City Wellbeing Program ■ City Futures Research Centre

Planning and Building Healthy Communities.

A multi-disciplinary study of the relationship between the built environment and human health.

This report comprises research funded by an Australian Research Council Grant No. LP100100804. The research was conducted within the City Wellbeing Program (City Futures Research Centre UNSW) with partners UrbanGrowth NSW, the Heart Foundation (NSW) and the South Western Sydney Local Health District (NSW Health).

STUDY AREA FINDINGS

for

VICTORIA PARK

City Futures Research Centre ▪ University of New South Wales

September 2016

A Note about some organisational changes during the course of this Project.

During the course of this Project:

- The Healthy Built Environments Program (HBEP) became known as the City Wellbeing Program (both located within the City Futures Research Centre).
- NSW Landcom was re-constituted as UrbanGrowth NSW.
- Sydney South West Area Health Service became the South Western Sydney Local Health District (SSWLHD).

The original ARC Project arrangements were with these earlier entities.

ACKNOWLEDGEMENTS

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Chief Investigators: Susan Thompson, Bill Randolph and Bruce Judd (UNSW)

Partner Investigator: Bin Jalaludin (South Western Sydney Local Health District)

Senior Researcher: Emily Mitchell (City Wellbeing Program, UNSW)

Research Assistants: Roy Byun (South Western Sydney Local Health District); Belinda Crawford (South Western Sydney Local Health District); Sarah Judd (Research Assistant, City Futures Research Centre); Linda Kennedy (Student, Faculty of the Built Environment, UNSW); Jennifer Kent (Senior Research Associate, HBEP); Ben Mitchell (field work assistance); Greg Paine (Research Assistant, City Wellbeing Program, UNSW); Ji Yuan Yu (PhD student, Faculty of the Built Environment, UNSW)

Research Project Steering Committee: Michelle Daley and Julie-Anne Mitchell (Heart Foundation); Bin Jalaludin and Roy Byun (SW Sydney LHD); Bill Randolph and Bruce Judd (UNSW); Stuart Gibb (UrbanGrowth, NSW). Chair: Susan Thompson (UNSW)

This Report prepared by: Dr. Greg Paine, Ms Emily Mitchell and Professor Susan Thompson (City Wellbeing Program, UNSW)

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EXECUTIVE SUMMARY: *Planning and Building Healthy Communities* – Victoria Park.

The *Planning and Building Healthy Communities* Study explores how our built environments impact, positively and negatively, on major risk factors for contemporary chronic diseases such as diabetes, respiratory and heart conditions, some cancers, and depression; the so-called 'lifestyle diseases'. Using multi-disciplinary perspectives in the gathering and review of data four newly-developing residential areas are examined as case-studies. This report focuses on Victoria Park.

Victoria Park is a major urban achievement, comprising a new medium-high density suburb of some 8,000 residents on former industrial land with no particular residential amenity and limited services. Although there was little or no specific attention to healthy built environment matters at the time, there have been fortuitous health co-benefits from an emphasis on environmental and community actions (and a need to generate a marketable residential environment from scratch), including open spaces, water-sensitive urban design, light and ventilation, direct access paths to encourage 'active transport', and establishment of a sense of 'community' through provision of facilities and support. As such Victoria Park presents by and large as a healthy built environment.

When participants were asked to nominate the things that currently assist them to keep healthy, most matters cited relate to their local built environment. All achieve recommended minimum levels of physical activity, generally via a combination of active transport (walking and bus), recreation walking, and active recreation. Some use gyms and/or swimming pools at their work or in their residential building. Although active transport use is high there is still a high propensity to use the car for certain trips, particularly for household shopping. This may now have been reduced with the recent opening of a supermarket and other shops within Victoria Park. Car use is likely to further decrease when the extensive additional commercial, retail, recreation and social facilities and services in the larger surrounding Green Square also come on-stream. The provision of these facilities is also likely to address various frustrations expressed by participants about the lack of various 'necessary' local facilities including fresh food shops. Some were established during the Study – but the comments do point out an important timing issue for such developments.

Social interaction with neighbours is relatively low, but most participants are content with this, generally because they have sufficient avenues for social interaction elsewhere. That said, they also express some frustration about not knowing who their neighbours are, due to the 'transitory' nature of spaces in their multi-unit buildings coupled with the short-term tenures within certain (but not all) of these buildings. It has resulted in the open space areas (a central dog park with market area, a children's playground, and a ball court) becoming important gathering spaces where, as suggested by participants, there is a propensity for incidental conversation. This suggests the 'community' aspects of the original design have been successful, but also that multi-unit building designs need further attention to address this limitation.

Participants do though express lingering concerns, for their health, from the anonymity of residential buildings (leading to concerns about drug-related crime, and a possible growing lack of trust generally); loss of outlook and light from (higher) newer buildings; inner-city noise and grit; and in-sensitive placement of driveways and garbage storage areas adjacent to residential living spaces.

STUDY OVERVIEW – background and findings.

The *Planning and Building Healthy Communities* Study.

This Study appraises the impacts the shape of the built environment can have on human health, based on in-depth location-specific research in four case-study areas. The Study follows from an extensive review of the literature undertaken in 2011 by the Healthy Built Environment Program (now the City Wellbeing Program) within the City Futures Research Centre, and sought more local-specific information relating to, in particular, physical activity, social interaction and nutrition as key risk factors for contemporary chronic diseases such as diabetes, respiratory and heart conditions, some cancers, and depression.

The case-studies comprised different metropolitan and urban fringe areas in Sydney: Airds Bradbury, Renwick, New Rouse Hill and Victoria Park. All areas are currently undergoing development, and incorporate healthy planning interventions to various degrees. UrbanGrowth NSW (formerly Landcom) is a key facilitator in the development of each area.

The Study was conducted between 2011 and 2015 for the project partners: UrbanGrowth NSW, the National Heart Foundation, and the South Western Sydney Local Health District (SWSLHD). It comprised detailed audit observations, in-depth semi-structured interviews with 20 residents of each area, and a subsequent focus group. Specific tools were designed for each of these stages, with the design of the interview questions also drawing on similar work in other locations in Australia in order to allow the potential for possible later comparisons. The SWSLHD supplied demographic data, and the Study also drew on a SWSLHD survey of the food environment of Sydney conducted at the same time.

All the tools developed for the Study can be utilised as models for future similar studies elsewhere.

The analysis of findings and the write-up report for each Study area uses a series of questions related to a set of Indicators as to what constitutes a healthy built environment, prepared by the City Wellbeing Program in a separate project. This will allow for consistent comparative on-going appraisals of the four Study areas, and for potential comparison from similar studies elsewhere.

The Study was funded through an Australian Research Council grant and by monetary and in-kind contributions by the Project partners. It addresses National Research Area Priority 2: Promoting and Managing Good Health. The project partners are key players within the fields of health and the built environment. This ensured a multi-disciplinary perspective in its aims and in the gathering and review of data. It also allows the Study, through its conclusions and recommendations, to directly influence the shape and management of existing and future built environments to achieve health-related outcomes.

This Report conveys the Study findings for Victoria Park. An additional Summation report brings together the findings from all four areas and details conclusions and recommendations applicable to the design of future built environments generally.

The Study findings for Victoria Park.

> …can people agree upon a minimum service that should we provide while [the area] is being developed. So, a chemist and post office and a doctor. Do you know what I mean?...the basic things that [every] area needs...just a few essentials to make it easier for people while the places are building up….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…post a letter, you can pay a bill, you can go to the chemist, things like that.
>
> Looks like a lot of the issues that we have, though, will be resolved and we're working to rectify them with getting the shopping centre there. They'll have the chemist and there is one doctor, sounds like there'll be another one, there'll be less traffic, there'll be less noise, and pollution, all that kind of thing, because all of the extra [construction] traffic and the trucks will be stopped. So a lot of our issues are going to be resolved. It's already in the plans, so that's good.

1. Victoria Park is a major urban achievement, comprising the establishment of a new medium-high density suburb of some 8,000 residents within the space of some 10 years on a brownfield site in a transitory industrial area with no particular residential amenity and only limited services. Victoria Park also comprises the lead development in the similar, larger Green Square urban renewal project. Although not the first such developments in Australia, both Victoria Park and Green Square are somewhat experimental and innovative in their scale and conception.

2. A number of the innovative aspects of Victoria Park are also 'of their time', with an emphasis on 'green' environmental matters, water-sensitive urban design, and the establishment of a sense of 'community'. There was also a close fit between these aspects and the need to generate, in this industrial area, a marketable residential environment from scratch. Although there was little or no specific attention to the way the built environment influences health, there are fortuitous co-benefits from the environmental and community-building objectives. As such Victoria Park presents by and large as a healthy built environment.

3. Participants also currently present as healthy. Although this would be mainly due to their individual characteristics (generally a younger age group with high mobility and social connectivity, and with personal inclination to participate in physical activity), the built environment of Victoria Park and its location relative to the centre of Sydney also means there are substantial facilities to assist these inclinations. When participants were asked to nominate the things that currently assist them to keep healthy, most matters cited relate to their immediate built environment.

4. It is also true that when participants are asked to nominate those things they need to keep healthy and do not have access to, most matters cited also relate to the built environment. Positively, for most of these matters this is likely to be a passing phase as a significant range of active transport, active and passive recreation facilities, other community facilities, and commercial retailing and services come on-stream as the surrounding Green Square renewal is progressively completed. Participants expressed frustration at the existing lack of such facilities, and suggested urban development processes need to ensure better up-front provision of these needs. Some matters (a local supermarket, other fresh food shops, a gym, and medical services) have already been provided in Victoria Park itself during the latter stages of the Study, and as such would now address most of these concerns.

5. All participants achieve recommended minimum levels of physical activity, even though most have other commitments (eg. work, family). Generally this is via a combination of active

transport (walking and bus), recreation walking, and active recreation pursuits. Some use gyms and/or swimming pools at their place of work or in their residential building. Although active transport use is high there is still a high propensity to use the car for certain trips, particularly for household shopping. This may now have been reduced with the recent opening of a supermarket and other shops within Victoria Park; car use is likely to further decrease when the additional facilities and services in Green Square also come on-stream.

6. Few participants cycle, with most citing road safety concerns. This may dissipate as more local facilities able to be accessed by local streets become available, and as regional cycle paths are established as per the local Council's cycle strategy. These additional local facilities will also be easily accessed by walking, which will further assist levels of physical activity given the small scale of Victoria Park means that although the quality of its walking environment is high distances are short and so yield only low numbers of 'active' hours. Attention though will need to be given to a particular concern raised by participants – safety when crossing the busy main roads bordering Victoria Park and which have only limited crossing facilities. Further, the propensity for residents to undertake longer recreational walks to major (and high quality) regional open spaces is limited by a lesser quality of the adjacent walking environment. This needs to be similarly improved, perhaps in manner similar to the existing identification of cross-regional cycling routes).

7. Participants cite a range of responses when asked about their level of social interaction. Although interaction with neighbours is relatively low most are content with this, generally because they have sufficient avenues for social interaction elsewhere. That said, participants also express a level of frustration about not knowing who their neighbours are. The cause is a combination of (i) the 'transitory' nature of the physical spaces within their multi-unit buildings where people do 'bump into' each other (foyers, lifts, corridors), and (ii) the inability to know whether those other people are long-term or short-term residents or visitors, coupled with a difference of view as to the level of social interaction considered appropriate. This situation may be a causal factor in the popularity of the main open space area of Victoria Park as a general gathering space where, as suggested by participants, there is a propensity for incidental conversation. This, along with the provision of a ball court which is actively used by younger groups, a neighbourhood branch library, a Saturday market, and various casual meetings of particular interest groups suggests the 'community' aspects of the original development design have been successful. These opportunities will increase as the surrounding Green Square renewal also develops. Further, most participants feel very safe at all hours in the local streets and public spaces. Nevertheless, innovative solutions that encourage better social interactions with immediate neighbours also deserves attention; there is a risk the current 'anonymity' might lead to a level of insecurity and lack of trust in the community, and which could be already discerned, to a minor extent, in some comments.

8. Participants have a good range of sources of fresh food, and there is a low visibility and provision of non-healthy food shops. Attention may need to be given to supporting the viability of fresh food stalls at the Saturday markets, which appear to have been affected by the new local retail development; and to taking advantage of an apparent semi-active interest by participants in growing their own foods.

9. Victoria Park as a case-study has also identified a range of other lingering frustrations about high-density living and which deserve recognition and attention when designing other similar areas: the impact on local amenity of the higher scale of the most recent developments, local safety due to traffic speeds, inner-city air pollution and grit, and poor interface design between residential units and garbage storage areas and building driveways.

A summary table of findings and responses based on the three key domains and seven specific actions for healthy built environments follows.

Physical Activity
'Getting people active'

Facilitating 'active transport'	**Facilitating recreational physical activity**
Description Personal mobility is high in terms of both physical health and access to a variety of transport modes. Use of active transport (walking, bus) is high, though local walks are generally of short duration. Cycling is rare due to road safety concerns, and bicycles have been stolen. Participants also often use their car to access shops and recreation facilities (and sometimes work) because these are lacking in the immediate neighbourhood. However overall proportion of trips by car is relatively low. Some use car-share schemes. The pedestrian environment is good within Victoria Park, except for current construction traffic; but can be variable in surrounding area. Frustrations expressed about erratic bus services (with acknowledgment this is often due to traffic and not the service provider) and safety in crossing busy boundary roads due to inadequate pedestrian crossings. Proposed light rail is viewed positively provided the route is well-positioned.	**Description** Although facilities within Victoria Park are limited, overall access to facilities is high given high levels of mobility and high provision in surrounding area, at places of work, or within residential buildings (gyms, pools). All participants meet minimum weekly levels of physical activity. Victoria Park is conducive to walking and jogging (but less so in surrounding areas and in streets now with high-rises) and to active exercise in parks (though dog droppings are a problem, and the half basketball court has been 'taken over' by one user group). There is a regular tai chi group. Suggestion that installation of outdoor exercise stations and an (affordable) personal/group trainer or similar at a regular set time would induce greater use of facilities/opportunities. Future access to a swimming pool and other active recreation facilities will be high when constructed nearby in next few years.
Response Use of active transport should increase and car use for local trips should decrease as shopping and recreation facilities are progressively established in the local area as planned (and traffic & parking congestion is likely to discourage car use generally). Concerns regarding the local pedestrian environment should reduce as construction levels decrease and other facilities come on-stream. Immediate improvements re pedestrian crossings could be implemented, particularly to the new Town Centre. Need to monitor efficacy of bus services (routes/timetables/running times), and to maintain longer-term plans for light rail.	**Response** Need to improve management of existing dog park open space to ensure diversity of use possible. Consider whether quantity of overall provision of active recreation facilities in the larger Green Square Renewal Area will meet demand for all anticipated age groups (eg. the diverse facilities at Prince Alfred Park cited as a good example to follow). Consider non-built services to encourage physical activity in the public spaces already provided (eg. exercise groups, trainers) (with associated social interaction co-benefits).

Social Interaction
'Connecting and strengthening communities'

Facilitating incidental n'hood interaction	Making community spaces	Build for crime prevention
Description Potential for interaction is high in public streets and park given good design and seating (there is always someone about) and new retail development provides an additional meeting point; but variable in individual buildings given the 'transient' nature of most common areas, queries about just who is a long-term resident or not, and inactive management of common areas (eg. potential cinema area not used). Suggestion that interaction in social housing blocks is actively discouraged. Some comment that balcony use is restricted because of air pollution-which may reduce interaction. Some individuals have chosen to act as catalysts, to establish informal conversations, etc.	**Description** There are four well-maintained and used social foci – the dog park, Saturday markets, main playground, and basketball court (for youth). The new retail development now provides another. The streets generally are also seen as pleasant, safe and well-lit. There are also frustrations: - dog droppings in park restrict use by others. - the ball court is taken over by one user-group - reduced amenity of streets with new high-rises. - limited range of activities for younger age-group. - library/community programs not continuous and not kept pace with population inflow. - dust, grit, construction noise and traffic limits amenity.	**Description** Satisfaction with personal safety is high notwithstanding apparent crime issues within the more anonymous multi-unit buildings. Lighting in public areas is good, and presence of others on streets even at late hours is viewed as a positive. General ambience of area is amiable. Concerns expressed over apparent drug manufacturing activity within buildings, prevalence of break-ins and bicycles being stolen, and effectiveness of surveillance cameras is reduced due to poor positioning. Anonymity of these buildings could result in future increases in levels of anxiety, thus diminishing further incidental social interactions and overall wellbeing.
Response Consider how the design and management of common shared spaces within residential buildings might better promote incidental interactions with immediate neighbours - as a case study for similar developments elsewhere. Consider 'formalised' support for individual residents acting as 'social catalysts/.	**Response** Design of public environment appears successful but need to ensure management allows for intended diversity of use. Ensure continued viability of Saturday markets now that the new food retailing complex is open. Ensure new planned facilities in the Green Square Town Centre meet needs of all age-groups. Overall amenity should improve as construction diminishes.	**Response** Existing design of the public environment appears to be successful. Future uses of non-residential floor space should recognise the predominant residential nature of the area. Action to increase social interactions with immediate neighbours may be important to ensure existing high levels of community trust are not diminished.

Nutrition
'Providing healthy food options'

Facilitating access to healthy food

Description

A frustration about lack of fresh food shops in the immediate neighbourhood (other than the Saturday markets which are seen as too expensive for 'everyday' household shopping) now likely to be dissipated with opening of new retail complex. Nevertheless, access to other fresh food sources is high given high personal mobility, though a general feeling that supermarket food is not particularly fresh.
Some use of a local subsidised 'food boxes' network by those with limited mobility or income; and concerns if it is not continued.
There are some public planter boxes of herbs etc. maintained by a local 'growers' group – but use of the produce by others was not really mentioned. A reasonable number of participants have tried to grow their own food (supported by the local 'growers' group), but with overall limitations due to space and concerns about air pollution.

Response

Concerns about local access to fresh foods should have been resolved with the opening of the new retail complex in late 2014. However this appears to have a negative impact on the provision of fresh food stalls at the Saturday markets. This may require attention to ensure a diversity of outlets and its role as a 'neighbourhood focus'.
The subsidised community food-boxes network should be maintained as long as required.
Use of the public planter boxes could be re-invigorated, and that ability of all residents to use the food grown in there could be better promoted (this may then prompt more individuals to grow their own as well).

Promote responsible food advertising

Description

There is good awareness of the importance of fresh food, eg. as evidenced by the questioning of freshness of supermarket food, use of the Saturday market, and mention of lack of fast food shops as one of the things assisting participant health.
Fresh foods are given prominence in the new retail centre, and there is no noticeable availability or advertising of non-healthy foods.
The local neighbourhood social media advertise a local 'growers' group and there are visible 'communal' planter boxes in public spaces. However any effect of this and use of the produce from the boxes by others is not particularly noticeable.
The closely built-up and residential character of the built environment means a limited number of food premises generally in the area, and that prominent advertising panels are unlikely.

Response

Monitor and action if required the relative prominence of advertising and presence of healthy compared to unhealthy foods as additional food premises are established as the population grows and new retailing floor space comes on-stream.
Ability of all residents to use the food grown in the public planter boxes could be promoted (this may prompt individuals to grow their own as well).

1. INTRODUCTION.

1.1 Study overview.

The improvement of human health has always been an intrinsic part of urban planning: providing clean water, disposing of wastes, controlling pollutants, and ensuring fresh air and sunshine. We now have a range of solutions to address these needs. However these responses have not kept pace with other health issues now becoming apparent – the chronic so-called 'lifestyle' diseases such as diabetes, various respiratory and heart conditions, depression, and some cancers; and which are estimated to cost the Australian nation some $22.3 billion annually. Obesity, physical inactivity, increased stress, social isolation and poor nutrition have all been identified as key risk factors.

In turn, the shape of our built environments can have significant direct and indirect impacts on these contributing factors – and thus on our propensity to incur these new health risks.

A review of the research literature relating to these health and built environment relationships was conducted in 2011 by the City Wellbeing Program within the City Futures Research Centre in the Faculty of the Built Environment at the University of New South Wales.[1] The review identified three key domains in which the built environment can be either beneficial and detrimental to our health and well-being:

(i) Getting people active (physical activity) - to reduce obesity, the risk of heart disease, some cancers and depression.
(ii) Connecting and strengthening communities (social interaction) - to reduce risk of mental illness particularly depression.
(iii) Providing healthy food options (nutrition) - to reduce obesity and risk of heart disease and some cancers.

The review also identified seven specific necessary actions within these three domains relating to necessary features that need to be embedded within our built environments (Table 1.1).

The *Planning and Building Healthy Communities* study explores these health and built environment relationships in more depth via focused appraisals of four different metropolitan and urban fringe areas in Sydney:

- Airds Bradbury
- Renwick
- New Rouse Hill
- Victoria Park.

[1] Kent, J., Thompson, S.M. and Jalaludin, B. (2011) Healthy Built Environments: A review of the literature (Sydney: Healthy Built Environments Program, City Futures Research Centre, UNSW).

Table 1.1: **The basis of a healthy built environment – key domains and actions.**

Key Domain	Specific Actions
Getting People Active. The built environment can get people active by facilitating both utilitarian physical activity ('active transport') and recreational physical activity.	**Facilitate utilitarian physical activity.** Increasing the accessibility of destinations via active transport modes (i.e. walking, cycling, public transport), and ensuring the experience of walking, cycling and public transport is of high quality will assist the use of these modes relative to more sedentary car travel.
	Facilitate recreational physical activity. Providing facilities for formal and informal, and individual and group physical recreation in public spaces and via commercial and non-commercial organisations will assist in increasing overall levels of physical activity.
Connecting and Strengthening Communities. The built environment can connect people and strengthen communities – and thus support psychological health by fostering feelings of belonging and restoration – by facilitating incidental neighbourhood social interactions, by making community spaces, and by building for crime prevention**.**	**Facilitate incidental neighbourhood interaction.** Ensuring public spaces are 'friendly' (busy, comfortable, safe and open to all) and with clear expectations as to appropriate behavior included in the design of public spaces (eg. via the provision of facilities and signage) will assist in encouraging positive incidental interactions between individuals and groups.
	Make community spaces. Providing explicit and well-designed (accessible, comfortable, safe) spaces open to all will allow for gatherings and other activities by the community as a whole and as particular interest groups; similarly, access to natural green environments will extend the notion of community to include the restorative effect of wider nature.
	Build for crime prevention. Designing the built environment to discourage crime and feel safe (while still facilitating social interactions) will assist an overall sense of belonging, caring and community commitment.
Providing healthy food options. The built environment can provide healthy food options by facilitating access to healthy food, and by responsible food advertising.	**Facilitate access to healthy food.** Ensuring supermarkets, green grocers and farmers'' markets are accessible relative to fast food outlets, pubs and convenience stores (eg. through zoning and land use regulation, and subsidized spaces) will promote the consumption of healthy foods and discourage purchase of unhealthy alternatives.
	Promote responsible food advertising. Marketing, advertising and promoting the visibility of healthy foods (eg. near schools and other community locations, and relative to unhealthy foods) will have positive influences on consumption habits.

All areas are currently undergoing development, and incorporate healthy planning interventions to various degrees (Table 1.2). A key facilitator in the development of each area is UrbanGrowth NSW (formerly Landcom), the property development instrumentality of the State government.

The Study was conducted between 2011 and 2015. The Project partners were:

- the City Futures Research Centre (Faculty of Built Environment, University of New South Wales).
- UrbanGrowth NSW.
- the National Heart Foundation (NSW division).
- the South Western Sydney Local Health District (SWSLHD) (NSW Health).

