors such as wastewater, stormwater and water supply’ (McManus 2005: 119). In addition, for a WSUD scheme to ‘work’, particular attention needs to be given the on-going maintenance of the infrastructure, including provision of adequate on-going resources and establishment of a suitable management regime (Wong and Eadie 2000).

The adoption of WSUD as an integral part of the design and development of Victoria Park has also resulted in her key health-supportive benefits: the development of aesthetically pleasing and often relaxing open spaces with extensive water features, thus assisting liveability; the ‘making visible’ of the water flow and drainage aspects of the site development, thus increasing the connection between residents and wider ecological processes, and with nature itself; and long-term ecological improvement of the Botany

Aquifer (Landcom n.d.). In turn, there are also various non-health co-benefits: the resultant aesthetics and 'green' ambience assists marketability; and merging recreation and drainage space needs means a more economically efficient use of land. Combined, these features were used in the marketing of Victoria Park to distinguish it from other competing developments (workshop comment, 5.7.18).

Both the WSUD and the broader landscaping aspects of Victoria Park won various awards – which in turn assist in publicity and marketing (Landcom n.d.). The integrated landscape design at Victoria Park has been listed by the Australian Institute of Landscape Architects as one of the 'ten most significant works of 2001-2007', on the basis of its ability to inform design matters relating to density and to green infrastructure. The citation is copied below. WSUD principles are now also embedded within the GSTC master plan for similar reasons, although also without use of that term.

Three notes of caution, each from a health perspective, are also relevant, particularly in the context of Wong and Eadie's (2000) comment about the need for adequate maintenance of WSUD schemes:

- (i) The integration of drainage swales and the like with grassed public open space areas, such as is the case with Joynton and Tote parks in Victoria Park, risks removing those areas from effective public recreation use in periods of high or extended rainfall as the open spaces become too wet and even boggy for public use. This matter appears to receive little recognition and attention in the literature.
- (ii) Areas of ponded water are potential breeding grounds for mosquitos, and thus also for vector-borne disease. There are now added concerns about this possibility given the potential that warming temperatures due to climate change might lead to an expansion in areas subject to otherwise semi-tropical diseases (Curson and McCracken 2000), such as malaria and dengue fever. Again, this matter appears to receive little attention in the non-health literature, though it is noted that the various water features in Victoria do include mechanical pump systems to ensure continued activation.
- (iii) Visible waterway systems within residential estates can be an effective way of making people aware of how 'the social is connected to the environment' and how there is a 'recursive relationship ... [a] ... nexus between their life-ways and environmental flux' (Blair, 2010: 52, 53). This potential 'educational' aspect of WSUD is consistent with

some of the ESD objectives in the Green Square Town Centre Master Plan that seek to raise the awareness of residents and other Green Square users to the environmental ‘imperative’. However, Blair (2010) also warns that to effectively prompt reflection on the true variable nature of the environment, the engineering and management of such (man-made) systems needs to also present seasonal and climatic variations – and not simply a tidily-managed, and erroneous, image of constancy, and which, she suggests, is a risk in any landscape design associated with a WSUD scheme, particularly where also related to recreational space.

**Box 5.12: Extract relating to Victoria Park, Australian Institute of Landscape Architects (n.d.)**

**‘The ten most significant works of Australian landscape architecture 2001-2007’**

**5. Density and green infrastructure**

A central challenge for the next decade is for Australian cities to increase density whilst improving environmental qualities and social wellbeing. Finding innovative ways to integrate green infrastructure into urban fabric in the Australian context is necessary to achieve this. The risks and the rewards associated with integrating such infrastructure require careful consideration and cooperation between disciplines and the commitment of strong clients. Over the past two decades, Victoria Park in Zetland, Sydney, emerged as the most innovative example of integrated high-density living and water-sensitive urban design, opening up opportunities for other similar works. The result of a collaboration between the NSW Government Architect’s Office, Hassell and water engineers and scientists Tony Wong and Peter Breen, the park’s design has turned the problematic flooding conditions of the site into a dynamic and safe public landscape that celebrates water. The quality of the public domain design is evident in the way radical engineering solutions have resulted in an urbane, everyday civic vocabulary.

Nearby, One Central Park [in Broadway, Chippendale] is another radical project that integrates biological components into the facades and roof terraces of the building in a convincing aesthetic. Inspired by the sandstone ledges and caves of Sydney, the building facade becomes the site for a landscape experience. The new technologies integrated with the two projects were untested on such a scale in Australia at the time of their implementation. Both developments are test-beds for new biophilic urban forms that require new thinking about energy, technology, climate and maintenance to make them sustainable in the long term.



Victoria Park Public Domain by Hassell with NSW Government Architects Office and Turpin + Crawford Studio for Landcom, Sydney, New South Wales, 2002.

### ***5.4.3: Green Square as part tabula rasa brown-field development and urban experiment***

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#### **Key points:**

- At the time, there were few, if any, models of similar brown-field development in Australia at this scale – the case study developments are in this sense experimental.
  - The planning and development of the case studies has been iterative, assisted by the broad corporate brief of Landcom and the almost free-hand allowed by these brown-field sites without substantial surrounding development to consider.
  - This needs to be kept in mind when assessing the replicability of what has occurred.
  - There have been timing issues in the establishment of needed new infrastructure.
- 

The development at the time of Green Square – as a brown-field redevelopment – was somewhat an experiment in terms of the acceptance by the purchasing public of such development at the scale and density proposed (Landcom n.d.). Landcom itself had only recently been charged by the Government with ‘paying closer attention to development opportunities in inner and middle ring suburbs’ as a result of the adoption in metropolitan strategy of a more ‘compact city’, rather than continuing its previous focus on the ‘subdivision of land on the urban outskirts for detached family housing’ (O’Toole 1996). Victoria Park was the first substantial redevelopment within Green Square. Given the degree of uncertainty of market acceptance, plus an understanding that success on this site would be important as a catalyst for this larger redevelopment, particular attention was given to both the detail and quality of the development outcome (Landcom n.d.).

Further, given Victoria Park was located in an area with few if any existing residents, plus the wider corporate brief of Landcom itself, the master planning gave considerable attention to ways in which a new ‘community’ could be established. This included up-front provision of key areas of open space, the design of those areas to promote social activity (e.g. barbeques, a market area, and a community kiosk space), intended early development of a neighbourhood retail and commercial area, early provision of a local Council library, and the establishment of a ‘welcome’ program for new residents and a residents’ community group (Landcom n.d.). All these actions have positive health co-benefits. However, they may not have been given the same amount of attention if Victoria Park had been located within a different overall environment.

There was some precedence relating to the up-front provision of public open space and other community facilities in the earlier redevelopment of vacant industrial sites in Ultimo-Pyrmont in the late 1980s – 1990s. This project was overseen by the City West Development Corporation established in 1992 with infrastructure funding under the Commonwealth *Building Better Cities Program* (Warren Centre 2015; Murphy and Watson 1997). As with Green Square, an early impetus was the establishment of a new public transport link (a light rail). The Ultimo-Pyrmont locality is however substantially different: it is within walking distance of the city centre, it has a high level of amenity due to its elevated and harbour side location, there was an established residential community; and the available former industrial redevelopment sites were generally of smaller scale. Further, there were various resident-led campaigns against the development proposals (Murphy and Watson 1997: 158), a reaction which is invariably present in established residential areas undergoing increases in development density (Murphy and Watson 1997: 157). As such the degree of replicability with Green Square is limited. However, the early refurbishment of existing parks and development of new parks to quickly increase residential amenity and hence attractiveness, marketability and overall project credentials – with also a positive health co-benefit – is worth noting.

An impression from the various master plans for Green Square is that their authors had somewhat of a ‘free hand’ as a result of its (in part) tabula rasa nature, comprising large sites of low intensity uses with buildings that had ended their use and were to be demolished. Further, as noted, there were also no significant constraints arising from surrounding land uses. As Karskens (2004: 10, 11) notes:

‘... The challenge for planners, developers and designers is not how to link past and future, but about ‘creating excellence in design within the constraints of commercial reality’. In a recent public lecture, Phillip Bartlett, dubbed a ‘developer extraordinaire’, described Green Square as ‘the void, the vacuum, and where there’s a vacuum something will actually happen’. In fact its most positive aspect was the absence of ‘what other areas have, which means an opportunity to create something quite special’. Here developers are free of the constraints that history and heritage might impose— Green Square is a tabula rasa, a clean slate.’

Victoria Park was not however the first large site redevelopment of former industrial land in the immediate locality around Green Square. Two other developments, though of differing scales, possibly also influenced the ultimate planning strategies for Victoria Park and Green Square.

The former Reschs Brewery on South Dowling Street to the north of Green Square was progressively developed from the early 1990s to 2000. Given its quality and innovative design it received considerable attention at the time including three design/development awards. It comprises a high quality, high-rise development (up to 20 storeys) of 560 apartments, plus some commercial premises and neighbourhood shops centred on a new street and with a total FSR of 2.5:1. The development also includes well-maintained open space areas for residents, a pool, gymnasium and sauna, and a childcare centre; and included an early example of double-storey 'cross-over' apartments to give cross-ventilation while also ensuring north-facing living areas.

The Crown Square residential development by Mirvac Developments on the former ACI glass manufacturing site, also on South Dowling Street, comprises the northern-most part of Green Square. It also includes commercial development, a retail area, extensive open space and residents facilities comprising indoor pool, spa, gym and sauna. Visually at least, there is however less finesse in the overall design relationship of the buildings and in the functional design of the open space areas and the neighbourhood shops. Anecdotal advice is that it was suggested to prospective purchasers in Victoria Park of both the large development sites and the resultant individual dwelling units that they undertake a comparative assessment with Crown Square, in the confidence that the extra design attention given to Victoria Park would be obvious and lead to a sale (workshop comment, 5.7.18).

Two other implications of the clean slate and experimental nature of Victoria Park are noted. One is that the intended early development of the retail and commercial area did not occur. There were a number of reasons One was the limited viability given the initial small local market available; another arose because the development coincided with two market downturns (Landcom n.d.); and there was also a concern at State planning level that such development might compete with and take away from the viability of the then proposed Town Centre commercial area (workshop comment, 5.7.18). In part as a 'fill-in' facility, a local Saturday farmer's market was established in the central park. Comments by participants



in the *Planning and Building Healthy Communities* study (2011-2015) and visual observations made as part of that study suggested the market was popular. However, expressions of frustration at the then lack of a local retail and service centre was also common.

A further outcome is that the experimental nature of Green Square has led to its own suite of studies and surveys to assess success – and as such able to provide data to assist in deriving lessons for subsequent similar development elsewhere. Examples include:

- A post-occupancy survey of Green Square by Jigsaw Strategic Research for Landcom in 2004 (referenced in Landcom n.d.).
- A statistical review and analysis of the data from this study by Rashid & Rahat Arad, 2018 as part of doctoral research at the University of New South Wales.
- An on-going three yearly survey of residents, *Our Place*, conducted by the City Futures Research Centre, University of New South Wales for the City of Sydney.
- The inclusion of Victoria Park as one of four case-study sites in the *Planning and Building Healthy Communities* study (2011-2015) by the (then) Healthy Built Environments Program at the City Futures Research Centre and involving UrbanGrowth NSW, the National Heart Foundation, and the (NSW Health) South Western Sydney Local Health District.
- A Health Impact Assessment of Green Square carried out in 2017 by the Health Equity Research & Development Unit (HERDU) at the Centre for Primary Health Care and equity (CPHCE) at NSW.
- And now, this *Healthy High Density Living* research project itself.

**Box 5.13: Participant comment from the *Planning and Building Healthy Communities* study (2011-2015) about the provision of services in Victoria Park.**

*Can you shop local, here, in Victoria Square at the moment?*

No, only at the farmers' markets.

We've got to go to Woolies and Coles whatever [elsewhere]. You can't move up there and park and whatever. This is a big complex, we should be able to just walk across the road here and get our shopping.

*So, you're still waiting on facilities, services to catch up?*

[A] chemist would be good.

Chemist would be great.

[A] bulk bill doctor, you've only got one here, and he doesn't bulk bill. He's stopped...and had to go to Waterloo. So that's been, for people with children...I know my daughter's a little bit older so I can leave her at home, but if you've got a little one and you need Panadol and you've been the GP [and] you need a prescription for your child you have to get in the car and go up to Dank Street or down, you know, Rosebery way, which is just terrible for such a built up area that for simple things like a prescription or Panadol that you may need quite urgently

No newsagency, no post office. You've got to go down to Strawberry Hills.

Interviewee: Yes, are they putting one in here, in the new...

*Though it looks like a lot of the issues that we have here will be resolved, particularly with the new shopping centre?*

Obviously, for...future developments, if they can try and push things the other way, they'd have a very happy bunch of people living somewhere nice and new.

*What do you mean - push things the other way?*

Just a few essentials to make it easier for people while the places are building up. Just if we didn't have to go to Danks Street to go to the chemist and things like that, maybe, then, the whole, the road noise and the night works and the things like that. You wouldn't be so overcome by it all if then you just got your little - you can post a letter, you can pay a bill, you can go to the chemist, things like that.

Can people agree upon a minimum service that should we provide while the - is being developed, so, a chemist and post office and a doctor. Do you know what I mean? Just for every area?...the basic things that one area needs, every area...

I agree with everything everyone's saying. I think that basic services are really key, close by, to be able to get access to.

### **Box 5.14: Eight urban innovations to support experimental greyfield development.**

These conclusions and proposals summarised below are from a study (Newton, P. & Glackin 2014: 140-142, paraphrased with original emphasis) that looked at the experimental nature, to date, of greyfield development in Australia, in the context of what the authors say are more established brownfield development processes. The proposals are couched as specifically related to greyfield development; however they would also be applicable to brownfield development at similar precinct scales. It is also noted here that the proposals are essentially about process of development; and not about the resultant living environments (healthy-supportive or otherwise. They cite the need for:

1. *New urban policy* that recognises the significant opportunities that currently under-performing greyfield areas have for more intensive regeneration.
2. A metropolitan *planning authority* with responsibility for the strategic development of brownfield, green field and greyfield areas and their infrastructures, at a precinct scale.
3. Establishment of a greyfield precinct regeneration *program*, similar to the former Building Better Cities program that led the revival of brownfield sites, and underpinned by a new development 'model' from these experiences.
4. Urban *spatial information* platforms that can reveal an areas' redevelopment potential.
5. *New design models* for medium density precinct regeneration incorporating visualisation and performance assessment (including sustainability criteria).
6. Pro-active *community engagement*, with a trusted 'broker' to counter NIMB attitudes that can arise.
7. *New finance models*, including the ability for residents to become partners or co-investors.
8. *Construction and labour* innovations to reduce the higher development costs that characterise new medium density housing.

### **Box 5.15: Lessons for urban renewal**

Warren Centre (2015) Urban Reform Project 'Planning for Growth Case Study' study (entries paraphrased)

1. All urban developments or renewals are by their nature long term and multi-jurisdictional. Policy and regulatory frameworks needs to be established early and be able to adjust to changing circumstances.
2. All projects require extensive inter-government and inter-agency cooperation and strong political leadership. Successful projects show strong and highly visible government leadership assisted by a professional and independent public service, free from short term political interference.
3. A long-term vision and commitment, focused on outcomes not outputs; with clearly understood and articulated project objectives. A shared vision, clearly communicated; supported by strong, independent policy advice and bipartisan support for changes where needed over the life of the project.
4. The project must be part of a strategic plan incorporating land use and community requirements, and recognises their importance in shaping sustainable communities and the economy. Integrated planning, effective funding frameworks, detailed project briefs aligned with project deliverables, quality data and special skills are essential, but also responsive to changes in demand, context, technology and standards.
5. Continuous and extensive community and stakeholder consultation is required as well as flexibility to modify the project in response to submissions. Successful projects are characterised by genuine consultation with appropriate information to ensure informed debate.
6. Alternative procurement processes need to be considered and, once decided, adaptable; particularly for transport and utility infrastructure which need an implementation and staging strategy that is affordable.

#### ***5.4.4: Landcom as an active and creative player and its Healthy Development and Density policies***

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##### **Key points:**

- Landcom is an unusual, somewhat hybrid organisation in:
    - Its ability to act as a go-between between the market, and resident desires, the development industry, and government policy and process.
    - Its wide corporate brief that includes the ESD outcomes, including the generation of community, and its active pursuit of this.
  - This needs to be kept in mind when assessing the replicability of what has occurred, but also that Landcom does also serve as leader within the industry.
  - Landcom has adopted key policies on health and on density.
- 

In a sense Landcom is itself a component of the idea, suggested in section 1, of Sydney as an ‘accidental’ city (Ashton 1995). There are various components. One is that Landcom is a somewhat rare example, in ‘planning’, of longevity in an administrative organisation as a state level, and notwithstanding that, and consistent with Ashton’s (1995) thesis, it has also been subject to numerous changes in its structure and focus (including its more recent 2013 – 2017 role trading as UrbanGrowth NSW before reverting to Landcom). Furthermore, Landcom’s wide brief, as established in its legislation, has meant that it has been a particularly active player in the establishment of development processes generally, in addition to resultant built forms. This includes its work now in Green Square.

As an organisation, Landcom has its antecedents the NSW Land Commission, established in 1976 as a result of a decision by the then Federal Government to become more involved in urban issues, including housing supply and affordability (Spearitt 2000). Although its primary function was to acquire and develop land to ensure a supply of moderately priced allotments, the Commission was also required to conduct research into urban development issues, and to work with government and private bodies to promote appropriate urban development.

The Commission was incorporated into the new Department of Housing in 1985, and then, in 1986, re-established as a statutory body (the New South Wales Land and Housing

Corporation), using ‘Landcom’ as its trading name. Landcom’s functions were to acquire, develop and market affordable land for home buyers and builders, consistent with the objectives of the *Housing Act 1985* (see text box). As evidenced in earlier discussion, this emphasis on both supply and affordability – and on utilising releases of land on the metropolitan fringe to achieve this – has been a prime driving force in much of Sydney’s planning history. However, what is also of interest in terms of other long-held aspirations are the following particular inclusions (emphasis added):

- (i) To *encourage social mix* and the *integration of different housing forms* in existing and new communities;
- (j) To encourage the planning and development of new urban areas *as communities with a full range of appropriate services and facilities available in the shortest practicable time*;

**Box 5.16: The objects of the Housing Act 1985**

- (a) to maximise the opportunities for all people in New South Wales to have access to secure, appropriate and affordable housing;
- (b) to ensure that housing opportunities and assistance were available to all sections of the community with housing needs;
- (c) to ensure public housing was developed;
- (d) to ensure public housing reflected general community housing standards;
- (e) to maximise opportunities for tenants of public and community housing programmes to participate in the management and development of housing policies;
- (f) to promote orderly and economic urban development and the adequate supply of affordable and suitably located land for housing at the minimum practicable cost to consumers;
- (g) to promote equity between levels of assistance provided to people living in public rental housing, private rental housing and those who own or were purchasing their homes;
- (h) to maintain an efficient housing administration to ensure the effective co-ordination and provision of all housing services
- (i) to encourage social mix and the integration of different housing forms in existing and new communities;
- (j) to encourage the planning and development of new urban areas as communities with a full range of appropriate services and facilities available in the shortest practicable time;
- (k) to promote a viable and stable building and construction industry in the residential sector;
- (l) to facilitate the provision of an adequate supply of affordable home finance for persons in receipt of low and moderate incomes;
- (m) to encourage the development of flexible and innovative financial arrangements to facilitate access to home ownership for persons in receipt of low and moderate incomes;
- (n) to ensure appropriate mechanisms and forums are established to allow input into housing policy by representative community organisations and non-government agencies involved in housing policy and provision.

From 1995 to 2001, Landcom operated from within the Department of Urban Affairs and Planning; and expanded its operations to include a focus on urban renewal – in areas where transport, employment and services were well established but where the population was stable or declining – in support of the then imperative of ‘urban consolidation’ (Searle 2007). This role was also explicitly referenced in the implementation and governance section of the 2005 ‘City of Cities’ metropolitan plan for Sydney. The Chief General Manager of Landcom at the time when describing this expanded role also noted a wider joint human health and ecological imperative, consistent with the then planning zeitgeist: ‘that urban sprawl will result in declining air quality, water quality and may cause stress to the habitats of native flora and fauna’ (O’Toole 1996). It was in this role that Landcom became involved in the development of Victoria Park, and later contracted by the then South Sydney Development Corporation to assist in delivering the Green Square Town Centre.

In 1996, Landcom launched an environmentally sustainable development strategy orientated to the construction of energy efficient, ecologically responsible and attractive housing that would also be affordable to a variety of household types. This strategy included an Urban Design Program, which included New Urbanism principles. Although obviously the focus is on the development of Landcom’s own sites, there was also recognition of a concurrent wider community ‘promotional’ aspect – consistent also with the wider objective in the Housing Act to create ‘better communities’. As the then head of Landcom described it (O’Toole 1996):

‘Landcom is aiming to lift the standard of urban development through implementation of an ESD strategy which includes an Urban Design Program. This ... Program promotes the principles of New Urbanism in Landcom’s development proposals.

The use of new urbanism principles has been advocated to those participating in the tendering process. The aim is for Landcom developments to use creative design approaches to enhance the quality of the communities. ...

Landcom’s role is to work closely with local councils and industry and demonstrate the benefits of the New Urbanist approach by developing model urban developments. New Urbanist concepts are being adopted and will be implemented in an effort to create better urban environments for communities to live and work.’

This wider promotional aspect is also evident in later policies on other policies adopted by Landcom (see below).

This period of new sustainability thinking within Landcom coincided with the purchase and development of Victoria Park shortly thereafter; and influenced the particular the attention given to liveability, the quality of the open spaces, the diversity in dwelling types and the attempt to make connections back into the surrounding locality, even though formal individual policies about such matters had not always yet been established (workshop comment, 5.7.18).

Landcom was ‘corporatized’ in 2002, again with a broad brief (via the objectives of the *Landcom Corporation Act 2001*). In particular, it echoes, although without actually using the term, the then recently-developed ‘triple bottom line’ assessment tool, equating the achievement of ‘ecologically sustainable development’ with a necessary equal attention to environmental, social and financial factors. Arguably these have contributed to Landcom’s active and expansive role in Green Square (emphasis added):

- (1) The principal objectives of the Corporation are as follows:
  - (a) To be a successful business and, to this end:
    - (i) To operate at least as efficiently as any comparable businesses, and
    - (ii) To maximise the net worth of the State’s investment in it;
  - (b) *To exhibit a sense of social responsibility* by having regard to the interests of the community in which it operates;
  - (c) *To protect the environment* by conducting its operations *in compliance with the principles of ecologically sustainable development ...*;
  - (d) To exhibit a sense of responsibility towards regional development and decentralisation in the way in which it operates;
  - (e) To undertake, or *assist the Government in undertaking, strategic or complex urban development projects*;
  - (f) To assist the Government in achieving its urban management objectives;
  - (g) To be a *responsible developer* of residential, commercial and industrial land.
- (2) Each of the principal objectives of the Corporation is of equal importance.

It is also worth noting in this corporate brief the specific reference to complex development projects (section (1)(e)), and which have contributed to Landcom's involvement in the Green Square Town Centre (Landcom 2003).

Also relevant is section 14 of the Landcom Corporation Act in relation to environmental reporting:

- (1) The ... Minister is from time to time to adopt environmental reporting indicators, including environmentally sustainable development indicators, for use by the Corporation.
- (2) The indicators must include a methodology for making comparisons to international best practice in environmentally sustainable residential, commercial and industrial development.
- ...
- (4) The Corporation must monitor its activities against the environmental reporting indicators and must compile data on those indicators.
- ...

As part of these responsibilities, Landcom introduced a system of triple bottom line reporting, and other initiatives including innovations in water cycle management (i.e. WSUD), the introduction of sustainable energy technologies, and the training of on-site contractors in responsible environmental management. Later, in 2009, Landcom also sponsored the development of a sustainability rating tool to evaluate designs at the precinct level (complementing the State Government's BASIX tool at individual building level). Called PRECINX, it examines six factors (onsite energy, embodied CO<sub>2</sub>, potable water, stormwater, housing diversity and transport) to develop four performance indicators:

- Greenhouse gas emissions (tonnes CO<sub>2</sub>/year);
- Potable water use (kL H<sub>2</sub>O/year);
- Total affordability (\$/week); and
- Vehicle hours travelled (hours/week).

Landcom's active player engagement in planning and development processes has included publication of various design guide policy documents. The *Healthy Development* policy



(2010) describes how Landcom is to specifically include health considerations in its up-front development planning (see below). Other policies will result in positive health co-benefits from their implementation, even though health is not explicitly referred to. For example:

- *Street Tree Guidelines* – and which for example includes a list of species that limit pollen to reduce respiratory problems;
- *Open Space Design Guidelines*;
- *Public Art Guidelines*;
- *Water Sensitive Urban Design Guidelines*;
- *A Residential Density Guide*;
- *Built Form Design Guidelines*;
- *Street Design Guidelines*;
- *Universal Housing Design Guidelines*;
- *Community Centre Guidelines*, an associated *Community Centre Guidelines Fact Sheet*, and an initial investigative study of 13 community centres around Australia, *Community Centres Ideas Bank*.

The wider promotional objective of Landcom's activities is also evident. As examples:

- The *Healthy Development* policy (2010) states:

‘Landcom’s contribution to health outcomes is significant because of its reach – its ability to influence strategic projects and partners, and leverage private sector investment.’ (p.3).

‘Landcom puts policy into practice. The point of doing health-based planning at the due diligence stage of new projects, is so that health (and other) risks and opportunities can be identified and planned for. We are actively applying or health-focussed policy and learning to new projects.’ (p.7)

- The *Residential Density Guide* (2011) states that it will be useful also for ‘local councils and other government agencies that are involved in urban planning and development’ (p.4).