Table 1.2: **The four Study Areas and their characteristics.**

	Description	Current stage of development.
Airds Bradbury.	Existing suburban fringe location, south-west Sydney. Low density public housing estate of some 1500 dwellings, to be 'renewed' to (i) include private housing (reducing the overall proportion of public housing), (ii) upgrade the public domain including the local shopping centre and open spaces, and (iii) provide additional community services and facilities. Close collaboration between UrbanGrowth NSW and State agencies to promote equitable health outcomes via social programs and a re-structuring of the built environment.	Implementation of new community facilities and social services for existing residents. Demolition of some existing housing and re-location of residents. Completion of new aged housing units. Sale of first private housing lots towards the end of this Study.
Renwick.	Southern Highlands, adjacent to a township detached from the metropolitan area. New low density residential estate comprising 600 dwellings and an associated local commercial centre. Specific attention to integration with the existing town urban area. Explicit collaboration with the National Heart Foundation, and incorporation of its *Healthy by Design* guidelines in the master planning.	First stage of housing lots completed, including construction of dwellings and establishment of residents. Design of some open space areas developed, with construction underway towards the end of this Study. Needs study for new community facilities commenced.
New Rouse Hill.	Suburban fringe location, part of a metropolitan growth corridor, north-west Sydney. Large, comprehensive master planned development area incorporating a major regional mixed-use Town Centre, low and medium, density residential, schools and community facilities. No explicit inclusion of healthy design principles, but with health co-benefits from its emphasis on environmental outcomes, community development, and incorporation of recreation facilities to assist initial marketing.	Town Centre, bus transit way, primary and high schools, childcare centre, and community-title social and recreation facilities including public open spaces established. First stages of housing lots completed, including construction of dwellings and establishment of residents.
Victoria Park.	Inner-urban Sydney, part of the major Green Square precinct urban redevelopment. High density, master planned residential development of some 2,500 dwellings on former industrial land. Incorporates new local parks, some local retail, and a branch library. No explicit inclusion of healthy planning principles, but with health co-benefits from its emphasis on environmental outcomes and community development.	Public open spaces and local community centre and library established. Most housing stages completed, with only some high-rise developments waiting completion. Major neighbourhood retail centre opened during course of this Study.

By working with these key players within the fields of health and the built environment the study:

(i) ensured a multi-disciplinary perspective in its aims and the gathering and review of data, and

(ii) seeks to directly influence the shape and management of existing and future built environments to achieve health-related outcomes.

The study was funded through an Australian Research Council (ARC) grant and by monetary and/or in-kind contributions by the project partners. In this regard the study addresses National Research Area Priority 2: Promoting and Managing Good Health, and is consistent with the objectives of the National Preventative Health Task Force.

This Report conveys the Study findings for Victoria Park.

1.2 The aim and focus of the Study.

The aim of the Study is to:

(i) better understand what makes up a healthy built environment by researching how diverse residential neighbourhoods with a range of design features, housing densities, land uses, open space and access to transport, and in different metropolitan and fringe localities support human physical and mental health.

(ii) assist the future development of an urban environment within each of the four study areas that will promote good health and consequently reduce the individual, social and monetary costs of chronic disease.

(iii) draw lessons that can then be applied within our built environments generally.

The Study focused on the following research questions:

1. What features of the development make it easy/difficult for residents to be physically active in their everyday lives?
2. What features of the development make it easy/difficult for residents to access healthy food, public transport, community facilities and services which are linked to good health outcomes?
3. What features of the development make it easy/difficult for residents to be mentally healthy?

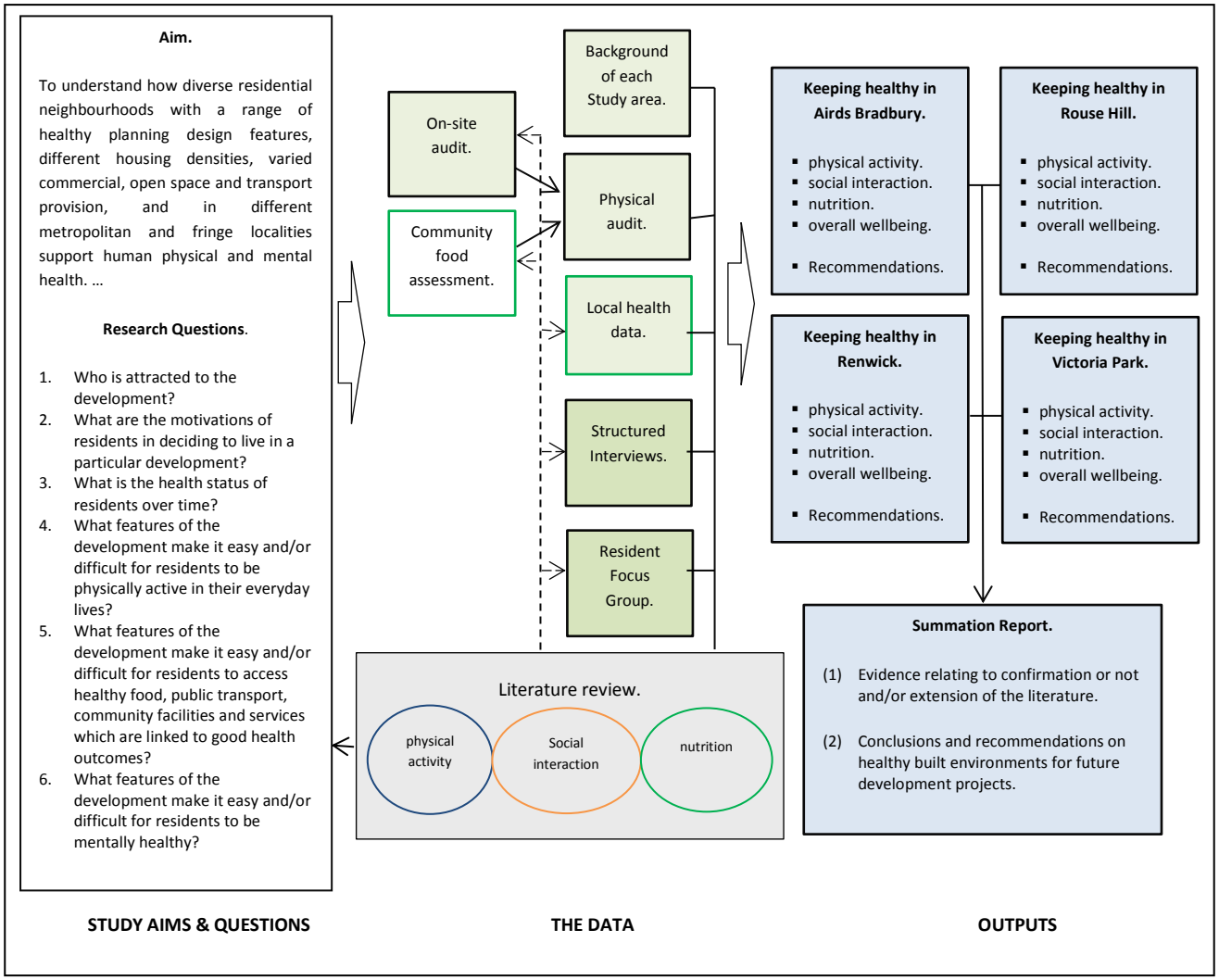
The Study used mixed quantitative and qualitative research methods, with an emphasis on the latter, to gather a 'rich picture' of data. Data collection methods comprised:

- on-site audits of the physical environment of each study area.
- in-depth semi-structured interviews with residents.
- a follow-up focus group with residents to explore the health and built environment relationships within each study area in more detail.

The Study also utilised where applicable a concurrent study conducted by the South Western Sydney Local Health District of the food environment within various localities in Sydney.

A 'map' of the aims, data sources and reporting outcomes of the study is at Figure 1.3.

Figure 1.3: **Study Map.**



Limitations due to the on-going development of each Study Area.

It was initially intended the study would include longitudinal appraisals of each Study Area. However this was not possible given the research time-frame and the on-going actual development of each Study Area (Table 1.2). As such the findings must necessarily comprise a 'snapshot' of the conditions of the time of the study. However the study has addressed this particular constraint by:

(i) structuring the key findings and conclusions around a set of healthy built environment indicators prepared by HBEP in a separate project for the NSW Ministry of Health. This will allow future appraisals of the health of the communities within the four study areas to be similarly structured and thus permit comparison over time.

(ii) structuring the focus group within each study area to add a temporal element to the discussion by asking participants to establish a desired 'future' that would be conducive to their health as they saw it, to then compare that vision with the current situation, and then discuss what that community needed to get there (or if already existing, what assisted this).

1.3 The determinants of our health - some background.

Our health is a result of an extensive range of factors and influences. These tend to be grouped and prioritized in different ways depending on the particular orientation of a project or intended audience. The following grouping and allocation of relative influence provides a useful summary, as applicable to this Study:

- personal behaviour – 40%
- family genetics – 30%
- environmental and social – 20%
- medical care – 10%. [2]

The following observations are also applicable:

(i) these factors are not necessarily separate from each other, but also interact. For example, over time environmental factors such as contaminants can influence genetics; and genetics combined with environmental and social factors can influence personal behaviour.

(ii) the determinants we can influence – personal behaviour, medical care, and environmental and social factors – account for some 70% of factors. Importantly, actual medical interventions account for only 10%, emphasizing the need to prioritise attention to personal behavior and to environmental and social factors – the so-called 'primary health care' actions.

(iii) environmental and social determinants include the ways in which we design, build, manage (govern), use and interact with our built environments; thus the reason and importance of this Study.

(iv) critically, personal behavior accounts for the largest single influence (40%) of all determinants.

Various models have been developed to illustrate these factors and the ways in which they interrelate. The 'Social Model of Health' (Figure 1.4)[3] developed in 1991 for example is based around the idea of there being various layers of influence on the health of individuals (shown centred in the diagram) who have their own individual causal factors. The first layer relates to personal behavior and ways of living; the next relates to social and community influences; and the third layer is about structural factors like housing, employment conditions, and access to services and infrastructure. A subsequent 'Health Map'[4] (Figure 1.5) developed in 2006 is based on this earlier 'Social Model of Health', but now includes wider economic and environmental (both built and natural environments) factors.

[2] As presented to the Walk21 XV International Conference on Walking and Liveable Communities, Sydney October 2014, by Tyler Norris: *Every Body walk: A vision becomes a movement*. Originally sourced from YMCA of the USA: *Pioneering Healthier Communities. YMCA Activate America/Lessons Learned*, 2002. http://www.tylernorris.com/pubs/YMCA_PHC.pdf.

[3] Dahlgren, G. and Whitehead, M. (1991) *Policies and strategies to promote social equity in health.* Institute for Future Studies. Stockholm.

[4] Barton, H. and Grant, M. (2006) 'A health map for the local human habitat.' *The Journal for the Royal Society for the Promotion of Health*, 126 (6). pp. 252-253. (http://eprints.uwe.ac.uk/7863).

Figure 1.4: **The *Social Model of Health* (1991).**

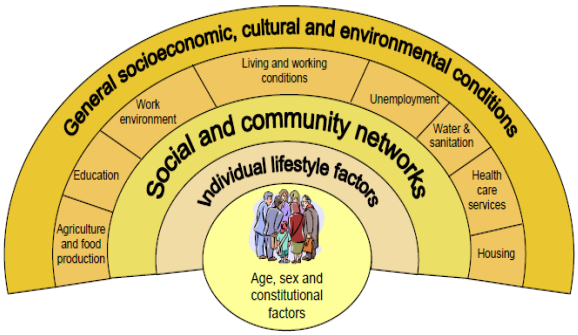
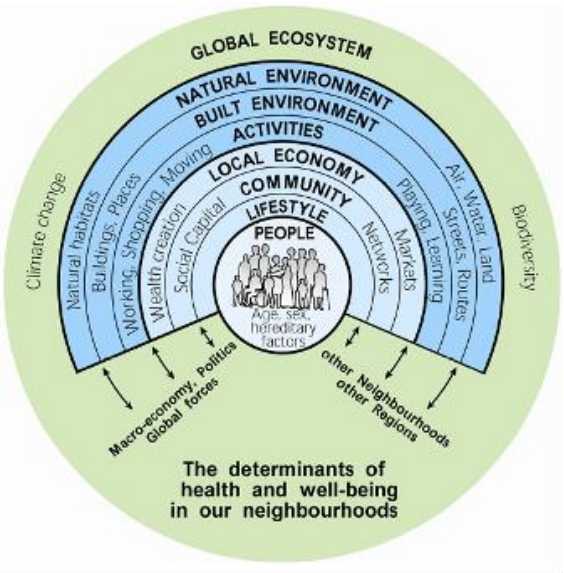


Figure 1.5: **The *Health Map* (2006).**



The concept of 'healthy built environments' – and the conduct of this Study – is centred around the relationships between these social, environmental and personal behavior determinants. They have informed not only the methodology and design of the Study but also the subsequent lessons and recommendations from the Study conclusions.

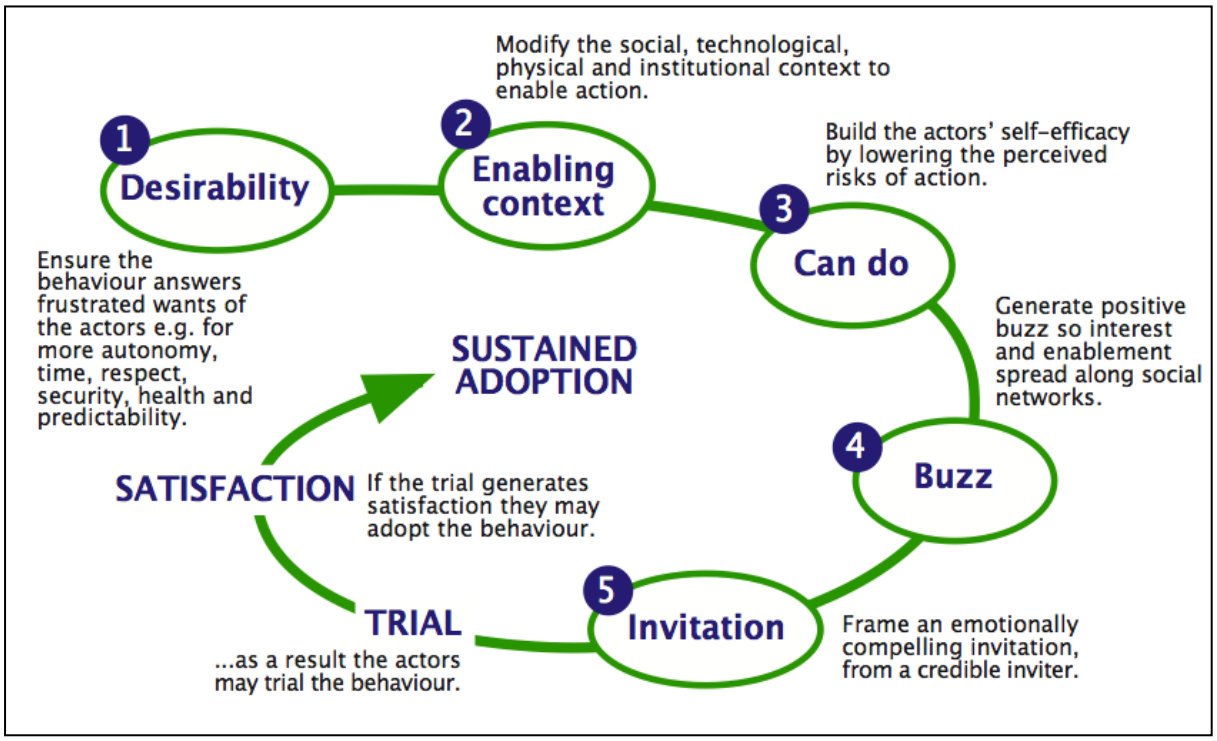
Of similar importance are then the various factors that act to influence actual personal behaviour. Again, the ways in which we act, adopt and respond to particular information and knowledge about matters is subject to numerous influences. For the purposes of this Study background reference has been made to the following particular grouping of five factors, derived from the '5 Doors' Model of Behaviour Change (Figure 1.6)[5]:

1. A specific orientation to what people want and need. The new behaviour must meet a desire.
2. An environment that enables the new behaviour sought. Changes (physical or social or institutional) to the existing environment may be necessary.
3. Assistance, through information and/or other means, to give people confidence that they know what to do, and can do it with minimum risk.
4. Making individuals feel that undertaking the change is not just a personal effort but part of a larger social conversation. The change sought must therefore become part of the underlying 'buzz' of the community.
5. Giving individuals further confidence by having a recognized leader, someone they can emulate, actually inviting them to join that larger movement.

[5] This Model was developed by Les Robinson based on research on the factors that influence and determine personal behaviour and on Robinson's own experiences in developing behaviour change programs through his consultancy *Enabling Change*. Refer: http://www.enablingchange.com.au/enabling_change_theory.pdf.

Importantly, raising individuals' knowledge or awareness about something comprises only part of one of the enabling factors of change, or 'doors' (Door 3). The other part of this door is that any information given must be targeted and be specific to individuals' needs if it is to be of influence. Further, as the model also illustrates, any behaviour change process needs to factor in a trial and error period, and so will not necessarily be immediate.

Figure 1.6: **The '5 Doors' Model of Behaviour Change.**



1.4 Relationship of this Report with the other reports for this Study.

This report is one of five (5) reports relating to the Study overall.

Four Study Area reports.

Separate reports, of which this is one, have been prepared for each of the four Study Areas. They include recommendations relating to features identified as important for the health of residents in that Area and which should be maintained, and for improvements to rectify any deficiencies.

Each report includes a separately-bound addendum comprising the Healthy Neighbourhood Audit of that Area. This audit appraises the physical features and the access to food characteristics of each Area from the perspective of the health of its residents (refer Section 3.2).

A Summation report.

The fifth report comprises a summation of the overall study findings and recommendations on healthy built environments, drawn from the understandings arising from the four Study Areas. These recommendations can be applied to future development projects in general.

Other reports.

In addition, the City Wellbeing Program has published various papers relating to the study design, process and findings. Papers published to date are listed on the City Wellbeing Program website, and in Appendix 1.[6] Future published papers will be listed on the City Wellbeing Program website.

1.5 Relationship with other work by the Project partners.

Each of the Project partners has been involved in other work that addresses the relationship between human health and the ways in which we plan and manage our built environments. In particular:

- NSW Health is active in promoting healthy built environments and in submitting related comment and advice on development proposals, and has published a set of guidelines to assist:
  Healthy Urban Development Checklist. A guide for health services when commenting on development policies, plans and proposals. (2009)

- The Heart Foundation is also active in promoting healthy built environments and active living more generally, and maintains a website of reference material, guidelines and checklists for healthy urban design responses, including case-studies:
  http://www.heartfoundation.org.au

  The Foundation has also published its own set of guidelines:
  Healthy By Design: a planners' guide to environments for active living. (2004)

- UrbanGrowth NSW (then as Landcom), around the time of the initial development of Airds Bradbury, adopted a 'healthy places and healthy people' policy. The policy provides for the integration into its design and development processes of considerations and actions to promote the health of the residents and other occupants of its developments. The policy is published as a brochure:
  Healthy development. How Landcom plans for healthy places and healthy people. (2010).
  http://www.landcom.com.au/downloads/uploaded/Healthy%20Development%20Brochure_d089_648e.pdf

  The brochure makes specific reference to the partnership with this Project, and to its emphasis on healthy by design considerations in the development of Airds Bradbury and Renwick.

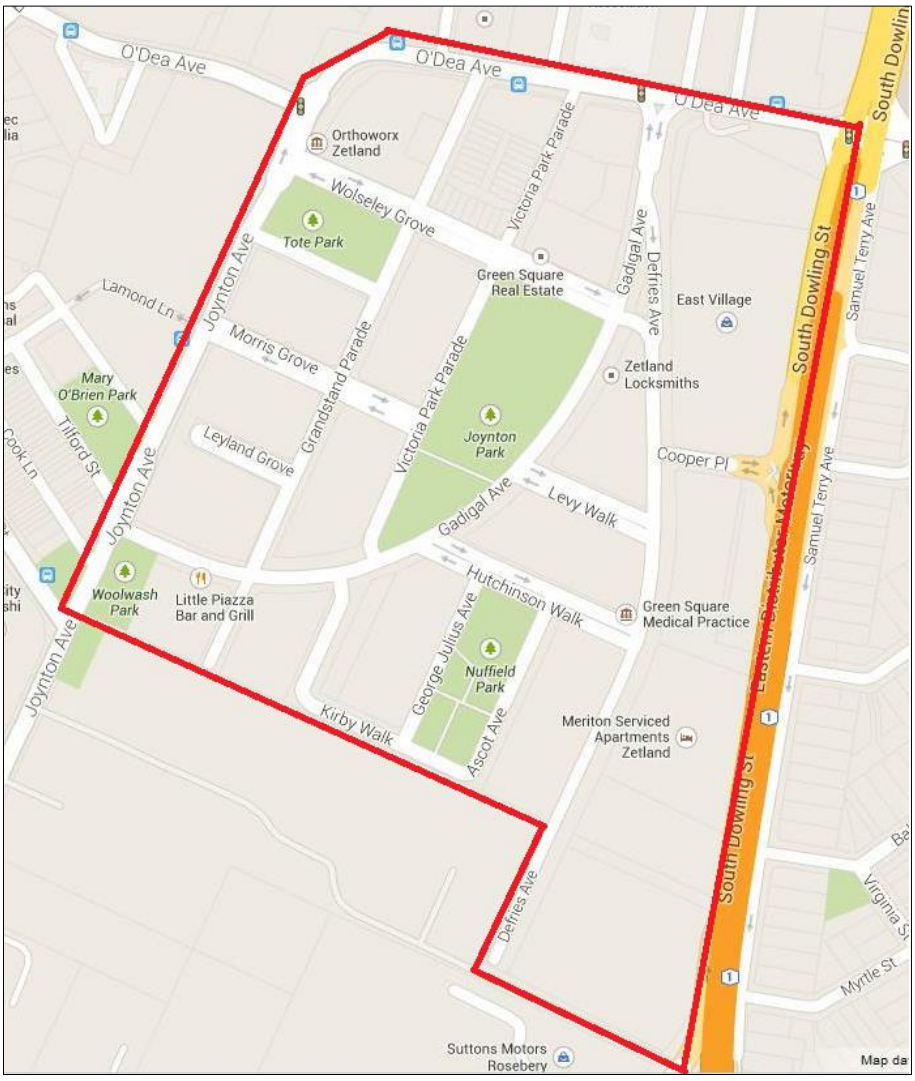
[6] For Papers listed on the City Wellbeing Program website, refer: https://www.be.unsw.edu.au/city-futures/city-wellbeing/about.

2. VICTORIA PARK – a description.

2.1 Location and history of development.

The Study Area comprises the whole of the development area known as Victoria Park located within the suburb of Zetland within the City of Sydney local government area (Figure 2.1). The area comprises approximately 24.5 hectares of formerly industrial land. The development entails the construction of new road and drainage systems; some 3,000 multi-unit dwellings in a range of building types (including terraces, walk-up, and high-rise units) with building heights from three to 21 storeys; a neighbourhood retail centre plus other local retail uses throughout the remainder of the estate; some 3.7 hectares of open space; and commercial space. Some of the residential uses include serviced apartments, and all development is subject to a levy to fund the construction of affordable housing dwellings. The ultimate intended population is for some 8,000 residents.

Figure 2.1: **The Victoria Park Study area.**



At the time of the Study the majority of the residential buildings had been constructed and progressively occupied, including the affordable housing units. The principal open space areas were constructed as an initial part of the development in order to ensure an appropriate level of 'up-front' amenity. The neighbourhood retail centre only opened at the end of the study period, when this Report was being prepared. The mixed use commercial, business, residential and community use precinct planned for the eastern part of the site and providing for a 'buffer' to the adjacent major arterial road (South Dowling Street) was also largely completed, though with, it would appear, a lesser proportion of commercial (employment) floor space (and which also appears to be largely occupied by the Audi car dealership). An originally intended aged persons housing component appears to have been abandoned.

The site was purchased by Landcom in 1997. Landcom prepared a master plan (Figure 2.2), constructed the initial roadways, drainage systems and principal parks; and then took on the role of 'master developer', dividing the site into a number of 'super lots' to facilitate subsequent development by multiple private-sector developers. The first residents moved in around 2003.

Victoria Park also comprises the principal initial large development site within the larger Green Square urban renewal area located approximately mid-way between the Sydney Central Business District and Sydney airport. Green Square is cited as the largest inner-urban 'brown-field' urban renewal project in Australia. It is centred on and takes advantage of the Green Square railway station on the Airport Line constructed for the 2000 Olympic Games, and the availability of industrial land for redevelopment given the decline and/or re-location of industrial activity in the area. The renewal will take place over some twenty-plus years. Final development will include extensive residential development on former industrial sites, a new Town Centre with extensive commercial floor space, and an extensive range of new community, cultural and recreation facilities. The possibility of a light-rail connection to the Sydney CBD is now also being considered. Although initially overseen by a specific State Government development corporation (the South Sydney Development Corporation) responsibility for planning and development approvals is now with the local City of Sydney Council.[7] The Town Centre will be a mixed use area with some 4,500 residents proposed; and the overall increase in resident population in the wider Green Square renewal area is estimate to be at least 20,000 and possible more. As such the Victoria Park estate will become part of a substantially enlarged and renewed urban area with access to a corresponding overall increase in local employment opportunities, recreation and cultural facilities, and transport.