Various Landcom policies have also been cited as references in work undertaken by the City Futures Research Centre in 2017 to update the NSW Health *Healthy Urban Development Checklist*.

Other examples of Landcom's 'active player' role, using the example of Victoria Park, include:

- Engagement with the requirement to include a certain number of dwellings as 'affordable housing' in terms of how best to allocate these across the development, with a 'peppering' approach preferred (though not actually achieved in the end). In addition, Landcom undertook to have an additional 5% of housing cater for 'moderate income housing' (Landcom n.d.). This is in contrast to the developer of the nearby ACI site, who successfully appealed the affordable housing requirement, although it was subsequently reinstated (ISRCSD, 2000).
- Engaging with South Sydney Council to increase the residential densities from Council's own Strategy, and subsequent DCP planning controls, as more realistic to the locality and the wider urban consolidation imperative, as well as to practically fund the required site remediation, itself a health response, as then required by the NSW *Contaminated Lands Management Act 1997*, and necessary services and public domain infrastructure on this brown-field site (workshop comment, 5.7.18). This also in a sense gave a wider economic/metropolitan context to Council's local area planning.
- As a smaller example, the attention to quality details is evidenced from an internal memo suggesting discussion with the South Sydney Development Corporation regarding a proposed use of bitumen for footpath areas, on the basis that it was unacceptable 'from an ESD perspective' and also on future maintenance concerns.

*The Landcom Healthy Development policy, 2010*

The *Healthy Development* policy establishes the achievement of health-supportive development as an explicit practice. Part of this is to prepare an initial 'Social Sustainability Due Diligence Assessment' to identify 'actions required to achieve ... healthy communities'

(p.4). Importantly, the Policy notes, and responds to, the understanding that the determinants of a healthy population include the (fraught) issue of equality:

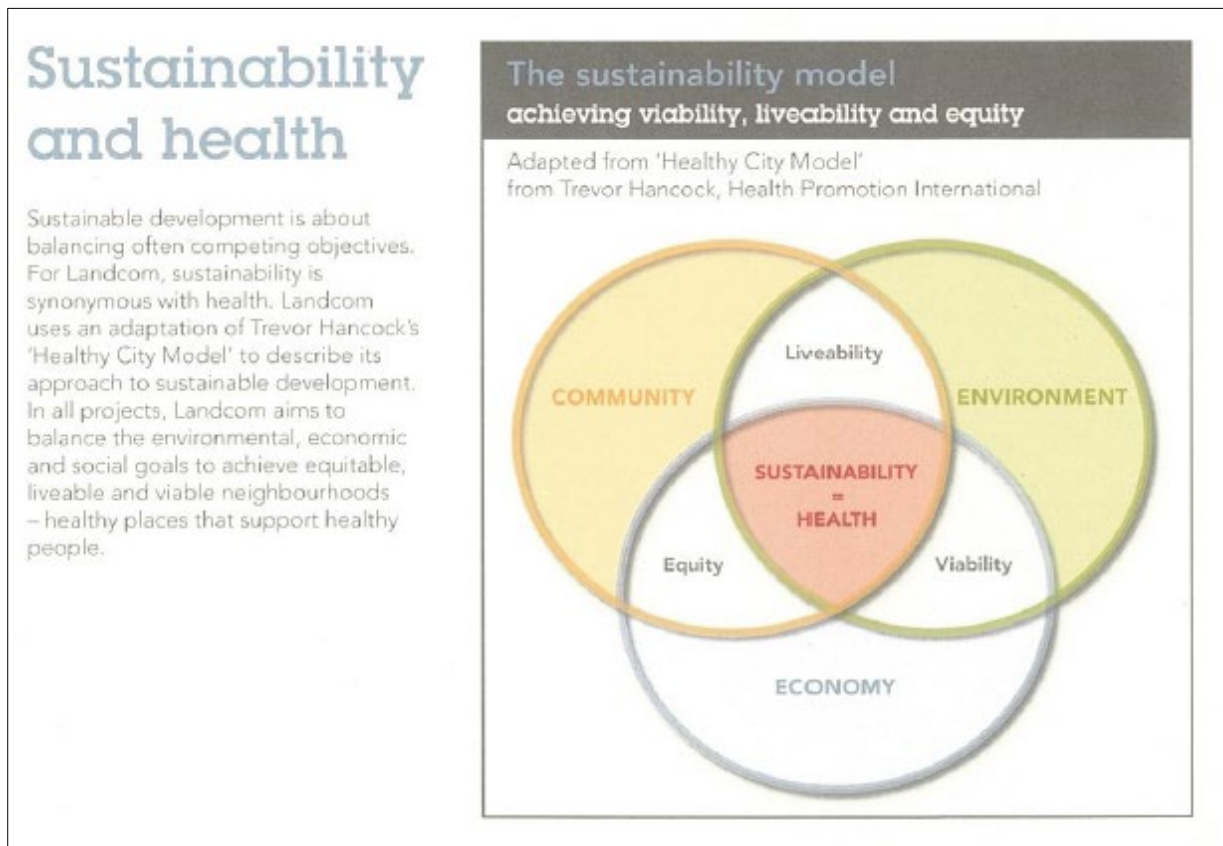
‘In unequal societies both the advantaged and disadvantaged are less well. Landcom’s overarching aim then, is to do development that minimises inequality ...’ (p.4).

The Policy cites its basis in a ‘Healthy City Model’ developed by Hancock (1993), and which equates health with ‘sustainability, and the intersection of community, environmental and economic factors’ (Figure 5.10). As Hancock further explains:

‘... health behaviours and choices are shaped by local social and environmental conditions; we need to create “vibrant places and spaces [that] cultivate belonging, inclusion, connectedness and engagement” in the context of “well-planned built environments and sustainable natural environments’.

The Policy also cites engagement with the Heart Foundation in relation to development at Renwick (near Mittagong), and with the then Healthy Built Environments Program (Faculty of the Built Environment, UNSW) to engage in an in-depth study of four new residential estates, including Victoria Park. The Heart Foundation also acknowledges the contribution of Landcom to its own publication: *Creating Healthy Neighbourhoods. Consumer preferences for healthy development* (Heart Foundation 2011).

**Figure 5.10: The model of health cited in *Healthy Development* (Landcom 2010: 3)**



**Box 5.17: A description of the Landcom *Residential Density Guide*, 2011**

The Guide includes various tools to assist practitioners to work out the implications on development form of different densities, as well as other factors, eg. the impact of car parking, lot tenure (Torrens or Strata title), the inclusion of land for non-residential uses, and the risk of ‘stifling creativity’ (p.32). It also includes a range of actual examples of built developments with an analysis of each in relation to various outcomes.

Key statements include (pp. 19-27):

- Density measures are only indicators, not design tools. Good design results from a combination of diverse other factors.
- The ‘right’ density evolves over time. Overall density targets may only be achieved after some years of development, with individual developments their own lesser or greater density.
- Higher density does not always equal higher buildings. Factors other than height, such as site coverage and setbacks also influence net density.
- Higher net residential density does not always equal more people. Different dwelling types can have different occupancy rates.
- The same building type can yield different net residential densities. Again, site coverage and setbacks are a factor, as well as dwelling size and, in an overall estate, allocation of space for other uses.
- Density is not intensity. Intensity refers to the measure of the feel of a place.
- Use caution when making comparisons. Net residential density results from a range of factors.
- Be aware of step changes. This refers to the use of terms ‘high’, ‘medium’ and ‘low’ density, which do not have neat boundaries, again due to the number of design factors that produce a resultant built form.
- A complementary measure – activity density. An assessment of resultant activity, beyond that generated by the anticipated residential population, is necessary to assess the viability of any non-residential uses.

#### 5.4.5: *Attending to financial costs*

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##### **Key points:**

- The financing of timely and effective infrastructure has been a continual dilemma in Sydney's residential history, and has often required Commonwealth contributions and associated interest in urban affairs.
  - In turn, inadequate infrastructure can be traced to significant, and varied, health dis-benefits, many of which only become apparent at a later date.
  - The development financing of the case studies has taken considerable time to resolve, and required innovative measures as well as up-front public capital.
  - On brown-field sites, the development of new infrastructure from a low base affects the resultant affordability and thus equity, with resultant health impacts.
  - The case studies are now, fortuitously, located within a wealthy Council, and a growing equally wealthy global market base.
  - This needs to be kept in mind when assessing the replicability of what has occurred.
- 

A persistent theme in these reviews has been the issue of just how to fund the urban initiatives to which the various planning strategies are orientated. There is a range of associated matters. Combined they raise inherent issues for both brown-field and health-supportive development in general; and notes of caution in terms of the ease in which the 'Green Square model' may be replicated elsewhere. As examples:

- It took some three years between the County of Cumberland Plan being presented to the Minister and for it to become law. This was primarily due to concerns about the estimated costs of implementation, how it would be funded, and the distinction of responsibilities between state and federal government (DEP 1984: 5,6), even though the supporting documentation also demonstrated that the savings, including from costs in future health care, and efficiency savings in having a healthy population, would outweigh those costs. As Winston (1957: 94, emphasis is original) noted, the outcomes of a health-supportive environment tend not to be measured in formal ways:

'All the children who are NOT killed or injured because of better road planning and school siting, all the factory smoke and noise that does NOT blacken and disturb your home because of better industrial zoning, all the additional hours of travel discomfort you do NOT have to suffer on the way to work and back, all the crime

and disease you do NOT have to pay for in taxes for health and police services, because home life and living conditions are improved .... . All these advantages perfectly real and important, but their benefit is spread imperceptibly over the whole community and their money value is difficult, if not impossible to assess.’

- The substantial new housing initiatives proposed in the County Plan (establishment of new towns, and the redevelopment of existing slum areas) largely did not occur during the time of the Cumberland County Council largely due to issues of financing, (SPA 1967; Coleman 1970; Stretton 1970), and which were only resolved largely when Commonwealth monies became available (Coleman 1970). Although the proposals (both inner urban and outer urban) invariably included a range of associated (health-supportive) facilities in addition to the dwellings themselves, there have been differing views as to the adequacy of the end product.

When discussing the high-rise housing developments that tended to be the principal form of replacement public housing in the inner city, and the ‘Le Corbusier’ model on which they were often based (tall buildings separated by green space), McManus (2005:36) suggests: ‘It is prudent to be cautious about [that] legacy ... because the inheritors of Le Corbusier’s ideas often tried to save money and in doing so were not faithful to his vision of a skyscraper in a park. Green spaces became car parks, buildings were cheaply constructed, and so on’; noting also that a number of such developments in the United Kingdom have been subsequently demolished. As he adds: ‘The legacy of the high-rise housing estates is similar to the low-density fringe public housing estates found in cities such as Sydney, Adelaide and Perth. They both have their genesis in the desire to house greater numbers of people as cheaply as possible, rather than housing fewer people in better conditions.’

However, Mee & Dowling (2000) suggest, in relation to the outer urban developments, that while there have been similar criticism, it usually overlooks the positive and health-supportive aspects of such areas in providing ‘modern housing at an *affordable* price’ (p.280, emphasis added) in a time of acute housing shortage and often providing ‘the fulfilment of a dream’ (p.288). In reference to Green Valley and Mount Druitt, they also add that, and contrary to McManus’ statement above, ‘... the NSW Housing Commission was not just aiming to house as many people for as little money as possible. It sought to

create an ideal suburban environment ... similar to those places aspired to by many Australians at the time. Central to this was the provision of adequate open space (in comparison to the crowded inner city) and specific spaces for homes, schools, shops and recreation' based on walkable neighbourhoods (p.285). Freestone (2000: 132) and Stretton (1970) however notes that these areas did suffer from a 'poor' level of service provision.

- The Cumberland County Council (1958: 19), in reporting the outcomes of a tour to United Kingdom, Europe and United States of America, itself noted the inherent – and continuing - conundrum in Sydney's development. On the one hand, it concluded: '... Australians appear to prefer houses and so far the advantages of flats or high density housing have not become evident enough to justify any expectation of an immediate change in taste.' However, it also noted that '... there are certain disadvantages of low-density housing that must be emphasised', citing, issues regarding the cost-efficient provision of services and 'water shortages and a complete lack of sewerage' in some areas; and, echoing many of the arguments put in support of urban consolidation today (e. g. Murphy and Watson 1997; Connell and Thom 2000), 'The need to exploit to the full our existing public utilities and transport facilities ... not only as a matter of economy but as the surest way of securing these services as the required scale for all zoned land'.
- The 1968 Sydney Region Outline Plan, in replacing the County Plan, noted '... clearly ... *a much higher level of public investment must be faced* in the future' (State Planning Authority 1968: 103, original emphasis). As one response, the proposed town centre in NSW to be included in the new public-funded suburb of Mount Druitt became the first such centre delivered in a public-private partnership. Constructed between 1971 and 1973, it was funded via a long-term lease arrangement with a private developer (Lend Lease Corporation) (Spearitt and DeMarco 1988). Spearitt and DeMarco (1988: 71) quote the Government's explanation at the time, being to ensure an early up-front provision of services to the new population: '...in most new towns in the United Kingdom, large numbers of people had to settle before adequate facilities were made available and Australia's major new city, Canberra, waited 35 years for its first department store'. They also however noted an adverse reaction at the time in that the Government agency charged with implementation (the State Planning Authority) was depicted as a 'profit-

motivated partner to private developers’; a view they suggest as false because the financial returns were applied to ‘roads, services and community facilities’ in the new suburb.

Here it can also be noted that Lend Lease has been involved in a recent, varied, continuation of this model. In this case, actual purchase of the land rather than a lease in the construction of the new regional town centre at New Rouse Hill, developed by Landcom.

Often, the required higher level of public investment has had to wait until Commonwealth monies have become available in conjunction with an interest, at that level in urban affairs which has generally been regarded as a state issue. This has been particularly so now in relation to ‘brown-field’ development with its necessary capital costs in infrastructure and other services given these are not usually a part of previous (industrial) uses; though, by comparison, urban consolidation policies, of which brown-field development is a part, is itself a response to the cost of new infrastructure on the metropolitan fringes, with one of the reasons cited why the new towns proposed in the County Plan were never built being a lack of Commonwealth funding (Meyer, n.d.). The Ultimo-Pyrmont redevelopment in the 1990s for example, the first substantial such development in Sydney was financed under the Federal Government Building Better Cities program, leading the way to other such redevelopments such as in Green Square. This program also led to the publication of the Australian Model Code for Residential Development (AMCORD), referenced by South Sydney Council in its DCP of 1997. Earlier, the activities of the NSW Housing Commission, established in 1942, were hampered until it was able to obtain greater funding from the Commonwealth in 1945 through the first (Australia-wide) Commonwealth States Housing Agreements, as part of post-war reconstruction programs under the then Labor Government. This enabled the Commission’s later and continuing roles in new estate housing as well as ‘slum clearances’ (Colman 1970; Meyer n.d.). And the rehabilitation, rather than redevelopment, of Glebe and Woolloomooloo in the 1970s, and which acted as models at the time for resident protests against the slum clearance proposals in Waterloo, were funded by the then Labor Government Department of Urban and Regional Development (Burgmann and Burgmann 1988); as well as establishing, with state governments, Land Commissions aimed at making available affordable land and housing on the metropolitan



fringe (Meyer n.d.). The NSW Land Commission became Landcom in 1986. The same government also funded the then new Regional Councils for Social Development.

- Substantial attention has been given in the various Green Square documents to the funding of required additional infrastructure and other services. In the section on ‘social infrastructure’ in the South Sydney Council Green Square DCP (2002) reference is made to Council’s Section 94 (developer contributions) plan for the area as well as to the likely need to fund a proposed new leisure centre (as assessed as required for the new expanded population) through a ‘Build, Own, Operate, Transfer’ (BOOT) system ‘or similar’ (p.17). The Victoria Park Master Plan included a requirement that ‘shared or communal facilities ... be located within each multi-unit development for resident recreation and leisure’ (p.26), listing picnic areas and BBQs, ball courts and swimming pools as examples. The Green Square Town Centre Master Plan itself includes a substantial section on establishing structures to finance its implementation, including referencing the Green Square Town Centre Infrastructure Strategy which includes detailed, and quite complicated, financial arrangements to be made with each developer in Green Square (see section 2.4). The resolution of these funding arrangements was one reason cited by the Warren Centre (2015) contributing to overall delays in implementing the Master Plan.
- In addition, brown-field redevelopments will generally accrue costs arising from necessary remediation of pollutants from former industrial uses; a necessary, and now legislated, health expenditure. There are however flow-on effects that also have potential health impacts. One is that site developers may seek to recoup this additional cost through additional density, this changing the form and scale of the resultant development. Another is that any costs passed on to the end purchaser can impact on affordability.
- Specific provisions requiring contributions to a minimum amount of affordable housing, either by way of monetary contribution or physical dwelling units, can have similar implications. At Green Square the affordable housing provision in the South Sydney LEP, 1997 was challenged by the developer of the ACI site to the north of Victoria Park (Meriton Apartments) on the basis of concerns about impact on financial returns. The appeal was upheld by the Land & Environment Court, though the provisions were eventually reinstated by re-making the LEP and after changes to the Environmental Planning & Assessment Act; also contributing to the delays in implementing to overall

Green Square Master Plan. By comparison, the Landcom development of Victoria Park accepted the provisions and included additional moderate income housing, consistent with Landcom's charter in respect to affordable housing in general.

- A frustration expressed by residents of Victoria Park about the lack of early retail and other local services (see section 2.3) is echoed in comment cited by Sharpe et al. (2013), namely the time-lag in providing the larger social infrastructure investments, particularly the library and sporting facilities, that will contribute to the overall 'liveability' and 'health-supportiveness' of Green Square as a whole. The respondents to the ISF study do however note that there is little doubt that this infrastructure will be provided given the financial resources available to the local Council, the City of Sydney, and indeed these facilities are already under construction since the date of the interviews for that study. The respondents do though point out a critical additional matter when considering the replicability of the Green Square model elsewhere, that the City of Sydney is one of the most well-resourced councils in Australia, substantially ahead of most other local government authorities. One can also add here a note that the financial structures in place to over time recoup this expenditure by way of developer contributions is assisted by the substantial scale of the overall Green Square redevelopment, and also, arguably, the premium on returns as a result of the inner city location, although here also the UTS study notes that this premium on land values also adds to the cost of providing certain physical infrastructure.
- Finally, it is likely that the financial success to date of Green Square, as for instance exemplified in the greater than predicted financial return to Landcom from the Victoria Park development - section 2.3, is due, in part, to its functional role as a residential centre and a future employment centre within the growing global status of the Sydney economy. This role is then coupled with its key location in the notional 'Global Arc' and within walking distance, should residents and workers feel so inclined, of the City centre. Combined, it means that the purchasing power of its likely residents is no doubt greater than those employed in the more traditional local employment sectors (Connell and Thom 2000), and similar to that of the 'gentrify-ers' of the older inner-urban housing before them. In turn, it means they are well able to afford the premium in costs arising from the development of such brown-field sites in terms of remediation, the provision of new and/or additional infrastructure, and contributions to the equitable provision of affordable

housing for others, as well as from the high quality of design, construction and on-going maintenance that is proposed and is already apparent.

A substantial aspect, and reason, for the involvement of Landcom in Green Square has related to such financial matters. Searle (2006) referred to these as ‘received resources’, by the then South Sydney Council, including planning assistance delivered through the then South Sydney Development Corporation and used as a way to allow the local council at the time to retain its overall authority over the area (see also section 1.1).

In Victoria Park Landcom was able to purchase this large site as well as a smaller adjacent but strategically located site to assist the overall development (Landcom n.d.) in the early days of Green Square when other private market developers may not have been willing to take the risk in what was then still a largely industrial area. Landcom was then also able to fund up-front the substantial infrastructure costs involved in establishing the site for redevelopment, and to do this with the desired quality. As part of this it entered into an arrangement with the local council to then have those costs re-funded over time as individual Section 94 contributions were received as development progressed. Here Landcom has suggested that this meant that it was able to provide the infrastructure at a higher standard than would have been provided by the Council (Landcom n.d.) At the time, this was the South Sydney Council, which would not have had the same level of revenue as the now combined City of Sydney. Furthermore, the rate of take-up of the individual development sites and hence payment of Section 94 monies would not have been known as, again, the market acceptance of Green Square was still somewhat uncertain. In addition, the period of development also coincided with some down-turns in the market (Landcom n.d.).

In relation to the Green Square Town Centre, one part of the involvement of Landcom was to provide seed funding for, again, necessary infrastructure works, in particular also given a limitation of the then South Sydney Development Corporation was that it itself did not have substantial assets or revenues (Searle 2006).

**Box 5.18: Extract from *Green Square Case Study* report (Institute for Sustainable Futures)**

Sourced from: Sharpe, S., Moore, D. & Paddon, M. (2013), *Research into the Economic, Social and Environmental Implications of Population Growth in Australian Cities: Case study–Green Square, NSW. Report for the (Commonwealth) Department of Sustainability, Environment, Water, Population and Communities*. Institute for Sustainable Futures, UTS.

The study comprised interviews with six stakeholders: from the City of Sydney, the Green Square Community Development Coordinator, Major Development Projects Manager, and Planning Manager; from Landcom, the Green Square Senior Development Manager and Development Manager; the Green Square officer from the Department of Planning; a UNSW researcher involved in resident surveys in Green Square; and a co-founder of the local Green Square Growers Group.

Stakeholders identified issues of land contamination (asbestos) and the need to augment existing infrastructure to cope with the land use change. This is at comparatively higher cost to developers and Council because of the inner-city location and high land values. These costs flow through into the variety and price of the residential housing stock produced, and influence the demographics and other social characteristics of the area, with both positive and negative consequences.

A major benefit was the opportunity to do something innovative and large scale. The Council has major plans in terms of low emissions energy supply, water recycling, and waste collection. These were exciting and made living and working in Green Square desirable. Many residents were ecologically conscious, and energy, water and waste efficiency activities were seen as positive from resource efficiency, cost and environmental perspectives. The projects however were not without downsides, with learning costs and delays. Landcom was essential for enabling these new systems to be developed and implemented.

There is some frustration and development ‘fatigue’ for some residents. These people feel they have to ‘put up’ the negative aspects of congestion, lack of parking and so on, while the benefits of more services and higher urban amenity seem far off.

Health impacts of high density living.

[A] focus on the need to plan for social interaction and develop community cohesion was linked to some of the potentially negative health impacts of higher density living. Stakeholders spoke of the importance of green spaces, jogging tracks, dog exercise areas and quiet places for residents.’

Overall, stakeholders thought the planning was in place, and there was not a high degree of concern that recreational facilities would not be provided. Acknowledgement the Council was financially well resourced and had significant leverage with developers to ensure high quality recreation infrastructure was in place. Some stakeholders said this was very different to new development areas in outer metropolitan areas.

*‘... the City of Sydney is probably better equipped to deal with this than most other councils because of its size and resources – more like a government agency than local council – they have more strategic planners ... than NSW Department of Planning has.’*

Capacity and resources of local council

All stakeholders made comment about the capacity and resources of the local council to deliver new services and infrastructure for the area. They noted this was completely different to councils in greenfield areas. There was little concern that facilities and infrastructure would not be provided, however many stakeholders were frustrated about the length of time residents needed to wait before facilities became available, suggesting the sequencing of provision is a concern for all areas of population growth, not just greenfield sites.

## 6. Discussion and Key Themes

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### Key points:

- None of the documents reviewed provided an explicit definition of healthy high density living;
  - The review found that there was a lack of density definitions based on a specific spatially defined and quantified set of criteria, with only one document, The Victoria Park Master Plan – Background Information (1998) providing a calculation of dwellings per hectare.
  - Health has indeed been present within the past and current planning of Green Square, however this presence, and the underlying intentions, is only rarely made explicit.
  - There are though many more health inclusions that are implicit, generally through co-benefit actions through more highly visible actions around community, place-making and environmental sustainability.
  - There is a risk however that by not being explicit, such intentions and fortuitous co-benefits can become lost over time and in various phases of development due to competing issues and interests and general lack of understanding and thus attention to the health-environment imperative.
  - The development of Green Square comprises a complex mosaic of overlapping issues requiring resolution. However, a feature is a distinct engagement with this complexity by Landcom and the City of Sydney, providing the potential for lessons for practitioners dealing with higher density development elsewhere.
  - There is though also a noticeable lack of current engagement with any particular needs of *high-rise* high density.
- 

‘Green Square names a place in transition, a place where the new literally jostles with the old, and where the past is in danger of obliteration as the city relentlessly expands, constantly remaking itself.

With the decline of secondary industry since the 1970s, the twentieth century industrial landscape of vast factories and belching chimneys is in retreat. Meanwhile, Sydney entered the global city stakes. ...

... [A]t Green Square we can actually witness the spectacular, strange and often poignant process of social, physical and economic transformation. It is a case study of a process which has occurred in Sydney since its inception.’  
(Karskens, 2004: 9)

## 6.1 Overview

This review commenced with the particular individual documents related to the planning for Green Square and the two case study locations in order to determine (i) how higher density living was defined, and (ii) the extent to which considerations about health played a part. In this sense it is an historical investigation, noting also that the Green Square Town Centre is still in its embryonic stages with current and on-going planning strategies in addition to the earlier master planning, and the health of the residents in the now substantially completed Victoria Park estate is of course also on-going.

### *Defining Healthy High Density Living*

None of the documents reviewed provided a definition of healthy high density. Where resident or dwelling targets may have been outlined it was never indicated that the resulting level of density was optimal for health. In addition, there was no evidence to suggest that the proposed development densities at Victoria Park or Green Square were based on a 'healthy density' target, rather the density of the sites was determined by what might sell. Generally, the delivery of 'greenspace' alongside residential buildings was used as a proxy for providing healthy initiatives on the sites.