The master plan design for Victoria Park gave particular attention to both 'ecological sustainability' and 'community', with publicity material referring to 'embracing the principles of green, open space, design excellence and a cohesive sense of community'.[8] Key features have been listed as:

- 40% of the site being retained as 'public domain'.
- public space where 'residents can meet over a barbeque, walk the dog or practice tai-chi.
- the establishment and funding of a local Victoria Park community group.
- a swale bio-retention system for stormwater management, including treatment and re-use.
- use of renewable building materials.
- incorporation of passive solar access and natural ventilation in individual dwelling designs.

[7] The South Sydney Development Corporation was established in 1996 and abolished in 2005.
[8] 'Welcome to Victoria Park: the natural neighbourhood.' Landcom, 2008 (brochure).

- strategies to ensure energy-smart living.
- a permeable network of streets and open spaces to facilitate access to public transport and recreation facilities in the region.

The master plan design did not consciously include any specific focus on residents' health. Nevertheless, many of the environmental and social 'community' design features also have important health co-benefits.

Figure 2.2: **Original Master Plan**.



2.2 The Study participants.

The Study included 21 residents of Victoria Park by way of an interview, and invitation to a subsequent focus group (see Section 3). A summary of the demographic characteristics of the

participants are included in Table 2.1. Those participants who also attended the Focus Group are marked with an * (one Focus Group attended did not participate in the earlier interviews).

Table 2.1: **The demographics of the Study participants.**

	Age	Gender	Occupation	Level of education	Household characteristic #	Current health status ##
1	18-21	F	Student	Tertiary degree	Shared household	Good
2 *	22-34	M	Professional	Tertiary degree		Very good
3	22-34	M	Student	Tertiary degree		Good
4 *	22-34	F	Professional	Tertiary degree		Very good
5	22-34	F	Professional	Post-graduate		Very good
6	22-34	M	Professional	TAFE	Couple	Good
7	22-34	M	Professional	Post-graduate	Single	Very good
8	35-44	F	Professional	Tertiary degree	Children	Average
9 *	35-44	F	Professional	Tertiary degree	Children	Good
10	35-44	M	Professional	Tertiary degree		Good
11	35-44	F	At home parent	Tertiary degree	Children	Very good
12 *	35-44	M	Professional	Diploma		Very good
13	45-54	M	Business owner	Yr. 9	Children	Very good
14	45-54	F	Professional	Tertiary degree	Couple	Good
15 *	45-54	F	Company director	Tertiary degree		Good
16 *	45-54	M	Manager	TAFE	Couple	Good
17	45-54	F	Professional	Yr. 12	Children	Poor
18	55-64	F	Professional	Post-graduate		Good
19 *	55-64	F	Retired (professional)	Tertiary degree	Single	Poor
20 *	65+	F	Retired (manager)	Yr. 10	Single	Average
21 *	65+	F	Home duties	Yr. 12	Single	Very good

Where known. Participants were not explicitly asked about the household in which they lived. The entries here are from advices and understandings obtained during the interview and/or focus group.

As advised by the participant, as either poor, average, good, or very good.

2.3 'Visibility' of the Project in Victoria Park.

In addition to the letter-boxing of Flyers inviting participation in the Study (Attachment 2), advices about the Study were also included on the respective websites of the Friends of Victoria Park and the Green Square Community Hub, and on the Friends of Victoria Park Facebook page.

3. THE RESEARCH PROCESS – methodology.

3.1 Introduction – the difficulties of measuring place-based health relationships, and the approach of this Study.[9]

Despite the many studies in the area of healthy built environments there are lingering difficulties and much debate about how research can best be conducted in this inter-disciplinary area. The issues are not just practical in terms of 'joining' the often disparate traditions of research in the built environment and health/medical fields, there are also often deep philosophical differences in built environment and health/medical scholarship. There are a number of issues, including how to:

- measure the invariably intricate rather than singular relationships people have with the environments in which they inhabit, and characterised by diversity, complexity and messiness. The intricacy of the urban planning process itself is a further complicating factor.
- 'isolate' for deeper appraisal those relationships and behaviours that might have a direct impact on individuals' health.
- meet the often quite different demands in respect to trustworthiness of data between the necessarily different contributory disciplines in such cross-disciplinary investigations.

Most studies seeking to understand the relationship between physical place and human interaction rely, necessarily, on detailed 'social science' observations of the everyday actions of people in familiar and ordinary places. However, when seeking to utilise the findings from these real-world settings within the medical discipline it is not possible to isolate variables in the double-blind procedures typical of research in the scientific laboratory. Further, it is arguable that even if it were possible to isolate variables of interest, the resultant simple 'proofs' that result would not lead to understandings of the people-place relationships under investigation that are sufficiently in-depth and comprehensive.

To address these issues this Study collected a mix of varied qualitative and quantitative data, in the manner of a 'triangulation' – an approach whereby researchers 'make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence.'[10] To assist rigour the Study gave particular attention to the design of the data collection tools. This included:

- a new explicit 'audit' instrument for the conduct of on-site observations of each Study area.
- an in-depth semi-structured interview, with questions based on both similar surveys used elsewhere in Australia to allow for future comparisons and on matters explicit to this Study.
- a purpose-designed follow-up focus group to obtain greater clarity on the data collected from the on-site observations and the interviews, and to 'give voice' to how the participants themselves see their neighbourhood as contributing to their current and future health.

[9] The content of this section draws on a paper (Planning and Building Healthy Communities) presented by the City Wellbeing Program to the 2013 State of Australian Cities (SOAC) Conference.
[10] Refer: *Qualitative Inquiry and research Design: Choosing among Five Traditions (3rd edition).* J.W. Creswell. Sage Publications, California, 2013 (p. 251).

Each of these three data-collection methodologies comprise a Study outcome in themselves, and are able to be used:

- in any future studies within the case-study areas, to enable consistent longitudinal appraisals, and
- as models for similar studies within other localities.

3.2 Auditing the environment of Victoria Park.

The Study audited the physical environment of each Study Area and assessed the potential impact of the physical features observed on residents' health.

Where relevant, the study also draws on a survey (the *Community Food Assessment*) of the availability, type and quality of foods within selected Sydney locations undertaken by Project partner South Western Sydney Local Health District in 2012 (and assisted by Study officers from the City Wellbeing Program).

(i) Auditing the physical environment.

The design of the neighbourhood audit.[11]

Studies of the built environment and health relationship have utilised a number of tools, including accelerometers, user questionnaires and surveys, walkability assessments and site audits. Most tend to explore the influence of neighbourhood design on utilitarian and/or leisure time physical activity; some have been developed to assess social and food environments. However few methods explore the impact on health of the make-up of a neighbourhood in its entirety; in particular by embracing all three of the key domains identified in the literature review conducted by the City Wellbeing Program in 2011 (and subsequently leading to this study): physical activity, social interaction, and access to healthy food.

The Study purposely sought to obtain just such a comprehensive 'overall' view of the physical environment of each of the case-study areas and developed a specific Healthy Neighbourhood Audit Instrument to assist. The Instrument establishes a process of 'systematic observation' to ensure consistent examination of the critical built environment determinants of health within each study area. Sources included existing similar audit tools and checklists (often relating to walkability), the principles relating to crime prevention through environmental design (CPTED), and new work developed by the Study officers. An initial design was re-worked after testing in the field to allow for better efficiency in data collection and for the incorporation of complementary GIS data. Auditors were trained in the audit process prior to commencing field work. A copy of the Healthy Neighbourhood Audit Instrument is at Attachment (3).

[11] The content of this section draws on a paper ('A Methodology to Understand How Environments Support Health') by S. Thompson and E. Mitchell in *Urban Design and Planning*, Volume 168 Issue DP4, 2015 (pp. 174-184).

The audit process:

(i) maps land uses and key features, infrastructure and design elements, and
(ii) records detailed environmental observations including peoples' use and movement through different spaces, perceptions of safety, and the availability of different types of food.

Information was sourced from:

- existing data of physical features, infrastructure and facilities and the like, including physical maps, GIS databases and aerial photographs.
- direct observation and use by the Study officers of the localities under study.
- published and verbal advices on the history of development of each locality.

The on-site observation work was conducted during the week and on weekends and in daylight and at night to give a good cross-section of observations. Note was taken of physical features (such as the road, footpath and cycle network, the presence of shopping and other facilities, open space areas and facilities, community gardens, the availability of food shops, and overall built form), social activities (such as the number of people using certain places, the types of activities they were involved in, whether they were in groups, and general demeanour), and of the auditor's own perceptions about overall amenity and ambience (such as noise, shade, the presence of dogs, feelings of safety, presence of litter, overall upkeep and maintenance). Each audit was primarily undertaken on foot, complemented by additional windshield observations and use of existing Geographical Information Systems (GIS) data.

Data relating to land uses, street networks and infrastructure was entered into a GIS application on an iPad on-site. Detailed observations were recorded on paper copies of the Instrument. Each site was also recorded in detail with photographs. The focus of the night audits was on the quality and maintenance of lighting infrastructure, and perceptions of safety. The weekend audits captured any variations in activity or behaviour not observed on weekdays. The result is a data set that is detailed and rich and the result of, generally, over 20 hours of observations, assessments and mapping.

The final section of the Instrument provides for the auditors to record any recommendations for improvements in the neighbourhood, any additional observations, thoughts and reflections, and a concluding summary of how the neighbourhood supports healthy living. This section included an overall 'report card' where 22 items were given a rating out of five relating to how the auditors as a group considered they supported healthy behaviours in everyday life. However, this assessment has not been carried through into the final Healthy Neighbourhood Audit Report on the basis of concerns that such qualitative 'scoring' was reductionist and unrealistic in being able to represent the complexity of most of the matters being assessed.

The design development and initial trial of the Instrument also revealed some fundamental difficulties in the intended audit process itself, and in presenting the collected data in a way that is both accessible and reflects its depth and diversity. The following notes describe the main issues and the ways in which they have been addressed in the final design and use of the Instrument.

(i) Built environments are dynamic and each study area is experiencing some form of development. As such the features recorded are a snapshot of the environment as mapped

and perceived at a certain time. The standardisation of the Instrument does however facilitate consistent re-appraisals at different future times.

(ii) There is a need to embrace both objective and subjective responses to the study area. The Instrument encourages the auditors to experience and immerse themselves within each area. For example, the Instrument requires auditors to reflect on how the site might support people of different sexual orientations, genders, religions and cultural backgrounds; and assess each built environment element in relation to how the most vulnerable and least able groups of society would use and experience it. However auditors will always be to an extent an 'outside observer' and reflections are inevitably informed by the auditors' own attributes and experiences. Each variable reported on is open to varying degrees of interpretation. To assist robustness in this regard the audits were completed by a team of interdisciplinary auditors, with skills and experience in urban planning, GIS and public health; the auditors were trained to consider how the site supported people of all ages and abilities; and individual reflections were discussed by the group on-site.

(iii) To simply map and quantify each built environment element would ignore these complexities and risks misrepresenting different spaces within each site as homogeneous. Further, assessments required both subjective and objective interpretations. To address, the Instrument adopts different formats to report different variables:

- a combination of maps, photographs and descriptive text, including mapping of the data in ArcGIS which then also allows for presentation in encompassing 'birds-eye' views.
- observations (such as the presence and type of certain physical features).
- subjective assessments of the quality of physical elements (such as the level of maintenance).
- subjective observations based on auditor perceptions and feelings (such as sense of safety).

The audit results are collated into a Healthy Neighbourhood Audit Report for each Study Area.

<u>Undertaking the neighbourhood audit in Victoria Park</u>.

Physical assessments were undertaken of the environment of Victoria Park over six separate visits at various times of the year in 2011, 2012 and 2013, as detailed in Table 3.1. The total visitation time comprised 22 hours and 30 minutes.

Table 3.1: **Details of audit visits to Victoria Park.**

Date and times.	Time spent (hrs).	Weather and special conditions.
Friday 21 October 2011, 10.30am – 3pm	5.3	Sunny and clear skies, around 29 degrees. The favourable weather may have impacted on the number of people outdoors.
Friday 11 November 2011, 9.20am – 12pm	2.4	Sunny, clear skies changing to slightly overcast throughout the morning. Moderate wind. Around 21 degrees. Undertaken during the university exam period.
Monday 23 January 2012, 9.30am - 3.30pm	6	Around 24 degrees, sunny with patches of overcast skies. Undertaken during school holidays.
Thursday 16 February 2012, 9am - 3pm	6	
Thursday 6 December 2012, 6.30pm - 8pm	1.3	Sunny, around 20 degrees. Windy. Some schools on holidays.
Saturday 13 July 2013, 2.30 - 4pm	1.5	Sunny, warm, around 18 degrees with the occasional cool, gentle breeze. Undertaken at the end of the school holiday period.

(ii) The community food assessment.

The design of the community food assessment.

The community food assessment comprised:

(i) a 'market basket' survey of the cost, quality and variety of fresh food available in supermarkets completed within a two week period in October 2012 to minimise the potential for seasonal variation. The supermarkets surveyed included Coles, Woolworths, IGA and Aldi where applicable for each location. Boutique grocery stores, butchers, greengrocers and online supermarkets were excluded because they were unlikely to stock all products in the market basket survey. A total of 100 supermarkets were surveyed across the highest and lowest socio-economic (SES) areas of Sydney.

(ii) a survey of the cost, quality and variety of foods available at farmers' markets in Sydney. This survey also included interviews with stallholders and patrons to determine reasons for using farmers' markets, and the source of produce on sale. A total of 18 markets were surveyed in various locations between February and April 2013. They comprised small and large private markets, community-run markets and farmer/ producer-run markets. 640 customer and 140 stallholder interviews undertaken.

The market basket survey collected information on the cost of 44 staple food items, the availability of 30 fresh fruits and vegetables, and the quality and cleanliness of 10 varieties of fresh fruit and vegetables. The selection of products was based on the protocol used in the *Victorian Healthy Food Basket*. This protocol represents commonly available and popular food choices selected to meet 95% of the energy requirements of four different types of families ('typical family' (two adults and two children), 'single parent family' (adult female and two children), 'elderly pensioner' and 'single adult' for a period of two weeks; and include the core food groups (fruits and vegetables, breads and cereals, meat and alternatives and dairy) and one non-core food group (extra food items). The

availability of fruit and vegetables was assessed using a frequency survey adapted from the *NSW Cancer Council Market Basket Survey*. The quality of fruit and vegetables was rated using a visual assessment tool developed from the *Queensland Healthy Food Access Basket* and the *NSW Cancer Council Market Basket Survey*. It included a visual assessment of quality based on evidence of age, bruising and mould, and cleanliness. The number and types of products on display in the high-traffic, high-visibility areas at the ends of aisles and closest to checkouts was also surveyed. These products were then divided into core and non-core food groups according to the *Australian Guide to Healthy Eating*. [12]

The farmers'' market survey used the same methods as in the market basket survey of supermarkets to assess quality of produce, over 10 items. All products available for sale were noted on a standard checklist to measure availability and diversity. Locally grown produce was also recorded. The cost of produce based on 1 kilogram of each item was recorded. The surveys of stallholders and patrons were standardised in a questionnaire.

The food assessment tools for both the market basket and farmers' market surveys were pilot tested and data collectors underwent training to ensure accurate and consistent ratings.

Detailed information on the design and results of the community food assessment are available in separately published papers.[13]

Undertaking the community food assessment in Victoria Park.

The market basket survey was completed within a two week period in October 2012 to minimise the potential for seasonal variation in the price and quality of foods, especially fruits and vegetables. For the Victoria Park area it comprised six stores, being one supermarket each from the two major supermarket chain stores, two discount supermarket chain stores and two independent stores.

The farmers' market research was undertaken between February and April 2013. In the Victoria Park area the Eveleigh Farmers' Market (held weekly), Entertainment Quarter (EQ) Village Markets at Moore Park (held Wednesdays and Saturdays) and the Sydney Sustainable Markets at Taylor Square, Darlinghurst (held weekly) were surveyed.

[12] Refer: *Victorian Healthy Food Basket Survey* (Palermo and Wilson, 2007), and the *Queensland Healthy Food Access Basket* (Queensland Health, 2002).

[13] Refer: (i) Crawford, B., Byun R., Mitchell E., Kennedy L., Torvaldsen S., Thompson S. & Jalaludin B. (2013) *Cost, availability and quality of food in high and low socioeconomic areas of Sydney*, poster presentation at the Public Health Association of Australia Annual Conference, Melbourne, September 2013; (ii) Crawford, B., Byun, R., Mitchell, E., Torvaldsen, S., Thompson, S. & Jalaludin, B. (2013) *Seasonal fresh food and a sense of place: Exploring farmers'' markets in Sydney*, Public Health Association of Australian Annual Conference, Melbourne, September 2013; (iii) Thompson, S., Mitchell, E. & Crawford, B. (2013) *Planning and Building Healthy Communities*. 6th State of Australian Cities Conference. Sydney, November 2013; (iv) Crawford, B., Byun, R., Mitchell, E., Thompson, S., Torvaldsen, S. & Jalaludin, B. (2013) *Healthy Food and a Sense of Place: Attitudes and Perceptions of Customers and Stallholders toward Farmers'' Markets in Sydney*. Report to Farmers'' Market Managers and Stallholders. Sydney and South Western Sydney Local Health Districts and UNSW.

3.2 Seeking the views and experiences of the residents of Victoria Park.

The Study sought the views and experiences of the residents of Victoria Park via:

(i) one-on-one semi-structured interviews with 21 residents (one interview extra to the other Study areas), and following this
(ii) a focus group to which those who had already undertaken an interview were invited.[14]

(i) The interview.

<u>The interview design.</u>

The interviews comprised a structured set of questions with set answer choices plus various opportunities to include additional observations (Attachment (4)). The questions explored the different ways participants use and make sense of their environments, and everyday behaviours that contribute to their health and wellbeing.

The questions covered five separate topic areas (Table 3.1). The questions were established in a collaborative process involving all Study officers and Project partners. To assist future comparative assessments between this Study and studies of other locations in Australia a number of questions were adapted from existing similar questionnaires, including:

- the *Neighbourhood Physical Activity Questionnaire* developed for the Western Australian Residential Environment Study (RESIDE) undertaken by the University of Western Australia for the WA Department of Planning, the WA Water Corporation, and the Heart Foundation to investigate the impact of urban design on health over a five-year period 2003-08.[15]
- the 5-year *Neighbourhood Health and Wellbeing Survey* commenced in 2011 of the residential estate of Selandra Rise in Melbourne by RMIT for VicHealth, the (Victorian) Growth Areas Authority, the City of Casey, the Planning Institute of Australia, and Stockland (the development company).[16]
- the *Green Square Snapshot Survey* conducted within the redevelopment area of Green Square (and within which the Study Area of Victoria Park is located) by the City Futures Research Centre, University of New South Wales in 2013).[17]
- the *NSW Adult Population Health Survey* conducted by the NSW Ministry of Health in 2011.[18]

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[14] The Study received approval from the Built Environment Human Research Ethics Advisory Panel (Faculty of the Built Environment, University of New South Wales) variously on:
- 3rd October 2012, amended 29 May 2013 (re Airds Bradbury, New Rouse Hill and Victoria Park) (Ref. 125073).
- 29th May 2013 (re Renwick) (Ref. 135036).
- 11th June 2014 (re all four Study areas) (Ref. 145057).

[15] Refer: http://www.sph.uwa.edu.au/research/cbeh/projects/reside
[16] Refer: https://www.planning.org.au/viccontent/selandra-rise
[17] Refer:https://cityfutures.be.unsw.edu.au/publications/?pub_type=Research+Reports&search=green+square
[18] Refer: http://www.health.nsw.gov.au/surveys/adult/Pages/default.aspx

Additional questions were developed to cover other topic areas. Completion of the interview design was undertaken after the neighbourhood audits and food assessments so that understandings from those components could assist in developing the interview questions.

Table 3.1: **Schedule of interview question topics.**

Section	Question Topics
Your Neighbourhood	• Features of the environment generally that are important to keep healthy. • Level of satisfaction with services, infrastructure and other elements of the Study Area neighbourhood.
Being Active	• Utilitarian and recreational physical activities. • Settings in which people engage in physical activities. • Modes of transport used to access sports facilities, green and open spaces and other relevant localities.
Your Community	• Relationships between neighbours and the larger community. • Perceptions and rating of 'social capital'. • Level of interaction between neighbours. • Places for socialisation and chance meetings. • Levels of engagement in social and community activities.
Your Food	• Frequency of fresh fruit and vegetable purchases. • Modes of transport used to access food sources. • Levels of engagement with alternative food sources such as farmers'' markets, community gardens and private edible gardens.
Your Health	• Assessment and rating of personal physical and mental health. • Changes in health status since moving to current location. • Basic demographic data.

Recruitment and conduct of the interviews.

A structured interview was conducted with 21 residents (one additional to the targeted number), either face-to-face or by telephone. The interviews were conducted between September 2013 and August 2014. Participants were given a $20 gift voucher to recompense their time. Generally the interviews took between 25 and 40 minutes.

Recruitment comprised an initial flyer distributed throughout the neighbourhood via letterbox drop.

Although the initial recruitment program yielded a number of participants, achievement of the targeted number of interviews subsequently relied on the Study officers approaching likely participants on local streets, in local open spaces and at the weekly farmers' market on two separate days (a week day and a Saturday).

(ii) The focus group.

The focus group design.

The design of the focus group sought to:

(i) minimise the risk that the responses might merely repeat those already obtained in the interviews, by maximising the opportunity for the participants to inform the Project about *their* experiences.
(ii) seek advice on specific matters not able to be adequately covered in the interview structure; such as the *interconnections* between participants' health and the places they use everyday, and features of built environments that have a *therapeutic affect* on health and wellbeing and for which there is as yet little evidence in the literature.
(iii) address the limitation that the Project could not comprise a longitudinal study as originally sought by incorporating a temporal element where participants were asked to vision and discuss future needs and desires.

The focus group was structured around four questions. The participants were asked to write their answers on notation cards which could then be displayed, and were initially given three notation cards for each question, with additional cards available for additional answers. The cards were of different colours for each question. Although participants were reminded that the main focus of the Study was about the connection between the built environment and health, it was also advised that other health-related matters they wished to include in their answers would be equally accepted.

The first two questions were about participant's own health behaviours, as determined by them:

(1) What are the things I *do* (now) to keep healthy.
(2) What are the things I *should be doing* (but do not do) to keep healthy.

The subsequent two questions sought advice on matters that currently assist and could in the future assist their actions and aspirations:

(3) What is *helping* me to keep healthy, now.
(4) What I *need* to keep healthy.

The completed cards were progressively displayed on a white-board (Figure 3.1), ordered as follows:

The things I do (now) to keep healthy.	*What is helping me to keep healthy, now.*	*What I need to keep healthy.*	The things I should be doing (but do not do) to keep healthy.

The two focus group facilitators then convened a discussion prompted by the entries and from their knowledge of Victoria Park from the audits and structured interviews. The discussion was electronically recorded with the permission of the participants. Discussion prompts included questions such as:

- *Are there any common features amongst the things that are 'helping to keep us healthy'*?

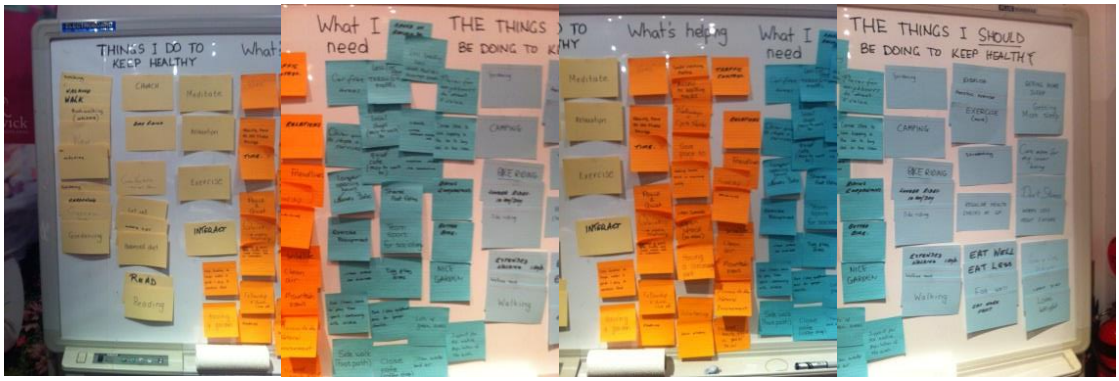
- *Are there any common features amongst the things that 'we need but do not have to keep healthy'*?
- *Do you have any suggestions for obtaining the things that 'we need but do not have to keep healthy'*?
- *Can you tell us more about …..* ?

As the discussion progressed relevant notation cards with similar entries were grouped. When it was felt that the discussion was nearing completion, a final question was asked:

- *When you sit back and look at all we have here, how would you summarise what we have and what we need in Airds Bradbury to keep healthy*?

The completed cards provide a key word summary of participants' health concerns, aspirations and experiences able to be transferred into an easy-to-read table (see Table 4.6) as part of the analysis. The transcript provided more detailed and in-depth information to assist.

Figure 3.1: **The display of participants' completed comments cards at the Focus Group**.[19]



Recruitment and conduct of the focus group.

The focus group was held on Monday 25th August 2014 at the Tote Building function room, above the local Green Square library branch in Victoria Park. It started at 7.00 pm and finished at approximately 9.15 pm. The chosen day and time was made after an initial mail or email contact with prospective participants as their preferences, given the Project officers were conscious that many residents worked long hours. Refreshments were provided for dinner, and participants were also given a $50 gift voucher to recompense their time.

The prospective participants comprised those residents who had earlier undertaken the interview and had agreed at that time to be advised of the subsequent focus group. Interviewees were also

[19] This illustration is from the focus group held with Renwick residents.

asked at the time to nominate any neighbours, family members or friends who they thought may also like to participate in the focus group, however in the end there were no participants recruited via this process.

There were eleven participants, including two who had not earlier undertaken an interview: one who shared an apartment with someone who had been interviewed (and who also attended the focus group) and one who was the partner of someone who had been interviewed (and who also attended the focus group). One person who indicated they would attend subsequently did not.

The participants provided a reasonable demographic cross-section. One was a student in the 18-21 age group; five were employed and variously within the 22-34, 35-44, 45-54 and over 65 age groups; two were retired, and in the 55-64 and 65 and over age groups; one was an at-home mother, aged 35-44; two other female participants were working mothers. Although not specifically requested for this information, there appeared to be a good mix of owner-occupiers and renters, and three lived in the affordable housing component of the overall Green Square development and located within Victoria Park.

3.4 How the Study findings are structured.

The varied data sources – the physical audit of the neighbourhood, the community food audit, the survey interviews, and the focus group discussion – have generated an extensive and rich data set about the healthy built environment characteristics of each of the four study areas. When considered together they also provide a similar informative appraisal about healthy built environments in general.

For the purposes of generating the findings, conclusions and recommendations (Sections 4, 5 and 6) are structured around:

(i) the three domains and seven key actions relating to healthy built environments identified in the earlier review of literature (see Table 1.1).

(ii) a series of 34 questions relating to each of these key actions. These questions are drawn from a set of Indicators of what would constitute a healthy built environment developed by the HBEP in a separate exercise. The 34 questions are shown in Table 3.2. An explanation of the reasoning behind each question is included in the relevant component in Section 4.[20]

(iii) an 'overview' appraisal of the healthy built environment characteristics of Victoria Park and the needs and aspirations of the Study participants sourced primarily from their comments and advices given in the semi-structured interviews and in the broader-ranging focus group discussion. This more wide-ranging appraisal extends the specific discussion on the matters relevant to three domains and seven key actions into a more general understanding of participant well-being. In particular it takes advantage of the more open questions asked at the focus group about what participants themselves considered as necessary for their health, without being necessarily confined to built environment matters.

[20] Refer: https://cityfutures.be.unsw.edu.au/research/programs/city-wellbeing/

This structure provides a convenient way to order the extensive data. It also allows any future appraisals of the contribution of the built environment of Victoria Park to the health of its residents to be similarly structured and thus permit comparison over time.

Two notes about the presentation of data.

(1) Comparisons of numerical data.

Where reference is made to the number of participants engaging in certain activities or the like, the actual number relative to the total number of participants is stated rather than a percentage due to the sample size for each study area (21 participants in Victoria Park, 20 participants in the other case study areas) (though sometimes a percentage is also given if it is considered to assist understanding).

To assist understanding it has been useful to compare some behaviours of the study participants with the larger population (either NSW or the Sydney metropolitan area). This larger data is sourced from more extensive quantitative studies of that population and is invariably expressed as percentages. Where a comparison is made between the Study data and the larger population data this is also expressed as a percentage.

(2) Participant comments.

The reporting of findings includes comments made by participants in both the interviews and the focus group. Where necessary to give context for comments made in the focus group, the initial question or prompt made by the focus group facilitator is also given, and is written in *italics*.

Table 3.2: **Keeping healthy in Victoria Park: the domains, actions and associated questions.**

PHYSICAL ACTIVITY: Getting people active.		**SOCIAL INTERACTION:** Connecting & strengthening communities.			**NUTRITION:** Providing healthy food options.	
Facilitating utilitarian physical activity.	**Facilitating recreational physical activity.**	**Facilitating incidental neighbourhood interaction.**	**Making community spaces.**	**Building for crime prevention.**	**Facilitating access to healthy food.**	**Promote responsible food advertising.**
1. Do participants achieve the recommended hours of physical activity per week?		17. Do participants interact with other residents?			27. Is fresh healthy food available to participants?	
2. Do participants engage in active transport modes? 3. Do participants use public transport? 4. Is public transport viable (convenient, comfortable, safe & affordable)? 5. Do participants walk (or cycle) as a means of transport? 6. Is walking viable for 'active transport' (convenient, comfortable, & safe)? 7. Do participants cycle as a means of transport? 8. Is cycling viable for 'active transport' (convenient, comfortable, & safe)? 9. Do participants use stairs? 10. Is use of stairs viable (convenient, comfortable)?	11. Do participants walk for recreational physical activity? 12. Is walking viable for recreational physical activity (convenient, comfortable, & safe)? 13. Do participants cycle for recreational physical activity? 14. Is cycling viable for recreational physical activity (convenient, comfortable, & safe)? 15. Does public open space provide for recreational physical activity? 16. Are other facilities available (by either public or private providers) for recreational physical activity?	18. Does the design of common areas in buildings foster incidental person-to-person contact? 19. Does the design of building frontages foster incidental person-to-person contact? 20. Does the design of public space foster incidental person-to-person contact?	21. Are there formal public and semi-public spaces accessible to the community at large? 22. Is the design of formal public and semi-public space inviting to the community at large? 23. Can participants be involved in the broader design and governance of their community spaces? 24. Does new development include a 'Welcome' program to initiate on-going social interaction? 25. Does the design and governance of public and private space allow contact with nature?	26. Is use of public space for active transport and for incidental and organised physical exercise and social interaction facilitated by low actual or perceived threats to security?	28. Are the shops selling fresh healthy food accessible? 29. Is there a relative over-abundance of EDNP food shops?* 30. Do participants have an ability to grow healthy food? 31. Can (farmed) healthy food be sourced (fresh) close to participants? 32. Is there a diversity of sources available for the sale or other distribution of healthy food (eg. markets, co-ops, food trucks)? * EDNP = Energy Dense, Nutrient Poor.	33. Might eating habits be adversely affected by local advertising? 34. Is the presence of healthy food options visible?
Summation.		Summation.			Summation.	

4. KEEPING HEALTHY IN VICTORIA PARK – our findings.

4.1 Physical activity – getting people active.

It is recommended that adults achieve 2½ - 5 hours moderate or 1¼ - 2½ hours vigorous physical activity (or combination) each week.

Australia's Physical Activity & Sedentary Behaviour Guidelines

- In 2013 29% of Australians ranked as obese, compared to 16% in 1980.
  Australian Health Survey, 2013 (ABS).
- In 2011-12 26% of trips under 1 km (ie. within 15 min. walk time) in Sydney were made by car.
  NSW Bureau of Transport Statistics.

Q.1. Do participants achieve the recommended number of hours of physical activity per week?

The Australian *Physical Activity & Sedentary Behaviour Guidelines* recommend that people aged 18 to 64 years achieve 2½ - 5 hours moderate physical activity or 1¼ - 2½ hours vigorous physical activity (or combination) each week.

Yes.

All participants achieved the minimum recommended number of hours of physical exercise per week (refer Table 4.1).

Generally, this was achieved via a mix of moderate and vigorous activity, and via a diverse range of activities. Walking, both for transport and for recreation, was particularly important, but so also was going to the gym and partaking in sporing activity such as squash, tennis and basketball. Swimming was not particularly mentioned, probably because of the lack of a near-by public pool (though some of the multi-unit residential buildings contain their own pools).

In addition, the total number of hours of physical activity for all but one participant generally exceeded to a reasonable degree the recommended minimums. That one participant just met the minimum requirement for moderate activity. That participant, who was in the 65 or over age-group, does though have lingering leg and back mobility issues and consequent pain due to a car accident. Instructively, that participant still consciously sought to undertake physical activity, and was able to achieve this through walking for recreation within the local neighbourhood.

Although participants gain a reasonable proportion of their physical activity from active transport means (predominantly walking), most achieve a substantial proportion of their total number of hours by other means as well. This suggests that participants have an individual motivation to engage in physical exercise, notwithstanding that many cite a general lack of time as an impediment to further physical activity and a fairly diverse and wide-ranging list of other hindrances.

In relation to other matters cited as hindrances to further physical activity (Table 4.2):

- the issue of distance to shopping facilities, necessitating access by car rather than walking particularly given the need to carry purchases, has been removed or at least modified since the Study interviews and focus group with the opening of the 'East Village' development within Victoria Park itself, which includes a major retail facility with a large supermarket and associated individual fresh food shops.
- there is to be progressive development within the surrounding locality of a major swimming and sports oval facility (to also include a crèche) and dedicated cycling routes; and additional commercial, social and entertainment destinations in the nearby Green Square Town Centre, more direct access to the Green Square railway station, and a possible light-rail system will facilitate greater use of active transport modes.

Table 4.1: **Time spent on physical activity** (both for transport and recreation)**, and hindrances to additional activity.**

	No. of hours spent on different activities.						TOTAL hrs: **Moderate activity.** Target: 2½ - 5 hrs / week # *	TOTAL hrs: **Vigorous activity.** Target: 1¼ - 2½ hrs/week *	**Target achieved?**	**Type of recreation activity.** moderate / vigorous	**Participant comment on hindrances to more physical activity.**
	'Active' transport.		Recreational activity.								
	Walking.	Cycling.	Walking.	Cycling.	Other moderate activity.	Other vigorous activity.					
1	1					3.5	1	3.5	√	Gym, jog, squash.	Cycling unsafe here. Walking not very pleasant.
2			2.5				2.5		√		Injury from car accident prevents much activity.
3	0.2		8				8.2		√		
4	2.4					1	2.4	1	√		Trip to work requires a train. Bad knees. Cycling unsafe here.
5	6		2			2	8	2	√	Gym.	Distance, uneven footpaths precludes walking. Child in pram. No bike storage. Might swim later in apartment pool.
6	0.2	3	0.4	(2-3)**		2-3	3.6	2-3	√	Roof exercise circuit.	Use car for large purchases. No local friends-so drive to socialise. Do not own a bike as yet.
7			1			4	1	4	√	Strenuous cycling.	Not a pleasant place to cycle for recreation.
8	2.5		2		0.5		4.5	0.5	√		
9	1		3			3	4	3	√	Vigorous walking, gym.	Work from home. Drive to shops & childcare. Don't cycle.
10			1			6	1	6	√		
11	7		2				9		√	Home gym.	Cycling unsafe here. No continuous uninterrupted walking & cycling paths.
12	14		3.5				17.5		√	Exercises in park.	Distance/time to work. Time. Cycling unsafe here.
13	4.6		2		1.4	1	8	1	√		
14	0.4	3				3.5	3.4	3.5	√	Gym.	
15	10		1.5		0.25	2-3	11.75	2-3	√		Car more convenient to go to work. Time.
16	1		7			4	8	4	√		
17						4		4	√		Cycling unsafe here.
18	0.5		1.5			9	2	9	√		Roadways not pleasant to walk along. Had a bad cycling experience. Not enough local destinations.
19	3	1	5	1			10		√	Activity in park.	Knee problem. Lack of local destinations. Cycling unsafe here.
20	0.4		1-2		2		3.4-4.4		√	Gym, park exercises.	Time, too busy.
21	2		0.2			2	2.2	2	√	Jog, tennis.	
	17 (81%) walk for transport	3 (14%) cycle for transport	17 (81%) walk for recreation	2 (9.5%) cycle for recreation	4 (19%) engage in moderate recreation	14 (66.5%) engage in vigorous recreation	100% (21 out of 21) achieve recommended hours of physical activity				

For the purposes of this Study total moderate activity comprises walking and cycling (as both transport and recreation) plus other moderate recreation activity.

* The 'targeted' number of hours is the amount of activity each week recommended for adults aged 18-64 years by *Australia's Physical Activity & Sedentary Behaviour Guidelines* (either all moderate or all vigorous, or in combination).

** See discussion under Q. 13 *Do participants cycle for recreational physical activity?*

Q.2. Do participants engage in active transport modes?

> The relative number of trips by 'active transport' indicates levels of non-sedentary means of transport (such as by motor vehicle). It is also important to distinguish between types of 'active transport' as some are more conducive to physical activity than others – hence the subsequent questions about public transport, walking and cycling.

Yes. There is a relatively high use of 'active transport'.

As indicated in Table 4.2 participants use 'active transport' for 61% of trips, compared to a Sydney average of 31%. The car was used for only 39% of trips, compared to a Sydney average of 69%.

This was the case even though participants still reported a high propensity (19 out of 21 participants, or 90.5%) to use the car for at least some trips. Here however, the actual extent of car usage is low – these same participants *also* report high usage of other more active modes, particularly public transport and walking:

- walking was used by 16 out of 21 participants (76%) as a mode of transport, accounting for 29% of trips which is significantly higher than the Sydney average of 17.5%.
- public transport was used by 15 out of 21 participants (71.5%), accounting for 24% of trips which is more than twice the Sydney average of 11.4%.
- although the number of participants who cycle for transport (three participants) is low, the total number of trips undertaken by cycling is also higher than the Sydney average. [21]

As indicated in subsequent comments by participants, use of the car tended to be for shopping trips where there would be heavy or bulky items, and for convenience for recreation or social activities beyond the immediate locality. This need should be progressively reduced as additional facilities within walking distance are constructed in the locality; this has already occurred with respect to food retailing and certain other commercial facilities now available in the 'East Village' development in Victoria Park.

That said, four participants (19%) still used their car for 90% or more of trips, mainly for travel to work. This high figure also means that the average for all trips by car (39%) is 'skewed' slightly higher than would otherwise be the case. (The use of a motor scooter by one participant, although of positive benefit in terms of minimum take-up of road space - and is promoted by the local Council in this regard - still does not mean the user is gaining any physical activity benefit and so is included here under 'car' usage).

Overall, the high use of active transport modes is consistent with participant's views on the importance of walking, cycling and public transport for their health:

- 19 out of 21 participants (90.5%) indicate that 'being able to walk around the local area' is important for their health (with the remainder being neutral).

[21] See the Note (*) to Table 4.2 for advice on the exact ability to correlate the Study figures with NSW Bureau of Transport Statistics on Sydney averages.

- 19 out of 21 participants also indicate that 'being able to catch public transport' is important for their health (with the remainder being neutral).
- nine participants (42.8%) indicate that 'being able to cycle around the local area' is important to their health (with eight participants (38%) being neutral and 4 (19%) indicating it was not important). Participants also indicate a high degree of concern about the safety of cycling in the area – refer Q.8).

Table 4.3: **Relative mode of travel in a usual week.**

Participant	Relative use of each travel mode (%)			
	Car	**Public transport**	**Bicycle**	**Walking**
1	40	60		
2	5	10 (community bus)		85
3	90			10
4	25	35		40
5	60	10		30
6	5		95	
7	95			5
8	5	80		15
9	70	25		5
10	100			
11	10	20		70
12	20	30		50
13	5	5		90
14	30	10	60	
15		35		65
16	25	2		73
17	90			10
18	85 (scooter)			15
19	15	40	5	40
20		90		10
21	50	50		
Total trips using this mode (%) *	39 % (Sydney av. 69%)	24 % (Sydney av. 11.4%)	8 % (Sydney av. 2.2%)	29 % (Sydney av. 17.5%)
Participants using this mode (%) #	19 (90.5 %)	15 (71.5 %)	3 (14 %)	16 (76 %)

* Percentage of all trips undertaken which use this mode of transport (total of all entries in this column ÷ 21). The Sydney average figures are from the *Household Travel Survey Report: Sydney 2012/13* (Bureau of Transport Statistics, 2014). Note the correlation between the Study statistics and the Household Travel Survey statistics is not exact: (i) the former is for all days per week, the latter is for weekdays only, and (ii) the bicycle statistics in the Household Travel Survey include travel by taxi (being combined into an 'other' category), whereas taxi travel is included as a 'car' mode in the Study statistics.

Percentage of participants who use this mode of transport for at least some trips (number of entries in this column ÷ 21) (total across the Table exceeds 100 because some participants use multiple modes).

The high use of active transport modes is also consistent with an intention in the initial design of the estate, as stated in promotional literature about Victoria Park prepared by Landcom, to create a 'permeable network of streets and open spaces to encourage movement though the site and facilitate access to public transport and regional recreation opportunities'. Although this intention appears to have been achieved, note should also be taken of comment in this Report elsewhere about some current limitations in respect to access to the Green Square railway station, to recreation opportunities in the surrounding area, and in crossing adjacent major roads. It is however also likely that these issues will be progressively resolved as intended features and facilities in the Green Square Redevelopment Area overall are constructed.

Participants also have access to various car-share schemes. Although this is of itself not a means of active transport (being still by car) the general uptake of the scheme in this locality does correlate with the figures above which suggest that car use is not the 'default' mode of transport, as compared for instance with lower density outer-urban residential areas and which has led to current concerns about an epidemic of 'lifestyle' diseases due to low levels of physical activity. Further, once becoming a car-share member the 'distance', for members, from the car as default mode is likely to increase given they will not then have the 'ready-to-use' 'convenience' of actually owning a car but must plan ahead to book a share car when needed.

Focus Group participant comment on using a car-share scheme.

The issue of traffic keeps coming up. Do any of you use the car-sharing service?
I use it. I think it's great. Yes, it works good.

You have a child, is that right? You have two children and you use it with them?
Yes. It's difficult with having to install cots, because obviously you have to put them in and take them out all the time, but that's my problem. But from the point of view of booking it and from the economy of it, it's really good.
It's a good idea.
So you put the child seats in, and away you go?
Yes.

So the car share doesn't provide its own child seats?
Sometimes they have them with the car, but if someone before you has not been using it, they can take it out.

Q.3. Do participants use public transport?

The relative number of public transport trips indicates levels of active rather than sedentary means of transport. Public transport is regarded as active transport because it generally involves a greater degree of walking than car use.

Yes. There is a reasonably high use of public transport.

As indicated in Table 4.2, public transport:

- was used by 15 out of 21 participants (71.5%) for at least some trips.
- comprised almost one-quarter (24%) of all trips, which was more than twice the Sydney average of 11.4%.[22]

These figures are consistent with participant's views on the importance of public transport for their health, with 19 out of 21 participants (90.5%) indicating it was important (with the remainder being neutral). This figure of itself might have suggested an even higher use of public transport. Here three points would appear relevant:

(i) the ability to walk to destinations in this locality rather than needing to use public transport is quite high, as reflected in the equally high figures relating to walking. This then has superior outcomes in terms of encouraging physical activity.
(ii) although centrally located and generally well-provided for by public transport, there are still some issues with respect to capacity, access and overall service (refer Q.4).
(iii) in relative terms, the figures for both public transport and walking are skewed towards an under-estimation because of very high usage of the car by about one-quarter of participants, predominantly because it is their most convenient mode of travel to work.

Q.4. Is public transport viable (convenient, comfortable, safe and affordable)?

Satisfactory access to public transport can encourage usage, and other associated active travel modes (often also provided there are accommodating facilities such bus shelters and bicycle racks). In addition, public transport can facilitate access to destinations further afield than can be achieved by walking or cycling.

Variable. Although well-served, there are some capacity and access issues.

Victoria Park is well served by bus routes, and also has access to the rail system via Green Square station on the Airport Line. Publicity material for Victoria Park has noted that a particular intention in the design of its overall layout was to create 'a permeable network of streets and open spaces to encourage movement through the site and facilitate access to public transport and regional recreation opportunities.'[23]

here are seven bus routes that run along streets adjacent or near to the streets bordering Victoria Park, including regional east-west and regional north-south routes (with the north-south routes also generally giving access to the City), and one north-south inter-regional route (the M20 from Botany to Gore Hill via the City).

This level of provision is consistent with survey interview responses when participants were asked to rate their level satisfaction with their 'access to public transport in the neighbourhood':

[22] See the Note (*) to Table 4.2 for advice on the exact ability to correlate the Study figures with NSW Bureau of Transport Statistics on Sydney averages.
[23] 'Welcome to Victoria Park: the natural neighbourhood.' Landcom, 2008 (brochure).

- 18 out of 21 participants (85.5%) indicated they were satisfied (with 7 participants 'strongly' satisfied).
- one participant (4.8%) was neutral.
- two participants (9.5%) were 'somewhat' dissatisfied.

The high level of usage of public transport is notwithstanding that participants also expressed various frustrations with the bus service, including:

- frequency, particularly when buses are delayed by road traffic congestion.
- directness of service.
- capacity, particularly when the buses have come from further afield and are now full.

One participant at the focus group also advised that the 370 bus route which runs near to Victoria Park and provides an effective cross-regional service from Leichhardt to Coogee that connects with two major universities and major hospitals was instigated as a result of lobbying by local residents.

Participants did not indicate any particular use of trains (although no specific questions were asked in this regard). It is noted that direct access from Victoria Park to the Green Square railway station is currently blocked by the large construction site of the Green Square Town Centre. Access is via a more circuitous route along surrounding streets. The distance from the (closer) western edge of Victoria Park (Joynton Avenue) is approximately 800 metres, which is the distance generally cited for convenient access from dwellings to a railway station. The distance is greater for residents in other areas of Victoria Pak. The design of the Town Centre does include a major east-west multi-modal link as well as some smaller diagonal pedestrian links though future building developments that will reduce travel distance from Victoria Park to the station and hence accessibility. However these still do not result in direct straight-line links, and some review of their location may be beneficial in encouraging greater future use. An earlier cost impediment to using the railway because of an additional user charge for the privately-owned railway station itself was removed in early 2011 (the NSW Government now pays this charge). This is beneficial because greater use of the train service generally would increase levels of physical activity given access to the station is really only viable by walking or cycling (or taxi).

Interview comment on public transport:

- Buses are infrequent and not direct. Seniors now need a card – can't buy a ticket on the bus.
- Public transport services need to be improved – more frequent. I ride my bike instead of taking the bus even in torrential rain because the bus takes too long.
- Would like light rail.
- Public transport is 'neutral' for me at present because I find it difficult to use with my mobility problem.
- Distance to work is too far. But always catch the train to other activities.
- Not enough public transport available

Focus Group comment on public transport:

I think transportation's quite good. They could put more buses on because now they are getting fuller. Buses, yes.
But I mean the access to transport's really good. You can get taxis, you can get buses really easily.
The buses are very [inconsistent] - so many times they just won't rock up. Or you might wait like an hour in a peak hour. With the M20 bus, you might like, you might get three in a row and then just none for an hour, which is [not helpful], especially if you were likely to really rely on public transport.
If you have to go somewhere, you just can't rely on them. So you have to end up spending like, you know, 30 bucks for a cab just to go down the road because the M20 comes every 15 minutes.
Yes.
No, it's supposed to come every 10 in the morning.
That's right, 10 minutes, and it used to come every 10 minutes.
But you're right, we do have enough buses. They just get caught up in the traffic.