### *Lack of Definitions of Density*

The review found that there was a lack of density definitions based on a specific spatially defined and quantified set of criteria, with only one document, the Victoria Park Master Plan – Background Information (1998) providing a dwellings per hectare calculation. While the term density was used frequently, none of the reviewed documents provided clarification of what might constitute low, medium or high density. This is problematic when the density of the site is labelled low, medium or high density as without any accompanying density calculation as there is no basis for comparison and readers attribute their own conceptualisation of density levels to the site. It also becomes more confusing when buildings are described as 'lower density' in documents where the maximum density is not defined (i.e. the buildings are not necessarily 'low density' but simply less dense compared to other proposed buildings).

Fifteen of the documents reviewed (seven related to Victoria Park and eight related to Green Square) do not contain any numbers or phrasing that conceptualise density. The types of documents that did not provide any descriptors to aid in the conceptualise density were documents that would not be expected to make reference to such measures, such as the Contaminated Site Summary Audit Report, the Contribution Credit Deed and documents related to resident social activities such as event flyers. The lack of conceptualisation of density in these kinds of documents is generally acceptable. More concerning is the lack of comprehensive density definitions and supporting quantitative and qualitative factors in key planning documents such as the Green Square Town Centre Planning Proposal.

Importance of qualitative and quantitative descriptors in the conceptualisation of density  
Only one document, the Victoria Park Master Plan – Background Information (1998) provided a proposed density of the site, expressed in dwellings per hectare, for two development scenarios. Through the review of this document it became apparent that the inclusion of a single measure of density might not provide enough information for a reader to understand the proposed level of development on the site. More familiar single measure descriptors such as building height in metres, number of storeys and written descriptions of building form such as townhouses or slim towers might be more helpful in visualising what Victoria Park might look like. It is not difficult to imagine that some readers may find the proposed number of storeys of a building as an easier comparison metric over number of units per metre squared. In many ways the conceptualisation of density may be seen as a subjective process, where the process of conceptualisation will vary from person to person depending on their background, experience with different descriptors and the definitions of what constitutes low/medium/high density in their own context. It is therefore important to provide a range of quantitative and qualitative descriptors alongside density calculations in development documentation.

#### *Pliability of density levels at Victoria Park and the Green Square Town Centre*

The Victoria Park Master Plan demonstrates a rare pliability in regard to final density levels on site and discusses the possibility of increasing or decreasing density on the site depending on market condition. In contrast, the Green Square Town Centre Planning Proposal uses much of the document to make statements about the need to allow densities beyond current limits to ‘cover’ the associated costs of the development. Much time is spent justifying the

need to amend planning allowances to increase density. There is no suggestion that there is any flexibility, just that higher densities must be allowed.

*Health is present, but with variations as to conceptualisation and visibility*

It was found that health is a continual, but varied, presence. In terms of variations, there are a number of elements. One relates to the way in which health is conceptualised. The review found elements of all the three conceptualisations of health identified in the earlier associated literature review conducted for this Study: global public and population health, socio-ecological determinants of health, and planetary health (or relational ecology). Another variation relates to the visibility of this presence. Only rarely is health mentioned specifically, most notably in earlier strategic planning documents (The South Sydney Plan of 1995 and the County Plan of 1952) or in the identification of actual health care needs and facilities. Mostly, the presence of health comes about through co-benefits that will arise from other actions. In turn, many of these other actions arise from processes and ideas that, at that time but also continuing into the present day, figured highly in the then professional and societal milieu: sustainability/ecological sustainable development, for example, the generation of vibrant places of social and therefore also economic activity, reduction in dependency on the private car in favour of public transport, walking and cycling, the imperative to quickly house an expanding population in ways which are affordable, and the creation of living environments with high amenity as part of marketability objectives.

*There are also variations in the underlying intentions for including health, but these are difficult to determine*

The review then turned to the question, in relation to these varied inclusions of health, of 'how and why'. What was happening in the world of the practitioners to motivate them or require them to include, or not include, health their activities? The answer to this is therefore important in terms of the translational aspects of this project.

This part of the review proved more complex. In those circumstances where the inclusion of health is more implicit and unstated leaves unanswered the question of the extent to which the practitioners preparing the documents were aware of these connections, and indeed of the health imperative itself. Here, for instance, the practitioners actually aware of this connection



but simply not bothered or thought it necessary to make it explicit, concentrating instead on the often more-in-demand concerns like sustainability, social and commercial vibrancy, the marketing of amenity, and the need to reduce car dependency? Or, alternatively, are these connections and co-benefits unintended and simply fortuitous?

Part of the difficulty is another, related possibility. One of the background features of the time was the developing consciousness of the need for a more connected - holistic, joined-up' - thinking in the resolution of the complex problems then becoming apparent. Examples of responses include the 'triple bottom line' approach to sustainable development, the ideas of 'integrated local area planning' and 'place management', and the changes in professional descriptors, such as health surveyors becoming 'environmental health' officers, town planners becoming 'environmental planners', and architects becoming 'urban designers'. This connectedness is also well illustrated in the later (2010) model adopted in the Landcom 'Healthy development' policy, which merges community, environment and economic matters to achieve a common 'sustainability=health' outcome. It may be the case, when such more holistic approaches become inherent within a practitioner's reasoning, that there is a 'matter-of-course' understanding that actions in one area will influence others and with then no necessity to make those other areas explicit.

Furthermore, there is also the overall complexity that is urban management. Amongst the plethora of immediate issues needing to be resolved, those with longer term implications – like health – can become lost. But that in itself is also not sufficient reason to not consider certain matters. One could suggest that 'sustainability' has similar long-term objectives, as well as, as with health, immediate implications as well, and yet, as the review of documents shows, this recent and complex imperative was given substantial prominence.

Still further, even when there is direct mention of the health-built environment nexus, this mention is often sketchy and almost in passing. While some matters do get mentioned, suggesting an awareness, later in the same document other connections are not mentioned at all; raising the question of whether this comes down simply to the knowledge and interest of the author at the time, such as the reference, in one document, to the need to provide long views as relief from close-up desk top work. As other examples, the passing mention in the Victoria Park Master Plan that cycling is good for human health whereas there is no similar comment in relation to the Plan's emphasis also on walking. The positive health effects of

improving indoor air quality from operable windows to allow natural ventilation is mentioned, but not in reference to the recommended use of low emission paints, and which seems to be more orientated to wider pollution concerns. Issues relating to mosquitos and their role in potential vector-borne disease is not raised at all when discussing the substantial use of community-based stormwater detention systems and their potential to then enhance the amenity of public open spaces.

Also, not raised are matters to do with standards relating to light and ventilation of internal rooms, no doubt because there are well-regulated standards in this regard in NSW driven in response to the earlier era of less-regulated dwellings that made up the slums of inner Sydney. The result may have been different if Green Square was in Victoria for instance where these standards have been relaxed, to growing objection and subsequent review. Similarly, the inevitable required decontamination of pollutants when developing these brown-field sites also tends to receive only passing mention, likely due to being a given because of legislation. However, the resultant health benefits do come at a development cost which then needs to be re-couped and which in turn can lead to density increases, or to changes in the provision or quality of services, or an impact on the affordability of the individual dwelling units – all of which have their own health impacts.

*Earlier responses to health issues can generate their own on-going concerns*

There is also the possibility of an embedded knowledge that planning has always been involved in resolving health issues. This though raises its own dilemmas in terms of explaining the varied inclusion of health in planning documents. One is that actions invariably seem to come after a problem has arisen, with planning playing catch-up. Furthermore, actions to resolve the problem tend to focus on particular and singular solutions, and that problem only. South Sydney provides a number of examples dating back to the earliest days of settlement: the establishment of a new water supply pipeline to the Botany Swamps after the Tank Stream at Sydney Cove became polluted, the resolution of degraded housing stock due to poor construction standards and land use planning via simplistic demolition, and legislation to require remediation of contaminants deposited by uncontrolled earlier industrial uses. This is different to forward thinking about what might constitute a health-supportive environment in the first place. In addition, when we do undertake this exercise there have been significant variations in what we consider as appropriate models and

then how they are implemented. The garden suburbs of Daceyville and Rosebery for instance, developed to address slum housing issues, have entirely different health outcomes from the later similarly-designed suburbs on the fringes with less access to services, and often also a density that is too low to support the provision and maintenance of services. And although it has been argued that the low-scaled but denser Strickland Flats building of 1914 embedded within the existing urban fabric of Chippendale arguably provides a healthier living environment than the high rise but less dense Northcott Flats building set within open space in Surry Hills, anecdotes from the time suggest that the community itself preferred the garden suburb idea of Daceyville.

Here again the result has been a further dilemma – that the concentration on a suburban ideal and an ambivalence, or even rejection, towards residential flats has, until very recently, left us without a range of good – and well-researched – higher denser housing forms to model. Further, where there are concentrated groups, into estates, of residential flat buildings, these have primarily been for public housing - which generate other non-design issues that impact on health, such as low income, low unemployment and poor maintenance, that then complicate any assessments. Further, private residential flat development has tended to comprise individual buildings scattered on suburban lots with close-by neighbouring development, meaning potential amenity impacts to those properties are often significant determinants of final designs.

We are now, in a sense, catching up again in terms of understanding the extent to which high density environments can be health-supporting. Except for the broad-areas of low-density housing typical of the outer suburbs, the South Sydney area provides examples of all such development patterns, including traditional detached housing, as in Rosebery, adjacent to Green Square to the south. Matters relating to density and health have been a continual part of South Sydney's lived experience, and now Green Square represents a latest example. Landcom, as the major player itself has corporate policies and guidelines on both health and residential density. The current Study provides an avenue to bring these two elements together.

*A need for an infused network thinking in order to connect learning and practice*

Such translations between learning and practice have been discussed by McManus (2005) in relation to the imperative to make cities more sustainable, and which, although referring to

human survival as an explicit driver, is concentrated on ecological sustainability, with human health tending to be seen as an outcome. McManus uses the idea of actant (or actor) network theory, drawing on work by Callan (1986) to note the need for:

- A situational thinking that takes into account local conditions and other factors including culture, instead of the more usual approach of homogenous thinking that eschews context and often results in a mentality of one best way to do things (p.3),
- But also an ability to see beyond the confines of each place and learn from the experiences of others elsewhere.

In terms of this latter necessity, McManus (2005: 3) refers to the contention, within network theory, that as ideas and experiences travel they are invariably translated into a form suitable for new contexts, and which is different to the notion of diffusion where ideas similarly spread from a particular point and are implemented in a variety of locations, but without any particular variation (p.84).

In reviewing the background to the master plans for the two case study localities, The South Sydney Plan adopted in 1995 stood out in the way in which it appeared to be infused with the very strong and very local experiences of that community in terms of housing, local amenity, employment, and social equity, and, as such, also health. In comparison, most of the other documents reviewed came across as somehow more detached from this imperative. Health, in these documents, tends to be seen through the lens of other orientations, principally sustainable development and urban design. While The South Sydney Plan also gives strong focus to both these matters, its approach appeared to be very much from the perspective of the human experience itself of living in South Sydney, and which was, as noted in Section 3.6, very much tied up with a range of social and economic concerns. The South Sydney Plan appears to provide an example of Engwicht's (1992 :7) vision, using, in a nice coincidence, a health metaphor of practitioners working more as doctor than mechanic:

‘... If instead planners were to view the city as a living organism, an ecosystem, and the planner was to see his primary function as promoting health then he would cease being a ‘mechanic’ and would become a ‘prophet/doctor’.

Two associated questions then arise, and, to an extent, must remain unanswered, acting more as reflective prompts:

- If The South Sydney Plan had not been so focussed on health, would the health-supportive responses, albeit generally not referred to in that direct way, in the subsequent master plans for Victoria Park and the Green Square Town Centre have occurred?, and
- If the South Sydney community itself had a different set of characteristics and a different set of experiences, for example, from a better placed socio-economic class, and without the experience of inner-city substandard housing, and perhaps also without the sense of ‘working class’ community, would The South Sydney Plan have included this content in the first place?

Here though of course one needs to take care with generalisations. The Victoria Park Master Plan, prepared shortly after The South Sydney Plan, seems to take a similar interest possibly separate from any prompts in The South Sydney Plan, though with different wording. The amenity of the future residents seems very much to the fore, and the Plan is highly detailed in the ways in which this is to be achieved through the provision of quality apartment, building and public domain outcomes. This emphasis may have been driven in part or in whole with a need to demonstrate consistency with the provisions in the DCP component of The South Sydney Plan. It may also have been driven in part or in whole with the broader social and community objectives of the Housing Act under which Landcom then operated. However, one does also get the sense, when reading this Master Plan, that the author was thinking directly about the people who would live and work there.

Earlier, the County Plan also presents as a document where the immediate health concerns of residents is also embedded throughout. A reading of this plan in conjunction with its successor, the Sydney Region Outline Plan of 1968, is instructive in the openly-expressed empathy of the former and the apparent technical detachment of the latter. But here again there is a necessary caveat. The ways in which the inner city slum clearances proposed in the County Plan, a response to the poor health outcomes of such housing, were actually carried out left a lot to be desired in terms of the disruption to the health-supportive community and family ties that resulted, including the often extended travel times faced by inner-city workers now in the new housing estates on the fringe, and which are now also the cause of concern in relation to the growth in chronic diseases due to social isolation and a lack of physical

activity. The impacts of the slum clearances were documented at the time; arguably they were also still present within local memory when The South Sydney Plan was developed as a result of the last of such proposals being located here, the redevelopment of Waterloo by the NSW Housing Commission in the 1970s, the experience of which could then be said to have influenced both the content and the consultative approach of The South Sydney Plan.

### *A necessary design approach*

An associated issue and question relates directly to the outcomes of such planning responses. As Engwicht (1992: 8) asks, continuing his analogy of the planner as doctor:

‘As a doctor, their chief tool of research would become the microscope. Putting living neighbourhoods and cities under the microscope they would be asking each other: ‘What makes this neighbourhood tick?’ ‘Why is there are sense of togetherness in this street but not in this?’ Why does this park work as a people space and not this one?’

An example stands out in the Green Square context. Landcom (n.d: 10), in its own evaluation of Victoria Park, suggests that it was its emphasis the quality of the built outcome that led to a discernable difference with surrounding development, and by implication also, a better living environment for its residents:

‘There is no doubt that Victoria Park is a great success in terms of urban outcome, particularly when compared to the nearby large-scale developments undertaken around the same time. It is a proven example of higher densities in a functional, cohesive and attractive development.’

Anecdotal evidence was that the principal nearby development in this comparison was the ACI site to the north, being constructed slightly ahead of Victoria Park time-wise by privately-owned Meriton Apartments (workshop comment, 5.7.18). Apparently prospective purchasers in Victoria Park, both the developers of the super blocks being sold, and the purchasers of individual dwellings, would be directed to inspect the ACI development on the basis that it was considered the Landcom development would compare favourably. A visual comparison of the two developments now suggests that both have the same essential

ingredients: similar-scaled development, apartments orientated to central public open spaces, calmed internal traffic, a local retail centre, and communal swimming pool and spa and gym facilities and the like for residents. That same visual comparison does though also suggest a noticeable qualitative difference in the outcome. It gives rise to two key questions:

- Just what is this difference in quality? and
- How important is this in terms of the health of residents? Is, for instance, one development more health-supportive than the other?

When seeking to answer these questions one also needs to recognise the possibility that it may not have mattered if health was not a particular and explicit consideration in the development process. Other factors, prominent at the time may have yielded the same result: the strong focus at the time on urban design and in particular on New Urbanism, plus the direct examples of such new urbanist models in existing South Sydney localities, and referred to as villages in the DCP), and the ecological imperative, with its inherent understanding that sustainability requires a reduction in car use and, as in the concept of the triple bottom line, equal attention to such social and economic matters as connection, community and equity. The result being, in effect, a virtuous coalition of events and circumstance. This idea is reinforced also, in respect to Green Square, in its fortuitous location now within Sydney's global economy and therefore its increased ability to finance the various and multiple health-supportive features that are being provided.

## **6.2 Key themes from the case-studies to guide future work**

This review, in particular its appraisal of the zeitgeist of the time, suggests there was a lot happening in the 1990s when Green Square was initiated, and which is now continuing into the present day as these earlier master planning strategies are implemented. Furthermore, both the Green Square locality itself and the ways in which health has figured in its development comprises a complex layered mosaic, with the connections between the various parts not necessarily straight lines and also not always readily visible; and akin – still – to Atkins' (1961) earlier suggestion of Sydney as a metropolitan muddle.

Consistent with the idea of the metropolitan muddle, Green Square has been, and still is, subject to a plethora of plans, and influences. Further, the establishment of these multiple

plans has been subject to a number of influences: variously linear, networked and iterative. Influences have been the physical environment, the distinctive local community, and professional practice and governance characteristics. All have, to varying extents, influenced health outcomes.

The various academic and non-academic literature reviewed detailed in this Report comprise an extensive, often daunting range of material, issues and subject matter. This is not unexpected given:

- The complex, multi-disciplinary nature of urban development and the broader ecological sustainability objective generally;
- The complex environmental and behavioural determinants of human health; and now
- The similarly complex interaction between these determinants and the shape of the built environment.

In turn, this complex and interacting nature characteristic presents some difficulties in presenting the overall key findings. Often, these findings take on the image of a highly networked and interacting mosaic of matters that transcend traditional linear cause-and-effect explanation and neat well-defined categorisation, and hence, also presentation. The following sections develop six key themes from these reviews as relevant to this translational research project. They are interrelated, and in no particular hierarchy of importance:

1. A dynamic comprising both a tightening and expansiveness of outcomes.
2. Composite responses, and an engagement with complexity.
3. A loss, or lack, of a language to describe the healthy public environment we are seeking to achieve.
4. Actions in relation to health are largely consistent with the academic literature.
5. A seeming lack of current engagement with any particular needs of high-rise high density.
6. The built environment, and its promotion and management, as psychological prompt.

These themes also suggest a number of follow-up investigations. These are presented in the following section, Section 7.



*1. A dynamic comprising both a tightening and expansiveness of outcomes.*

The image of the documents as presenting a networked and interacting mosaic of matters proved useful in the initial assessment. However, it also became apparent that this mosaic was not static. Rather, there also seemed to be a dynamic and movement at play that also needed to be identified. It was found that this dynamic had two components. One is not unlike a tightening noose of influences, potentially constraining the viability and practicality of achieving the highly liveable urban environment described in the aims and objectives of the various planning strategies. However, this assessment alone does not adequately convey what was occurring within the documents, and in the development of Green Square itself. A further aspect was also evident, a more expansive set of actions and outcomes that did indeed seem to achieve, and with some identifiable success, the quality living environment that was sought when assessed against the ‘triple bottom line’ of social, economic and ecological objectives, as well as an overall innovative and often creative approach to the task by the key planning strategy players, Landcom and the City of Sydney. The following sections list examples of the make-up of these two aspects in more detail.

Examples of a ‘tightening’ of influences and outcomes

- There have been substantial increases in density in the Green Square Town Centre development, largely due to an imperative to internally finance the substantial costs of site preparation (amalgamation, re-location of existing uses, demolitions, remediation) and basic infrastructure (flood control, roads, open space). This resulted in approval of a sought-after 38% increase in floor space. In addition, the number of anticipated dwellings to be constructed within this floor space has increased as a result of a reduction in size of the typical individual apartment floor area from an initially anticipated 113m<sup>2</sup> to 90m<sup>2</sup>. A comprehensive review of the transport implications of this increase has concluded that the only way to prevent Green Square from locking up is to establish a modal split that favours public/active transport over private vehicle use not existing anywhere else other than the central Sydney core commercial area, a major task requiring both substantial increased financial investment and changes in individual behavioural patterns.
- Substantial development projects such as Green Square are invariably subject to outside economic influences, particularly when undertaken over an extended time period. The

coincidental timing of the development of Victoria Park with various downturns in the commercial property market, coupled with state planning authority concerns that the scale of the planned commercial component would have a detrimental impact on the viability of the Green Square Town Centre, then in its early days of planning, resulted in a substantial delay in providing neighbourhood retail and local services. This was the cause of most of the negative comments about Victoria Park expressed by residents in the *Planning and Building Healthy Communities* study, and where otherwise comments and ratings of ‘satisfaction’ were generally very positive. It also risked promoting, and embedding, non-active travel to retail facilities further afield.

- An objective of Green Square development is to ensure a good level of integration with the existing surrounding local community - to address potential adverse impacts on that community and to make new residents feel part of an existing community. Supportive studies for the early (1990s) planning strategies indicated in addition to a growing gentrification of the area there were also substantial socio-economic and associated health issues in relation to low income and employment levels in the existing community. The various master plans have sought to address these issues by providing affordable accommodation via a levy system; by initiating, in the Green Square Town Centre, local employment opportunities in construction; and making the new public facilities accessible to all. However:
  - Such levies in practice also in effect increase the price of the new dwellings to be sold on the market with then its own potential flow-on health implications for those buyers due to the need to service larger deposits and mortgages;
  - The existing local community remains somewhat invisible in recent Green Square Town Centre documents that identify the personas of typical residents. The orientation of such documents appears more to be about identifying potential Town Centre patrons on the basis more of a commercial/marketing perspective of likely customers (Table 6.1). In this sense, it risks the situation referenced in Connon, (2018: 66) that ‘the new neoliberal high-density development market is designed primarily with the needs of two social groups in mind: young professionals and empty-nesters, thus contributing to health inequity between the urban wealthy and poor.’

- Various of the place-making documents relating to the Green Square Town Centre suggest a need for the retailing component to allow a diversity of operators and type and style of service as a way of achieving the objective of a ‘vibrant’ place that people will want to visit repeatedly. The City of Sydney place-making workshop expressed this need in terms of examples of places *not* to emulate, listing: ‘[New] Rouse Hill or North Sydney on the weekend’. The New Rouse Hill town centre for instance is operated as a managed shopping centre, and the comment here echoes commentary from others about a general homogeneity that can result (e. g. Bevan 2008). However, and notwithstanding this identified need, other Green Square Town Centre documents identify an intention to actually apply this centralised management approach; with one document including specific details of an intention to establish a ‘*precreated laneway*’ (emphasis added) as part of early activation in order to ‘curate the right [obviously pre-determined] retail mix’ (p.42).

**Table 6.1: Examples from Green Square documents identifying local community demographic make-up.**

Name of document	CoS: <i>Green Square Placemaking</i> (p.20)	Mirvac: <i>Green Square Placemaking 2018 Plan</i> (p.6)	Mirvac: <i>Social Corner Activation Brief</i> (p.7)	Mirvac: <i>Green Square Place Strategy</i> (p.8)
Collective name given to the identified groups	‘Profile of Green Square residents – three service age groups’	‘Top personas within 2km radius – and making up 75% of our community’	‘The community’	‘Top 5 personas within 4km catchment – making up 68.8% of total catchment’
The individual identified groups	<ul style="list-style-type: none"> <li>▪ Young Workforce (25-34 years)</li> <li>▪ Homebuilders (35-49 years)</li> <li>▪ Students (18-24 years)</li> </ul>	<ul style="list-style-type: none"> <li>▪ New School Cool (socially aware early adopters)</li> <li>▪ Young &amp; Platinum (millennials who have made it to the top)</li> <li>▪ Fit &amp; Fab (a way of life in healthy places and filled with activity)</li> <li>▪ Quiet Achievers (young, renting families with big career goals and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Young and Platinum (well-educated high-income renting professionals - 17%)</li> <li>▪ Areas in Transition (singles renting and living alone close to work, with average incomes - 10%)</li> <li>▪ Quiet Achievers (renting, tech-savvy fashionable young families - 6%)</li> </ul>	<ul style="list-style-type: none"> <li>▪ New School Cool (well-educated, high income, social and tech savy - 20.2%)</li> <li>▪ Young &amp; Platinum (well-educated, high income professionals, renting - 13.9%)</li> <li>▪ Healthy Wealthy &amp; Wise (well-educated, high income, renting at high cost. Social and</li> </ul>

		valuing environment and ethics)		<p>health conscious - 12.4%)</p> <ul style="list-style-type: none"> <li>▪ Fit &amp; Fab (young singles renting love social and sporting activities - 11.8%)</li> <li>▪ Social Academics (young students, rent with others, interest in social activity, technology and health - 10.5%)</li> </ul>
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Examples of an expansiveness of influences and outcomes

- The essential dynamic nature of the Green Square planning and development environment has necessitated the various planning strategy documents to also remain fluid. This has been recognised in an opaque up-front way, and portrayed as not just inevitable but allows for improvements in planning and implementation as the project progress. This need for fluidity is reflected in the various revisions to the respective master plan documents, and has been essentially accepted by the overriding planning authority, the City of Sydney; it also being an open question whether such acceptance would be given to a private fully commercial development organisation or propriety company. It is in a way consistent with the idea of actant network theory or situational rather than ‘homogenous’ thinking (McManus 2005) as a way to deal with complexity, and introduced in the earlier context report. The resultant fluidity of mindset appears also to have influenced the achievement of other outcomes. For example:
  - A valuing of innovation. The Landcom review of the Victoria Park development for example specifically refers to a ‘superior urban design outcome’ (p.2), an aim to ‘better the targets set for energy usage’ (p.8), and ‘innovative measures’ (p.2).
  - The ability for the City of Sydney to respond to concerns about a lack of a local primary school that pupils could walk to, and pointed out for instance by the Health Impact Statement on Green Square undertaken by the UNSW Centre for Primary Health Care and Equity  
<https://cphce.unsw.edu.au/research/understanding-and-intervening-reduce-health->

[inequalities/nsw-health-impact-assessment-1](#)), has meant a re-allocation of Council-owned land on the former South Sydney hospital site and earmarked for a local health centre for such a school - with the concurrent assessment that there would be sufficient commercial floor space being within the Town Centre itself that could be allocated for health use, and at the same time assist activation of the Town Centre.

- Within Landcom, the adoption of some characteristics of a ‘learning organisation’. As the review of Victoria Park also notes: ‘Landcom is already applying many of the lessons learned ... Staff and management have ... refined them in Landcom’s business processes for future use to enhance the built form and urban outcome elsewhere.’ (p.14).
- The necessary establishment of a modal split that includes a high proportion of trips by active transport (as detailed above) has the benefit of achieving as a matter of course the walkable and cyclable places now seen as inherently health-supportive by increasing physical activity and opportunities for incidental social interactions. In addition, if in conjunction with mixed use land use zonings which is essentially the case in Green Square, it can also result in increased visitation to businesses, in turn improving local economies and activation, and then again the generation of additional destinations to walk in a cycle of improvements.
- The early activation strategies that are being adopted in the Green Square Town Centre suggest a recognition and learning of certain deficiencies in the earlier development of Victoria Park where there was a delay in providing local neighbourhood retail and commercial facilities, and which at the time was the cause of irritation amongst residents. A response at the time was to establish a Saturday farmers’ market which was well-patronised and was a source of social interactions as well as fresh foods. In the Town Centre there appears to be to a degree an expansive creativity being used in developing activation initiatives, including pop-up facilities, the temporary utilisation of existing floor space prior to redevelopment for fresh food retailing, the instigation of welcome dinners and talks and other events, and the establishment of The Social Corner as a drop-in space. All have potential positive health flow-on effects.

- Somewhat as a reverse process to that now occurring in the Green Square Town Centre, the final Victoria Park development was developed to a lesser overall density than initially anticipated and allowed for in the planning controls. Landcom advises that only 75% of the allowable gross floor area was utilised. It would appear that the ability to accept this reduction in development density – with consequent improvements in visual and experienced scale of buildings – was due to the high economic returns received (at the time the highest margin on a percentage basis of any Landcom urban renewal project) *as a direct result* of the high quality of design that was achieved through the specific attention given to this aspect.

It is also likely that this outcome was also as a result of the close integration of design, financial considerations and marketing/promotion of a particular image (as also discussed in Section 5) – though the extent to which Landcom to advantage of a particular need or market niche identified at the time, or actively created it will be difficult to define (see for example Figure 6.1).

- As described in more detail below, there is some indication of a developing view of the built environments being created at Victoria Park and the Green Square Town Centre can act as educational prompts in themselves for more expansive societal needs – in these cases as related to ecological sustainable development, but as suggested below, potentially also in relation to human health). The outcome could be described as an affective environment or, in a sense, an environment of influence; and possibly not unlike the idea of a salutogenic environment as proposed by Antonovsky (1996, 1979) to describe places which are inherently supportive of a person’s health and general wellbeing because they establish an overall sense of coherence for that person in relation to their place in the world and within themselves.

## 2. *Composite responses, and an engagement with complexity*

When the various planning strategies were assessed against the individual attributes within the Three Health Frameworks, it was found that a large proportion comprise a *composite* of health-supportive actions. And that this is the case whether the strategies comprised an individual action or a particular document dealing with a range of matters. It meant that in practice during that assessment process most such strategies fell within multiples of the 50

attributes, also giving rise to one of the concerns relating to the potential for double-counting, as described in the Methodology section.

Again, this finding would not be unexpected. This review canvassed practice documents, and the practice of planning, urban design and architecture, and indeed design generally, is a composite exercise. The construction of the composite that is any viable and workable urban area. In the particular case of Green Square, this is also reflected in, for example:

- The many references in the documents to ‘composite’ words and terms, for example ‘ESD’, ‘community’, ‘urban design’, ‘place-making’, and ‘public domain’. Place-making for instance is defined in a City of Sydney document as: ‘... integrated, cross-disciplinary and long-term planning for holistic places that consider the social, economic, environmental and cultural aspects of place. It encompasses a broad range of ideas and philosophies ...’ (p.3),
- The Landcom Board Meeting discussions relating to Victoria Park which show that the master-planning, financials and marketing of the project were all being considered together and undertaken in a similarly composite way; and
- In the Green Square Town Centre ‘placemaking framework’, a recognition of the need to provide ‘a *complex* urban environment for encouraging social interaction’ (p.40, emphasis added).

There is a differentiation here with the academic documents also reviewed for this Study. By their academic nature, such documents tend to take particular stances, foci, specialisations and orientations. Expressed another way, the academic approach or stance is more analytic, and the design approach or stance is more composite/synthetic. The various attributes of a health-supportive environment identified in the three health frameworks have been developed from the academic literature and therefore in themselves tend to be singularly focussed, notwithstanding that some also address matters which are necessarily multi-dimensional, such as socio-ecological inequalities and planetary sustainability. As such, a composite of codings against these attributes when applied to individual references in the planning strategies would be expected.

There are also other factors at play. One is that the activities of Landcom and the City of Sydney, as the major players in Green Square and the main ‘protagonists’ in the reviewed

documents are also composite, and not just because their actions as reviewed here are related to planning, urban design and architectural matters. In the case of Landcom, there is a statutory corporate objective is to yield composite ‘triple-bottom-line’ outcomes, while another objective is ‘...to undertake, or assist the Government in undertaking, strategic or *complex* urban development projects’. Landcom’s commitment to these matters was also illustrated in a comment included in one of the presentation documents reviewed here when introducing Landcom’s approach to the triple bottom line: ‘[we] walk the talk – [a] focus on delivery’ (doc.VP #17). As a local government authority the City of Sydney has a similarly wide ‘brief’ and set of responsibilities as established under local government legislation (the *Local Government Act, 1993*).

Further, and as a number of the documents note, Green Square comprises the largest such urban redevelopment project in Australia. In addition, it has had to deal with a number of site-specific issues that are in themselves complex, and when combined result in even greater complexity. These include potential flooding, as a former wetland, required site amalgamations and remediation, transportation, and a lack of any substantial existing social, community and recreational infrastructure. Resolution of these issues has been resource-intensive. In turn, it results in the tightening dynamic of combinations of issues described above. In addition, there is also a recognition in the Green Square Town Centre Master Plan that for Green Square to be successful socially, and by correlation, economically, the resultant urban environment must provide ‘a *complex* urban environment for encouraging social interaction’ (p.40, emphasis added).

When considered in conjunction with other commentary that concludes that Green Square has been largely successful in its responses to date (see Appendix 3), these characteristics suggest there has been an active and ongoing engagement by the respective agencies with this complexity.

To further illustrate this suggestion, and by way of contrast, such engagement arguably differs from earlier, although still recent and continuing approaches to urban development issues, and illustrated for example in the review of the 1951 County of Cumberland Plan in an earlier report. The response of that Plan to the then complexity of the substantial proportion of the urban population housed in inner-urban slums, including many areas now within Green Square, and the substantial incidence of communicable and chronic diseases



that resulted comprised, it could be suggested, a simplification: the re-location of both the existing and new and growing population to greenfield developments based on an urban design approach of greater separations between land uses and individual buildings. The reasoning was that such increased allocation of space, including green space, and the additional penetration of light and healthy air that would result was inherently health-supportive. The resultant anticipated urban form is shown, in an image from the time, in Figure 6.1, wherein the separation approach underlying the layout of the buildings and land uses also happens to be reflected in the way in the portrayal of the three adults in the shopping centre: each are pursuing their activities separately, with no social interaction between them.

The dilemma of course is that while this simplified urban pattern was successful in addressing some health issues, it has, coupled with the necessary use of private motorised transport both because of the increase in distances needing to be travelled and the lack of concurrent investment in public transport, also generated its own new health concerns. These are predominantly centred around those chronic diseases that result from insufficient physical activity and social interaction, as well as in some cases added stress from increased household transport costs.

Of further interest here is that the principal planning strategy developed by the former South Sydney Council, The South Sydney Plan (1998), not just accepted the existence of the existing older, closer and more complex inner-urban settlement pattern, and which had been demolished in some localities based on the slum clearance programs in the County Plan, but actively embraced it as an appropriate urban model to pursue. As stated in the Discussion Paper prepared as a prelude to the Plan: 'The nature of inner Sydney encourages travel on foot or bicycle. Pedestrians contribute to the vitality of the area and its shopping, commercial and entertainment facilities.' (p.28).

The South Sydney Plan did though seek an urban pattern that would in a sense also include the 'green-ness' of the more outer urban suburb, by proposing a substantial increase in open space areas and street tree plantings. Thus, both the inner urban and outer urban models were invoked to various degrees in the planning strategies subsequently developed for (then industrial) Green Square. It is particularly reflected in the design of Victoria Park, and highly

visible also in the consequent marketing material branding Victoria Park as ‘the natural neighbourhood’.

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The resultant scale of this difference in approach is well illustrated when comparing the pair of ‘vision’ images in Figure 6.1. Arguably, the experience and skill-sets needed to implement these two quite different urban scenario would also be different. As such, it would be of interest for the translational orientation of this research project to investigate the nature of such differences. Here, the experience of Landcom may well be able to provide comparative advice relating to both urban development models. The initial constitution of Landcom as a development agency (in 1986) was to facilitate greenfield development, with its typical lower density and dispersed land use patterns. It was only later, and at times in its constitution as UrbanGrowth NSW, that it was instructed by Government to engage in the different and more complex urban form of inner urban redevelopment. Victoria Park was Landcom’s the first project in this regard, and involvement in the Green Square Town Centre occurred soon afterwards, concurrently with the implementation stages of Victoria Park.

**Figure 6.1: A comparison of urban ‘visions’ and resultant complexities**



In addition, as noted, Landcom comprises a hybrid organisational character. Its corporate objectives, as established by legislation, include up-front social and ecological objectives as equal to market objectives. Landcom has been an active player in achieving these 'triple bottom line' outcomes. In addition, the market imperative generates an additional characteristic of Landcom as a conduit between public and private criteria and therefore of how both outcomes may be achieved. Furthermore, Landcom has also taken on roles as both design and market leader in urban development. In relation to Victoria Park for instance, one presentation described Landcom as having the multiple roles of master planner, master

developer and delivery partner. Together, these characteristics suggests a potential interesting engagement with Landcom to ascertain the various skill-sets involved, and any differences.

3. *A loss, or lack, of a language to describe the healthy public environment we are seeking to achieve.*

The current Green Square planning strategies were preceded by The South Sydney Plan, developed in the 1990s. A feature of that plan was that it gave value to the existing close-knit mixed use urban fabric typical of the South Sydney locality and characterised by being walkable, busy, commercially active and conducive to social contact. Although not always explicit, there was an implicit recognition also that such urban pattern was essentially health-supportive. The Plan captured this character in its use, variously, of the terms ‘urban village’ and ‘activity centre’; one more evocative and one more prosaic.

Both these terms have been continued in the planning strategy and marketing documents applying to Green Square, as well as the broader City of Sydney area. However, the Victoria Park and Green Square Town Centre documents also use a range of other terms to describe essentially the same intentions. This is particularly so in relation to the more detailed ‘implementation’ documents now being prepared for the Green Square Town Centre, and which comprise the majority of Green Square Town Centre documents reviewed.

The number and frequency of use of such different terms, even within individual documents, is often substantial. An example, from one document, is given in Figure 6.2. The resultant experience of reading these documents suggested a problem. This problem was not initially obvious but became evident after reading a number of these documents together. Read once, or twice, the terms seemed to suggest a knowing of the type of resultant environment that was sought. However, when read together and in the context of their numerous variations, the result was something different: a sense of a lesser knowing and even a potential confusion about this ultimate objective and how it might be achieved.

There seems to be a loss of a concise, coherent language to express the exact nature of what is sought. Instead, there are numerous references to a range of terms, including, as examples, ‘vibrancy’, ‘community’ ‘wellbeing’, ‘village’, ‘global village’, ‘town centre’, ‘activity centre’, ‘activation’, ‘identity’, ‘green’, ‘sustainable’ and so on; variations used to describe

what appears to be the same outcome, and not just within the same document but also at times within the same paragraph or even the same sentence. This multi-various nature of the wording contrasts for example with the preciseness and focus – an orderliness – that characterises the academic literature also reviewed in this research project – and from which then more concrete understandings can be derived, including, in this project, the development of the ‘Three Frameworks of Health’ and its component detailed attributes.

It generates the question: what are the authors really meaning, and wanting to say? Is it what we now understand as the characteristics of a health-supportive environment, as listed for example in the Three Health Framework, or something else? Or, more critically, are the authors merely using contemporary marketing jargon without much additional thought? And with this last question, also prompted by the recognition of the close nexus between urban design, implementation and the three health framework, something else? Or, more critically, are the authors merely using contemporary marketing jargon without much additional thought? (And with this last question also prompted by the recognition of the close nexus between urban design, implementation and marketing within Green Square generally, and most explicitly in the development of Victoria Park).

**Figure 6.2: Examples of words used to describe the intended Green Square Town Centre outcome (as sourced from *Green Square Placemaking. Vol. 1: Framework* (City of Sydney, n.d.))**

resilient, appealing and welcoming character with a unique identity ▪ dynamic, healthy public places ▪ thriving places with character ▪ provide for a range of lifestyle opportunities ▪ promote place-based uniqueness and individuality ▪ support a sense of wellbeing ▪ foster community connectedness, capacity and sense of ownership ▪ promoting and encouraging community participation and growth ▪ distinctive and identifiable ▪ unique destination ▪ enhancing its present circumstances ▪ vibrant, sustainable village ▪ create places and unique experiences ▪ creates a sense of place ▪ contributes to community identity and wellbeing ▪ vibrant mix ▪ offer a convenient, contemporary lifestyle ▪ vibrant and sustainable village ▪ sustainable as well as innovative ▪ a progressive town centre ▪ urban village ▪ an urban, vibrant inner-city hub

It is difficult to determine an answer to these questions from only the material at hand. But the questions above also prompt another: does it matter? And particularly in the light of the assessment in section 8.4 below, that notwithstanding this imprecise wording in the planning

strategies themselves there is overall a substantial consistency with the attributes of a health-supportive environment as revealed by the academic literature.

In response, the following points, arising from this review of documents, suggest that it *does* indeed matter that health is not more explicitly, and consistently, referenced; and as such there exists a need for the development of a more precise and consistent terminology to guide the establishment of such environments.

- (i) The ‘confused’ language suggests the potential for an equivalent confusion in understanding just what it is we want to achieve, generating the risk that the desired outcome becomes lost amongst the many, and often competing, other determinants and interests. There is then a similar risk that the health objective is seen in this light as separate and stand-alone, and therefore subject to such competition, when, as evidenced for example by the review summarised in Table 6.2 below, the attributes of a health-supportive environment are consistent with most other urban development objectives, in the manner of co-benefits.
  
- (ii) An outcome of the separate review of background planning strategies as applying to and influencing the development of Green Square since the early 1900s was that the practice of urban planning tends to focus on *different* aspects of health at different times, in effect on whatever matter is most obvious and pressing at that time. Concurrent with this, the review also suggested that there was little or no ‘scanning ahead’ and that planning strategies are primarily orientated to dealing with issues that are at times already embedded and as such more difficult to resolve. This was the case in relation to the communicable diseases identified in the early to mid-1900s as resulting from poor quality slum housing; and is arguably the case now in relation to chronic diseases. There is also the case where no attention was given to health at all in planning strategies during the 1960s to 1990s coinciding with a period when there were no *apparent* health problems within the community, and an associated view that health care and urban planning were separate exercises. A review of Sydney’s health in 2000 (Curson and McCracken 2000) mentions issues to do with an ageing population (e. g. degenerative diseases, and the need to accommodate the needs of visiting carers) as well as the potential for the spread of semi-tropical diseases due to global warming, but did not mention the chronic diseases that, although apparent then,

did not become prominent some 10 years later. And a recent Health Impact Statement relating to Green Square concentrates on issues relating to children only, in response to what the authors saw as an existing lack of attention to this need. A lack of mindfulness to the health imperative generally and the potential for built environment responses risks a continuation of this pattern.

(iii) A more focussed and consistent understanding of goals may also assist in preventing inconsistencies between different documents applying to the same planning area. In Green Square for instance, and discussed in other sections of this Report, a number of such discrepancies have been noted, for example:

- The placemaking framework prepared by the City of Sydney includes the identification of various typical residents to be recognised and catered for, however does not include the characteristics of the existing community in surrounding localities, the integration of whom has been a feature of other Green Square planning strategies.
- Similarly, a document by MIRVAC describing proposed early activation strategies also describes an assessment of the current community make-up – but is even more limited in its delineation of persons, seemingly concentrating on those likely to be more engaged customers within the Town Centre.
- A place-making workshop conducted by the city of Sydney produced comment suggesting that management of the Green Square Town Centre should not result in the centralised control of tenancies and uses typical of stand-alone managed centres, with the New Rouse Hill own Centre cited as a model not to adopt). However other documents, here prepared by Landcom and the Green Square Consortium specifically mention an intended ‘single ... integrated management’ for the Town Centre.

But planning, and planning strategies, are only one aspect of the ‘muddle’. Aston’s (1995) initial proposal of the ‘accidental city’ was in part in response to the impression that Sydney lacked an interest in planning, and in plans, with urban outcomes the result of speculative whims and catch-up responses to problems. Freestone (2000: 120) further notes that ‘Planning has been the ultimate chameleon ... waxing in times of perceived or impending crises, often waning through the good times’. It follows that maintaining a health presence in

this changeable milieu also requires attention to urban processes that for whatever reason appear to eschew planning. The health imperative needs to remain visible to all practitioners, and not be over-shadowed by other matters. But where, and how, is the best way to locate such health considerations and references within this complex mix of formal and informal processes of urban affairs so it receives adequate attention? typical solution is to develop checklists. A more substantial question is whether it is possible to again ‘infuse’ planning activity with health, as it appears to have been the case with the County Plan of 1951, The South Sydney Plan of 1995, and to an extent also the Victoria Park Master Plan of 1998. All are examples of plans that were not ‘shy’ about mentioning health, and also associated issues of equality, up-front. In turn, such visibility can serve to prompt, guide and *motivate* those practitioners charged with implementing the plans. It would be useful to ask urban practitioners themselves about their preferences in how best to keep health visible to assist planning and design activities, and to emphasise to decision-makers the need to continually consider health matters.

A final point is worth making in reference to any potential action to develop a more consistent *lingua franca* around the ‘place outcome’ of the inclusion of health in urban development and management. It is prompted by another of the findings from this review that even for words that may have had a consistency in understanding as to their meaning when first developed, a certain ‘slippage’ in preciseness can now also be discerned. The term ‘sustainability’ provides an example, particularly where now used as a preceding descriptor, such as in ‘sustainable community’ or ‘sustainable building’ or ‘sustainable village’. In conjunction with an expansion, in some fields, of the idea of ‘sustainability’ it is now not possible to determine from these descriptors alone whether the author is intending solely an earlier concept of ‘ecological sustainability’ or whether considerations of social and economic sustainability are also included, and, for instance, the cause of one element of potential impreciseness in the scoring process used in this current review of the documents, as described in the methodology section (section 3).

Care needs to be taken to ensure that any resultant new terminology in respect to the achievement of health-supportive environments retains a robustness that provides a consistent, well-understood and long-lived direction as to its meaning and how to respond.

#### 4. *Actions in relation to health are largely consistent with the academic literature*



The documents suggest an active engagement with ensuring a good standard of overall liveability within Green Square, and hence, by implication, though not necessarily, with overall individual and community health and wellbeing. This is regardless of whether or not those matters or actions that are health-supportive are referenced explicitly or implicitly, more as co-benefits, with the actuality of this being, as discussed in section 5, that such references are predominately implicit.

This engagement is multi-dimensional, and addresses all of:

- The private (individual apartment and building) and communal/public (public domain) needs of the resultant population; and
- Both the quantum of public facilities and infrastructure to be provided and the quality of that infrastructure and resultant user experiences.

In addition, it is possible to view the intended high density of the locality as being positive in itself in that it:

- Allows the opportunity to achieve a vibrant public domain, with a variety activities available to the whole community, and easily accessible by active transport modes; and
- Reduces the overall urban land footprint, with positive ecological outcomes.

Further, the substantial scale of the development generates a public administration and design challenge, requiring a particular and detailed attention and an extensive commitment of public resources, both financial and professional.

The results of the assessment of the degree of consistency of the Victoria Park and Green Square Town Centre precinct developments with the 50 attributes that comprise the three conceptual frameworks of health are described in Appendix 3, and derive from considering the results of the analyses of both the group 1 and group 2 sets of documents.

The assessment shows that there is a high degree of consistency. In one view, this might be expected, given:

- Landcom’s corporate objectives which include a triple bottom line approach to its reporting and hence also its activities, plus also its own explicit policy on Healthy Development;
- The substantial resources available within the two principle strategic planning and development agencies: Landcom, and, in the Green Square Town Centre, also its partner, the Green Square Consortium, and the City of Sydney; and
- The sense of a commitment by both agencies to the task of achieving a highly ‘liveable’ environment in Green Square.

However, Green Square is in its early days in its overall development as a lived-environment. It is not possible at present to fully evaluate the success of the positive intentions apparent in the various planning strategies. That said, it would be possible to gain some indications of success by reviewing the following existing recent surveys of Green Square residents:

- The 2011-2015 *Planning & Building Healthy Communities* study which included the Victoria Park precinct which is now well-established with some residents now having lived there for nearly 10 years;
- The City of Sydney *MyPlace* surveys of Green Square conducted in 2015 and 2017,
- The Landcom *Healthy and Inclusive Places* survey conducted in 2018 of residents in Victoria Park and the Green Square Town Centre, and
- The MIRVAC study conducted of residents’ perception of liveability in relation to its first residential development in the Green Square Town Centre.

A recommendation of this Report is that these studies be reviewed for lived experience information relating to the success of Green Square as a health-supportive environment.

5. *A seeming lack of current engagement with any particular needs of high-rise high density*

Consistent with the idea of Sydney as an ‘accidental city’ (Ashton, 1995) this research project itself is indicative of yet another ‘accident’ – that we are building high density developments without first studying its effects on overall wellbeing and even though we are well aware of concerns that have been expressed in the recent past about high density residential estates, including now in the adjacent suburb of Waterloo; albeit that such commentary also

invariably becomes ‘muddled’ given such areas also comprise public housing with residents experiencing particular individual socio-economic issues, and the housing providers invariably also experiencing financing issues that impact on overall maintenance and updated provision of residential facilities. The current Study provides the opportunity to review the private-sector areas now being developed in Green Square. Other older areas of substantially high-density, high-rise housing exist in other areas of the former South Sydney (e. g. Kings Cross/Elizabeth Bay), and newer areas now are also being developed in for example Parramatta and Wentworth Point.

High density development can take on various shapes and form in terms of resultant buildings. In Victoria Park, the mix of different residential building scales and layouts was presented, in marketing material, as a positive – with the resultant overall development still able to be characterised in that material as a ‘green’ and ‘natural’ ‘suburb’ and therefore presumably somewhat familiar and comfortable, in the Australian context, to prospective purchasers and residents, and in doing so also apparently acknowledging an existing ‘stigma’ on high-rise housing (Connon et al, 2018: 65, 68). This mix was also presented in a positive way as being able to accommodate a diversity of household types and sizes, and thus is also consistent with various of the attributes from the Three Healths Framework.

However, there is also a noticeable lack of particular engagement with any *particular* needs as resulting from those denser development forms that comprise high-rise (tall) buildings. Design and management attention is predominantly given over to, in a sense, the ground level aspects of higher density living. On the larger precinct scale this has included, for example:

- The provision of adequate, in quantum and quality, green open spaces and other public domain areas;
- The provision of adequate public facilities for recreation and cultural stimulation; and
- Management attention to the social activation of the public domain.

On the individual building scale this has included, mainly in Victoria Park:

- A master plan requirement for communal open space and recreation facilities, such as gyms, within each development;
- Attractive ground-level foyer areas;

- As many apartments as possible to have their own individual entrances direct to the public street, rather than via a communal foyer, to both activate the footpaths and give individual identity to apartments;
- In the Green Square Town Centre, attention to awning and balcony design on lower levels to reduce adverse amenity impacts from noise and the like emanating from the active public domain.

However there has been little or no attention given to how the higher levels of such developments should be designed and whether there are different needs compared to lower-rise high density building forms. This point was brought to the fore at the workshop held with Landcom personnel and former personnel involved in Green Square where one attendee currently involved in a proposed high-rise residential development of 30+ storeys in a different locality pointed out two contrary current attitudes, and ‘perceived wisdom’, to such building height, with no conclusive direction for planners and designers: that such heights were not desirable given a risk of social isolation for upper-level residents; and, conversely, that this concern could be adequately addressed via attention to accessibility and design of adjacent ground-level spaces to facilitate social contact.

The literature reviewed in Connon et al., (2018) also does not distinguish to any large extent between high, medium and low-rise high density development. Where there is reference to high-rise development, this is predominantly in relation to the experience of public housing (Connon et al, 2018: 63), where additional socio-economic influences come into play when seeking to assess the health and overall liveability aspects of buildings of this shape and scale (Connon et al, 2018: 63, 65, 68), with limited attention to more generic issues in respect to high-rise. Commentary in this regard does note that high-rise living can work well in areas with ‘good neighbourhood amenities, built-in security, shared facilities, recreational spaces and opportunity for selective interactions’, and that this can equally apply to any ‘lower income groups’ able to avail themselves of this broader public domain (p.65). There is however no canvassing of any need or not for particular design features that would assist healthy living at higher levels, except for a specialised reference to designing such levels, presumably windows and balconies, to limit the opportunity for suicide through falling.

Three design initiatives from outside Green Square are worth noting to illustrate this point:

- (i) The high-rise (30-storey) aged persons housing constructed in near-by Waterloo in the 1970s comprised a small footprint per floor, thus allowing for a more ‘intimate’ number of residents per floor, plus also the provision of a common room on each floor to assist in social interactions (Zubryki T, 1981).
- (ii) Architects of a high-rise development in Chicago (USA) have experimented with vertical off-setting of balconies between floors to allow the possibility of visual and conversational social contact between adjacent floor levels, at least, both one level higher and one-level lower (Gang 2016).
- (iii) Various design proposal and constructed buildings in Sydney, also including detailed attention to the design of the balconies to address issues of wind protection and other climate control in order to make them viable as outdoor open spaces (Appendix 5).