We'll need more in the future. When I used to get on the bus four years ago, I was the only person getting on it and now like 25 people get on. So we pretty much fill the bus up here which never used to get filled up until Surry Hills.
Yes, that's right, that's true.

So they all bunch up as well?
It just depends, though. Sometimes it might be on a good day, but it is something that you can't just rely on.
They all get stuck on O'Dea Avenue down by Bourke Street.
Sometimes, they just stop there and then they just don't come.
They can't get around.

I think they're planning the light rail to come out this way, up through the main Green Square.
That would be good.
Yes, that would be very good. That would be an additional...
But that's 2030 something.
Will that go to where you want it to, where you'd like it to go?
Probably not.

A lot of people with children, they try and get their kids across into the eastern suburbs for schools, so the majority of people have to hop in cars. With my daughter, there was a beautiful bus that went out from the front of our place. On the timetable it got in to school on time, but in reality, it never turned up. So she was always late for school. It was just too stressful for her. So we ended up she now go to Alexandra.
Yes, but I think you mentioned in our interview there was then a similar issue?
Yes, exactly the same. She walks now.

It's a common problem with Sydney transport, going across suburbs. Like, I can remember years ago when we tried to get the 370 route going … across from Coogee over to Leichhardt and to take in UNSW and Sydney Uni as well. So students could study, you know, all that sort of thing. They agreed to it, and then it was only Monday to Friday and finished at 7 pm. Well now it goes seven days a week. It's still packed. But this is a problem with the State transport authority. They need to be looking at the proper corridors where people are actually in need of the services.

The public transport limitations noted here have also been noted by the local Council which has been lobbying for improved services to cater for the progressively increasing population. This

includes the building of a light rail connecting the Green Square Town Centre with the City. The proposed route, for which corridor dedications are being progressively made in conjunction with new developments, will run through Victoria Park itself (along Defries Avenue) and will mean a substantial increase in the viability of public transport usage. However, there are as yet no current proposals to fund construction, which is likely to be quite long term.

In addition to proposals to increase the viability of public transport, the Green Square development strategy includes substantial future new social, recreational and employment facilities which will be in easy walking distance of Victoria Park. Once established it is likely that any need to use public transport to access many facilities and amenities will decrease, and that walking will increase with consequent increases in the level of physical activity undertaken by residents (refer Q.16 and Q. 21).

Q.5. Do participants walk as a means of transport?

> The relative number of trips by walking or cycling indicates levels of active rather than sedentary means of transport. The emphasis here is on walking, but similar health benefits arise if people cycle for otherwise walkable trips (see Q.7, below).

Yes. There is a high propensity to walk.

As indicated in Table 4.2:

- 16 out of 21 participants (76%) walked for at least some of their trips.
- overall, 29% of all trips were undertaken by walking, which is slightly over one-half again compared with the Sydney average of 17.5%.
- 10 out of 21 participants (47.5%) meet weekly minimum physical activity requirements by walking for transport purposes.

These figures are consistent with participant's views on the importance of walking for their health, with 19 out of 21 participants (90.5%) (the same as for catching public transport) indicating it was important (with the remainder being neutral). This figure of itself might have suggested an even higher use of walking for transport. Here there are a number of comments:

(i) although the walking environment itself within Victoria Park is satisfactory there are issues overall in terms of current walking amenity outside of Victoria Park itself; and in respect to nearby destinations, which are currently limited. Further, at the time of the Study interviews local supermarkets were not really within walking distance, particularly when carrying a load of shopping (refer Q.6).

(ii) in relative terms, the figures for both walking and public transport are skewed towards an under-estimation because of very high usage of the car by about one-quarter of participants, predominantly because it is their most convenient mode of travel to work.

(iii) there is likely to be some under-estimation of the use of walking for transport given that some participants have not included any walking component when also citing their use of public transport.

Five participants indicated that they did not walk at all for transport. However of these only one would appear to engage in no 'active transport' at all. Of the others:

- three indicated they used public transport, which would entail some walking and hence physical activity benefit as a component of using this transport mode.
- two indicated they cycled for a high proportion of their trips (with one of these also indicating they walked for some trips).

The propensity to walk for transport may have increased since the Study interviews as a result of the opening within Victoria Park itself of the 'East Village' development which includes a substantial range of food shops including a supermarket, thus negating the need to use a car to access these services.

Q.6. Is walking viable for 'active transport' (convenient, comfortable, safe)?

The grouping, layout and travel distance between land uses, particularly destinations accessed daily influence the quantity and quality of walking, and therefore propensity to walk.

Yes. Some issues are cited, but these will be progressively addressed.

Participants indicated a high level of satisfaction with 'how easy and pleasant it is to walk in the neighbourhood'. However there was also a relatively high level of participants indicating they were dissatisfied. :

- 16 out of 21 participants (76%) indicated they were satisfied (with 11 participants indicating they were 'strongly' satisfied).
- two participants were neutral.
- three participants indicated they were dissatisfied.

The design of Victoria Park explicitly seeks to provide good quality footpaths, and a good environment for walking generally in terms of amenity and security. As noted (Q.4), the creation of a 'permeable' network of pedestrian spaces with good width, shading and a 'green' ambience was a particular criterion in the overall design of Victoria Park. The above high levels of satisfaction and the findings of the Audit suggest this has been achieved.

However there are also limitations, particularly:

- the small area and limited number of destinations within Victoria Park limits the potential places able to be accessed by walking.
- pedestrians must then also traverse footpaths in adjacent areas, which are not always to the same standard; and have to contend with the heavily trafficked nature of surrounding streets. Some concerns about safety in crossing these streets and delays in the provision of associated infrastructure to improve safety was raised at the focus group.

- the current amount of construction work within Victoria Park itself can make walking unpleasant by taking over footpath space, and necessitating the use of streets by large construction vehicles.

That said, most of these limitations should be minimised in the future with:

- an increase in the number of destinations within Victoria Park itself (and which has already occurred since the Study Audit and interviews with the opening of the 'East Village' retail centre).
- an increase in the number of destinations in the immediate locality when the Green Square Town Centre, the South Sydney Hospital site and the Gunyama park recreation facilities are completed (see Q. 16 and Q.21). With the exception of having to cross Joynton Avenue, these should generally be accessible for residents of Victoria Park via local streets and pedestrian pathways.
- a reduction in construction traffic as the overall development is progressively completed.

However, limitations in these regards are likely to be apparent for at least the next ten years given the scale overall of the Green Square Renewal Project.

Interview comment on walking for transport:

- Too difficult since I had a car accident – lingering issues with legs and back make it difficult.
- Have a disability.
- Problems with knees.

- Distance, obviously. Sometimes the quality of the pathways – uneven surfaces – I have a daughter in a pram.
- The shops are too far away – have to use the car.
- Lack of things to walk to – only place is to the [local] community market every Saturday.
- Use the car for large purchases, and do not have any local friends.
- I mainly work from home. Shops and child-care require a drive in the car.
- Distance to destinations, and timeframe – would take too much time out of the day.

- Car is too convenient – I carry a lot of stuff for work, so can't imagine carrying that to the train station. Don't have a direct train line to North Sydney – don't want to have to change. Don't like the prepaid bus ticket system.

- A lot of main roads – not a very pleasant journey. Not scenic and too much traffic. Not easy to cross the roads.
- Main roads with lack of safe pedestrian crossings, lack of destinations – need to get out of the neighbourhood.
- Not enough public transport available.

Focus Group comment on walking for transport:

A lot of people with children, they try and get their kids across into the eastern suburbs for schools, so the majority of people have to hop in cars. With my daughter, there was a beautiful bus that went out from the front of our place. On the timetable it got in to school on time, but in reality, it never turned up. So she was always late for school. It was just too stressful for her. So we ended up she now go to Alexandra.

Yes, but I think you mentioned in our interview there was then a similar issue?

Yes, exactly the same. She walks now.

That supermarket and centre here is going to be very popular, not just for us here, but also for everybody else around here. This will serve us all, the same.

Yes. It won't be [the sort of market I would like], but still we can walk there.

Do you know how long it took us to get a light crossing where the pizza place is?

So is that a signalised crossing, or a painted crossing?

We're having to do letters to the Councils and all that, and this is earlier on. Just to get a light so people don't get run over on the crossing.

So there's been a lot of work also put in - just simple things that were needed.

Q.7. Do participants cycle as a means of transport?

Relative number of trips by cycling indicates levels of active rather than sedentary means of transport.

Only a limited number of participants cycle for transport.

As indicated in Table 4.2:

- only three out of 21 participants (14%) cycled for at least some of their trips. Of these, one participant cycled for virtually all (95%) of trips and one for 60% of trips. The other participant only cycled occasionally (5% of all trips).
- only 8% of all trips were undertaken by cycling – which is nevertheless higher than the average for Sydney, which is 2.2%.

The low number of participants who cycled for transport is somewhat at odds with the higher number of participants (nine out of 21, or 42.8%) who indicated in a separate question that 'being able to cycle around your local area' was important for their health (with this difference being the case also when the number of participants who cycle for recreation (Q.13) is also included. Only two participants cycle for recreation, both of whom also cycle for transport and so are included in the figures here). Possible reasons for this difference are discussed in Q. 8.

Q.8. Is cycling viable for 'active transport' (convenient, comfortable, safe)?

> The grouping, layout and travel distance between land uses, particularly destinations accessed daily influence the quantity and quality of cycling, and therefore the propensity to cycle.

No, but may improve in the future.

When asked about cycling as a means of transport participants indicate either an ambivalence and/or a specific concern about the safety of cycling in the locality. (Similar responses were also made in respect to cycling as a means of recreation, with it being noted also that only two participants cycled for recreation and both of these also cycled for transport - see Q. 13 and Q.14).

Although nine out of 21 participants (42.8%) indicated that being able to cycle in their local area was important to their health, a similar number (eight participants, 38%) were neutral (indicating that it was neither important nor unimportant to their health). Four participants (19%) indicated it was unimportant.

When asked about their level of satisfaction with 'how easy and pleasant it is to bicycle in your neighbourhood':

- almost half (ten out of 21 participants, 47.5%) indicated either that they 'did not know', or that the question was not applicable to them.
- seven participants (33.5%) indicated they were satisfied.
- two participants (9.5%) were neutral.
- two participants were 'somewhat' dissatisfied, with no participant indicating they were 'strongly' dissatisfied.

In explanation of these figures, participants cite a number of quite well-defined barriers to not cycling more:

(i) they have no personal history of cycling as an activity, and may not know how to cycle.
(ii) perceived age or ability, perhaps as a result of a trauma.
(iii) that most cycling requires sharing the local roads with cars and that this is not safe, with a number of comments also being made about a lack of acceptance of cyclists by drivers.

The responses are consistent with the low number of participants who do cycle for transport (Q.7). They do however also suggest there may be a latent potential to cycle if safety concerns could be alleviated.

Here it is noted that the local Council has adopted an extensive strategy to promote and provide for cycling locally, including dedicated local and regional bike paths and lanes.[24] Some of the proposed regional routes are located on roads adjacent to Victoria Park, and one proposed local route runs through Victoria Park, along Defries Avenue. These actions may make cycling more viable in the future when completed. It may also be that cycling to the future additional destinations that will be created when the Green Square Town Centre, the South Sydney Hospital site and the Gunyama Park

[24] City of Sydney *Cycle Strategy and Action Plan 2007-2017.*

recreation facilities (see Q.16 and Q.21) are completed will be more viable to participants given the relatively shorter distances and a reduced need to use major roadways to access these.

Finally, some participants indicate that they no longer cycled, at least at present, given their bicycles had been stolen. This suggests the need for improved bicycle parking and storage facilities – in both residential buildings and in public areas.

Interview survey participant comment on cycling for transport:

- Don't like cycling.
- Cannot since I had a car accident – lingering issues with legs and back make it difficult.
- Bad knees.
- Has a disability.
- I am too old.
- Do not have a bike – no storage room.
- Don't own a bike as yet.
- Do not have a bicycle. Prefer to use other forms of transport. I do enough physical activity in any case (playing basketball).
- Had a bad experience with a bike once.
- Used to – it's a good are for cycling, with paths, but my bike was stolen!

- Safety is a concern – too many roads (as opposed to dedicated cycle paths), far too much risk of being knocked over. Would like more cycle overpasses. Don't think Australians are kind to cyclists.
- The idea of riding on roads in the city does not appeal – it's dangerous. Other options are OK.
- Very dangerous within traffic – lack of segregated cycling lanes. If there were more cycle paths I would buy a bike.
- Safety – no bike tracks – would want to ride on separate bike lanes.
- Feel like it's unsafe riding on the road – would want to ride on cycle paths. Roads are too narrow and carry too much traffic. Condition of roads – not perfectly flat.
- Thinks Australians don't like bike riders much.
- Safety – worried about cars.
- Used to cycle, but the bike got stolen; also do not feel safe cycling around the streets. Now have a motorised scooter.

- Not practical to cycle to work in a suit and tie. Cycling would take longer – not sure how to get to North Sydney that way.
- Don't know how to ride.
- Don't cycle.

Q.9. Do participants use stairs?

Using the stairs rather than a lift or escalator provides an opportunity for incidental physical activity.

There would appear to be only limited use of stairs.

Residents were not asked about their use of stairs and so there is no data to answer this question. However Audit observations indicate:

(i) a proportion of dwellings in Victoria park comprise townhouse (terraced) development or maisonette-style apartments, each of two or three storeys. These will inherently require the use of stairs for internal access between floors.
(ii) however most residential dwellings are located in high-rise multi-storey buildings where the primary access is via lifts.
(iii) the only multi-level public spaces are the Tote Building library and community centre, and 'East Village' retail centre. Neither promote stair access between floors. In the Tote Building primacy is given to lift access, and in 'East Village' primacy is given to escalators/travellators or lifts.

Q. 10. Is use of stairs viable?

The visibility of, and ease of accessibility, convenience and comfort of stairs increases the propensity to use them.

No.

Except for the individual townhouse or maisonette-style dwellings, the ability to use stairs in developments generally in Victoria Park are limited by various design and management practices.

(i) in the multi-storey residential buildings internal security arrangements purposefully limit access between floors and utilize the system of lift access to facilitate this. As such the potential to use stairwells is further reduced or not possible at all. This restriction on access between floors has also been the subject of comment by participants in respect its limiting effect on social interaction within buildings (see Q. 18).
(ii) in the Tote Building library and community centre access between floors is mainly by a lift to meet universal access requirements and for after-hours security control. Further, the limited floor area of the building means that the stairwells are designed to function as fire-stairs and so are visually hidden by fire-doors.
(iii) in the 'East Village' development access between the two retail/commercial levels is predominantly by escalator/travellator or lift, which are given primary visibility. Although this part of the development comprises only two floors and which could therefore be easily serviced by stairs, there is no visible stair access.

Q. 11. Do participants walk for recreational physical activity?

Recreation walking (either leisurely or vigorously) is a good way to achieve required minimum hours of physical activity to maintain health.

Yes.

A high proportion (17 out of 21, or 81%) of participants walked for recreation purposes (Table 4.1).

The actual area of Victoria Park is quite small, meaning that local walking trips are likely to be relatively short in themselves and therefore would not contribute substantially to total hours of physical activity unless there is an explicit intention to walk for a particular amount of time or distance, or to walk further afield.

Nevertheless, six participants walked for 2½ hours or more per week, which meets the minimum recommended number of hours of moderate physical activity; and ten participants walked for 2 hours or more per week.

When combined with any walking also undertaken for transport purposes, 12 participants walked for 2½ hours or more per week, and 15 participants walked for 2 hours or more per week.

These figures are generally consistent with participant responses when asked in the interview surveys to rate the importance to their health of 'being able to walk around the local area':

- 19 out of 21 participants indicated it was important (with 13 indicating it was 'very' important).
- Two participants were neutral, but no participant indicated it was unimportant.

Q. 12. Is walking viable for recreational physical activity (convenient, comfortable & safe)?

The provision of comfortable, safe, convenient and attractive routes can encourage the propensity to walk (either leisurely or vigorously) for recreational physical activity.

Yes. Some issues are cited, but these will likely be progressively addressed.

Participants indicated a high level of satisfaction with 'how easy and pleasant it is to walk in the neighbourhood', although there was also a relatively high level of participants indicating they were dissatisfied. This question did not distinguish between walking for recreation and walking for transport purposes (see Q.6), though where recreation is concerned the directness of routes is likely to be of less concern and destinations will also differ to some extent.

- 16 out of 21 participants (76%) indicated they were satisfied with the ease and pleasantness of walking in the neighbourhood (with 11 participants indicating they were 'strongly' satisfied).
- two participants were neutral.
- three participants indicated they were dissatisfied, with two 'strongly' dissatisfied.

The design of Victoria Park explicitly seeks to provide for good quality food paths and a good environment generally in terms of amenity and security. This appears to be achieved. The Audit observations about the quality of the walking environment were generally positive:

- the higher density buildings located on the periphery of Victoria Park create a sense of enclosure, providing protection from noise, pollution, traffic etc. from along the major roads that surround the neighbourhood.

- the site has many wide footpaths, generously landscaped with adequate space for pedestrians, people in wheelchairs and people with prams, with adequate trees planted along the paths.
- the width of the majority of streets in combination with landscaping elements (i.e. drainage swales) reduces the speeds of cars driving around the majority of the internal street network (Gadigal Avenue being the exception).
- the amenity of the streets was generally very good. Noise pollution from construction zones has an impact. However overall the streets are of high quality and well-maintained, although foul odours came from large concentrations of household waste bins on the street.
- the street pattern allows for a high level of connectivity within the site.

These observations are generally consistent with advices by the participants themselves regarding the amenity of the walking environment, though a number of limitations have also been cited:

- the small area and limited number of destinations within Victoria Park limits the potential number of destinations to walk to as a recreation trip.
- for destinations further afield pedestrians must then also traverse footpaths in adjacent areas, which are not always to the same standard, and have to contend with the heavily trafficked nature of surrounding streets. Some concerns about safety in crossing these streets and delays in the provision of infrastructure to improve safety were raised at the focus group.
- the current amount of construction work within Victoria Park itself can make walking unpleasant by affecting footpaths, and necessitating use of the streets by large construction vehicles.

In addition, although the Audit commented that the higher density buildings located on the periphery of Victoria Park had a positive effect in 'blocking off' amenity impacts from surrounding major roads, comment at the focus group expressed concern about the height of these developments now creating shadowing impacts and reducing overall feelings of openness to the sky in these streets.

Some of the limitations noted should be reduced in the future with:

- an increase in the number of destinations in the immediate locality when the Green Square Town Centre, the South Sydney Hospital site and the Gunyama park recreation facilities are completed (see Q.16 and Q.21). With the exception of having to cross Joynton Avenue, these should generally be accessible for residents of Victoria Park via local streets and pedestrian pathways.
- a reduction in construction traffic as the overall development is progressively completed (although limitations in this regard are likely to be apparent for at least the next ten years given the scale overall of the Green Square Renewal Project.

Nevertheless, some participant comment also indicate a need, in terms of encouraging recreation walking, to give additional attention to the nature and extent of potential longer walking routes in the locality. This could be similar to how specific cycling routes have been canvassed and provided for in the local Council's *Cycle Strategy and Action Plan 2007-2017.* For example, the extensive Centennial Park is within viable distance to become a destination for longer recreation walks,

however existing access is somewhat indirect and can involve walking along major roads (although, favourably, an internal mid-block walkway has been included within the progressive development of the block immediately to the north of Victoria Park, across O'Dea Avenue).

Interview comment on walking for recreation:

- It's not the most beautiful area!
- A lot of main roads – not a very pleasant journey. Not scenic and too much traffic. Not easy to cross the roads.
- Would like a continuous path, not have to be stopped at traffic lights etc.
- Traffic, poor paths.
- Too many pets in the park areas.

- Difficult since I had a car accident – lingering issues with legs and back make it difficult.
- A bit cold at present – might walk more in summer.
- Go for walks elsewhere – at the beach (about 2 hours/week).
- We exercise regularly at the gym, and I go for runs.
- Time factor – walk more on the weekends.
- Time/too busy (2 entries)

- Disconnected from the places I like to walk
- Not many destinations.
- Lack of things to walk to – only place is to the community market (directly across the street from me) every Saturday. I do enough physical activity in any case (playing basketball).
- The parks are too far.

- Shared bike/pedestrian paths need to be improved in Victoria Park and across the city – linkages desperately needed.

Q.13. Do participants cycle for recreational physical activity?

Recreation cycling (either leisurely or vigorously) is a good way to achieve required minimum hours of physical activity to maintain health.

No.

Only two participants cycled for recreation (Table 4.1). For one of those participants this was for only one hour per week. For the other, it comprises two to three hours of strenuous cycling as part of that participant's exercise regime. Both of these participants also cycled for transport (Q.7).

The low number of participants who cycled (for either recreation or transport) is somewhat at odds with the higher number of participants (nine out of 21) who indicated in a separate question that 'being able to cycle around your local area' was important for their health.

Participants cite a number of hindrances to cycling (refer Table 4.1 and Q. 14).

Q.14. Is cycling viable for recreational physical activity (convenient, comfortable & safe)?

> The provision of comfortable, safe, convenient and attractive routes can encourage the propensity to cycle (either leisurely or actively) for recreational physical activity.

No, but may improve in the future.

Similar to responses to the use of cycling for transport, and which is also undertaken by only a minimal number of participants (refer Q. 7), participants cite a number of fundamental reasons as to why there is a negligible use of cycling for recreation. Combined, they suggest a lack of any particular 'culture' of cycling amongst participants:

(i) a number of participants indicate that they do not know how to cycle and/or do not have the skills or confidence to cycle in an inner-city location.

(ii) even for those participants who do know how to cycle, a substantial number cite a specific concern about safety. In this regard, two participants separately stated that they thought Sydney drivers were hostile to cyclists, with no culture of a sharing of road space between bicycles and motor vehicles. Here it is noted that although the local Council has adopted an extensive strategy to improve the ability to cycle safely in the Council area including the establishment of dedicated and separated routes, none have been constructed in the Victoria Park locality at present.[25]

That said, nine out of 21 participants indicated that 'being able to cycle around the local area' was important for their overall health, and a further eight participants were neutral on the question. The responses suggest that even though current levels of cycling are low, there may be a latent potential to cycle, particularly if safety concerns could be alleviated. In this regard:

- the Council cycling strategy includes proposed regional routes located on roads adjacent to Victoria Park, and one proposed local route running through Victoria Park along Defries Avenue.
- it may be that participants will feel more comfortable about cycling to the future additional destinations that will be created when the Green Square Town Centre, the South Sydney Hospital site and the Gunyama Park recreation facilities are completed (refer Q.16 and Q.21) given these will be relatively close and will not necessarily require use of major roadways.

Finally, some participants indicated that they no longer cycled, at least at present, given their bicycles had been stolen. This suggests the need for improved bicycle parking and storage facilities – in both residential buildings and in public areas.

[25] City of Sydney *Cycle Strategy and Action Plan 2007-2017.*

Focus group comment on cycling:

What about cycling? No-one's really talked about that.
No, it's not very safe.
Yes, if you don't get your bike stolen it's good.
We've stopped riding. It's too dangerous now.
Yes, I reckon too dangerous.

No, we've got beautiful cycle tracks. But you just need to be confident on the roads.
No, I don't think so. I don't think they connect enough.
They're working on it, though.
Yes, it'll get there.
But at this point, they don't.
They don't have to go across here to get all the way. They only have to go, just the other side of Bourke Street and hop on it there,

Your bike was stolen?
Yes, right in the car park.
Yes, same with us.

Q.15. Does public open space provide for recreational physical activity?

An important function of public open space is to provide facilities for both vigorous and less-vigorous recreational physical activity, especially for those activity modes which require spatial area and/or dedication of particular facilities and/or groups or teams.

In part.

The three open space areas within Victoria Park itself are predominantly orientated to passive recreation. However all are large enough, particularly Joynton Park, for circuit running or jogging activity, and Nuffield Park includes a half-size basketball court. Joynton Park is regularly used by a Tai Chi group, and Tote Park includes an active playground for children.

Since the Audit and the participant interviews, a large children's playground has opened in Mary O'Brien Park, immediately adjacent to Victoria Park to the west across Joynton Avenue.

A number of participants expressed various concerns about access to facilities for recreational physical activity and also made suggestions about the provision of additional facilities:

- there is no close-by swimming pool.
- exercise stations with helpful instructions as to use could be provided in the existing parks.
- organized outdoor group activity such as a walking group or exercise class would be beneficial in encouraging take-up of exercise.
- the existing half-sized basketball court in Nuffield Park is inadequate, with the comment being made that if facilities are to be provided they should be of a realistic (here, full-size)

scale. Other comment about this facility was that it tended to be 'taken over' by a particular group of users which combined with its small size meant that its potential for use by others was diminished.

- a problem with dog-owners not picking up their dog's droppings in Joynton Park, which is an off-leash dog area, made the grass area there unviable of other activities.

Focus group participants also expressed concern that although the children's playground in the adjacent Mary O'Brien Park, then under construction, was likely to be an excellent facility and well-used, access from Victoria Park required crossing busy Joynton Avenue. At the time there was only one dedicated pedestrian crossing facility, which had only been installed following representations by residents.

Focus group comment about pedestrian access across Joynton Avenue:

But once again, you know what? Everyone's going to have to get their prams over busy Joynton Avenue. Do you know how long it took us to get a light crossing where the pizza place is?

So is it a signalised crossing, or painted?

[Just painted] We were having to do letters to the Council and all that, and this is earlier on. Just to get a light so people don't get run over on the crossing.

So there's been a lot of work also put in - just simple things that were needed.

Discussion in the focus group discussion also included comment that there were limited facilities provided for youth/teenager age-groups, other than the half-sized basketball court in Nuffield Park. In this regard the daughter of one participant travelled to a Council-provided facility in the suburb of Erskineville, which is some distance away. Here, concern was alluded to about the potential for anti-social activities youth/teenager age-groups in Victoria Park if additional and more accessible facilities were not provided as the proportion of that age-group in the population increased.

In terms of the above comments and observations, it should also be noted that while the range of active recreation facilities within the public open spaces of Victoria Park itself are limited:

- participants do have access to a wide range of facilities in the broader locality.
- some participants have access to active recreation facilities (gyms, swimming pools) within their residential buildings and/or at their place of work.
- there is to be a substantial future public investment in active recreation facilities (including swimming pools and a sports field) as part of the larger Green Square redevelopment, and these will be located close to and thus highly accessible to Victoria Park (refer Q.16).
- a commercial gymnasium has recently opened in the new 'East Village' development in Victoria Park, and other privately-operated developments could be expected in the future as part of the larger Green Square Town Centre development.

Focus group comments on provisions for active recreation:

- At night time, it's nice, it's quiet, you [can then go] running around the park which in the daytime, you don't. It's not very pleasant to go. There's just construction people everywhere and you don't want to...
- The thing with the park, it would be more encouraging if you weren't so scared about, you know, crap. Which happens, and now I just don't run on the grass anymore. I just don't go on the grass, because after a few times, too many people just don't pick up.
- Maybe we can have, like, a little walking group or something and say you know it's six o'clock, I'm going to go for a half an hour walk. Who wants to come? Something like that, because then when you make an appointment to be there and go and do it, then you're going to be less likely to go home and sit on the lounge, because you've got an appointment.
  We might be able to help each other.
- I looked at joining one of those outdoor kind of, not gym, but like - not boot camp, but you know that kind of exercise thing. I looked at ones close to me, and the closest one was Waterloo. That turned me off, because it meant I had to get the car and drive there. So I'm looking for some activity or exercise I can do straight after work. For me, it should be somewhere that I can walk to from my house, ideally, anyway. So yes.
  Yes, I'd be interested in doing something like that, definitely.
- My daughter goes to the youth club [in Erskineville, at the Council's youth centre] after school. So then I go across and get her. I don't get home from work [until after school closes] so she goes there after school. [She's] Fourteen.

Q.16. Are other facilities available (by either public or private providers) for recreational physical activity?

Some recreational physical activities will not be able to be provided within public spaces at the neighbourhood scale (e.g. sporting ovals, larger parklands, trails) – but still need to be accessible to invite use. Private spaces (e.g. indoor gymnasiums, yoga studios) if accessible (distance, operating hours, provision of child care, etc.) allow additional opportunities for recreational physical activity.

Yes, with substantial additional facilities to be provided in the future.

Participants have access to a number of different types of active recreation facilities in addition to those provided within the public open spaces within Victoria Park itself:

(i) some multi-unit residential buildings include their own swimming pools and gymnasiums, available for residents' use.

(ii) although at the time of the Audit and interviews there were only limited other active recreational facilities available within Victoria Park itself (refer Q.15), there is a substantial array of facilities, by both public and private providers, in the general locality and which were used by a number of participants. These include gyms; active sporting facilities including swimming pools, tennis courts, and various team sports facilities; and a skateboard park in the nearby suburb of Waterloo. One participant also belonged to an active dance group.

(iii) some participants indicated that they utilised gymnasium facilities at their place of work.

Since the Audit and participant interviews a 'health club' which includes a gym and other facilities has opened in the 'East Village' development. It is therefore easily accessible to participants, and has long opening hours (5.30am-10.00pm weekdays, and 7.00am-6.00pm weekends).

Importantly, a key component of the broader Green Square redevelopment is an active recreation centre to be located at Gunyama Park, one-block south of Victoria Park and therefore easily accessible to participants via the local (not primary) road system. This centre is due for completion in 2018 and will comprise:

- an Olympic-sized outdoor pool.
- various indoor pools including a hydrotherapy pool.
- a gymnasium, and an outdoor training circuit.
- a multi-purpose sports field/oval.
- general open space areas, and a crèche.

The establishment of this facility should address a number of the limitations regarding existing public facilities as cited by participants (and listed in Q. 15).

Focus Group comment on recreation facilities for younger people:

- I feel like some sort of a facility for younger people would be interesting to see, because I know that we've got a basketball court nearby. It's really tiny. Occasionally, you will see young boys playing there, but that's pretty much half a court, so we don't exactly make use of that facility as well, so I would say that if you want to make a facility, either, like, make it like a proper one or don't have it at all.
  Prince Alfred Park is a really good example of something done well…they've got the swimming pool and basketball courts and tennis courts and a big [open] area. That's where I go.

- *So for that age group, the teenagers to the mid-20s or so, what sort of proportion of outdoor and indoor stuff do you think is missing, or required?*
  Probably 50/50 of both, I'd say. So there's one basketball court, and if you just want to - it's usually the boys who are on it, like at least a dozen of them, every afternoon, way until the lights go out. So if you wanted to, even as a family, grab the basketball and go down, you've got no chance of getting on the court.
  I think the skateboard park down there is good, for the young ones.
  That's one of the best in the southern hemisphere, that one.
  But once again that's Waterloo.
  Pretty much just replicating Prince Alfred Park here and then you'll be very good, it will be a very good. … you meet other young people who just go there and that encourages you to meet other people which you might never see another young person through the day.

- Just another thing that I thought about, having something interesting outdoors would be good. I think it was mentioned, an outdoor chess board, just a board or an outdoor gym or, you know, like, in Sydney Park they've got that cycling track for kids…. I've got a young child and I think there's going to be lots of young kids growing up here. I think we need more. There's one playground. I don't know, is there more than one playground?
  We originally, … - do you remember that conversation we had with [the Community Development Facilitator] like, two or three years ago, and the park across that way that doesn't get used much, opposite the coffee shop…We were talking about maybe that could be like a bike track in there for the kids, because hardly anybody uses that... So yes, you could do something there.

Focus group comment on other types of active recreation facilities:

- Meriton perhaps have seen an opportunity to overbuild in the area and have…un with it.
  So you consider the area as overbuilt?
  Yes, overbuilding.
  I think they've actually made an effort to help with the health by having the swimming pool and the gym and the sauna and the spa in there, so I think they're trying to think of ways to help people keep healthy for the residents of that block.

- It will be good when we have our pool down the road.
  Yes, that would be great.
  2018, we're getting it. $440 million worth.
  Which will be great because you can see other people like to swim.

- I just thought about it…what I need to keep healthy. Like, around the park if they put exercise stations like they have in other places. I haven't seen any.
  Exercise stations that actually tell you what to do. Like, a sit up bench…That would be a good idea.

- Maybe we can have, like, a little walking group or something and say you know it's six o'clock, I'm going to go for a half an hour walk. Who wants to come? Something like that, because then when you make an appointment to be there and go and do it, then you're going to be less likely to go home and sit on the lounge, because you've got an appointment.
  We might be able to help each other.

- I looked at joining one of those outdoor kind of, not gym, but like - not boot camp, but you know that kind of exercise thing. I looked at ones close to me, and the closest one was Waterloo. That turned me off, because it meant I had to get the car and drive there. So I'm looking for some activity or exercise I can do straight after work. For me, it should be somewhere that I can walk to from my house, ideally, anyway. So yes.
  Yes, I'd be interested in doing something like that, definitely.

- There's T'ai chi.
  Is there?
  Yes, T'ai chi, yes.

- It would be great to have more facilities for everybody, like a swimming pool, access for people to do hydrotherapy and all of that type of thing.

Summation – Physical Activity.

(i) Overall levels of physical activity are high. All participants achieve the recommended minimum number of hours of physical activity per week. There are a number of reasons for this. The participants are generally (but not all) within a younger age group and appear willing to allocate time to physical activity, even though they are also working and some have young children. The built environment does though also assist:

- half of all participants meet the recommended requirements solely through the use of active transport (walking, predominantly, including to and from public transport, but two participants through cycling).
- the design of the streets and open space areas within Victoria Park are of a high quality. This, combined with apartment living, encourages residents to get 'out and about'. In turn, this generates a feeling of pleasant activity in the public spaces which then encourages further activity.
- there are a number of active recreation facilities within the local area (though less so within Victoria Park itself) and participants are generally highly mobile. Some of the larger apartment buildings also have their own gyms and swimming pools.

(ii) There is a high level of 'vigorous' activity undertaken amongst participants, also probably due to their younger age group, and the proximity of active recreation facilities including, for some, at their place of work.

(iii) Although most participants use a car for some of their weekly trips, overall car use in terms of proportion of trips is significantly lower than the average for Sydney. 'Active transport' modes account for 61% of trips. There are though:

- deficiencies in terms of cycling facilities and infrastructure. This applies to cycling for both transport and recreation. Many participants consider it unsafe to cycle on roads in Sydney, though many also indicate that they do not know how to cycle. Although there is no particular cycling 'culture' apparent amongst a large proportion of participants there is a recognition that cycling can be beneficial for one's health and as such there may be a latent propensity to cycle that could be tapped with improved facilities.
- some frustrations with the walking environment in terms of traffic noise, volume and pollution; safety in crossing major surrounding roads; condition of footpaths in surrounding areas; and construction vehicle traffic.
- frustrations in terms of delays in buses due to traffic, and capacity issues because Victoria Park is located towards the end of many bus routes.

(iv) Many existing frustrations and deficiencies in respect to facilities that support physical activity are likely to be resolved in the future as the larger Green Square redevelopment progresses, although this will be over a 10-year (and more) period:

- the number of local destinations able to be accessed by local routes will increase as the Green Square Town Centre and active recreation facilities in the future nearby Gunyama Park are completed.

- access to the Green Square railway station will become more direct, and a suggested light rail line to the city will be routed through Victoria Park itself.
- the future Gunyama Park is to include a major aquatic centre and active sports field, proposed to be completed by 2018.
- amenity aspects of the physical environment will improve as construction work eases.

(v) Participant experiences do though also indicate that specific attention needs to be given to:

- safe and convenient pedestrian crossings of major surrounding roads.
- a direct pedestrian and cycling route to the Green Square Town Centre and railway station.
- safe cycling routes generally to draw on a potential for a greater uptake of cycling amongst participants, and associated secure bicycle parking facilities.
- pleasant longer recreational walking routes in the wider surrounding locality.
- regular 'informal' group activities within the public open spaces to encourage uptake of active recreation (with the co-benefit of greater socialisation), for example walking and aerobic exercise.
- improved provision of activities in the immediate local area for younger age groups.
- active recreation activities suitable for less-mobile older age-groups.

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4.2 Social interaction – connecting and strengthening communities.

"Getting to know neighbours, volunteering, and being involved in local activities are great ways to feel connected. Feeling part of our community enhances our sense of belonging and security."

Australian Unity Wellbeing Index.

- At least 6 Australians die from suicide every day, and 20% of adults will experience a mental illness in any year.

  Black Dog Institute (Australia).

- In the last 6 months, 7% of adults did not converse with someone, 43% did not attend a social event, and 40% did not meet anyone new.

  Newspoll (survey of isolation, Nov. 2013).

Q. 17. Do participants interact with other residents?

Interaction with others on either a planned or incidental way is critical in supporting mental health and wellbeing. The ways in which the built environment is designed and managed is able to support or hinder such levels of social interaction.

There is variable level of social interaction between residents, and with participant satisfaction with this.

The is a high degree of variability in the extent to which participants interact with other residents in Victoria Park, and with their satisfaction with this. Participant advices appear to suggest a 'mosaic' of different interactions rather than any predominant overall pattern. In summary:

(i) Interactions with immediate neighbours is low (see below, and also Q.18). Some express frustration with this, particularly in relation to:
- a lack of spaces within multi-unit buildings that facilitate opportunities to meet with neighbours.
- the spaces which do exist (lobbies, corridors and lifts) are not really conducive to meaningful interactions, though does who use other common area facilities such a gyms and swimming pools advise that it is a source of contact and interaction.
- it is often not possible in such situations to know whether a person you meet is a long-term resident or renter or visitor, with the suggestion that there are then different appropriate levels of interaction.

(ii) However others indicate that a low level of interaction with neighbours is not of particular concern for them. Reasons given include that:
- there is little need to have a close relationship with neighbours when living in an apartment compared to if living in a dwelling house.
- they have sufficient alternative 'circles' of people with which to socially interact.

(iii) Some indicate that they do 'run into' neighbours in the local parks or the Saturday market. This suggests that they have at least some knowledge of others who live in their buildings, and that these locations perhaps provide a better 'place' in which to interact.

(iv) 'Not enough time due to other commitments' is commonly cited as a reason that limits socialisation with neighbours. However the impression gained here is that this is not seen to be problematic but rather simply an explanation of the situation, and that participants are happy to prioritise other components of their life. Here it is noted that most participants worked, a number also had young families and/or also spent reasonable levels of time undertaking physical activity. Further, the inner-urban location of Victoria Park means that residents have access to a substantial and wide range of entertainment options.

(v) A substantial proportion of respondents also cited a wide range of other reasons that limited the extent to which they socialised with neighbours, and which is also illustrative of the diversity of experiences and situations that appear to characterise the neighbourhood =(see boxed text of comments made in the interviews and at the focus group).

In terms of participant responses to questions relating to social interaction:

(i) When asked whether 'being able to meet with friends and neighbours in your local area' was important to their health:
- 16 out of 21 participants (76%) indicate that 'being able to meet with friends and neighbours in your local area' is important to their health (with an equal number of participants indicating that it was 'important' and 'very important'.
- four participants indicated it was neither important nor unimportant; and one participant indicated it was unimportant.

(ii) Actual levels of direct interaction by participants with other residents in Victoria Park are relatively low when compared with similar statistics based on NSW as a whole:
- nine out of 21 participants (42.8%) visited their neighbours once or more in the previous week, compared to 62% of all NSW residents.
- 12 out of 21 participants (57%) met someone they knew when shopping at least some of the time, compared to 82% of all NSW residents.[26]

(iii) When asked about the type of interaction that had with their neighbours participants indicated it was predominantly on an 'occasional' level only, with little regular socialisation:
- 'I do not speak to or socialise with my neighbours': 3 participants (14%).
- 'I speak to my neighbours occasionally': 16 participants (76%)
- 'I regularly socialise with my neighbours': 2 participants (9.5%)
- 'I consider my neighbours to be close friends': nil participants.

Notwithstanding the apparent difference between the importance to their health that participants gave to meeting with 'friends and neighbours in their local area' and actual low levels of interaction, participants also indicated generally high levels of satisfaction with this situation, though this differed depending on the question asked (Table 4.3):

[26] Source of NSW averages: *NSW Adult Population Health Survey (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.*

(i) When asked about their satisfaction with their level of interaction with neighbours:
- 12 out of 21 participants (57%) indicated they were satisfied.
- eight participants (38%) indicated they were not satisfied, with one participant indicating they 'did not know'.

(ii) When asked more broadly in a separate question about their overall levels of satisfaction with specific aspects of their neighbourhood:
- similar numbers (12 out of 21 participants, or 57%) indicated they were satisfied with both the 'opportunities to meet people in the neighbourhood' and the 'number of friends they had in the neighbourhood'.
- however a number of participants were either unsure or 'neutral' on these matters with, respectively, seven (33.5%) and four (19%) indicating that they were neither 'satisfied' nor 'dissatisfied'.
- a higher proportion of participants (15 out of 21, or 71%) were satisfied with 'the number of people they know in the neighbourhood', though 5 participants (24% were still dissatisfied with this aspect.

Table 4.3: **Levels of satisfaction relating to social interaction measures.**

	Strongly dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Strongly satisfied	Don't know
Opportunities to meet people in your neighbourhood.		2	7	7	5	
Number of friends you have in your neighbourhood.	1	4	4	9	3	
Number of people you know in your neighbourhood.		5	1	11	4	

	Dissatisfied	Satisfied	Don't know
Your level of interaction with neighbours.	8	12	1

One of the key design principles when preparing the original master plan for Victoria Park was to seek to generate a 'a cohesive sense of community', via both physical design elements and by initial support for the establishment of a local community group and for dedicated community facilitator position. A publicity brochure published in 2008 after the initial development stages had been established included the statement[27]:

> Landcom has differentiated Victoria Park through its efforts to foster a strong, safe community… Intimate private spaces like balconies and patios are balanced with public space, where residents can meet over a barbeque, walk the dog or practice tai chi.
> A friendly diverse community is now flourishing at Victoria Park and new social networks have sprung up to savour daily experiences and pursue common interests.

[27] *Welcome to Victoria Park: the natural neighbourhood*. Landcom, 2008 (brochure).

Comment by participants (see boxed text) and observations by the Audit generally support this contention. The Audit noted:

- Joynton Park is a hub of activity and Gadigal Avenue is very busy with road and pedestrian traffic, particularly for people with dogs.
- There was a good degree of activity within the main parks. Particular notation was made of (i) a child's birthday party being held in Tote Park (the location of a children's playground), (ii) an afternoon BBQ in Joynton park, (iii) an informal basketball game in Nuffield park, and (iv) several dog owners playing with their dogs in Joynton Park.
- The social gatherings appeared to be privately organised, and the congregation of dog owners appeared opportunistic, apparently striking up conversations and small talk from the shared interest in dog ownership.
- Several notices were posted in the community kiosk in Joynton park, highlighting community groups. Additional information about these groups can be found on websites and through social media, such as Facebook.
- The locality felt safe. There always seems to be people around, it is well lit, and there are many opportunities for passive surveillance.

Overall, there would seem to be a reasonable level of satisfaction with the number of people that participants 'know' within the area; however this has not translated, at least as yet, into equal numbers of people that participants consider as 'friends'. In part this may be due to the new-ness of the area and relatively short time that some have lived there. In part also, a number of participants indicate that they already have social networks elsewhere and do not therefore feel the need to interact with neighbours, and/or their time is largely taken up with their own interests and family and work needs. In terms of built environment factors:

- the socialisation opportunities provided by the main park areas within Victoria Park receive favourable comment (refer Q.20 and Q.21).
- the lack of places to interact with neighbours in multi-unit buildings is a common complaint (refer Q.18).
- there are a number of local groups that residents can participate in if desired (refer Q.23 and Q.24).
- the area provides a positive overall ambience to socialisation from the point of view of amenity (Q. 20 and Q.22) and feelings of personal security and safety (refer Q.26).

Interview comment about lack of interest in interacting with neighbours:

- Not socialising with neighbours doesn't bother me – I'm more introspective. Also people tend to keep changing in this area.
- Not interested in interacting with neighbours. They are just neighbours and this is a block of flats – they hide if you see them. I say 'hi' and that is that. You don't know them. It's a block of flats – you don't need to – it's not like with a house and garden.
- Not interested – seems like neither party wants to take it much further.
- Just too busy with my own life.
- I have my own group of friends, don't particularly feel a need to go beyond that.

Interview comments on social interaction:

- Meet a lot of people in the park, which is very accessible. Strongly satisfied with the number of people I have met in the 4 years I've been here. The area is well-designed that way – and with no main through street. There's a feeling of identity-belonging.
- It is a really cool area considering the number of people living on top of each other – surprising really. It is very well thought out.
- Don't have any friends in the area – just moved here, but know lots of people in the local cafés and restaurants – 'they all know us'.
- Opportunities to meet people are limited, and there are cultural barriers to making friends and getting to know people.
- Find it difficult to get used to the culture and habits of people in the neighbourhood – do not feel happy and comfortable with it.
- I have met quite a lot of people here.
- Good opportunities to meet people – very social down here in the park.
- There are lots of immigrant students – makes it seem like a transitory community.
- Outdoor cinemas in the summer would be a good idea – for people to meet and get together.

Barriers to interaction.

- For things that limit socialising – I cannot really articulate it. We live on the 10th floor – it's a very quiet floor. Only interactions with neighbours are in the lift or corridor, and they are a different demographic to us.
- Wanted to help out in the building's garden, but not allowed by management (City West Housing).
- Social interaction is not encouraged by the building management (City West Housing). We are all locked away from each other. We have started a discussion group in the park.
- There is a lack of opportunities to socialise. More neighbourhood events might be a way of meeting people.
- Cultural differences limit social interaction.
- People don't get out and about, stay inside a lot. Also, don't have a pet – think I miss out on opportunities to socialise here because of that.
- Only talk to neighbours when we bump into each other and we don't often bump into each other. Wish there was more opportunity to bump into people and get to know them better.
- Just moved to the area – this limits interaction.
- Interactions limited by cultural barriers.
- I always speak with my neighbours when I see them in the foyer of corridor or lift. Very friendly with them – but you really only get to know the people on your floor because the other floors are locked off – you have to get someone to buzz you up through the foyer. I don't like it.
- Lack of opportunity to meet neighbours in the apartment block. No common area to bump into people – only the hallway. Also a large proportion of renters – people come and go and you see lots of people but don't know who actually lives there. Only time you see people and talk is when the fire alarm goes and you are standing around outside with nothing else to do.

Enablers to interaction.

- Sometimes interact with neighbours at the Saturday market.
- There are sometimes language barriers with neighbours, but I have overcome that with lots of smiles and giggles!
- Attends community group meetings (Friends of Victoria Park) at the local cafes/restaurants.
- Sometimes socialises with neighbours at the BBQ facilities and Joynton Park kiosk bike fixing workshop.
- Regularly socialise with neighbours in the park with our dogs.

Two final points are worth noting here.

One is that the apparent anonymity of the design of many of the larger residential buildings coupled with reduced levels of social interaction has led to a number of concerns (probably correct) being expressed about the possibility of drug manufacture activities within these buildings (see also Q.26).

The other is to note the actions of one particular participant who has of her own initiative, and sometimes in conjunction with friends, established herself in a sense as an informal 'social catalyst' within one part of the neighbourhood by engaging others in conversation in a particular area of seating on the edge of the main open space of Joynton Park. Although mentioned in passing in the interview with this participant this role was given particular emphasis by another participant in the subsequent focus group (which the 'social catalyst' participant also attended):

> … I don't think you and [….] realise how big a part of the community you two are, and maybe that people do see you sitting on the corner in the afternoons and do approach you, and that's a very big community activity. …my daughter comes down and sits with the two of you, I hop off the bus and have a chat. Then we walk home.
>
> Yes, so it's the park, it's brilliant, we all get together and it's sort of like...
>
> *You have mentioned one sort of little nuclei grouping of people. Do you see others like that?*
>
> I presume, yes, I presume there's others. I would presume so, within the park.
>
> There must be.

Q. 18. Does the design of common areas in buildings foster incidental person-to-person contact?

The design of common areas can foster incidental person-to-person contact. Residents, shoppers, commuters, workers and tourists can be invited to sit and linger with others provided there are seating arrangements and a certain level of activity to engage their interests.

Only partially.