The following further ‘design’ points are also worth noting here:

- (i) Certain of the literature from the *Global public & population health* and *Planetary health (relational ecology)* frameworks suggest that the generally smaller physical footprint of tall buildings means they are inherently beneficial by reducing urban sprawl and hence demand on land resources and overall ecological impact (Connon et al, 2018: 41, 45, 75).
- (ii) Certain of the literature from the ‘planetary health (relational ecology)’ framework suggests that tall buildings have a greater potential for solar access as a sustainable energy source (Connon et al, 2018: 75), and which would, presumably, also be the case for wind generation.
- (iii) There is only limited reference to the possible health implications arising from the use of certain building materials, and then only in relation to avoiding harmful materials. Both the Victoria Park and Green Square Town Centre master plans reference the detrimental impact on internal air quality of chemical residues from plastics and certain paints, and propose controls to limit these. However, there is no mention of other, albeit quite recent, aspects, such as:
  - The potential for catastrophic fire arising from the use of inappropriate flammable materials, as experienced in 2018 in London, and in 2019 in Melbourne, thus exacerbating a generic fear of fire already recognised as a feature of high density living (Connon et al, 2018: 59). Here there is both the obvious potential impact

from direct health trauma that could arise, and a more indirect negative impact whereby residents do not feel safe, generating stressors that can then impact on mental wellbeing (as referenced in the *Socio-ecological determinants of health*).

- The potential for some materials to have positive impacts, both directly in terms of air quality and indirectly through generating a ‘greener’, more ‘natural’ ambience.

As examples there are:

- The positive impacts now seen arising from the use of exposed timber in both the structure of buildings, including high-rise, and in internal wall cladding etc.; and
- The addition of plants and other ‘living’ greenery in walling and planting boxes – with air quality, ‘felt’ psychological and cooling benefits.

Victoria Park includes some buildings in high-rise form, and the Green Square Town Centre, given its intended density and smaller area will be, necessarily predominantly high-rise. The degree to which such buildings are health-supportive is still difficult to assess, primarily given the recent-ness of development. Resident surveys in the Victoria Park component of the *Planning and Building Healthy Communities* study (2011-2015), the existing City of Sydney *My Place* and *Wellbeing Survey* studies, and the Green Square Town Centre studies of residents by Landcom and MIRVAC can assist. The *Planning and Building Healthy Communities* study did not particularly canvass issues relating to the height-scale of buildings; however two issues were raised by residents in the interviews and workshop:

- In relation to wider urban design implications for the public domain, residents considered the streets where high-rise buildings were more predominant were colder, windier and less-inviting; and
- In relation to the internal management of such buildings, a lack of direct access between floors because of security arrangements, necessitating routing via the ground floor foyer, tended to discourage visitation between apartments; something also raised by the multi-unit residents of another of the study locations – New Rouse Hill.

6. *The built environment, and its promotion and management, as psychological prompt*

A sixth theme evident from the documents is somewhat nascent; the ability of a built environment to not just include and provide features that support healthy behaviours but to also prompt, psychologically, an awareness of such behaviours and of the importance of health as a consideration in daily life in the first place. This includes how such environments are managed and promoted in addition to how they are designed and constructed. The documents reviewed here suggest an awareness of this potential role, however, not in respect to healthy behaviours but rather in respect to providing educational prompts and awareness-raising about the natural environment and ecological issues in general. This has been evident in Victoria Park in the inclusion of public water features as part of making visible the WSUD approach taken to deal with the flooding and drainage issues applicable to that site and Green Square in general. The Green Square Town Centre documents take this a step further, with a quite explicit statement for example in the Master Plan proposing the ability for the design of the urban domain to promote an increased environmental awareness generally amongst Town Centre residents and other users, and prompted also in this respect by the fortuitous inclusion of ‘green’ in the name of the locality itself.

It could be worth exploring how such actions could be taken further, to also include an awareness of healthy behaviours generally, and in particular also the connections now being developed between human health and ecological health, as identified in the *Planetary health (relational ecology)* category in the three heaths framework. Actions in this regard could take various forms:

- One is the inclusion of such prompts within physical design features, similar to how the water features in Victoria Park operate in terms of the ecological and engineering issues of drainage, flooding and water quality.
- Another could draw on some of the characteristics of certain of the marketing material that had been devised, again for Victoria Park, in its initial promotion as not only the ‘natural neighbourhood’ but also a place orientated in a positive way to promoting wellbeing. Here again it is useful to note the close and it would seem iterative nexus in the early decision-making processes around Victoria Park of design, financial *and* marketing and promotion components. The images in Figure 6.3, extracted from an early marketing proposal well illustrates the possibility of such material acting almost as health promotion material in itself and possibly in turn focussing the designers towards this imperative, potentially countering any loss of focus as described above, and then also the

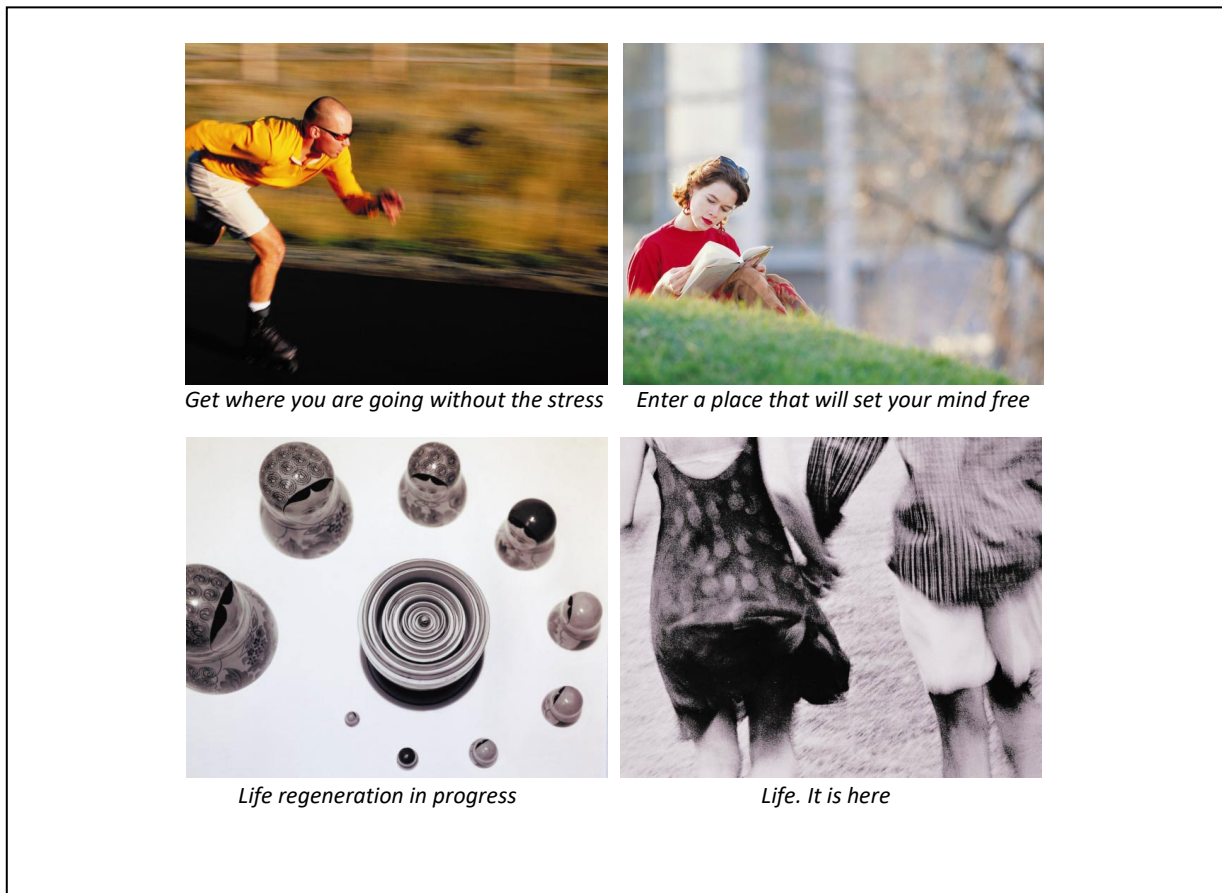
future residents. In respect to these residents it is useful to then also compare these marketing images with another, comprising an interview about the lived experience of two new residents of Victoria Park published in the real estate section of a major Sydney newspaper (Figure 6.4).

- The early activation strategies now underway in the Green Square Town Centre aimed at establishing a sense of local community and a vibrancy to the commercial areas yet to be fully established also provide a vehicle for health-orientated material. This is occurring already with the initiation of The Social Corner and associated events, and which include a range of activities with potential positive health outcomes including introductory dinners, talks on sustainability matters, and the establishment of a pop-up garden area; and with the proposals to use existing buildings yet to be redeveloped to provide interim space for pop-up retailing of fresh foods, and possibly drawing on lessons from Victoria Park where the late establishment of such facilities was the cause of concern amongst early residents.

Here it is also noted that such prompts can also assist in meeting the certain of the ‘psycho-social’ needs identified as important in overall human health, such as opportunities for learning, variety in everyday experiences, and the absence of alienation (Boyden 2004 in Capon & Thompson 2010).



**Figure 6.3: Victoria Park marketing images and text**



**Figure 6.4: An example of healthy ‘lived-experience’ in Victoria Park (with extract from the text).**

Source: ‘Domain’ real estate section of the *Sydney Morning Herald*, 10 October 2014.



**CASE STUDY**

**BUSY COUPLE FIND AREA A BREATH OF FRESH AIR**

**Living space: Mario Sidharta and wife Somang Lim, with dog Ally. The pair were attracted to Green Square by the parks and nearby beaches. Photo: Edwina Pickles**

After 2½ years living in Surry Hills, chefs Maro Sidharta and his wife, Somang Lim, found themselves longing for a change of scenery.

At work, both spent long hours in restaurant kitchens, and at home in the inner city, there was never much room to get out into the fresh air.

So when they visited friends living around Green Square in Zetland, they were impressed with the number of green parks, and decided to move.

“We’ve now been here since December and we love it,” says Sidharta, 30, who works as a chef at acclaimed restaurant Longrain.

“There are so many parks around here and so many pet-friendly places to walk that we also decided to get a dog, and she loves it here too.”

Now Sidharta, Lim, 29, and their seven-month-old siberian husky Ally are a common sight around Green Square, walking, running and playing in the parks of the area.

“The new East Village shopping mall is going to open soon too, which will really help it here,” he says.

“There’ll be a lot more facilities, and it’s already starting to get busier.

“It’s also very friendly. Ally can socialise with other dogs and, when you’re out with your dog, people stop to talk. You meet a lot of people and there’s a good sense of community.”

Sometimes at the weekend, the trio go to a nearby beach, such as Coogee. “It’s so central here to everywhere,” says Sidharta.

“We’re very happy we moved.”

‘... at home in the inner city, there was never much room to get out in the fresh air. ... So when they visited friends living around Green Square ... they were impressed by the number of green parks and decided to move.

It’s also very friendly. Ally can socialise with other dogs and when you’re out with your dog people stop to talk. You meet a lot of people and there is a good sense of community.’

## 7. Conclusion and Recommendations

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### Key points:

- Many of the documents reviewed did not contain clear definitions of ‘density’, and it is unclear which descriptors are most helpful to planning professionals for conceptualising what is meant by a healthy higher density living environment;
  - None of the documents reviewed provided an explicit definition of a ‘healthy higher density living environment’.
  - There is however a high degree of consistency between the planning strategy work in Green Square and the attributes of a health-supportive environment.
  - However, it is difficult, due to the recent-ness of development, to assess the effectiveness of this outcome.
  - Furthermore:
    - (i) The lack of explicit mention of health in most of the more recent planning strategies raises an issue of whether the inclusion of health-supportive features will be and can be maintained, given the complexity of development, and
    - (ii) The Green Square development process has some unique features that may not be able to be replicated elsewhere.
  - This review suggests ten possible further investigations.
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The first principal conclusion of this review is that most of the documents canvassed did not contain clear definitions of density and instead relied on quantitative and/or qualitative descriptors to conceptualise density. In addition, it is then unclear which of those descriptors, or which combination of descriptors, are most helpful in aiding people in their conceptualisations of density. Also, none of the reviewed documents provided a definition of ‘healthy high density’ and there was no evidence in the documents to suggest that consideration of health issues was the driving force behind the proposed density at each site.

The second principal conclusion is that, and notwithstanding the lack of a definition of healthy high density, there is nevertheless a high degree of consistency between the planning strategy work being undertaken in Green Square and the attributes of a health-supportive environment as identified in the earlier review of academic literature and formulated into the ‘Three Healths framework’. However, the nature of this review also means that there needs to be some degree of ‘holding this finding lightly’. Analysis of the data, in particular in respect

to trying to understand underlying motivations and influences behind the inclusion, or not, of health-supportive provisions, often required a high degree of interpretation given:

- The overlapping nature of many of the attributes themselves;
- The general lack of explanation within the documents as to the reasons for inclusion of various provisions; and
- The frequency, particularly in the later Green Square Town Centre documents reviewed, of an impreciseness in specific words and terms used, and often also in the overall language.

These characteristics suggest the need for a greater understanding about two matters:

- The degree to which the implementation of the planning strategies have been judged as successful in actually achieving a health-supportive environment. This will necessarily mean engagement with the local residents, workers and visitors to Green Square, and also health practitioners in respect to actual population health outcomes - and is also an on-going as well as future exercise.
- The degree to which the planning strategy practitioners, including authors and those now engaged in implementing the strategies, have themselves realised and consciously included health-supportive features in the strategies and their on-going work; or, has the consistency mentioned been more by fortuitous chance and thus also subject to the risk of being lost amongst other matters and competing interests and needs.

That said, other characteristics of Green Square suggest that it can indeed provide useful instruction on the current need to re-embed the notion of a health-supportive environment in planning strategy work, and in particular in higher density urban brown-field development. The evidence from the review suggests that within the planning strategy work in Green Square there is a degree of specific engagement with respect to:

- Providing a highly liveable urban environment including, via the inclusion of an affordable housing component, for a range of socio-economic groups;
- The integration of broader ecological sustainable development needs, including the improvement of the local water environment, local biodiversity, and efficiencies in energy use;

- Being innovative in terms of design and management processes, including the inclusion of measures to address ESD criteria, in on-going place-making, and in encouraging the required high modal split towards active transport use,
- Not just the construction and delivery of a housing estate but also the arguably more difficult ‘non-built environment’ process of establishing a residential community.

The review, and the qualifications as to process and findings described above, has suggested nine potential follow-up investigations to clarify certain outstanding matters as well as new matters raised as a result of the findings. An additional tenth investigation has also suggested itself, in part as a result of these findings, but also in part as one of the outcomes of the contextual review of planning strategy documents as applicable to wider Green Square. This was the identification of the issue of how these strategies are being financed, given not only the particularly large scale and number of strategies being implemented but also the somewhat unique funding environment in which this process is occurring. It gives rise to financial questions about the degree to which the Green Square planning strategies might be replicated in other development areas.

The ten recommended investigations are listed below:

#### 1. Descriptors in relation to density

Surveying people to investigate how they use quantitative and/or qualitative descriptors in text to conceptualise density will help the project team to make more feasible recommendations in regard to how density levels could be better communicated to the general public. Attitudes towards particular descriptors held by planning professionals could also be collected to assist in understanding the subjective nature of density conceptualisation.

#### 2. The extent to which health has determined adopted densities

Interviews with key Landcom personnel would help to reveal the process and thinking behind the determination of density at each site and clarify if there were any influencing health factors that may not have been documented in the Landcom planning documents. These interviews may also provide an opportunity to understand how Landcom defines ‘healthy high density’ at present, as well as during the planning of Victoria Park and Green Square. Any changes in this definition will help to highlight industry responses to health issues over time.

### 3. Comparative reviews of density conceptualisations

The key Landcom planning documents for the two sites were written almost 15 years apart and there is a stark difference in their approach to density discussions, from flexibility at Victoria Park to making the case for increases in the Green Square Town Centre. A study of similar planning strategy documents from 1998 to 2012 from other developments elsewhere in New South Wales or in other parts of Australia might reveal further information in regards to whether: a) there was a uniqueness to the Victoria Park or Green Square Town Centre approach for the time, or b) there had been a general trend towards the Green Square style of proposal in other areas of New South Wales and Australia, providing the project team with a greater understanding of the broader context of each development and how planning proposals and density have evolved.

### 4. The personal attributes required to deal with complexity

From the experience of Green Square as an example of an urban development process that is consciously engaging with the full complexity of urban, and health, issues, an exploration with key Landcom, and potentially also City of Sydney, personnel involved in Green Square to find out which attributes (skills, attitudes and motivations) they have required in order to deal with that complexity.

### 5. Assessment of the success of the 'liveability' intentions of Green Square

To ascertain in more detail the success of the planning intentions to create in Green Square a highly liveable residential environment consistent also with ESD principles. This would include a review of existing recent studies on resident satisfaction with Victoria Park and Green Square Town Centre, and possibly also other developments in the wider Green Square locality. These studies comprise: (1) recent and proposed studies of residents by Landcom and MIRVAC; (2) the existing City of Sydney My Place and Wellbeing Survey studies; and (3) the Victoria Park component of the Planning and Building Healthy Communities study 2011-2015.

### 6. A focus on the liveability of the *high-rise* components of Green Square

From the conclusion that there is a lack of current local information on the experience of designing, and living, in high-rise development, the review of the recent existing studies into resident satisfaction mentioned above should include a particular focus on their lived-

experience of not just a high density locality but also, for some, apartments in high-rise buildings.

#### 7. A review of literature on high-rise living generally

A review of the local and international sociological and architectural design literature broadly on high-rise residential buildings. This could include: (1) the work of the (international) Council on Tall Buildings and Urban Habitat and associated CTBUH Journal; (2) the International Journal of High-Rise Buildings; (3) Haddow, A. (2007) *Shall we dense?* The Winston Churchill Memorial Trust of Australia; (4) the references listed in Appendix 4; and (5), for earlier background, Conway, D. (1977) *Human Response to Tall Buildings*. American Institute of Architects Research Programs. Dowden, Hutchinson & Ross, New York.

#### 8. Assessing different high density configurations

Undertake a comparison of densities within different high-density localities within Sydney of different building shape and treatment of road layouts and car parking configurations to ascertain the extent to which high density development needs to be high-rise.

#### 9. Practitioner knowledge and motivations about 'health'

To explore in more detail the finding that the planning strategy work in Green Square is essentially consistent with the contemporary academic literature on health-supportive environments, interview discussions should be conducted with relevant Landcom, and potentially City of Sydney, personnel involved in Green Square about:

- The extent of their knowledge and understanding of health-supportive environments;
- The extent to which this knowledge is experiential and intuitive or research based or derives from other, and not necessarily academic, documents;
- The particular motivations for putting such knowledge into practice;
- The particular personal and institutional enablers and inhibitors that were experienced when seeking to achieve that motivation; and
- Any lingering personal and corporation concerns about what they do not know about health-supportive environments.

#### 10. Financing successful high density

From the knowledge that there are substantial costs involved in the establishment of much of the health-supportive and other infrastructure required in Green Square, and the

understanding that any flow-on cost burden on individual owners and renters can itself have detrimental implications in relation to health as a result of financial stress and unequal access to opportunities, a final recommendation would be to conduct a financial assessment that looks at:

- The additional cost per dwelling, and flow-on individual financial costs to buyers and renters, arising from the infrastructure and other establishment costs of Green Square;
- The additional cost per dwelling, and flow-on individual financial costs to buyers and renters, arising from the future costs relating to maintenance and other management of the public domain in Green Square;
- Whether Green Square is likely to have been, and will be, the beneficiary of a unique amount of financial and other resources available to Landcom and to the City of Sydney council; and
- The degree to which this financial experience can be replicated in planning strategies for the development of health-supportive environments elsewhere.

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<sup>2</sup> Note that the presenter, Sean O'Toole, was the then Chief General Manager of Landcom.

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## 9. Appendices

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Appendix 1: Summary description of the 50 attributes of a health-supportive environment comprising the ‘Three Theoretical Frameworks of Health’ (the ‘Three Healths Framework’)

Appendix 2: The consistency between Green Square planning strategies and the ‘Three Healths Framework’.

Appendix 3: Sydney architectural commentary and design initiatives.

Appendix 4: Tally sheets for each group 2 document, showing:

- The frequency of consistency with attributes from the ‘Three Healths Framework’, and
- Attributes not covered.

## **Appendix 1:**

### **Summary description of the 50 attributes comprising the ‘Three Theoretical Frameworks of Health’ (the ‘Three Healths Framework’)**

The following table is summarised from the *Healthy Higher Density Living* project Literature Review Report 1 - Connon et al, 2018: 38-75 and 134-135.

1. Global public & population health		
Attribute (factors which, when present, will assist achievement of health)		Notes / Explanation
1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	Urban health is challenged by increased pollution, noise, overcrowding and stress resulting from the urbanisation process. The relationship between health, housing, density and increased city size is a pressing concern and cannot be overlooked within urban planning actions.
	1.1.2 Improvements to infrastructure and transport provision	The provision and design of transport and other infrastructure can enable positive health outcomes by reducing exposure to traffic pollution, increasing walking behaviour and reducing sedentary lifestyles. The challenge is to maximise this through/within higher density development.
	1.1.3 Solve problems resulting from changing urban demographic population profile	There is a close nexus between health and household profiles. A particular current development issue is a discrepancy between increasing smaller households, and available dwellings.
1.2 Promotes positive physical health	1.2.1 Good air quality	<ul style="list-style-type: none"> <li>▪ These attributes directly relate to relatively-easily measured built environment features that in turn can have direct physical health outcomes: air quality, noise, adequate indoor and outdoor spaces, feelings of safety, amenable traffic (and associated noise) levels, and affordable quality food.</li> <li>▪ City designs need to prioritise lowering rates of cardio-vascular disease from physical inactivity, sedentary behaviours and unhealthy diets.</li> <li>▪ <i>Adequacy</i> of indoor and outdoor space relates to both quantity and quality of design and layout. In respect to outdoor space this necessarily includes opportunities to undertake physical activity.</li> </ul>
	1.2.2 Adequate outdoor space	
	1.2.3 Pedestrian friendly outdoor spaces	
	1.2.4 Safety	
	1.2.5 Adequate indoor space	
	1.2.6 Low neighbourhood traffic levels	
	1.2.7 Access to quality food	
1.3 Promotes positive mental health	1.3.1 Good air quality	<ul style="list-style-type: none"> <li>▪ The same attributes that can lead to positive physical health outcomes (as above) can also lead to positive mental health outcomes.</li> <li>▪ In addition, levels of feelings of safety and comfort can influence social interaction; in turn high levels of safety, comfort and social interaction can reduce rates of depression, loneliness and anxiety.</li> <li>▪ Fear and actual experience of crime and prolonged exposure to high traffic levels (noise and busyness) can also lead to detrimental mental health outcomes.</li> <li>▪ Again, <i>adequacy</i> of indoor and outdoor spaces necessarily then includes both size and quality of design and layout.</li> </ul>
	1.3.2 Adequate outdoor space	
	1.3.3 Pedestrian friendly outdoor spaces	
	1.3.4 Safety and human interaction	
	1.3.5 Adequate indoor space	
	1.3.6 Low neighbourhood traffic levels	
	1.3.7 Low crime levels	
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	<ul style="list-style-type: none"> <li>▪ High density development provides an opportunity to address the joint challenge of the impacts of increasing urbanisation and the achievement of <i>long-term</i> improvements in population health.</li> <li>▪ This means addressing the needs of the current population <i>as well as</i> expected dramatic increases in life expectancy, chronic disease, crowding, pollution, crowded transport and urban sprawl.</li> <li>▪ A potential new threat is bioterrorism - the possible introduction into crowded urban areas of microbes for which the current population has no immunity.</li> </ul>
	1.4.2 Future-orientated	

<b>2. Socio-ecological determinants of health</b>		
<b>Attribute</b> (factors which, when present, will assist achievement of health)	<b>Notes / Explanation</b>	
	<i>Emphasises the wide range of social and ecological factors that influence, directly and indirectly, health outcomes. These attributes seek to promote the conditions that lead to health-improving behaviours – by supporting overall wellbeing rather than focussing on specific physical and mental health issues. Includes an emphasis on interventions available at a neighbourhood level.</i>	
2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	<ul style="list-style-type: none"> <li>▪ Focus on overall wellbeing/‘living well’/quality of life/levels of satisfaction rather than specific physical and mental health matters.</li> <li>▪ Includes both objective and subjective interpretations and measures, including resident diversity, neighbourhood relations and social and environmental aspects of neighbourhood design.</li> </ul>
	2.1.2. Uses stimulating design and infrastructure to enhance resident wellbeing	<ul style="list-style-type: none"> <li>▪ About <i>optimising</i> ways of living in higher density environments rather than merely reducing chronic disease tendencies.</li> <li>▪ Recognises the importance of ‘place-making’ to stimulate affective responses, and a view of urban living (and overall quality of life) as a ‘flow of experiences’.</li> </ul>
	2.1.3 Promotes human happiness	<ul style="list-style-type: none"> <li>▪ Resident satisfaction, and in turn happiness, is influenced by both the actual physical and <i>perceived</i> built environment.</li> <li>▪ Relevant features include position, design and facilities of dwellings, noise levels, walkability, safety and condition of the local area, and distance from social contacts.</li> </ul>
	2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	<ul style="list-style-type: none"> <li>▪ Liveability (and thus health) comes from social and environmental <i>interactions</i>; as well as from individuals’ (socio-economic, family, gender) status in that society and environment.</li> <li>▪ Key liveability indicators are: access to healthy food, affordable and quality housing (optimal light, humidity and temperature control), supportive and inclusive social and transport infrastructure, walkability, safety and attractiveness.</li> <li>▪ Higher (rather than lower) densities can often give more opportunities to achieve these indicators.</li> </ul>
	2.1.5 Promotion of active transport	<ul style="list-style-type: none"> <li>▪ Important for promoting less-sedentary lifestyles, with positive quality of life and health outcomes.</li> <li>▪ Active transport localities also tend to be more compact and vibrant, and foster a sense of place.</li> </ul>
	2.1.6 Enhances social Interaction, including at different stages of the life course	<ul style="list-style-type: none"> <li>▪ Social interaction is important for human wellbeing. Opportunities for social interaction need to be maximised by enabling closeness to family, friends, goods and services (via good public transport).</li> <li>▪ Social cohesion and interaction is enabled by allowing diverse groups to mix in cafes, shops, service points, and parks (with, necessarily, good levels of amenity).</li> <li>▪ A need also for opportunities to be personally involved in local planning (involvement in the place-shaping <i>process</i> is itself important in enhancing liveability).</li> <li>▪ Healthy places allow for personal fulfilment and attainment of life goals.</li> <li>▪ Different age groups have different needs.</li> <li>▪ Links to cultural heritage can allow older people to share stories with younger residents, narrowing generational differences and enhancing community.</li> </ul>

2.2 Positive physical health	2.2.1 Provides access to public and active transport	<p>Prevention and mitigation of specific physical health outcomes can be achieved via a ‘pathway’ approach – giving access and/or limiting exposure to specific causal factors:</p> <ul style="list-style-type: none"> <li>▪ active transport supports cardio-vascular activity, respiratory functions, and social interaction.</li> <li>▪ safe, attractive and easily-accessible (nearby) ‘places to go to’ entice visitation and support resultant behaviours which are more active and social.</li> <li>▪ access to affordable fresh food should be prioritised over less/non-healthy ‘fast’ food options.</li> <li>▪ limiting exposure to air pollution reduces rates of respiratory disorders, and can assist/promote greater outdoor activity.</li> </ul>
	2.2.2 Building design and access to space promotes positive behaviour change	
	2.2.3 Enables access to fresh food	
	2.2.4 Limits exposure to air pollution	
2.3 Positive mental health	2.3.1 Decreases social isolation	<p>As above, prevention and mitigation of specific mental health outcomes can be achieved via a ‘pathway’ approach – giving access and/or limiting exposure to specific causal factors:</p> <ul style="list-style-type: none"> <li>▪ there is concern that high-density environments can increase social isolation. However, well-designed building, street and open spaces can also foster interactions amongst the resultant larger numbers of people, potentially decreasing social isolation.</li> <li>▪ healthy environments should not be crowded or noisy, should have optimal indoor air quality and light, be well-ventilated and insulated, offer good access to open green spaces, and be functional (well-governed and maintained).</li> <li>▪ crime and associated fears can be reduced by appropriate physical design as well as promoting cohesive local neighbourhoods – generating feelings of comfort and security.</li> <li>▪ concerns about fire, falls, suicides, earthquake risks and communicable diseases need to be addressed. Well-designed indoor and outdoor spaces can assist.</li> <li>▪ specific design measures in tall buildings may reduce the means to suicide.</li> </ul>
	2.3.2 Limits noise pollution and other environmental stressors	
	2.3.4 Reduces crime and fear of crime	
	2.3.5 Reduces fear of the health risks associated with environmental hazards through appropriate building design	
	2.3.6 Decreases suicide rates through effective building design	
2.4 Health equity	2.4.1 Age and health	<ul style="list-style-type: none"> <li>▪ For older adults, a need for easy access to green space to facilitate restorative and walking activity.</li> <li>▪ A proportion of dwelling units need to be large enough for (extended) families, providing social support for adults and children.</li> <li>▪ Children need a range of play spaces catering for different age groups, with attention to air quality, access, safety and stimulating activities. Schools need to be within walking distance.</li> </ul>
	2.4.2 Gender and health	
	2.4.3 Socio-cultural factors and health behaviours	<ul style="list-style-type: none"> <li>▪ Negative perceptions about particular urban environments are themselves inhibitors to engaging in healthy behaviours, and can directly impact on mental health.</li> <li>▪ Low income and less-educated groups are often more susceptible to the negative impacts of high-density living – though this can often be related to levels of service provision (public and private) and maintenance, and (in Australia) a negative cultural perception of high-density generally.</li> <li>▪ There are particular negative perceptions in relation to families with children living in apartments.</li> <li>▪ Merely providing health-supportive physical spaces is not enough – socio-cultural-responsive ‘education’ programs also need to be established to raise awareness and stimulate usage.</li> </ul>

	2.4.4 Socio-economic inequalities and health	<ul style="list-style-type: none"> <li>Healthy cities need to be socially-justice orientated, including recognition of an increasingly diverse population. High mobility rates can hinder establishment and stability of long-term communities.</li> <li>There is a need for diverse and affordable housing combined with supportive public infrastructure (that enhances social capital and networks and generates places of encounter and co-existence).</li> </ul>
<b>3. Planetary health (relational ecology)</b>		
<b>Attribute</b> (factors which, when present, will assist achievement of health)		<b>Notes / Explanation</b>
		<i>A renewed focus on the health of the natural environment as necessary for ensuring long-term human health, and an overall multi-scaled transformative approach. Here, higher density living presents an opportunity rather than a challenge for improving the health of the planet by limiting the footprint impact on the natural environment.</i>
3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	<p>There are multi-dimensional feedback loops between ecological health, human health and the design of urban environments. We need to achieve improved:</p> <ul style="list-style-type: none"> <li>biodiversity</li> <li>food security</li> <li>air and water quality</li> </ul> <p>In turn, enhancing such ecosystem 'services' generates positive effects on human psychological outlook and overall quality of life, including community cohesion.</p>
	3.1.2 Promoting long-term food security	
	3.1.3 Enhancing air quality and reducing atmospheric pollution	
	3.1.4 Improving water quality	
	3.1.5 Promoting human and environmental flourishing for long-term quality of life	
3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	<p>As above, with particular attention to providing natural green spaces - designed for climate adaptation, and adequate access thereto - to counter the pressure of increased urban densities, resulting in better mental health, cooler local temperatures, improved biodiversity, and potential for local food production.</p>
	3.2.2 Promotes urban greening	
	3.2.3 Promotes local food production	
3.3 Addresses global health challenge, especially climate change	3.3.1 Promotes adaptation to climate change	<p>As above, with particular attention to the need for development to respond specifically to the health threats (human and environmental) posed by climate change – by combating air pollution and the heat island effect, and also by tackling causes by reducing greenhouse gases.</p> <p>Addressing such broad-scale issues will also assist equality of health outcomes across populations.</p>
	3.3.2 Promotes mitigation of climate change through reduction in green-house gases	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	<p>Improvement in overall planetary health requires use of and investment in renewable energy in addition to reducing energy demands.</p> <p>Overall urban design needs to be innovative in terms of addressing thermal mass implications, and ensuring ready access to sun and wind energy sources.</p>
	3.4.2 Innovative environmentally-friendly building design	





## Appendix 2:

### The consistency between Green Square planning strategies and the 50 attributes comprising the ‘Three Healths Framework’

<b>(1) Global public &amp; population health</b>		
<b>Attribute</b>	<b>Degree of application in the Green Square case-studies</b>	
Global-challenge responsive	<ul style="list-style-type: none"> <li>• Focused on solving public health challenges resulting from increased urbanisation</li> </ul>	<p>Yes, but at a macro-level by (i) limiting urban ‘sprawl’ through ‘urban consolidation, and (ii) reducing journey times by providing dwellings close to work and other facilities.</p>
	<ul style="list-style-type: none"> <li>• Improvements to infrastructure and transport provision</li> </ul>	<ul style="list-style-type: none"> <li>▪ Leverages existing decision to build the New Southern Railway.</li> <li>▪ Creates WSUD infrastructure that will improve water quality to Botany Aquifer and the Alexandra Canal.</li> <li>▪ Creates new local ‘active transport’ routes, open spaces and built recreation facilities (sports + community)</li> </ul>
	<ul style="list-style-type: none"> <li>• Solve problems resulting from changing urban demographic population profile</li> </ul>	<ul style="list-style-type: none"> <li>▪ To an extent via inclusion of a proportion of dwellings as ‘affordable’ for ‘low’ incomes and, in Victoria Park, also an additional provision of dwellings for ‘moderate’ incomes, plus an overall diversity of housing types.</li> <li>▪ It is not clear whether Green Square will be able to address unemployment levels in the existing adjacent population.</li> <li>▪ Otherwise, no particular provisions, however the ‘universal’ nature of proposed facilities will allow equitable use by both existing and new residents.</li> </ul>
Promotes positive physical health	<ul style="list-style-type: none"> <li>• Good air quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Co-benefit from urban consolidation, and by promoting the increased use of non/less-polluting active transport modes.</li> <li>▪ Perhaps assisted closure of Waterloo Incinerator on the Town Centre (in 1997), though this was already subject to scrutiny and protest on health grounds.</li> </ul> <p>Otherwise limited ability to affect local air quality. Some Victoria Park residents have expressed concerns about air quality – as emanating from the locality as a whole rather than the case-study sites. Green Square is placing more people in this situation. Increased tree planting may assist in mitigation.</p> <ul style="list-style-type: none"> <li>▪ ESD criteria for Town Centre includes reductions in PVC and paint emissions; and standards for cross-ventilation/operable windows in respect to indoor air quality.</li> </ul>
	<ul style="list-style-type: none"> <li>• Adequate outdoor space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes- within individual neighbourhoods and site developments, and also within the locality through monetary contributions (and facilitated by an active local government authority).</li> <li>▪ In Victoria Park a minimum amount of open space per person was allocated (20m<sup>2</sup>) (although this could include built-up components) plus a requirement of 20m<sup>2</sup> of private outdoor space per dwelling (which could include balconies).</li> </ul>
	<ul style="list-style-type: none"> <li>• Pedestrian friendly outdoor spaces</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. The master plans and available implementation evidence indicates considerable attention to providing high quality pedestrian environments.</li> <li>▪ In Victoria Park there are minimum footpath widths + standards to increase number of building entries opening to public streets to encourage activity and safety.</li> </ul>
	<ul style="list-style-type: none"> <li>• Safety</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. The master plans include specific reference to ways to improve safety in public spaces.</li> </ul>

		<ul style="list-style-type: none"> <li>▪ CPTED assessment is specifically mentioned in the Town Centre master plan as an additional development assessment criteria.</li> </ul>
	<ul style="list-style-type: none"> <li>• Adequate indoor space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Standards here are set by State Government legislation. There are no additional standards in the master plans.</li> </ul>
	<ul style="list-style-type: none"> <li>• Low neighbourhood traffic levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mostly.</li> <li>▪ The Town Centre has a substantial central car-free area, and in both locations streets designed as short lengths and primarily for local traffic – though some concerns in Victoria Park that the main street is used to avoid adjacent through routes.</li> <li>▪ However adjacent streets bounding the two sites are heavily trafficked.</li> </ul>
	<ul style="list-style-type: none"> <li>• Access to quality food</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potentially, as a result of provision of neighbourhood shops, though the shops in Victoria Park were initially delayed (but are now open). To compensate at the time Landcom sponsored a farmers’ market (now not viable and effectively closed with the opening of the retail area).</li> <li>▪ The planning for the Town Centre has included early provision of a supermarket, and suggestions of interim pop-up facilities for fresh food retailing – suggesting a ‘learning’ from this experience.</li> <li>▪ Visual evidence from Victoria Park retail area is that it has a good range of quality fresh foods.</li> <li>▪ Victoria Park has community food growing boxes, and a ‘growers group’ to manage them and encourage individual food growing in private spaces.</li> <li>▪ Arguably also influenced to an extent by the former South Sydney Council’s food policy (<i>What’s Eating South Sydney</i>, 1995), and inclusion of food issues in its DCP.</li> </ul>
Promotes positive mental health	<ul style="list-style-type: none"> <li>• Good air quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Co-benefit from urban consolidation, and by promoting the increased use of non/less-polluting active transport modes.</li> <li>▪ Perhaps assisted closure of Waterloo Incinerator on the Town Centre (in 1997), though this was already subject to scrutiny and protest on health grounds.</li> </ul> <p>Otherwise limited ability to affect local air quality. Some Victoria Park residents have expressed concerns about air quality – as emanating from the locality as a whole rather than the case-study sites. Green Square is placing more people in this situation. Increased tree planting may assist in mitigation.</p> <ul style="list-style-type: none"> <li>▪ ESD criteria for Town Centre includes reductions in PVC and paint emissions; and standards for cross-ventilation/operable windows in respect to indoor air quality.</li> </ul>
	<ul style="list-style-type: none"> <li>• Adequate outdoor space</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes- within individual neighbourhoods and site developments, and also within the locality through monetary contributions (and facilitated by an active local government authority).</li> <li>▪ In Victoria Park a minimum amount of open space per person was allocated (20m<sup>2</sup>) (although this could include built-up components) plus a requirement of 20m<sup>2</sup> of private outdoor space per dwelling (which could include balconies).</li> </ul>
	<ul style="list-style-type: none"> <li>• Pedestrian friendly outdoor spaces</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. The master plans and available implementation evidence indicates considerable attention to providing high quality pedestrian environments.</li> <li>▪ In Victoria Park there are minimum footpath widths + standards to increase number of building entries opening to public streets to encourage activity and safety.</li> </ul>

	<ul style="list-style-type: none"> <li>• Safety and human interaction</li> </ul>	<ul style="list-style-type: none"> <li>▪ The master plans include specific reference to ways to improve safety in public spaces.</li> <li>▪ CPTED assessment is specifically mentioned in the Town Centre master plan as an additional development assessment criteria.</li> <li>▪ Both Victoria Park and the Town Centre are designed to maximise the potential for human interaction in the public open spaces and streets.</li> </ul>
	<ul style="list-style-type: none"> <li>• Adequate indoor space</li> </ul>	Standards here are set by State Government legislation. There are no additional standards in the master plans.
	<ul style="list-style-type: none"> <li>• Low neighbourhood traffic levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mostly.</li> <li>▪ The Town Centre has a substantial central car-free area, and in both locations streets designed as short lengths and primarily for local traffic – though some concerns in Victoria Park that the main street is used to avoid adjacent through routes.</li> <li>▪ However adjacent streets bounding the two sites are heavily trafficked.</li> </ul>
	<ul style="list-style-type: none"> <li>• Low crime levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not able to be determined from this review.</li> <li>▪ The intention is to have high levels of feelings of safety in public spaces (see above).</li> </ul>
Focused on long-term health outcomes	<ul style="list-style-type: none"> <li>• Action-orientated</li> </ul>	<ul style="list-style-type: none"> <li>▪ The high level of both quantity and quality of infrastructure proposed + the emphasis on active transport coupled with mixed-use land use pattern will have inherent health co-benefits.</li> <li>▪ The existing hydrotherapy pool located on the old hospital site will be re-located to the new aquatic centre.</li> <li>▪ There is now a medical centre in the Victoria Park retail area, consistent with master plan intentions.</li> <li>▪ The Local Health District has plans for a local community health centre. The initial location has been reallocated for a primary school, but on the understanding there are sufficient alternative spaces in the Town Centre.</li> </ul>
	<ul style="list-style-type: none"> <li>• Future-orientated</li> </ul>	As above.

## (2) Socio-ecological determinants of health

Attribute	Degree of application in the Green Square case-studies	
Liveability	<ul style="list-style-type: none"> <li>• Promotion of liveability and quality of life rather than disease prevention</li> </ul>	<ul style="list-style-type: none"> <li>▪ The thrust of all provisions in the master plans is consciously around 'liveability', 'quality of life' and 'wellbeing'.</li> <li>▪ On-ground outcomes in Victoria Park suggest this has been achieved there (it is too early to make a detailed assessment in relation to the Town Centre).</li> <li>▪ The Town Centre 'activation strategies' have a strong orientation to social interactions.</li> </ul>
	<ul style="list-style-type: none"> <li>• Uses stimulating design and infrastructure to enhance resident wellbeing</li> </ul>	Yes - as above. There is a high level of quality and innovation in the infrastructure being established.
	<ul style="list-style-type: none"> <li>• Promotes human happiness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not able to be determined from this review.</li> <li>▪ Resident surveys conducted for the City of Sydney suggest a high level of satisfaction amongst Green Square residents.</li> <li>▪ The UNSW <i>Planning &amp; Building Healthy Communities</i> study indicates a high level of satisfaction by Victoria Park residents.</li> </ul>

		<ul style="list-style-type: none"> <li>▪ The Town Centre ‘activation strategies’ have a strong orientation to social interactions.</li> </ul>
	<ul style="list-style-type: none"> <li>• Emphasises a two-directional relationship between the built environment and human wellbeing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes - as above. There is a high level of quality and innovation in the infrastructure being established.</li> <li>▪ The thrust of all provisions in the master plans is consciously around ‘liveability’, ‘quality of life’ and ‘wellbeing’.</li> <li>▪ On-ground outcomes in Victoria Park suggest this has been achieved there (it is too early to make a detailed assessment in relation to the Town Centre).</li> </ul>
	<ul style="list-style-type: none"> <li>• Promotion of active transport</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. The master plans and the Town Centre transport assessment give considerable attention to providing high quality pedestrian environments, new cycling routes, and access to public transport.</li> <li>▪ Green Square is in part based around maximising use of the railway access at Green Square station.</li> <li>▪ The mixed-use land use pattern is in part to promote active transport by providing easily-accessible destinations.</li> <li>▪ Both master plans include provision of bus shelters.</li> </ul>
	<ul style="list-style-type: none"> <li>• Enhances social interaction, including at different stages of the life course</li> </ul>	<ul style="list-style-type: none"> <li>▪ Both Victoria Park and the Town Centre are designed to maximise the potential for human interaction in the public open spaces and streets.</li> <li>▪ The Town Centre ‘activation strategies’ have a strong orientation to social interactions.</li> <li>▪ A new primary school is proposed for the old hospital site.</li> <li>▪ However it is not able to be determined from this review whether specific age-related needs are being addressed.</li> </ul>
Positive physical health	<ul style="list-style-type: none"> <li>• Provides access to public and active transport</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. The master plans and the Town Centre transport assessment give considerable attention to providing high quality pedestrian environments, new cycling routes, and access to public transport.</li> <li>▪ Green Square is in part based around maximising use of the railway access at Green Square station.</li> <li>▪ The mixed-use land use pattern is in part to promote active transport by providing easily-accessible destinations.</li> </ul>
	<ul style="list-style-type: none"> <li>• Building design and access to space promotes positive behaviour change</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not able to be assessed from this review, however this is the expressed intention in the master plans.</li> </ul>
	<ul style="list-style-type: none"> <li>• Enables access to fresh food</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potentially, as a result of provision of neighbourhood shops, though the shops in Victoria Park were initially delayed (but are now open). To compensate at the time Landcom sponsored a farmers’ market (now not viable and effectively closed with the opening of the retail area).</li> <li>▪ The planning for the Town Centre has included early provision of a supermarket, and suggestions of interim pop-up facilities for fresh food retailing – suggesting a ‘learning’ from this experience.</li> <li>▪ Visual evidence from Victoria Park retail area is that it has a good range of quality fresh foods.</li> <li>▪ Victoria Park has community food growing boxes, and a ‘growers group’ to manage them and encourage individual food growing in private spaces.</li> <li>▪ Arguably also influenced to an extent by the former South Sydney Council’s food policy (<i>What’s Eating South Sydney, 1995</i>), and inclusion of food issues in its DCP.</li> </ul>
	<ul style="list-style-type: none"> <li>• Limits exposure to air pollution</li> </ul>	<ul style="list-style-type: none"> <li>▪ Co-benefit from urban consolidation, and by promoting the increased use of non/less-polluting active transport modes.</li> </ul>

		<ul style="list-style-type: none"> <li>▪ Perhaps assisted closure of Waterloo Incinerator on the Town Centre (in 1997), though this was already subject to scrutiny and protest on health grounds.</li> </ul> <p>Otherwise limited ability to affect local air quality. Some Victoria Park residents have expressed concerns about air quality – as emanating from the locality as a whole rather than the case-study sites. Green Square is placing more people in this situation.</p> <p>Increased tree planting may assist in mitigation.</p> <ul style="list-style-type: none"> <li>▪ ESD criteria for Town Centre includes reductions in PVC and paint emissions; and standards for cross-ventilation/operable windows in respect to indoor air quality.</li> </ul>
Positive mental health	<ul style="list-style-type: none"> <li>• Decreases social isolation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Both Victoria Park and the Town Centre are designed to maximise the potential for human interaction in the public open spaces and streets.</li> <li>▪ The Town Centre ‘activation strategies’ have a strong orientation to social interactions.</li> <li>▪ The UNSW <i>Planning &amp; Building Healthy Communities</i> study indicates some concern about not knowing neighbours in multi-unit buildings, particularly where also let out on short-term rentals.</li> </ul>
	<ul style="list-style-type: none"> <li>• Limits noise pollution and other environmental stressors</li> </ul>	<ul style="list-style-type: none"> <li>▪ In respect to traffic noise, the Town Centre has a substantial central car-free area, and in both locations streets designed as short lengths and primarily for local traffic. Some concern in Victoria Park that the main street is used to avoid adjacent through routes. However adjacent streets bounding the two sites are heavily trafficked.</li> <li>▪ The nature of anticipated non-residential land uses is unlikely to generate high levels of noise.</li> <li>▪ It is not known from this study whether residential noise is an issue in the multi-unit buildings. Some evidence that the design of developments in the Town Centre are to address noise emanating from lower level non-residential uses.</li> <li>▪ It is not known from this study whether there are other environmental stressors present. Remediation of individual sites should remove any concerns about site contaminants.</li> </ul>
	<ul style="list-style-type: none"> <li>• Reduces crime and fear of crime</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not able to test whether crime has been reduced.</li> <li>▪ The master plans include specific reference to ways to improve safety in public spaces.</li> <li>▪ CPTED assessment is specifically mentioned in the Town Centre master plan as an additional development assessment criteria.</li> <li>▪ Both Victoria Park and the Town Centre are designed to maximise the potential for human interaction in the public open spaces and streets.</li> <li>▪ The UNSW <i>Planning &amp; Building Healthy Communities</i> study indicates some concern about crime levels specifically drug manufacture) as a result of the anonymity of multi-unit buildings.</li> </ul>
	<ul style="list-style-type: none"> <li>• Reduces fear of the health risks associated with environmental hazards through appropriate building design</li> </ul>	<ul style="list-style-type: none"> <li>▪ The only local environmental hazard that might give rise to a ‘fear’ relates to flooding. Substantial drainage works are nearing completion to address this. The WSUD components makes parts of this infrastructure ‘visible’ to the public at large with an intended ‘educational’ outcome.</li> </ul>
	<ul style="list-style-type: none"> <li>• Decreases suicide rates through effective building design</li> </ul>	<ul style="list-style-type: none"> <li>▪ No particular provisions.</li> <li>▪ Not able to assess this in this study.</li> </ul>

Health equity	• Age and health	<ul style="list-style-type: none"> <li>▪ No particular provisions, however emphasis on accessible travel routes and outdoor design will assist older persons, and the ‘universal’ nature of proposed facilities should not create barriers or limitations.</li> <li>▪ The Victoria Park master plan included a proposed retirement housing development and this was sought in the implementation phase – however did not eventuate.</li> <li>▪ A proposed new primary school on the old hospital site will provide convenient access for school-aged residents.</li> </ul>
	• Gender and health	<ul style="list-style-type: none"> <li>▪ No particular provisions, however the ‘universal’ nature of proposed facilities should not create barriers or limitations.</li> </ul>
	• Socio-cultural factors and health behaviours	<ul style="list-style-type: none"> <li>▪ No particular provisions, however the ‘universal’ nature of proposed facilities should not create barriers or limitations.</li> </ul>
	• Socio-economic inequalities and health	<ul style="list-style-type: none"> <li>▪ To an extent via inclusion of a proportion of dwellings as ‘affordable’ for ‘low’ incomes and, in Victoria Park, also an additional provision of dwellings for ‘moderate’ incomes.</li> <li>▪ It is not clear whether Green Square will be able to address unemployment levels in the existing adjacent population.</li> <li>▪ Otherwise, no particular provisions, however the ‘universal’ nature of proposed facilities will allow equitable use by both existing and new residents.</li> </ul>

<b>(3) Planetary health (relational ecology)</b>		
Attribute	Degree of application in the Green Square case-studies	
Co-benefits approach to human and environmental health	• Enhancing biodiversity of the natural environment	Yes – explicit intention to improvement of the Botany Aquifer and, in Victoria Park, to re-establish native plantings to provide habitat for insect and bird life.
	• Promoting long-term food security	<ul style="list-style-type: none"> <li>▪ Not really.</li> <li>▪ As part of urban consolidation strategies Green Square has the <i>potential</i> to reduce metropolitan growth into food-production lands. However there is no concurrent metropolitan policy that explicitly achieves retention of such lands (despite statements of aims and objectives to this effect).</li> <li>▪ In Victoria Park a local growers group and community food-growing boxes demonstrates good intentions. However in practice has only limited use and ability to supply.</li> </ul>
	• Enhancing air quality and reducing atmospheric pollution	<ul style="list-style-type: none"> <li>▪ Co-benefit from urban consolidation, and by promoting the increased use of non/less-polluting active transport modes.</li> <li>▪ Perhaps assisted closure of Waterloo Incinerator on the Town Centre (in 1997), though this was already subject to scrutiny and protest on health grounds.</li> </ul> <p>Otherwise limited ability to affect local air quality. Some Victoria Park residents have expressed concerns about air quality – as emanating from the locality as a whole rather than the case-study sites. Green Square is placing more people in this situation. Increased tree planting may assist in mitigation.</p> <ul style="list-style-type: none"> <li>▪ ESD criteria for Town Centre includes reductions in PVC and paint emissions; and standards for cross-ventilation/operable windows in respect to indoor air quality.</li> </ul>

	<ul style="list-style-type: none"> <li>• Improving water quality</li> </ul>	<p>Yes – adoption of WSUD principles include specific reference to improvements in quality of local runoff water to Alexandra Canal and the Botany Aquifer.</p>
	<ul style="list-style-type: none"> <li>• Promoting human and environmental flourishing for long-term quality of life</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes – strong adoption of ESD principles in conjunction with master plan statements about the potential for environmental infrastructure to be designed to promote environmental ‘learning’ suggests this is a possible outcome.</li> <li>▪ Some Town Centre ‘social activation’ activities include an environmental focus.</li> </ul>
Holistic approach to human wellbeing	<ul style="list-style-type: none"> <li>• Provides opportunities for accessing and attending to nature</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes, but very much in a localised way, and in relation to newly-created landscapes only.</li> <li>▪ Victoria Park promoted as a ‘green’ neighbourhood as a result of tree planting, new landscaped parks, and water features.</li> <li>▪ The ‘opaque’ design of WSUD features may promote an awareness of broader hydraulic processes.</li> <li>▪ Victoria Park includes native tree plantings in order to increase native bird and insect life.</li> <li>▪ Victoria Park has community food growing boxes, and a ‘growers group’ to manage them and to encourage individual food growing in private spaces.</li> </ul>
	<ul style="list-style-type: none"> <li>• Promotes urban greening</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes - Victoria Park promoted as a ‘green’ neighbourhood as a result of tree planting, new landscaped parks, and water features; however the Town Centre will be more ‘hard’ landscaped. .</li> <li>▪ The ‘opaque’ design of WSUD features may promote an awareness of broader hydraulic processes.</li> <li>▪ Victoria Park includes native tree plantings in order to increase native bird and insect life.</li> </ul>
	<ul style="list-style-type: none"> <li>• Promotes local food production</li> </ul>	<p>To an extent. In Victoria Park a local growers group and community food-growing boxes demonstrates good intentions. However in practice has only limited use and ability to supply.</p>
Addresses global health challenge especially climate change	<ul style="list-style-type: none"> <li>• Promotes adaptation to climate change</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes – strong adoption of ESD principles, plus climate change co-benefits from potential reductions in urban sprawl and promotion of active transport.</li> <li>▪ The master plans envisage the potential for environmental infrastructure to be designed to promote environmental ‘learning’.</li> <li>▪ Some Town Centre ‘social activation’ activities include an environmental focus.</li> <li>▪ Development also has to comply with State Government BASIX requirements.</li> </ul>
	<ul style="list-style-type: none"> <li>• Promotes mitigation of climate change through reductions in green-house gases</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes – through promotion of active rather than car-based transport, re-use of demolition materials, promotion of renewable energy technologies. and design measures to reduce building energy use.</li> <li>▪ Development also has to comply with State Government BASIX requirements.</li> </ul>
Promotes planetary sustainability in built environment design	<ul style="list-style-type: none"> <li>• Uses renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes. Includes a statement that in Victoria Park renewable energy targets were exceeded.</li> <li>▪ Development also has to comply with State Government BASIX requirements.</li> </ul>
	<ul style="list-style-type: none"> <li>• Innovative environmentally-friendly building design</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes – master plan criteria include ESD requirements in addition to State Government BASIX requirements.</li> </ul>



## Appendix 3:

### Sydney architectural commentary and design initiatives

- (i) Balcony design in high-rise buildings (1) (*Sydney Morning Herald* 'Domain' section, 8 September 2018)



A balcony for the future, the Greenland Centre, above; Laneway House by Jon Jarka Architects, below.