The principal building types to which this applies in Victoria Park are the multi-unit residential buildings, which are the predominant building form, and the retail and commercial components of the recently-opened 'East Village' development.

In respect to residential buildings, only slightly over half of participants (12 out of 21) indicate they are satisfied with the level of interaction they have with their neighbours, and responses generally to questions relating to social interaction suggest a level of frustration amongst participants about their actual ability to interact with neighbours should they wish to do so. There are two main reasons, which interrelate:

(i) the only physical places that residents are likely to meet each other are in the main building lobby, the corridors on each residential floor, and within the lifts themselves. These are not spaces that would generally encourage lingering, and people in these spaces are in any case invariably on-route to somewhere else with perhaps little ability or inclination to linger.

(ii) it is often difficult to know whether the people who you do meet in these common areas are permanent residents, visitors, or less-permanent tenants; each of whom are likely to mean a different 'level' of social interaction.

A number of residential buildings also include other common areas where interaction would be possible, such as gyms, swimming pools, barbeque areas and roof-top gardens. However, few participants cited these as locations where they engaged with others in their building.

There were particular additional expressions of dissatisfaction made by those participants who were residents of the affordable housing apartment buildings, and which are managed by a community housing organisation. Comment contended that the management arrangements actually discouraged social interaction amongst residents in order to, it was suggested, limit the likelihood of residents grouping together and discussing management issues generally within the building. These actions included:

- security arrangements which did not allow residents to visit others on different floors without having to descend (by lift) to the ground floor and then 'buzz' the person they wished to visit in order to gain lift access to that floor (which though is also not dissimilar to the security arrangements in other multi-storey, multi-unit residential buildings).
- closing the common meeting room provided within the building.
- not allowing residents to participate in maintenance gardening of the common garden areas (with this work instead being undertaken by a contractor).

The result was that interested residents felt that it was necessary to instead meet in a local park away from the building. This Study has not investigated the accuracy of these statements. They are though worth investigating given their impact on social interactions which are an important component of individuals' health.

In respect to the common areas of the 'East Village' development it is noted that although they are primarily orientated to retail and associate commercial activity, the design and management of these spaces particularly with the provision of informal seating areas would be conducive to social interactions. However, given the development was opened after the Study interviews and focus group were carried out it was not possible to verify this with participants.

Q. 19. Does the design of building frontages foster incidental person-to-person contact?

The design of building frontages can foster incidental person-to-person contact. Residents, shoppers, commuters, workers and tourists can be invited to sit and linger with others provided there are seating arrangements and a certain level of activity to engage their interests.

In part.

The extent to which building frontages in Victoria Park would potentially influence social interactions is variable, and no comment in this regard was made by participants. In terms of audit observations:

- the predominant building form in many of the streets is multi-storey, multi-unit residential buildings. Usually these do not make any real contribution to social interactions along their building frontages. Although often constructed to the boundary, building entrance areas do not include any external seating or lingering space, and some facades at ground level comprise screened car parking areas.
- many of the lower-rise residential buildings and some of the higher-rise buildings do include courtyard areas or more particularly balconies facing to the street. Although usually slightly elevated to give a measure of privacy these areas do still allow the potential for interaction between residents and passers-by. However it has also been the case that very few such interactions have been sighted by the Study officers, and the balconies themselves do not appear to be well-used.
- there are now a number of ground-level cafes and restaurants which include outdoor seating either on the public footpath or adjacent on private land. These do make a positive contribution to potential social interactions.

Q. 20. Does the design of public space foster incidental person-to-person contact?

The design of public space can foster incidental person-to-person contact. Residents, shoppers, commuters, workers and tourists can be invited to sit and linger with others provided there are seating arrangements and a certain level of activity to engage their interests.

Yes.

There appears to be a good level of incidental social interaction within the public open space areas (parks and roadways). This would appear to achieve at least in part one of the initial design objectives, which was to generate a sense of community within Victoria Park.

- The Audit noted that Joynton Park is a hub of activity and that Gadigal Avenue is very busy with road and pedestrian traffic, particularly for people with dogs. This is where most activity was cited, though there is significant activity generally also within the other two main parks. Many people were seen walking around the footpaths, and playing with or watching their dogs running around on the grass in Joynton Park (an off-lease dog area), sitting with their dogs and/or friends on benches. Groups of young men and women were seen using the BBQ facilities in Joynton Park and the ball court in Nuffield Park, and a child's birthday party was observed in Tote Park.
- The auditors felt very safe in all areas, including at night; though less so along the main roads of O'Dea Avenue and South Dowling Street where there is heavy traffic and there are fewer pedestrians. There always seems to be people around in the neighbourhood generally, which is well lit with many opportunities for passive surveillance.
- Although there were no overt physical signs of religious diversity, the Audit found no indications that any cultural or religious group or people of different sexual orientations would

feel more or less comfortable in the area. Community noticeboards in Joynton Park advertised activities relating to different groups, including Chinese cultural groups.

- When asked to indicate the locations where they met their neighbours, public spaces (such as the street, the town square, local shops, local cafes, and parks) were nominated twice as many times as locations that were within their actual (multi-unit) residential buildings (such as lifts and corridors, the building gym or swimming pool, and foyer areas) (Table 4.4).
- Participants also cite a high level of satisfaction with the quality of the local parks (17 out of 21 participants, or 81%, are either 'somewhat' or 'strongly' satisfied), meaning they are more likely to utilise these areas and as such meet other residents they already know, or over time come to know other users.

Table 4.4: **Locations where participants meet and spend time with neighbours.**

Location	No. times cited*	% of times cited*
Your/their home.	4	9 %
The street.	9	20 %
Town square.	2	4.5 %
Local shops.	3	7 %
Shopping mall.	nil	
Local café'/restaurant.	6	13 %
Park.	6	13 %
Sports field.	nil	
Bushland.	nil	
Community centre.	2	4.5 %
School or child care.	nil	
Somewhere else.#	13	29 %
Total:	45	100

* There were 45 responses overall. Note the question allowed participants to cite more than one location.

Locations cited were: Building circulation areas (lifts, corridors, hallways, foyers), building gyms and pools, the Saturday markets, the bike workshops at the community kiosk, strata meetings.

Participant comment does however also indicate a need to be vigilant in terms of how public space is managed in order to ensure these levels of potential social interaction are maintained. These comments include concerns about inconsiderate or inattentive dog owners not picking up after their dogs in Joynton Park meaning that the grassed area is limited for other users, that the limited ball court facilities have been 'taken over' by particular groups, and the toilet and shade facilities need to be up-kept. In addition, the need for a greater range of activities to attract particular age or user groups is also cited, including the possibility of outdoor chess boards, informal exercise equipment, a child's cycle track, and the possibility of an outdoor cinema (see also Q.21 and Q.22).

Participant comment about dogs and social interaction:

I think having the dogs makes you more likely to interact, but if you don't have a dog, I don't think you'd go - you know…
Everybody just rocks up and talks.
Everybody does, we've wasted more than a couple of hours on that corner.
Do people without a dog talk with people who do have dogs?
Yes.
Definitely, yes.
Yes, it ends up...
We meet so many friends...
So many people there.
In the summer I was down there two or three hours.

- People don't get out and about, stay inside a lot. Also, [I] don't have a pet – think I miss out on opportunities to socialise here because of that.

Participant comment about public space and social interaction:

There's, you know, behind our building there's a square and there's barbecue facilities there. …it's not enough, probably, but [it means] they have thought about things too.
Is this Meriton [private development]?
Yes.

- Quality of parks superb.
- Satisfied overall however there is a huge amount of rubbish around – park/public areas maintenance. People are losing heart because people aren't caring enough about their rubbish and there is lots of mess from construction. Council needs to commit to maintaining landscaping and infrastructure, otherwise the area is in danger of becoming a slum. Density means there is an intensity of use that requires high level management.
- Need to recognise that with global warming/extreme heat, strategies to help people to cool down in public areas should be developed. Need better shading/all-weather cover in parks and public spaces. Maybe more water features too.
- The parks are excellent, beautiful.
- Satisfied with level of green spaces – find it to be a quiet neighbourhood, an escape from the city, but still like being close.
- [I] think there should be one larger park instead of small disconnected parks. The use of existing parks is poor – particularly because of dogs, lack of signage.
- Public toilets unsatisfactory – access not always available, and not very clean.
- Just another thing that I thought about, having something interesting outdoors would be good. I think it was mentioned, an outdoor chess board, just a board or an outdoor gym or, you know, like, in Sydney Park they've got that cycling track for kids…I've got a young child and I think there's going to be lots of young kids growing up here. I think we need more. There's one playground. I don't know, is there more than one playground?
- There's no cinema or outdoor cinema for the summer months. We have long periods of time where we could be having outdoor cinema. Actually, when I first saw that [space] there, when I first came here, I thought that was going to be a place where we would have outdoor cinema, but no, that didn't. But things like when you build a park...
- When you build a park, put a little cafe there and a newsagent, or something, and people will buy a coffee and a newspaper and they'll sit and they'll read and then that's encouraging, that interaction. Or even chess sets and things like that, those sorts of activities to encourage people.

21. Are there formal public and semi-public spaces accessible to the community at large?

> Perceived accessibility of neighbourhood destinations may increase use and thus promote physical activity; reduce vehicular trips and increase neighbourhood cohesion and safety.

Yes, though accessibility of some areas is being limited by certain usage practices.

The public and semi-public spaces within Victoria Park include:

- a highly walkable system of internal streets
- a major central park (Joynton Park) and two secondary parks (Tote Park and Nuffield Park).
- the Council-managed Tote Building community centre comprising a neighbourhood service centre relating to Council functions and services, a branch library, and community meeting rooms.
- the internal public circulation areas within the new East Village retail centre.

All are generally accessible to the community at large, though with the Tote Building and East Village spaces limited to their nominated opening hours, and the East Village spaces also subject to the internal management policies of the owners/managers.

Joynton Park includes a small Council-managed kiosk which can be hired by individuals or groups.[28] Comment in the focus group about its use by certain groups (bike maintenance, and Chinese language groups were mentioned) suggests that such usage extends the accessibility of that public space overall.

Comment in focus group about use of the Community Kiosk:

That kiosk that we have in the major park. Is that ever open?
Yes. Every month it's open.
You can hire it, it's open every... Sunday mornings it's open for the bikes, they have all the bike maintenance and everything there.
If you could get tea and coffee as well [that would be good].
Also, there's some Chinese speaking thing over there too.
It's open every Saturday for the markets.

The Audit concluded that different cultural or religious group or people of different sexual orientations would feel more or less comfortable in the area. Community noticeboards in Joynton Park advertised activities relating to different groups, including Chinese cultural groups. However, discussion in the Focus Group also suggests that the overall accessibility of some areas is being limited by current practices relating to activities allowed there:

[28] http://www.cityofsydney.nsw.gov.au/explore/facilities/venues-for-hire/joynton-park-community-kiosk.

(i) There were two concerns about the use of Joynton Park, which provides an off-lease area for dogs (and consequently also acts as a popular location for social interaction). One is that the popularity of this use is such that the area may reach a capacity in the future. The other, of immediate importance is a concern that many dog owners are becoming lax in obeying the laws about picking-up dog droppings from their dogs, meaning that use by others is becoming unviable.

(ii) A similar issue was now being observed in Tote Park, a primary use of which is meant to be as a children's play area. As such dogs are not permitted off-lease, but apparently it is being used as such and with a consequent problem of dog-droppings.

(iii) Comment was also made about the basketball court facility in Nuffield Park which is open for general use being at capacity, in the sense that its use appears to have been 'taken over' by a particular group of users thus restricting its use by others.

Some comments also suggest the need for greater attention to the types of facilities that are provided within the public and semi-public spaces that do exist, in a sense how they are managed. These suggestions also included reference to certain specific users groups such as young mothers, and youth.

Comment about spaces to facilitate social interaction for specific groups and needs:

- Having community places to go to eat and drink (like a drop-in centre) – which are dog-friendly and children-friendly for young mums. Embrace the whole community, not just particular parts of it. Be interesting to see how everyone interacts in the new shopping centre to open soon.
- Shops interacting with the community – not just taking from it.
- When you build a park, put a little cafe there and a newsagent, or something, and people will buy a coffee and a newspaper and they'll sit and they'll read and then that's encouraging, that interaction. Or even chess sets and things like that, those sorts of activities to encourage people.
- [Need] things like [an indoor] table tennis court [in a youth centre], at least when it's raining.

[I like to go] to things to have discussions and getting involved.
Yes, I attended a few things with the library, you know, like the art. It's quite a bit. But it just sort of falls apart.
Dwindled away, didn't it, and that gave a lot of people opportunities to exchange ideas and find out what was going on and I miss that, actually.

Did those activities seem to bring in a cross-section of residents?

Yes.
Renters and owners and everybody.

Focus Group discussion on use of the parks as off-lease dog areas:

The thing with the park, it would be more encouraging if you weren't so scared about, you know, crap. Which happens, and now I just don't run on the grass anymore. I just don't go on the grass, because after a few times, too many people just don't pick up.

Dogs doing their business in the park?

You can't, because the dogs are doing their business in the park. You can't run in the park.
Yes, exactly, yes. A lot of people just don't want to - you see them, and they just turn their eye when you see them. They don't pick it up. Some people do the right thing, and some, you know...
I go and tell them. I just say, could you please pick that up?

How do they respond to that?

One of two things happens: they'll apologise profusely, go, I'm really sorry, I'll go pick it up, or you'll get a mouthful, and there's no medium, no middle ground.
But we learn a lot when we go down there, don't we?
Wasn't there supposed to be one park for the dogs?
Yes, there is, that's it just there [Joynton Park].
Yes, but now they use this one [Tote Park], too.
Yes, they shouldn't be in this one, because this is the kid's one.
Yes.
They're not supposed to.
They're not supposed to, and they're spoiling it, yes.

So dog park etiquette?

Yes. But that's all been dealt with, you know, the Council runs free dog obedience classes. There's a lot of literature around it. It's just that people just refuse to pick up after their dogs, no amount of community cajoling unfortunately is going to help that.
Unfortunately, as you increase population density, you're going to increase more people...
Well the day will come we probably won't even take the dogs down there because there'll be too many.
Yes.
Yes, and we've all got dogs. People - the majority of the people down there don't want the area to go not off-leash, but that's what will happen from people not looking after it. But there's so many people that have got dogs now, it's hard for us to police ourselves, which we try to do.
Yes, people are just lazy.
People walk like that with their mobile phones around, do a lap around the park, like this. The whole time. Dogs shitting everywhere and then they….

In saying all that, too, I have noticed some young men going round with - and they have the right things for picking up, you know, and bags, and picking up for all those lazy people that haven't done. I don't know whether they do it out of the goodness of their heart or whether they're paid or whether - I would like to know that. But we have seen them, haven't we. We said, oh, wow, that's great, you know.

They go around picking it all up?

Yes, they go round picking it up, yes.

22. Is the design of formal public and semi-public space inviting to the community at large?

The design of spaces can support psychological health by fostering feelings of belonging.

Yes, although there are concerns about the range of spaces attractive for younger age groups, and some concerns about the cultural make-up of other users.

The public and semi-public spaces within Victoria Park include:

- a highly walkable system of internal streets
- a major central park (Joynton Park) and two secondary parks (Tote Park and Nuffield Park).
- the Council-managed Tote Building community centre comprising a neighbourhood service centre relating to Council functions and services, a branch library, and community meeting rooms.
- the internal public circulation areas within the new East Village retail centre.

Participants report high levels of satisfaction with the design of the streets and park areas:

- 17 out of 21 participants (81%) indicate they are satisfied with the 'quality of parks in the neighbourhood', with nine of these indicating they were 'strongly' satisfied. Two participants were neutral, and two participants were dissatisfied.

Further, participants also report high levels of satisfaction with security in public spaces, consistent also with the conclusions of the Audit (see Q.26):

- 20 out of 21 participants (95%) indicate they are satisfied with their personal safety in neighbourhood streets after dark.
- 17 out of 21 participants (81%) indicate they are satisfied in terms of safety from threat of crime generally in the neighbourhood; with two participants indicating they were dissatisfied, and two being neutral (neither satisfied nor dissatisfied).

When asked to indicate the locations where they met their neighbours, public spaces (such as the street, the town square, local shops, local cafes, and parks) were nominated twice as many times as locations that were within their actual (multi-unit) residential buildings (such as lifts and corridors, the building gym or swimming pool, and foyer areas).

The Audit concluded that although there were no overt/physical signs of religious diversity, there were also no indications that any cultural or religious group or people of different sexual orientations would feel more or less comfortable in the area; and that the area presented as very multicultural. Community noticeboards in Joynton Park advertised different groups and activities (including Chinese cultural groups) indicate social and cultural inclusion. Some comment made at the focus group also noted that the apparent cultural propensity for Asian residents to go for walks around the neighbourhood late at night contributed to overall feelings of safety and security given the additional number of people on the streets.

Although these are positive conclusions in terms of formal public and semi-public space being inviting to the community at large, it needs to be noted that some participants also expressed levels of dissatisfaction ranging from discomfort to concern about this aspect of the population make-up of the area. For one participant, an older woman, groups (or 'gangs' as she expressed it) of (Asian) youths made her feel insecure and limited her use of public space at night. The other two participants (from the same household) were stronger in their expressions of concern about 'the large Asian population' of the area. Although this did not appear to necessarily limit their use of public spaces (they were for example keen recreational walkers) both participants had left Victoria Park by the time of the subsequent focus group.

Some concerns were also expressed about the amount of construction activity and traffic, and an increase in through traffic generally in the neighbourhood, as limiting the attractiveness of public streets and adjacent open space areas. Although the issues associated with building construction should reduce and disappear over time as all building sites are completed, the management of through traffic in terms of volume (and thus noise) and speeds is likely to need to be addressed by the local Council.

The East Village retail centre was not complete and therefore open at the time of the interviews and focus group with participants and so their assessment of the attractiveness of the internal public areas of this development is not known. within the new.

General assessment by the Study officers suggest that these areas are well-designed and, although primarily orientated to retail and associated commercial activity, the provision of informal seating areas and a general open ambience would be inviting to the community at large and to social interactions.

Participant comments about the attractiveness of public space:

I wouldn't hang around here, because there's nothing for young, like you're saying, nothing for young people.
There's no cinema or outdoor cinema for the summer months. We have long periods of time where we could be having outdoor cinema. Actually, when I first saw that there, when I first came here, I thought that was going to be a place where we would have outdoor cinema, but no, that didn't [happen].

People tell me. I'm not here most of the day time, but [as] I said, it's really noisy.
Yes. It's not a very pleasant place to meet, certainly.
Mornings are very unpleasant here, very unpleasant.
Well construction, yes, the trucks coming and they're going, up to 10 minutes to get out of my driveway to get away.

We use the park quite a lot from our building and we still seem to whinge a lot. Three times a day I'm out with the dog.

I think we need a lot more shade. There's not much shade around here, and like in Australia, sun cancer's a really bad thing. That would make people come out more if we had more shade.
There's a tiny little bit that's not very efficient where the barbecues are…we need to have some shade cloth structures, areas with a bit more seating so you could sit in under there.
Over the playground.
Definitely over the playground, particularly over the playground.

But at night time, it's pretty good, and because of the apartments and a lot of the, I think it's the Chinese community, are up quite late. There's just people walking, they're having their nightly constitutional walk at, you know, 10.00 or 11.00 at night, which is really nice.

Yes, so it's the park, it's brilliant, we all get together and it's sort of like...
You mentioned one sort of nuclei or grouping of people. Do you see others like that?
I presume, yes, I presume there's others. I would presume so, within the park.
There must be.
There'd be other people...
[And] there are other parks.

I think the skateboard park down there is good, for the young ones.
That's one of the best in the southern hemisphere, that one.
[Yes], but once again that's Waterloo [not Victoria Park].
This is what I mean, once the children start growing [there is not a lot for them].

Too much speeding in the street. A worry for children. Dogs have been hit. Screeching of hard-braking common. No speed signs.
Speed limit is poorly marked.
Sometimes cars go too fast in the street…
There have been a few accidents – some people just fly down the street.

Q. 23. Are residents and others invited to participate in the broader design and governance of their community spaces?

> Participation can facilitate orderly social interactions through removing ambiguity in expectations and creating behavioural norms in the broader governance of the community. Group membership and participation is associated with improved personal health.

Yes, through 'normal' Council processes and through being part of a larger redevelopment area.

The streets and open space areas within Victoria Park, although constructed by Landcom as the developer, have been dedicated to the local Council. Residents of Victoria Park have the ability to be involved in the on-going design and management of these areas by:

- responding to Council notifications about any proposed changes, made in accordance with that Council's general policies on community participation.[29]
- making representations to that Council in as per standard practice via both the Council administration and elected Councillors.

In addition, Victoria Park is part of the wider Green Square Redevelopment Area, the development of which is current and on-going. Specific proposals in terms of the development of future community and recreational facilities are publicly-notified and residents have the opportunity to respond. Further, as a somewhat unique model of inner urban redevelopment, the Green Square project has been the subject of various studies and surveys in which residents can participate.[30]

In addition, the following also act as prompts to resident participation in the design and governance of Victoria Park:

- a 'community kiosk' structure has been included in the development of Joynton Park in the same location where the weekly markets are held. It is used for displays and the dissemination of information generally by the local council (and by other groups who are able to also use the space). A community 'blackboard' space is included on one of its external walls.
- there is a 'community development coordinator' position within the local Council with responsibility for resident liaison within Green Square (and other localities). Part of this position includes the maintenance of a dedicated Green Square webpage (refer Q.24).
- a resident-based 'Friends of Victoria Park' group which disseminates information on local matters via its Facebook page.

One further matter relating to resident participation in the governance of their immediate environment is worth including here. Some participants lived in the affordable housing apartment

[29] Refer: http://sydneyyoursay.com.au/our-approach#hp_h_listConsultation_3_Our+approach+to+community+engagement.

[30] For example, at the time of this Study a concurrent study was being conducted by the City Futures Research Centre for the local City of Sydney Council into residents' needs, expectations and experiences of living in Green Square. This study was completed in 2014. See: Easthope, H., McNamara, N., & Thompson, S. (2014) *Green Square Community Survey 2014 (Final Report).*

buildings in Victoria Park and which have been constructed as an essential component of the overall Green Square development. These buildings are managed by a separate community housing organisation. The participants resident in these developments expressed concern in the interviews and subsequently in the focus group about an apparent lack of ability to be engaged in the decision-making processes relating to the management of their buildings, to the extent that, it was contended, management actually discouraged resident interaction itself including by closing the community meeting room which had also been provided in the development (refer Q.18). Management arrangements also prevented residents from being involved in maintenance of open space areas, thus restricting this as a possibility to contribute to activity levels and also the growing of foods. The comments are included here for information and possible future review. Their accuracy has not been separately assessed as part of this Study.

Interview comments about the management of the affordable housing developments:

- Strongly dissatisfied with the running of our building complex. Very unprofessional, eg. the community room in our building is locked off. Management office not manned – they have said they are not there to help us.
- Social interaction is not encouraged by the building management. We are all locked away from each other. We have started a discussion group in the park.

Q. 24. Do new developments include a 'Welcome' program for residents to initiate on-going social interaction?

Awareness initiatives can be as simple as proper placement of signage or a more developed 'welcoming program' creates an awareness of community events, locations of social and cultural programs, etc. to encourage feelings of community connection.

Yes, although both its continued effectiveness and necessity could be queried.

Landcom as developer of Victoria Park provided initial funding for the establishment of a 'welcome' program for in-coming residents. The funding established a dedicated Community Development Coordinator position within the local Council to undertake the program. The position is now funded by that Council and has responsibilities for other 'renewal' areas within the City of Sydney as well, and mention of matters relating directly to Victoria Park now tend to be subsumed into reference to the larger Green Square development area.

The local Council website includes a webpage relating to the community development activities in Green Square. It describes the role of the Community Development Coordinator as working to 'connect locals with community groups, events and programs'. The webpage includes advice on those groups and events, including links to the Council-sponsored 'Green Square Community Hub' webpage giving similar advices, and the non-Council 'Friends of Victoria Park' and 'Green Square

Professional Networking Group' groups. [31] The location of the webpage on the Council website is perhaps not intuitive, being located under the 'Vision (Sydney's Future)' tab on the City of Sydney home-page. It is not known how frequently it is accessed. The webpage also advises that a periodic email newsletter is sent out to some 300 residents and visitors in the Green Square area. The Green Square Community Hub also has a physical presence at the community kiosk in Joynton Park once a month on every second Saturday between 10.00am and 1.00pm, and which coincides with the weekly farmers' market there.[32]

The local Council has also established a Neighbourhood Service Centre in the Tote Building in Victoria Park to facilitate local access to Council services. This building also contains the branch library and is open 10.00am-6.00pm, Monday-Friday.