#### High society

On the topic of suburban building, Nimmo, the director of Lahzenimmo Architects, believes high-density living is essential to stop our cities sprawling. "In a perfect world, we should not be cutting down one more tree or clearing one more forest to make a greenfield development. We should be building within the footprint we already have."

High-density and apartment living can offer a quality lifestyle if done properly, Nimmo believes.

"We haven't sold the benefits of higher-density living to the general populace terribly well."

He says places such as Sydney's Potts Point and Elizabeth Bay are good examples of a traditional quality, high-density lifestyle.

Phillip Rossington of BVN is another advocate for quality high-rise living. He's working on the 70-storey Greenland Centre, which will be Sydney's tallest residential tower when it is finished in 2019.

High-rise balconies are often unusable due to the dangers of strong winds so BVN has developed a new concept for a protected balcony that will be pleasant to sit on even at great heights.

These balconies will be like individual pods with a windscreen to offer protection. They're not fully enclosed winter gardens but will have fresh air circulating.

"We're controlling the velocity of the air rather than trying to block it out altogether," Rossington says.

The "Sydney balconies" will have a solid half-metre-high wall to offer security, timber decking and vents below and above to allow the controlled air to circulate.

People living on high floors will now be able to step out onto a traditional balcony 75 per cent of the year, he says.

Balconies are an integral part of apartment living and the average size of a balcony increases as you go up the east coast, from Melbourne to Sydney to the Gold Coast.

#### Health check

At the same time as innovating – whether it is balconies or cultural context – how do architects ensure the next generation of Australian design enhances the occupants' health and wellbeing?

This concept is a growing area of focus for the industry. Mark Stevenson, an epidemiologist and professor of urban transport and public health at the University of Melbourne, told the National Architecture Conference that he uses a multi-disciplinary approach to analyse data on what constitutes our healthiest suburbs.

"Healthier suburbs are ones where we see greater green space, reduced emissions or air pollution, not huge road networks running through housing developments – and greater public transport support," he says.

These types of suburbs are sought-after and attract higher prices.

"We are trying to explore what are the physical elements of some of those healthy suburbs, so if we were to recreate those suburbs in a poorer area, what would we be doing?"

He says the timing is crucial for the development of our cities.

"The time is now to be really exploring what we can be doing and how we can be doing things differently," Stevenson says. ■

- (ii) Balcony design in high-rise buildings (2) (*Architecture Australia* Issue 6, November 2018, p.80).

National Award

## Short Lane by Woods Bagot

Location Sydney, New South Wales

Jury citation Located on Bourke Street in Sydney's inner-city neighbourhood of Surry Hills, this mixed-use project comprises twenty-two apartments across six levels above a retail podium at ground level. Echoing the height and brutalist materiality of the neighbouring Wesley Mission, all surfaces are finished with textured board-formed concrete.

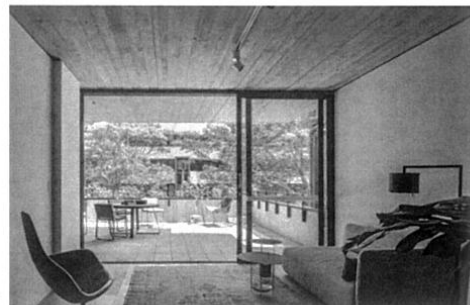
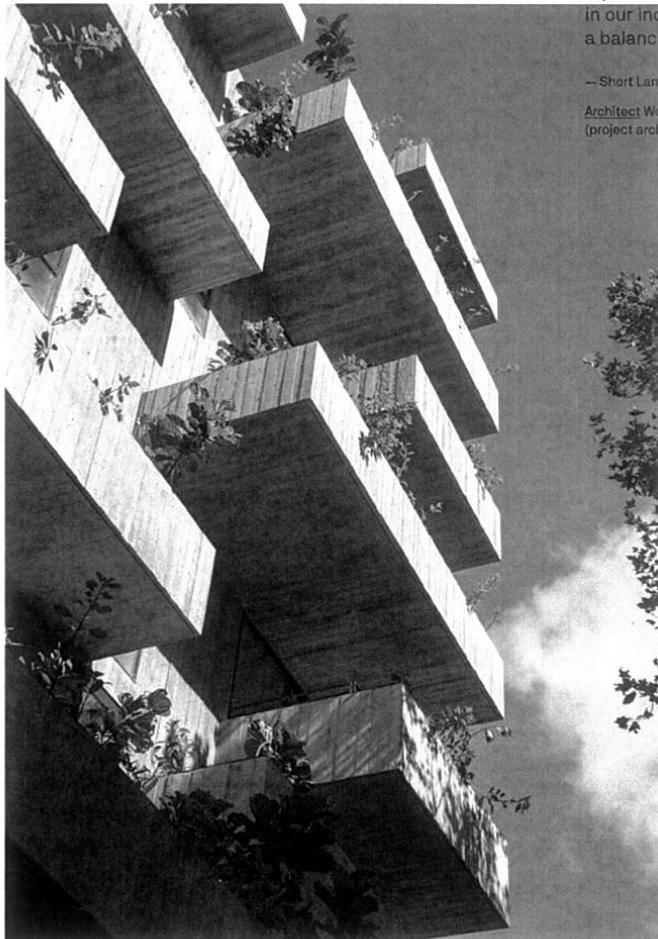
The street frontage is defined by densely planted balconies and terraces that stagger across the facade to provide shade, shelter and either privacy or engagement with neighbours between levels. This planted facade creates private botanical spaces for the residents and gives back as a living building to the street.

Each apartment has good cross-ventilation, with openable windows on both the north and south facades and full-height sliding glass doors leading onto outdoor cantilevered terraces.

The jury was impressed by the compact planning of the apartments. No space was wasted and careful attention was paid to the understated interiors in order to create a sophisticated urban retreat in which off-form concrete ceilings are balanced by the warmth of oak floors. Through tight resolution of a few key ideas such as urban nature and compact living, Short Lane represents a new prototype for low-scale, mixed-use development in our increasingly densified cities, seeking to bring about a balance between nature and urban environments.

— Short Lane will be reviewed by Lee Hillam in a future issue of *Architecture Australia*.

Architect Woods Bagot; Project team Simon Lee, Amy Lee, Domenic Alvaro  
(project architects); Builder Complete Construction



"Long corridors, deep corridors, closed-off corridors where many apartments might share the one lift - this is not considered best practice any more," Timothy Horton, registrar of the NSW Architects Registration Board, said.

Where towers rise too far above the street, apartment owners may gain views but can no longer step out and talk to friends on the street below, Mr Deivar said.

"In fact, many balconies are too windy to sit on at all. We are well above the tree line and so are exposed to the elements, particularly the heat.

"We are reliant on lifts and unable to use the stairs - limiting regular exercise and interaction with your neighbours."

Andrew Nizamo, president of the NSW Chapter of the Australian Institute of Architects, said far too many apartment developments were not delivering on the basic needs of good natural light, natural ventilation and creating a place you would want to call home.

He nominated The Rockford in Erskineville by Fox Johnston as a development that gets the basics right, a winner of the NSW Architecture Awards.

The 19th century, he said, had left the city a legacy of industrial and warehouse buildings "screaming to be adapted and reused".

Another winner, The Griffiths Tess building in Surry Hills had languished for 30 years and fell into disrepair until Popov Bass architects adapted it into 38 new apartments, retaining the best qualities and romance of the old warehouse.

## Architects say towers a health risk

Linda Morris *SMH 1-10-18*

Some of Sydney's leading urban designers have called for a rethink on high-rise residential developments with warnings that long, dark corridors, balconies too windy to sit on and apartments with no cross-ventilation are damaging people's health and wellbeing.

"Physically, these buildings are sick," said Benjamin Deiva, architect and senior urban designer with Hill Thalis Architecture + Urban Projects. "In the long-term, they make us sick."

About 1500 Sydney architects, urban designers and members of the public gathered this weekend for the 12th annual Sydney Architecture Festival, which has as its theme: "What makes a building truly great?"

The national festival aims to applaud the best projects, admit the worst excesses, promise better and educate the public on best practice.

Mr Deivar has called for public support of "gentle urbanism", a planning strategy that rejects the bulky footprint of 10- to 30-storey-plus towers for slim footprint buildings with generous setbacks, landscaping with deep soils and mature trees and scope for three- to four-bedroom apartments.

A survey of 2000 NSW residents by NSW Architects Registration Board found that the most important factor in people's home life was the availability of natural light.

(iv) Resident and buyer commentary regrading apartment design (*Sydney Morning Herald* 'Domain' section, 2 May 2014, p.8)

8 May 2-3, 2014

Domain.com.au

COVER STORY

# Designs of grandeur

Gone are the days of the two-storey walk-up. Now we want apartments that suit our lives better.

Words by **SUE WILLIAMS**

## THE DESIGN WISHLIST FOR APARTMENTS

**FLEXIBLE INTERIORS:** We want more flexible interiors, says Turner's Dan Szwaj. At George & Allen in Waterloo, for instance, bedrooms have glazed walls between them and the living areas. **BATHROOMS:** The latest thing is fully-ventilated bathrooms, preferably with real windows, says AJC's Jim Koopman. But very few people now want bathtubs, says Angelo Candalepas - unless they're a family with small kids. **BEDROOMS:** Candalepas says we want bigger bedrooms, as we do a lot more in them than we used to: study, watch TV, use computers. **STORAGE:** An absolute necessity now, and it has to be efficient and integrated into the design. **CUSTOMISATION:** We're looking at opportunities to customise our space, with some developers now offering a choice of layouts in some projects, Szwaj says. **BALCONIES:** Balconies or wintergardens are a must. We want to sit outside and relax, says David Milton of CBRE. **CROSS-VENTILATION:** People are beginning to realise we live in a great micro-climate, and don't need airconditioning, say Hill Thalia's Philip Thalis. **INTIMATE LOBBIES:** No one likes long corridors smelling of other people's cooking, says Thalis. **OUTDOOR GREENERY:** Gardens, lawns, or landscaped podiums are important, says Koopman. **COMMUNAL FACILITIES:** We're looking for more common areas, says Szwaj. That might be a dining room, barbecue, theatre or pool. **PARKING:** Still important, but we also want bike spaces.

**M**ore security than for a royal visit to Parliament House, acoustic engineering good enough to block out the surround-sound home theatre next door, and enough space, light and air to swing half a dozen cats, dogs, children and assorted visitors.

Today, we demand so much more from an apartment than simply a roof over our heads. Gone are the days when apartments all looked the same and were the preserve of singles and couples who couldn't afford a house. Now, they are the first choice of a wide array of buyers looking for convenience, affordability and low-maintenance living.

One thing that is paramount is good design. We want our apartments to look good, feel better and operate at maximum efficiency all the time.

"The NSW government's SEPP 65 (State Environmental Planning Policy 65) in 2002 set new benchmarks for design and that was a revelation," says Jim Koopman, director of architectural firm Allen Jack+Cottier. "The design quality of apartments has improved ever since then and is getting higher all the time."

The smaller the apartment, the better planned the space has to be. Philip Thalis, a founding principal of Hill Thalis, who guest-edited the latest issue of *Architecture Australia* on urban housing, says good design can be the difference between making an 80-square-metre apartment feel mean or spacious.

Yet it is not enough for architectural quality to be assessed at the planning stage only, he believes. Plans can be changed later during the development and construction process, without enough checks.

There are no simple absolutes in good design, either. Best practice varies hugely according to location, says architect Dan Szwaj, an associate director at Turner. A good apartment in the city, for example, might be affordably compact, with a galley kitchen, whereas one in Wentworth Point, further west, is usually larger, with a spacious kitchen and island bench, and lots of cafes and shops nearby.

"The days of putting up a block of apartments and nothing else are over," he says.

**“**People want to open up their old layout of segregated small rooms.  
**”**  
Chris Mo'ane, Integrated Building Consultancy

"There's now a real desire to bring something more to apartment design, whether it be communal facilities like a cantilevered pool out over the street at Diversity, a private health club at Platinum or a way of changing how the space works."

There is now a lot more emphasis on the position of a building too. "The streetscape is extremely important, and the re-engagement with the street," says Angelo Candalepas, a director of Candalepas Associates. "Apartment residents want proximity, amenity, immediacy and connectivity."

But the focus on good design is not only for new apartments. Increasingly, the owners of older-style apartments are undertaking major renovations, such as adding balconies and turning odd spaces into extra storage.

Mostly, says Chris Mo'ane, of Integrated Building Consultancy, they are asking for larger balconies to be engineered, sliding or concertina doors to be put in, and changes to the internal configuration.

"People want to open up their old layout of segregated small rooms and enlarge their kitchens, remodel bathrooms and replace old windows."

Sometimes, that means they can create an extra bedroom too. Then they might be able to build up into roof space, says Ian Agnew, of Archicentre. "Our lifestyle has changed now and we like open space."

However, as with everything, there are always limits on best design. "We'll always end up having to balance affordability with our wish list of fantastic amenity," says Koopman.

#### **Appendix 4:**

**Tally sheets for each Group 2 document, showing:**

- **Frequency of consistency with attributes from the ‘Three Healths Framework’,  
and**
- **Attributes not covered.**

**Appendix 4 (a): Victoria Park documents**

**(VP) 1. Victoria Park Zetland**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	2		
		1.1.2 Improvements to infrastructure and transport provision	1		
	1.2 Promotes positive physical health	1.1.3 Solve problems resulting from changing urban demographic population profile			
		1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
	1.3 Promotes positive mental health	1.2.7 Access to quality food			
		1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.4 Focused on long-term health outcomes	1.3.5 Adequate indoor space				
	1.3.6 Low neighbourhood traffic levels				
	1.3.7 Low crime levels				
		1.4.1 Action-orientated	1		
		1.4.2 Future-orientated		4	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	3		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	2		
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	3		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change			
		2.2.3 Enables access to fresh food			
	2.3 Positive mental health	2.2.4 Limits exposure to air pollution			
		2.3.1 Decreases social isolation			
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
2.4 Health equity	2.3.5 Decreases suicide rates through effective building design				
	2.4.1 Age and health				
	2.4.2 Gender and health				
	2.4.3 Socio-cultural factors and health behaviours				
		2.4.4 Socio-economic inequalities and health		8	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security	1		
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality	1		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	2		
		3.2.2 Promotes urban greening	2		
	3.3 Addresses global health challenge especially climate change	3.2.3 Promotes local food production			
		3.3.1 Promotes adaptation to climate change	1		
	3.4 Promotes planetary sustainability in built environment design	3.3.2 Promotes mitigation of climate change through reduction in green-house gases	1		
3.4.1 Uses renewable energy		2			
	3.4.2 Innovative environment-ally-friendly building design	3			

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 2. Untitled briefing note**

Tier 1:	Tier 2:	Tier 3:	No. of references				
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1				
		1.1.2 Improvements to infrastructure and transport provision					
		1.1.3 Solve problems resulting from changing urban demographic population profile					
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.2 Adequate outdoor space	1			
			1.2.3 Pedestrian friendly outdoor spaces				
			1.2.4 Safety				
			1.2.5 Adequate indoor space				
			1.2.6 Low neighbourhood traffic levels				
			1.2.7 Access to quality food				
			1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.2 Adequate outdoor space	1	
	1.3.3 Pedestrian friendly outdoor spaces						
	1.3.4 Safety and human interaction						
	1.3.5 Adequate indoor space						
	1.3.6 Low neighbourhood traffic levels						
1.3.7 Low crime levels							
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.2 Future-orientated			2	7	
			2				
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	3				
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	4				
		2.1.3 Promotes human happiness	1				
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	4				
		2.1.5 Promotion of active transport	1				
		2.1.6 Enhances social interaction, including at different stages of the life course	1				
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.2 Building design and access to space promotes positive behaviour change	3			
			2.2.3 Enables access to fresh food	1			
			2.2.4 Limits exposure to air pollution	1			
			2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.2 Limits noise pollution and other environmental stressors	1	
					2.3.3 Reduces crime and fear of crime	1	
	2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design	1					
	2.4 Health equity	2.3.5 Decreases suicide rates through effective building design	2.4.1 Age and health	1			
			2.4.2 Gender and health	1			
			2.4.3 Socio-cultural factors and health behaviours	1			
			2.4.4 Socio-economic inequalities and health	1	29		
			3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1	
					3.1.2 Promoting long-term food security		
	3.1.3 Enhancing air quality and reducing atmospheric pollution						
3.1.4 Improving water quality	1						
3.1.5 Promoting human and environmental flourishing for long-term quality of life	1						
3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.2 Promotes urban greening		1			
		3.2.3 Promotes local food production					
		3.3 Addresses global health challenge especially climate change		3.3.1 Promotes adaptation to climate change	3.3.2 Promotes mitigation of climate change through reduction in green-house gases	1	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				3.4.2 Innovative environment-ally-friendly building design	2	9

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.



**(VP) 3. Summary of Landcom Board Papers re Victoria Park**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	4		
		1.1.2 Improvements to infrastructure and transport provision	1		
		1.1.3 Solve problems resulting from changing urban demographic population profile	5		
	1.2 Promotes positive physical health	1.2.1 Good air quality 1.2.2 Adequate outdoor space 1.2.3 Pedestrian friendly outdoor spaces 1.2.4 Safety 1.2.5 Adequate indoor space 1.2.6 Low neighbourhood traffic levels 1.2.7 Access to quality food			
				1	
	1.3 Promotes positive mental health	1.3.1 Good air quality 1.3.2 Adequate outdoor space 1.3.3 Pedestrian friendly outdoor spaces 1.3.4 Safety and human interaction 1.3.5 Adequate indoor space 1.3.6 Low neighbourhood traffic levels 1.3.7 Low crime levels			
			1		
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated 1.4.2 Future-orientated			12	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	2		
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	5		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport 2.2.2 Building design and access to space promotes positive behaviour change 2.2.3 Enables access to fresh food 2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation 2.3.2 Limits noise pollution and other environmental stressors 2.3.3 Reduces crime and fear of crime 2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design 2.3.5 Decreases suicide rates through effective building design			
				3	
	2.4 Health equity	2.4.1 Age and health 2.4.2 Gender and health 2.4.3 Socio-cultural factors and health behaviours 2.4.4 Socio-economic inequalities and health		2	
			5	21	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	2		
		3.1.2 Promoting long-term food security	1		
		3.1.3 Enhancing air quality and reducing atmospheric pollution	2		
		3.1.4 Improving water quality	3		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	3		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature 3.2.2 Promotes urban greening 3.2.3 Promotes local food production		1	
				1	
				1	
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change 3.3.2 Promotes mitigation of climate change through reduction in green-house gases		1	
				1	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy 3.4.2 Innovative environment-ally-friendly building design		1		
			1	18	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 4. Victoria Park Project. A Review of the Victoria Park Development, Zetland. 1997-2010.**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	4		
		1.1.2 Improvements to infrastructure and transport provision	1		
		1.1.3 Solve problems resulting from changing urban demographic population profile	3		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space	3		
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space	3		
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	3			
	1.4.2 Future-orientated	2	19		
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	4		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	7		
		2.1.3 Promotes human happiness	2		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	11		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change	4		
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation	1		
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design	1		
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours		1			
2.4.4 Socio-economic inequalities and health		3	34		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security	1		
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality	4		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	2		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	7		
		3.2.2 Promotes urban greening	7		
		3.2.3 Promotes local food production	1		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	2		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases	2		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	2			
	3.4.2 Innovative environment-ally-friendly building design	3	33		

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 5. Victoria Park: Post Project Review**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision	2		
		1.1.3 Solve problems resulting from changing urban demographic population profile	2		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space		1	
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		2		
	1.4.2 Future-orientated		2	10	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	1		
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	4		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport		1	
		2.2.2 Building design and access to space promotes positive behaviour change		1	
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation			
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
		2.4.2 Gender and health			
2.4.3 Socio-cultural factors and health behaviours			1		
2.4.4 Socio-economic inequalities and health			2	13	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		2	
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		2	
		3.2.2 Promotes urban greening		1	
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change			
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		1	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				
	3.4.2 Innovative environment-ally-friendly building design			6	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 6. Contaminated Site Summary Audit Report.**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality	1	
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety	1	
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated	2		
		1.4.2 Future-orientated	2	7	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention			
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food	1	
			2.2.4 Limits exposure to air pollution	1	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation		
			2.3.2 Limits noise pollution and other environmental stressors	2	
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				4	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality	2		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production	1	
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		5	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 7. Victoria Park Residential Contribution Credit Deed**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1	
		1.1.2 Improvements to infrastructure and transport provision		
		1.1.3 Solve problems resulting from changing urban demographic population profile		
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space		
		1.3.3 Pedestrian friendly outdoor spaces		
		1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		1	
	1.4.2 Future-orientated		1	3
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2	
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing		
		2.1.3 Promotes human happiness		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing		
		2.1.5 Promotion of active transport		
		2.1.6 Enhances social interaction, including at different stages of the life course		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	1	
		2.2.2 Building design and access to space promotes positive behaviour change		
		2.2.3 Enables access to fresh food		
		2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation		
		2.3.2 Limits noise pollution and other environmental stressors		
		2.3.3 Reduces crime and fear of crime		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
		2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health		
2.4.2 Gender and health				
2.4.3 Socio-cultural factors and health behaviours				
2.4.4 Socio-economic inequalities and health				
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment		
		3.1.2 Promoting long-term food security		
		3.1.3 Enhancing air quality and reducing atmospheric pollution		
		3.1.4 Improving water quality		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		
		3.2.2 Promotes urban greening		
		3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy			
	3.4.2 Innovative environment-ally-friendly building design			

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 8. 'Victoria Park Zetland'.**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	3		
		1.1.2 Improvements to infrastructure and transport provision	1		
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space	1		
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space	1		
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction	2		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	5			
	1.4.2 Future-orientated	5	18		
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	8		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	4		
		2.1.3 Promotes human happiness	4		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	10		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	1		
		2.2.2 Building design and access to space promotes positive behaviour change	3		
		2.2.3 Enables access to fresh food	1		
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation	1		
		2.3.2 Limits noise pollution and other environmental stressors	1		
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
		2.4.2 Gender and health			
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health			33		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security	1		
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality	1		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	6		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	4		
		3.2.2 Promotes urban greening	1		
		3.2.3 Promotes local food production	1		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	1		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases	1		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	1			
	3.4.2 Innovative environment-ally-friendly building design	1	20		

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 9. Proposed (Victoria Park) Home Page**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		1		
	1.4.2 Future-orientated		1	3	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change		2	
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation			
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				3	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		1	
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature			
		3.2.2 Promotes urban greening			
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change			
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases			
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				
	3.4.2 Innovative environment-ally-friendly building design			1	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 10. 'The Water Cycle'.**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation		
		1.1.2 Improvements to infrastructure and transport provision		
		1.1.3 Solve problems resulting from changing urban demographic population profile		
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space		
		1.3.3 Pedestrian friendly outdoor spaces		
		1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		1	
	1.4.2 Future-orientated		1	2
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing		
		2.1.3 Promotes human happiness		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing		
		2.1.5 Promotion of active transport		
		2.1.6 Enhances social interaction, including at different stages of the life course		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport		
		2.2.2 Building design and access to space promotes positive behaviour change		
		2.2.3 Enables access to fresh food		
		2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation		
		2.3.2 Limits noise pollution and other environmental stressors		
		2.3.3 Reduces crime and fear of crime		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
		2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health		
		2.4.2 Gender and health		
2.4.3 Socio-cultural factors and health behaviours				
2.4.4 Socio-economic inequalities and health				
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment		2
		3.1.2 Promoting long-term food security		
		3.1.3 Enhancing air quality and reducing atmospheric pollution		
		3.1.4 Improving water quality		1
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		
		3.2.2 Promotes urban greening		1
		3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
	3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy		
3.4.2 Innovative environment-ally-friendly building design			2	6

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.



**(VP) 11. 'Start a resident group'**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation		
		1.1.2 Improvements to infrastructure and transport provision		
		1.1.3 Solve problems resulting from changing urban demographic population profile		
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space		
		1.3.3 Pedestrian friendly outdoor spaces		
		1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated			
	1.4.2 Future-orientated		0	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1	
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing		
		2.1.3 Promotes human happiness		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing		
		2.1.5 Promotion of active transport		
		2.1.6 Enhances social interaction, including at different stages of the life course	1	
	2.2 Positive physical health	2.2.1 Provides access to public and active transport		
		2.2.2 Building design and access to space promotes positive behaviour change		
		2.2.3 Enables access to fresh food		
		2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation		1
		2.3.2 Limits noise pollution and other environmental stressors		
		2.3.3 Reduces crime and fear of crime		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
		2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health		
2.4.2 Gender and health				
2.4.3 Socio-cultural factors and health behaviours				
2.4.4 Socio-economic inequalities and health			3	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment		
		3.1.2 Promoting long-term food security		
		3.1.3 Enhancing air quality and reducing atmospheric pollution		
		3.1.4 Improving water quality		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1	
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		
		3.2.2 Promotes urban greening		
		3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy			
	3.4.2 Innovative environment-ally-friendly building design		1	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 12. 'Free Christmas BBQ' (post card)**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food	1	
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction	1	
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated			
		1.4.2 Future-orientated		2	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation		
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				3	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		0	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 13. 'Victoria Park Life. Spring edition 2006'**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile	1		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated				
	1.4.2 Future-orientated		2		
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	2		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change	1		
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation		3	
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health		1	11		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality	2		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature			
		3.2.2 Promotes urban greening			
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change			
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases			
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				
	3.4.2 Innovative environment-ally-friendly building design	2	6		

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 14. 'Vic Park August Newsletter' email**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation		
		1.1.2 Improvements to infrastructure and transport provision		
		1.1.3 Solve problems resulting from changing urban demographic population profile		
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space		
		1.3.3 Pedestrian friendly outdoor spaces		
		1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		1	
	1.4.2 Future-orientated			1
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2	
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing		
		2.1.3 Promotes human happiness		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing		
		2.1.5 Promotion of active transport		
		2.1.6 Enhances social interaction, including at different stages of the life course	1	
	2.2 Positive physical health	2.2.1 Provides access to public and active transport		
		2.2.2 Building design and access to space promotes positive behaviour change		
		2.2.3 Enables access to fresh food		
		2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation		
		2.3.2 Limits noise pollution and other environmental stressors		
		2.3.3 Reduces crime and fear of crime		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
		2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health		2
2.4.2 Gender and health			2	
2.4.3 Socio-cultural factors and health behaviours			2	
2.4.4 Socio-economic inequalities and health			2	11
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment		
		3.1.2 Promoting long-term food security		
		3.1.3 Enhancing air quality and reducing atmospheric pollution		
		3.1.4 Improving water quality		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		
		3.2.2 Promotes urban greening		
		3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy			
	3.4.2 Innovative environment-ally-friendly building design			0

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 15. Notes Re Presentation to South Sydney Development Corporation on paving standards**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated			
		1.4.2 Future-orientated		0	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention			
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	1		
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	1		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation		
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				2	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design	1	1	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 16. Independent Architect Review**

Tier 1:	Tier 2:	Tier 3:	No. of references				
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation					
		1.1.2 Improvements to infrastructure and transport provision					
		1.1.3 Solve problems resulting from changing urban demographic population profile	1				
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.2 Adequate outdoor space	1			
			1.2.3 Pedestrian friendly outdoor spaces				
			1.2.4 Safety				
			1.2.5 Adequate indoor space				
			1.2.6 Low neighbourhood traffic levels				
			1.2.7 Access to quality food				
			1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.2 Adequate outdoor space	1	
	1.3.3 Pedestrian friendly outdoor spaces						
	1.3.4 Safety and human interaction						
	1.3.5 Adequate indoor space						
	1.3.6 Low neighbourhood traffic levels						
1.3.7 Low crime levels							
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.2 Future-orientated				3	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1				
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing					
		2.1.3 Promotes human happiness					
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	2				
		2.1.5 Promotion of active transport					
		2.1.6 Enhances social interaction, including at different stages of the life course					
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.2 Building design and access to space promotes positive behaviour change				
			2.2.3 Enables access to fresh food				
			2.2.4 Limits exposure to air pollution				
			2.3 Positive mental health	2.3.1 Decreases social isolation			
	2.3 Positive mental health	2.3.2 Limits noise pollution and other environmental stressors	2.3.3 Reduces crime and fear of crime				
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design				
			2.3.5 Decreases suicide rates through effective building design				
			2.4 Health equity	2.4.1 Age and health	2.4.2 Gender and health	1	
					2.4.3 Socio-cultural factors and health behaviours		
	2.4.4 Socio-economic inequalities and health				4		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment					
		3.1.2 Promoting long-term food security					
		3.1.3 Enhancing air quality and reducing atmospheric pollution					
		3.1.4 Improving water quality					
		3.1.5 Promoting human and environmental flourishing for long-term quality of life					
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.2 Promotes urban greening				
			3.2.3 Promotes local food production				
			3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
	3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy			3.4.2 Innovative environment-ally-friendly building design		0

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 17. Victoria Park. UTS Sustainable Urban Development students presentation**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1	
		1.1.2 Improvements to infrastructure and transport provision	4	
		1.1.3 Solve problems resulting from changing urban demographic population profile		
		1.2 Promotes positive physical health	2	
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space	2	
		1.3.3 Pedestrian friendly outdoor spaces		
1.3.4 Safety and human interaction				
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	2		
	1.4.2 Future-orientated		11	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2	
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	2	
		2.1.3 Promotes human happiness	1	
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	7	
		2.1.5 Promotion of active transport	1	
		2.1.6 Enhances social interaction, including at different stages of the life course	3	
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	1	
		2.2.2 Building design and access to space promotes positive behaviour change	2	
		2.2.3 Enables access to fresh food	1	
		2.2.4 Limits exposure to air pollution	1	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2	
		2.3.2 Limits noise pollution and other environmental stressors	1	
		2.3.3 Reduces crime and fear of crime	1	
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design	1	
		2.3.5 Decreases suicide rates through effective building design	1	
	2.4 Health equity	2.4.1 Age and health	4	
		2.4.2 Gender and health	1	
2.4.3 Socio-cultural factors and health behaviours		3		
2.4.4 Socio-economic inequalities and health		4	41	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	2	
		3.1.2 Promoting long-term food security	1	
		3.1.3 Enhancing air quality and reducing atmospheric pollution	2	
		3.1.4 Improving water quality	1	
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1	
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	2	
		3.2.2 Promotes urban greening	2	
		3.2.3 Promotes local food production	1	
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	1	
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases	2	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	2		
	3.4.2 Innovative environment-ally-friendly building design	4	21	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(VP) 18. 'Welcome to Victoria Park'**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Adequate outdoor space	2	
			1.2.2 Pedestrian friendly outdoor spaces	1	
			1.2.3 Safety	1	
			1.2.4 Adequate indoor space	4	
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
			1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Adequate outdoor space
	1.3.2 Pedestrian friendly outdoor spaces	1			
	1.3.3 Safety and human interaction	2			
	1.3.4 Adequate indoor space	4			
	1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels	1				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1			1
		1.4.2 Future-orientated	1	21	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	6		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	6		
		2.1.3 Promotes human happiness	3		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	8		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course	5		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1	1	
			2.2.2 Building design and access to space promotes positive behaviour change	4	
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution	1	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1	4	
			2.3.2 Limits noise pollution and other environmental stressors	1	
			2.3.3 Reduces crime and fear of crime	2	
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1	3	
2.4.2 Gender and health			3		
2.4.3 Socio-cultural factors and health behaviours			3		
2.4.4 Socio-economic inequalities and health			3	54	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality	1		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	4		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1	3	
			3.2.2 Promotes urban greening	1	
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1	2	
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases	2	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1	2		
		3.4.2 Innovative environment-ally-friendly building design	4	19	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.



**(VP) 19. 'Victoria Park'**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	<ul style="list-style-type: none"> <li>Not scored given similarity with Doc. (VP) 18.</li> </ul>		
	1.2 Promotes positive physical health			
	1.3 Promotes positive mental health			
	1.4 Focused on long-term health outcomes			
2. Socio-ecological determinants of health	2.1 Liveability			
	2.2 Positive physical health			
	2.3 Positive mental health			
	2.4 Health equity			
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health			
	3.2 Holistic approach to human wellbeing			
	3.3 Addresses global health challenge especially climate change			
	3.4 Promotes planetary sustainability in built environment design			

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**Appendix 4 (b): Green Square Town Centre documents**

**(GSTC) 1. Planning Proposal - Town Core Sites within Green Square Town Centre**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	4		
		1.1.2 Improvements to infrastructure and transport provision	4		
		1.1.3 Solve problems resulting from changing urban demographic population profile	2		
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.2 Adequate outdoor space	3	
			1.2.3 Pedestrian friendly outdoor spaces	3	
			1.2.4 Safety	3	
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food	2	
			1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.2 Adequate outdoor space
	1.3.3 Pedestrian friendly outdoor spaces	2			
	1.3.4 Safety and human interaction	3			
	1.3.5 Adequate indoor space				
	1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.2 Future-orientated			3
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	6		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	2		
		2.1.3 Promotes human happiness	4		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	7		
		2.1.5 Promotion of active transport	7		
		2.1.6 Enhances social interaction, including at different stages of the life course	7		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.2 Building design and access to space promotes positive behaviour change	3	
			2.2.3 Enables access to fresh food	3	
			2.2.4 Limits exposure to air pollution		
			2.3 Positive mental health	2	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.2 Limits noise pollution and other environmental stressors	1	
			2.3.3 Reduces crime and fear of crime	4	
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design	2	
			2.3.5 Decreases suicide rates through effective building design		
			2.4 Health equity	4	
	2.4 Health equity	2.4.1 Age and health	2.4.2 Gender and health	3	
2.4.3 Socio-cultural factors and health behaviours			3		
2.4.4 Socio-economic inequalities and health			5	70	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution	2		
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.2 Promotes urban greening	2	
			3.2.3 Promotes local food production		
			3.3 Addresses global health challenge especially climate change	1	
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.2 Promotes mitigation of climate change through reduction in green-house gases	6	
			3.4 Promotes planetary sustainability in built environment design	3	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.2 Innovative environment-ally-friendly building design	9	25	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 2. Green Square Town Centre – Town Core Sites. Statement of Community Benefits and Contributions**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated			
		1.4.2 Future-orientated			
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention			
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness			
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation		
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health					
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design			

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 3. Green Square Urban Renewal Area Updated Transport Management and Accessibility Plan (Sept. 2012) (Main Report)**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision	3		
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces	1	
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels	2	
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces	1	
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels			2		
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated	2		
		1.4.2 Future-orientated	2	14	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	4		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	1		
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	3		
		2.1.5 Promotion of active transport	5		
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport	6	
			2.2.2 Building design and access to space promotes positive behaviour change	1	
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution	1	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation		
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
			2.4.2 Gender and health		
2.4.3 Socio-cultural factors and health behaviours			1		
2.4.4 Socio-economic inequalities and health				24	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change	1	
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases	1	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		2	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 4. 'Your Green Travel Guide - Green Square'**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision	3		
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces	1	
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels	2	
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces	1	
			1.3.4 Safety and human interaction	1	
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels			2		
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated			
		1.4.2 Future-orientated		11	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	3		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness	2		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	2		
		2.1.5 Promotion of active transport	5		
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport	5	
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation	1	
			2.3.2 Limits noise pollution and other environmental stressors	1	
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
			2.4.2 Gender and health		
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				20	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change	1	
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		3	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 5. Position Description - Place Manager, Green Square Town Centre**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated	4		
		1.4.2 Future-orientated	4	9	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	6		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness	5		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	4		
		2.1.5 Promotion of active transport	1		
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation	1	
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health	1	
			2.4.2 Gender and health	1	
2.4.3 Socio-cultural factors and health behaviours			1		
2.4.4 Socio-economic inequalities and health			2	23	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution	1		
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	4		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases	1	
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy	1		
		3.4.2 Innovative environment-ally-friendly building design	1	8	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 6. Green Square Placemaking. Vol. 1: Framework**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision	5		
		1.1.3 Solve problems resulting from changing urban demographic population profile	1		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space	3		
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety	1		
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space	3		
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction	1		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated				
	1.4.2 Future-orientated			15	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	5		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	9		
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	4		
		2.1.5 Promotion of active transport	8		
		2.1.6 Enhances social interaction, including at different stages of the life course	4		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	7		
		2.2.2 Building design and access to space promotes positive behaviour change			
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation			
		2.3.2 Limits noise pollution and other environmental stressors	1		
		2.3.3 Reduces crime and fear of crime	1		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health	1		
2.4.2 Gender and health		1			
2.4.3 Socio-cultural factors and health behaviours		2			
2.4.4 Socio-economic inequalities and health		2	46		
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality	2		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	7		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	4		
		3.2.2 Promotes urban greening	3		
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	2		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases	2		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	2			
	3.4.2 Innovative environment-ally-friendly building design	4	27		

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.



**(GSTC) 7. Green Square Place Strategy – Part 1. Creating Great Spaces for Life.**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	3		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated		1		
	1.4.2 Future-orientated		3	7	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	7		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	4		
		2.1.3 Promotes human happiness	6		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	3		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	6		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change			
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation		5	
		2.3.2 Limits noise pollution and other environmental stressors		1	
		2.3.3 Reduces crime and fear of crime		1	
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health		1	
2.4.2 Gender and health			1		
2.4.3 Socio-cultural factors and health behaviours			1		
2.4.4 Socio-economic inequalities and health			1	37	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		1	
		3.2.2 Promotes urban greening		1	
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		1	
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases			
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				
	3.4.2 Innovative environment-ally-friendly building design			3	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 8. GSTC Placemaking Workshop #1**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	2		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile	1		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces			
		1.2.4 Safety			
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces			
		1.3.4 Safety and human interaction			
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated				
	1.4.2 Future-orientated			3	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	2		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness	2		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	2		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	2		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change			
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation		2	
		2.3.2 Limits noise pollution and other environmental stressors			
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				10	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature			
		3.2.2 Promotes urban greening			
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change			
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases			
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy				
	3.4.2 Innovative environment-ally-friendly building design			0	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 9. Green Square Town Centre Early Activation Strategy**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Adequate outdoor space	1	
			1.2.2 Pedestrian friendly outdoor spaces		
			1.2.3 Safety		
			1.2.4 Adequate indoor space		
			1.2.5 Low neighbourhood traffic levels		
			1.2.6 Access to quality food		
			1.2.7		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Adequate outdoor space	1	
			1.3.2 Pedestrian friendly outdoor spaces		
			1.3.3 Safety and human interaction		
			1.3.4 Adequate indoor space		
1.3.5 Low neighbourhood traffic levels					
1.3.6 Low crime levels					
1.3.7					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1	3		
		1.4.2 Future-orientated	3	9	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	13		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	5		
		2.1.3 Promotes human happiness	6		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	7		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	8		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1	1	
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food	5	
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1	7	
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1		
			2.4.2 Gender and health		
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				52	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1	1	
			3.2.2 Promotes urban greening	1	
			3.2.3 Promotes local food production	2	
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1			
		3.4.2 Innovative environment-ally-friendly building design		6	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 10. Green Square: The Social Corner Activation Brief**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.2 Adequate outdoor space	1	
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
			1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.2 Adequate outdoor space
	1.3.3 Pedestrian friendly outdoor spaces				
	1.3.4 Safety and human interaction	1			
	1.3.5 Adequate indoor space				
	1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.2 Future-orientated			1
			11		
4. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	4		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	1		
		2.1.3 Promotes human happiness	4		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	4		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
			2.3 Positive mental health	4	
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
			2.4 Health equity	2.4.1 Age and health	2.4.2 Gender and health
	2.4.3 Socio-cultural factors and health behaviours				
2.4.4 Socio-economic inequalities and health		18			
5. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.2 Promotes urban greening	1	
			3.2.3 Promotes local food production	1	
			3.3 Addresses global health challenge especially climate change		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
			3.4 Promotes planetary sustainability in built environment design		
	3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.2 Innovative environment-ally-friendly building design		2

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 11. Green Square Activations & Events**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile	1		
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated			
		1.4.2 Future-orientated		1	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing			
		2.1.3 Promotes human happiness	1		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing			
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	1		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation	1	
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health		
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				4	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		0	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 12. Green Square Summer Festival Plan, November 2017**

Tier 1:	Tier 2:	Tier 3:	No. of references	
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation		
		1.1.2 Improvements to infrastructure and transport provision		
		1.1.3 Solve problems resulting from changing urban demographic population profile		
	1.2 Promotes positive physical health	1.2.1 Good air quality		
		1.2.2 Adequate outdoor space		
		1.2.3 Pedestrian friendly outdoor spaces		
		1.2.4 Safety		
		1.2.5 Adequate indoor space		
		1.2.6 Low neighbourhood traffic levels		
		1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality		
		1.3.2 Adequate outdoor space		
		1.3.3 Pedestrian friendly outdoor spaces		
		1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space				
1.3.6 Low neighbourhood traffic levels				
1.3.7 Low crime levels				
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated			
	1.4.2 Future-orientated		0	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	1	
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing		
		2.1.3 Promotes human happiness	1	
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing		
		2.1.5 Promotion of active transport		
		2.1.6 Enhances social interaction, including at different stages of the life course	1	
	2.2 Positive physical health	2.2.1 Provides access to public and active transport		
		2.2.2 Building design and access to space promotes positive behaviour change		
		2.2.3 Enables access to fresh food		
		2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation		1
		2.3.2 Limits noise pollution and other environmental stressors		
		2.3.3 Reduces crime and fear of crime		
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
		2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health		
2.4.2 Gender and health				
2.4.3 Socio-cultural factors and health behaviours				
2.4.4 Socio-economic inequalities and health				
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment		
		3.1.2 Promoting long-term food security		
		3.1.3 Enhancing air quality and reducing atmospheric pollution		
		3.1.4 Improving water quality		
		3.1.5 Promoting human and environmental flourishing for long-term quality of life		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature		
		3.2.2 Promotes urban greening		
		3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change		
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
	3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy		
		3.4.2 Innovative environment-ally-friendly building design		0

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

**(GSTC) 13. Green Square. Placemaking-2018 Plan**

Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation			
		1.1.2 Improvements to infrastructure and transport provision			
		1.1.3 Solve problems resulting from changing urban demographic population profile			
	1.2 Promotes positive physical health	1.2.1 Good air quality	1.2.1 Good air quality		
			1.2.2 Adequate outdoor space		
			1.2.3 Pedestrian friendly outdoor spaces		
			1.2.4 Safety		
			1.2.5 Adequate indoor space		
			1.2.6 Low neighbourhood traffic levels		
			1.2.7 Access to quality food		
	1.3 Promotes positive mental health	1.3.1 Good air quality	1.3.1 Good air quality		
			1.3.2 Adequate outdoor space		
			1.3.3 Pedestrian friendly outdoor spaces		
			1.3.4 Safety and human interaction		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	1.4.1 Action-orientated	1		
		1.4.2 Future-orientated	1	2	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	5		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	3		
		2.1.3 Promotes human happiness	2		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	5		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course	2		
	2.2 Positive physical health	2.2.1 Provides access to public and active transport	2.2.1 Provides access to public and active transport		
			2.2.2 Building design and access to space promotes positive behaviour change		
			2.2.3 Enables access to fresh food		
			2.2.4 Limits exposure to air pollution		
	2.3 Positive mental health	2.3.1 Decreases social isolation	2.3.1 Decreases social isolation	2	
			2.3.2 Limits noise pollution and other environmental stressors		
			2.3.3 Reduces crime and fear of crime		
			2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design		
			2.3.5 Decreases suicide rates through effective building design		
	2.4 Health equity	2.4.1 Age and health	2.4.1 Age and health	1	
2.4.2 Gender and health			1		
2.4.3 Socio-cultural factors and health behaviours			1		
2.4.4 Socio-economic inequalities and health			1	23	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment			
		3.1.2 Promoting long-term food security			
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life	1		
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature	3.2.1 Provides opportunities for accessing and attending to nature		
			3.2.2 Promotes urban greening		
			3.2.3 Promotes local food production		
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change	3.3.1 Promotes adaptation to climate change		
			3.3.2 Promotes mitigation of climate change through reduction in green-house gases		
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	3.4.1 Uses renewable energy			
		3.4.2 Innovative environment-ally-friendly building design		1	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.

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Tier 1:	Tier 2:	Tier 3:	No. of references		
1. Global public & population health	1.1 Global-challenge responsive	1.1.1 Focused on solving public health challenges resulting from increased urbanisation	1		
		1.1.2 Improvements to infrastructure and transport provision	3		
		1.1.3 Solve problems resulting from changing urban demographic population profile	2		
	1.2 Promotes positive physical health	1.2.1 Good air quality			
		1.2.2 Adequate outdoor space			
		1.2.3 Pedestrian friendly outdoor spaces	1		
		1.2.4 Safety	1		
		1.2.5 Adequate indoor space			
		1.2.6 Low neighbourhood traffic levels			
		1.2.7 Access to quality food			
	1.3 Promotes positive mental health	1.3.1 Good air quality			
		1.3.2 Adequate outdoor space			
		1.3.3 Pedestrian friendly outdoor spaces	2		
		1.3.4 Safety and human interaction	1		
1.3.5 Adequate indoor space					
1.3.6 Low neighbourhood traffic levels					
1.3.7 Low crime levels					
1.4 Focused on long-term health outcomes	1.4.1 Action-orientated	3			
	1.4.2 Future-orientated			14	
2. Socio-ecological determinants of health	2.1 Liveability	2.1.1 Promotion of liveability and quality of life rather than disease prevention	4		
		2.1.2 Uses stimulating design and infrastructure to enhance resident wellbeing	4		
		2.1.3 Promotes human happiness	3		
		2.1.4 Emphasises a two-directional relationship between the built environment and human wellbeing	5		
		2.1.5 Promotion of active transport			
		2.1.6 Enhances social interaction, including at different stages of the life course			
	2.2 Positive physical health	2.2.1 Provides access to public and active transport			
		2.2.2 Building design and access to space promotes positive behaviour change	3		
		2.2.3 Enables access to fresh food			
		2.2.4 Limits exposure to air pollution			
	2.3 Positive mental health	2.3.1 Decreases social isolation			
		2.3.2 Limits noise pollution and other environmental stressors	1		
		2.3.3 Reduces crime and fear of crime			
		2.3.4 Reduces fear of the health risks associated with environmental hazards through appropriate building design			
		2.3.5 Decreases suicide rates through effective building design			
	2.4 Health equity	2.4.1 Age and health			
2.4.2 Gender and health					
2.4.3 Socio-cultural factors and health behaviours					
2.4.4 Socio-economic inequalities and health				20	
3. Planetary health (relational ecology)	3.1 Co-benefits approach to human and environmental health	3.1.1 Enhancing biodiversity of the natural environment	1		
		3.1.2 Promoting long-term food security	1		
		3.1.3 Enhancing air quality and reducing atmospheric pollution			
		3.1.4 Improving water quality			
		3.1.5 Promoting human and environmental flourishing for long-term quality of life			
	3.2 Holistic approach to human wellbeing	3.2.1 Provides opportunities for accessing and attending to nature			
		3.2.2 Promotes urban greening			
		3.2.3 Promotes local food production			
	3.3 Addresses global health challenge especially climate change	3.3.1 Promotes adaptation to climate change			
		3.3.2 Promotes mitigation of climate change through reduction in green-house gases			
3.4 Promotes planetary sustainability in built environment design	3.4.1 Uses renewable energy	1			
	3.4.2 Innovative environment-ally-friendly building design	1		4	

**Key:** 'Tier 3' attributes not apparent within the document are highlighted in yellow.