The role and effectiveness of the Community Development Coordinator position was discussed at the focus group. Positive comment was made about the 'visibility' of the current incumbent in the position and the early establishment of various programs by the previous incumbent. However a potential limitation was also noted – that the position, particularly if 'shared' amongst other renewal areas was unlikely to keep pace with the speed and volume of the current and future inflow of residents in both Victoria Park and the wider Green Square area.

One participant specifically mentioned attending meetings of the Friends of Victoria Park group in local cafes when asked about places where she met with other residents.

Publicity material on Victoria Park prepared by Landcom also mentions the establishment and funding, by Landcom in November 2005, of the Victoria Park Community Group of residents, stating 'The group nurtures a strong community spirit by organising a year-round calendar of events, promoting an easy interaction and communication among neighbours and the chance to enjoy the site's facilities.' It is not known for how long this funding was maintained. Although this group is still referenced on the City of Sydney Council website listing of community groups the given website link does not currently exist. It could be that this group has become the Friends of Victoria Park group mentioned above. This Study is not aware of any review of the efficacy of the original group; in any case, the 'community' of Victoria Park could be said to have matured since 2005 and that any need for the original developer-sponsored group would now be diminished or unnecessary.

[31] Refer:
(i) http://greensquarehub.com/
(ii) https://www.facebook.com/FriendsOfVictoriaPark
(iii) https://www.facebook.com/login.php?next=https%3A%2F%2Fwww.facebook.com%2Fgroups%2Fgreensquareprofessionalnetwork%2F

[32] Refer: http://www.cityofsydney.nsw.gov.au/explore/facilities/venues-for-hire/joynton-park-community-kiosk.

Focus group discussion on the Community Development Coordinator position:

We were about how important the community facilitator was, but she's not in that role anymore.
It's now […], somebody, I think?
Yes, she's doing it now. But [ ] used to be here quite a bit last year. Now […] is doing here. She's quite heavily involved. She's down the markets all the time.
Yes.
Is she?
She's here quite a lot.
But […] did do programs that involved everybody and they were indoor, outdoor programs and she facilitated so many things, whereas now all we have are the markets and it's not the same.

Well she's from the Council, isn't she, so generally that's an ongoing position, though how much they target Victoria Park, I don't know. Was that program doing things to set in place some more sustained community interaction that the people live here would just do it by themselves?
I think that was the aim, but it just took a lot to... because I think, I don't know if everyone else has noticed, there's a lot more people around here just in the last year, so it was kind of, […] was setting up a lot of stuff, but none of it was just taking off. So maybe they need to do another re-run because there's so many more, just the last year, the amount of people around here that have moved in is incredible. There's a lot more moving in especially in the next year.
The next year is going to be even bigger, I reckon.
It would be hard to keep up from that perspective on what to try and offer us and keep us happy and involved.

Q. 25. Does the design and governance of public and private space allow contact with nature?

Providing opportunities for contact with nature (green features as well as water amenities) can also support psychological health by fostering feelings of restoration.

Generally yes, though limited by being in a high-density inner-city location.

A feature of the design and development of Victoria Park has been the up-front inclusion of various 'green' public open space areas. These include three principal parks including the large central Joynton Park (and further smaller open space areas as other sections of Victoria Park are progressively developed), a large sculptural water feature and a naturalistic drainage feature in Joynton Park, street-tree plantings, and the provision of open central landscaped drainage swales on some of the principal streets. Prompts for these features have been:

- the need to establish at an early stage a high level of amenity for the area commensurate with residential use given its previous industrial use and (at the time of initial development) continued surrounding industrial activities.
- the adoption of a 'Water Sensitive Urban Design' approach, both in terms of now-current standard practice but also because of the particular topographical nature of this area as a former low-lying swamp.

The result has been a reasonable level of introduction of 'natural' elements at least in terms of trees, grassed areas, exposed water and semi-natural drainage areas. It is not known whether this has also led to a level of bird-life in Victoria Park. These features figured prominently in early promotional material for Victoria Park, including reference to the development as 'the natural neighbourhood' where residents had access to 'a 'good life' within a natural, yet urban environment.' Also mentioned was the design of individual dwellings to include cross-flow ventilation and larger usable balcony spaces orientated to maximise access to sunlight.

Participants made a number of positive and appreciative comments about certain of these features, particularly the green nature and openness of the parks as contributing to a general positive ambience which is then cited as having a positive influence on their heath.

However, there was also an equal amount of comment citing concerns about nature being in a sense 'shut out', principally because of the increasing density of the area. Concern was expressed that this increase in density would end up countering the positives of the green open space areas. Particular issues mentioned were concern about air pollution, general urban grit as well as some inter-looking issues which limited the use of balconies, and the blocking out of sunlight and the openness of the sky generally as a result of the increased height of more recent buildings.

These comments suggest:

- the absolute importance of maintaining the parks in good condition and with good levels of sun access as a counter to the concerns about air pollution and shadowing from tall buildings, both of which tend now to be established characteristics of the area.
- the need for continual monitoring of air quality, with consequent highly-visible public advices about the findings in order to avoid any concerns that may arise simply due to a lack of information.
- in similar future redevelopment areas, a need to establish building heights and setbacks that give greater importance to maintaining sunlight and daylight access, and a general 'openness' to the sky.

Focus group discussion on access to nature:

Like, you go - like, where the park is, it's fine, but now you get - it's only the past year, I think they've been putting all these crazy high rises in.
The sun, it's blocking the sun. They look horrible. It's just a big slab of...
Yes, it's dark already, isn't it, and they're like little wind tunnels, too.

The existing footprint when you were walking, you could see the sky, if you looked up around the park. Even around all the edges here, but now they've pushed those edges out, and that's where, like you said, if you hop off the bus up here, or get on the bus, that's it. There's nothing to look at.
It's badly-designed.
It's funny you should say that. I cannot see the sky...

Q.26. Is use of public space for active transport and for incidental and organised physical exercise and social interactions facilitated by low actual or perceived threats to security?

> Fostering a sense of belonging, caring and commitment also involves increasing a perception of safety. People will not interact within, or feel part of, a community that they perceive to be unsafe. Actual and perceived levels of security can inhibit or promote choices to actively travel, engage in recreational physical activity and/or engage in social interaction.

Yes. Though there is also concern about 'hidden' illegal activities within buildings.

Participants report high levels of satisfaction with the degree of public safety within Victoria Park. This is despite more wide-ranging discussion in the focus group that suggested that there were certain types of crime in the area that were of concern – however these tended to be break and enter robberies and the assumed manufacture of drugs, rather than person-to-person crime in public spaces.

- 17 out of 21 participants (81%) indicated they were satisfied with the level of 'safety from threat of crime in the neighbourhood', with 10 participants indicating they were 'strongly' satisfied and two participants each being neutral or dissatisfied (with one participant 'strongly' dissatisfied).
- 20 out of 21 participants (95%) indicated they were satisfied with their level of 'personal safety in their neighbourhood streets after dark', with one participant indicating they were 'strongly' dissatisfied.

Discussion in the focus group supported this level of satisfaction. The discussion also noted that a substantial factor in the felt level of security is the presence of pedestrians in local streets, even late at night, behaving in a non-threatening way ('doing their evening constitutional' as one participant commented). These feelings would also be influenced by the general high level of trust that participants cite (and in turn, positive neighbourhood experiences will influence the degree of belief that others can be trusted). When asked whether 'most people can be trusted':

- 13 out of 21 participants indicated they 'agreed', with a further two 'strongly' agreeing.
- four participants 'disagreed', with only participant 'strongly' disagreeing.
- one participant indicated they 'did not know'.

The total proportion of participants in agreement (15 out of 21 participants, or 71.5%) is comparable to the NSW average of 71.3%. More positively, the proportion of participants who indicated they felt safe in their neighbourhood streets after dark (20 out of 21 participants, or 95%) is substantially higher than the NSW average of 72.4%.

Participants were also asked to indicate whether they felt their neighbourhood had a reputation as a safe pace. 16 out of 21 participants (76%) agreed the reputation of Victoria Park was as a safe place, which is equivalent to the NSW average when residents are asked the same question about their area.

There were no crime related matters (such as for example safe and secure places to walk and cycle and exercise) cited by participants in the focus group when asked to detail the things they needed in order to keep healthy.

The one participant who indicated they were strongly dissatisfied with their personal safety when in the street after dark was a female in the 55-64 age group. In discussion she made specific reference to the presence of gangs of youths on the street, which has resulted in her not going out after dark. She also indicated she had raised the issue with the Community Liaison Officer at the local Police station. When this issue was raised by this participant at the focus group the degree to which it was supported or agreed by others was variable. The focus group discussion did though note the need for some vigilance to be maintained in terms of providing sufficient activities for younger people in the neighbourhood particularly as this population cohort increased as the population matured. Here it is noted that there would seem to be a reasonable expectation that this would occur as the Green Square Redevelopment Area is progressively developed given the planned provision of extensive recreation facilities (refer Q.16) and community facilities generally (refer Q. 21) in the near future.

A further comment by one participant when undertaking the survey interview is also worth noting: by a female participant in the 35-44 age-bracket. Although noting that safety in the area seems to be good she also advised that she did not in any case as a female ('as a girl', as she expressed it) go out on her own late at night. Although this concern would not be peculiar to Victoria Park, it is worth keeping in mind in the design and management of the larger Green Square redevelopment area – given the aspiration of the redevelopment that it comprise an exemplary model for inner urban development.

In respect to public area safety overall it is also noted:

- the Audit identified that there appeared to be good levels of casual surveillance of streets from adjacent buildings.
- some participants in the focus group who have lived in Victoria Park since its early stages of development indicated that private security surveillance had been provided at that earlier stage by Landcom, as developer, given the then large number of unoccupied sites and the low number of residents. Participants were not aware that this was now the case.

Comment from the interview surveys on safety:

- Like to see more police around on the streets.
- I'm okay with safety in the area, but have heard people in my building say they have had problems.
- Safety seems very good – but I'm a girl – I do not go out on my own late at night in any case.
- Dissatisfied with security of the buildings – could be improved – outsiders have too much access.
- There are gangs of youth of the street – I wouldn't go out after dark. I have raised this with the Redfern Community Liaison Officer.

Focus Group discussion about safety generally in Victoria Park:

On the cards here about things you need to keep healthy, there didn't seem to be any concern about people feeling unsafe on the street to stop you going out?

I think personally I don't feel unsafe.
Not at all.
I think it's quite safe.
Pretty good here, I reckon, I feel.

We walk around, I walk around here 11, 12 o'clock at night with the dog, I've been out. I never feel unsafe.
I go out by myself at night, no problems.
[I've] never been approached by anybody, never felt unsafe. You feel more unsafe in the morning with the workmen, because a couple of them, a couple of times, have given me a mouthful and you do feel quite threatened. But at night time, it's pretty good, and because of the apartments and a lot of the, I think it's the Chinese community, are up quite late. There's just people walking, they're having their nightly constitutional walk at, you know, 10 or 11 at night, which is really nice.

But no-one's actually made a comment … that there's kids roaming around, looking lost.

Giving a threatening aura to the place?

No, I don't think there is.
There is.
No.

Maybe there's not that many people in that age group?

It's fragmented as yet.

Are there surveillance cameras in the main square, or the this area?

No. I doubt there are many cameras around here, no.
They'll put them up in the street.
Yes, but not here, it's probably not worth the money.
Some of it is kept lit up. It's good that they keep it lit up. Good around the park which makes it safe.
As long as they keep it lit up. Sometimes they have a big floodlight, and sometimes they don't.
Yes, it goes off. Apparently it's solar, so it will go off once it's run out of juice.
Especially when that's up, it's quite nice, yes. Especially late at night, kind of a nice walk around there.

These generally positive perceptions about safety within public spaces does however differ from comment in the focus group which in an extensive discussion suggested there were also unresolved issues in the area relating to break-ins, the possible manufacture of illegal drugs within apartments, and (the lesser matter of) theft of bicycles. Although the local Police are apparently aware of these issues it was suggested that to date they have been unable deal with it effectively. Two particular elements to this were raised:

(i) the general anonymity within the large multi-unit buildings that now characterise Victoria Park, so that it is not possible to know who is who, and to control comings and goings effectively. Specific mention of the serviced apartments in Defries Avenue was also made in this regard.

(ii) a perception, almost in the nature of a conspiracy theory, that the building owners and strata managers are keeping quiet about the levels of crime in order to maintain the reputation and hence financial value of the area. Here comment also included the suggestion that the

location of security cameras within buildings themselves have somehow been positioned to limit their effectiveness, an issue that is also the subject of some postings on the Facebook page of the Friends of Victoria Park residents group. [33]

Focus group discussion on security cameras on private property in Victoria Park:

You could just say, can I see the security cameras. I'm like, well, the cameras aren't actually meant for anything, just...
Exactly.
Do you mean the surveillance cameras don't function?
They function, but just enough so you can't see nothing, just enough so when you do the insurance of the building, you can ring them up…but not enough to actually give them to the police.

[Yes] the cameras…someone smashed our front door and they said they couldn't make out who smashed the door. I went, well, if you can't have the camera at the front door, where would you have the camera?

Focus Group discussion on crime generally, and perceived, within buildings:

So, is crime a problem?
Yes, it's a big problem. We had the community police from Redfern come out early last year, was it? But it's - they kind of don't really know.
The developers, or whoever, the building owners cover it up, bottom line. It's as simple as that.
Yes, I'd say that.

There are quite a few robberies here, though, aren't there?
I don't know.
Robbery of property, or of people?
Property.

Break ins?
Break ins, yes. They seem to know when people go away.
Yes, I haven't heard much but I'm on the sixth floor.
I hear down in the park, I get all the people telling me, yes.
A few people have mentioned having their bikes stolen.
Yes, right in the car park.
Yes, same with us.

But that's very true what you said about the strata people keep a handle on it, because a few of the bigger buildings, the private ones, like, across the road, and there's one across the road from me that were quite expensive to buy into, they've got drug dealers in there. But they're looked after. They don't cause any troubles, and they must know.
They've got plain-clothes police onto them.
Where?
The drug dealers.
Here?
Yes. [continued]

[33] Refer: https://www.facebook.com/FriendsOfVictoriaPark.

I don't understand why a lot of people don't talk about drugs, so I'll get back on it. But it's because people that take drugs usually steal because they want more money and that's what I mean, it all goes hand in hand. It's a vicious cycle

Yes, but the drug dealers in that building, they're not selling the cheap stuff, they're selling to people that are working quite - they're keeping it all very under control.

Yes, but that doesn't make it acceptable.

No, of course it's not acceptable.

You wouldn't know if there was one living next door to you, you wouldn't know, because they keep it quiet.

If they're taking that meth, or something, you'd smell it.

It affects [you].

In terms of?

Not feeling secure, you don't know who comes in at different times of the night to buy it, how they get access, whether it's from the garages, or whether it's from [the basement carpark] so people can get up and down so they don't have to go through the security to get in.

It contaminates the apartment if they're cooking it, and you cannot live in it after that.

How have you become aware of this issue? Because it seems like some of you have and some haven't?

I don't know anything about it.

I'm shocked.

I've read all about it.

It's in the newspapers, is it?

No, in America, they have done research on it in.

But here in Victoria Park?

I've had a few discussions with the plain-clothes police.

There'd be the odd things happening.

We had a very suspicious smell in our building one day and I just mentioned it to the plumber when he came in to fix the toilet up, and I said, it's weird the toilet's blocked up. I said, I put some Draino down the sink and he just went, yes, well, maybe that's not such a great idea if someone's doing something in the building and you're getting a smell. I went, okay. I wasn't real good at science, but that makes sense.

What does it smell like? Sorry, because [I've smelt something] about three nights in a row, and it only happened about midnight. I don't know what the smell is, but I wonder if it was the same thing.

It was at a point where it was really overly potent and we had to open up all the windows for a night.

That's it.

I didn't know what it was.

If you think your drains are blocked...

You stop breathing.

So do you think that Victoria Square in this regard is any different to other places?

No, I was about to say, no, not at all. I feel safe.

I think there's just more of it.

Or it's perhaps more concentrated because they're denser buildings?

Yes.

* Considerations of safety from the perspective of risk of accident is dealt with in the other sections of this report dealing with the viability of utilitarian and recreational physical activity.

Summation – Social Interaction.

(i) The generation of a sense of 'community' is cited as an explicit intention of the design and initial development of Victoria Park; with this to be achieved by the inclusion of well-designed parks and other public spaces, a branch library and community meeting rooms in the restored Old Tote building on site, the initiation of a local resident organisation (the Victoria Park Community Group), and the funding of a dedicated community liaison/'Welcome' program position.

(ii) There is a range of opinion as to how well this objective has been achieved. Participants cite a high level of satisfaction with the extent and quality of provision of public spaces and facilities. The range of public and private facilities to be provided in the immediate locality with the future development of the wider Green Square redevelopment project will mean that opportunities for socialisation will increase. However, that said, participants also raise some concerns in these respects:

- the management of some areas and facilities means that usage is at times restricted to specific user groups only, thus reducing the potential for wider social interactions.
- there is some suggestion that some facilities are not keeping pace with demand, and that this will only be exacerbated as the local population increases.

(iii) Importantly, there is also a noticeable 'ambivalence' amongst many participants as to their desire and/or need to engage with neighbours. Some do wish to know and become more friendly with others in the neighbourhood; however others do not see this as necessary, instead relying on existing other social networks and the proximity to the wide range of activity and socialisation opportunities in this wider inner city location. Others also cite their time taken up with work and immediate family – with this not leading to expressions of dissatisfaction but rather more a statement of current choice and priority.

(iv) There is a lack of ability to interact in any meaningful way with neighbours in multi-unit buildings. This is also evident even amongst this group of participants who do not indicate any strong need for strong local contacts as a lingering frustration about not knowing who-is-who in their buildings. In part this is due to the 'transient' nature of the common areas of these buildings (interestingly, common gyms and swimming pools were not particularly cited as meeting places); in part it is also due to the diversity of tenure types and potential transient nature of the resident population itself.

(v) The potential for social interaction as a result of participation in the strata title governance arrangements of these multi-unit buildings was also cited by only one participant. A particular concern about being specifically excluded from participation in the governance arrangements of the affordable housing developments was also raised.

(vi) Except for some 'perception' issues amongst a few participants, the potential for social interactions is facilitated by high levels of feelings of safety and security within public areas.

(vii) The actions of one particular participant are worth noting here – which is that she has of her own initiative established herself in a sense as an informal 'social catalyst' within one part of the neighbourhood, by engaging others in conversation in a particular area of seating in the main open space of Joynton Park.

(viii) Also consistent with an initial design intention for the neighbourhood, participants indicate food levels of satisfaction in respect to contact with 'nature', as a result generally of the number of sizeable landscaped open space areas, the inclusion of substantial water features, and significant street tree plantings. There is however also concern about the effects of the more recent higher rise buildings being constructed in terms of overshadowing, wind-tunnelling, and a general 'closing-out' of the sky; and about general air pollution and grit and dirtiness of the inner city. For some this limits use of private outdoor areas and has raised the concern about health effects of locally-grown food.

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4.3 Nutrition – providing healthy food options.

It is recommended that adults consume 2 serves of fruit and 5 serves of cooked vegetables daily.

National Health and Medical Research Council (Australia)

- Number of adults eating recommended servings of:
  - vegetables – 6.8%.
  - fruit - 54%.
- 35% of daily total energy comes from foods with little nutritional value, and also high in saturated fats, sugars, salt and/or alcohol.

Australian Health Survey, 2013 (ABS).

Q. 27. Is fresh healthy food available to participants?

The built environment can be shaped to support or inhibit the sale and marketing of healthy eating options through zoning and land use regulation of the extent to which it provides space for retail and other food uses. A greater diversity of such space will then assist in providing variety in food options – to fulfill different needs in food type, affordability, cultural preference.

Yes, via a variety of outlets.

At the time of the Audit and the interviews and focus group with participants the only shops in Victoria Park that sold food were a small Asian supermarket and a convenience store. The convenience store did not sell fresh foods (other than dairy products) and the Asian supermarket only stocked a very limited range of vegetables particular to Asian cooking. Participants did though have access to:

- a number of supermarkets in the locality, although generally these were not in walking distance particularly if carrying a load of purchases.
- a weekly farmers'' market held within Victoria Park in Joynton park.
- a community food box delivery program if required due to mobility or affordability or other issues.

Sixteen (16) out of 21 participants indicated their primary source of fresh foods was in supermarkets, mainly because they were convenient and easy to travel to. Only 3 participants shopped primarily at any stand-alone fruit and vegetable shop.

Despite the proximity of the farmers' market, only two participants indicated this was their primary source of fresh foods. However, 10 out of 21 participants indicated they regularly attended the farmers' market. This, combined with other responses and discussion in the focus group suggest that the market is reasonably well patronised and so is likely to be a secondary source of fresh foods; with this mainly in respect to specialty as compared to day-to-day items (see boxed text under Q. 27).

Participants also appeared to have a high degree of awareness of the importance of healthy eating in keeping healthy. A number of comments in this regard were volunteered by participants when asked about things they regarded as important in keeping healthy (see boxed text below). 12 out of 21 participants cited 'being able to go to a farmers'' market' as important to their health, and discussion in the focus group included some questioning about the freshness of supermarket foods.

Since the Audit and participant interviews and focus group a large dedicated retail area ('East Village') has opened within Victoria Park itself. It includes a major supermarket, and separate dedicated bakery, butcher, fruit and vegetable and fish shops.

Comment by interview survey participants on food and keeping healthy:

- [Good to have] shops interacting with the community – not just taking from it.
- Council support for purchasable stand-alone wall gardens to grow own vegetables. Don't want to have to attach it to a common wall.
- [Need] shops that sell fresh fruits and vegetables.
- Easy access to supermarkets to buy food – so you don't get tempted to order 'take-out'.
- Healthy food options in the supermarket and retail shops e.g. salad bar.
- More cafés in the local area – with a range of healthy food.
- Business supplying healthy food in the area is very important.
- Good access to supermarkets and other necessary facilities.

Q. 28. Are the shops selling fresh healthy food accessible?

The placement and relative accessibility of supermarkets, green grocers, and farmers' markets can promote or hinder consumption of healthy foods.

Yes. Although access was variable at the time of the Study surveys.

Access to fresh food shops in the immediate neighbourhood was a principle source of dissatisfaction amongst participants. At the time of the Audit and participant interviews and focus group there were no shops that sold fresh foods in Victoria Park itself, meaning that participants had to shop elsewhere. This, combined with the need to carry shopping, was also a significant reason for a relatively high level of car use even though participants were otherwise also high users of 'active transport' modes.

- 16 out of 21 participants (76%) indicated they were dissatisfied with their 'access to fresh food shops in the neighbourhood', with only 4 participants indicating some level of satisfaction (and one participant neutral).

The Community Food Survey undertook an assessment of the quality, variety and cost of the healthy foods available in the area immediately surrounding Victoria Park, including supermarkets in the suburbs of Alexandria, Eastlakes and Waterloo (Table 4.5). Generally the Victoria Park locality, which

would be regarded as a middle level SES area, compared favourably with other areas including in terms of price against low SES suburbs:

- the cost of a general basket of healthy food was lower than the averages for both high SES and low SES areas in Sydney.
- the cost of a basket of fruit and vegetables was only marginally higher than that for low SES areas in Sydney.
- the quality of produce was higher than the average from all other areas.
- the variety of produce was however much lower than for the average of high SES areas and only marginally higher than for low SES areas.

Table 4.5: **A comparison of supermarket prices, quality and variety of fresh produce.**

Food measure	**Victoria Park surrounding areas**	**High SES Sydney suburbs***	**Low SES Sydney suburbs***
Cost of healthy food basket (mean)	$172	$194	$177
Cost of fruit and vegetable basket (mean)	$24	$27	$23
Produce variety (mean)	50	55	49
Produce quality score (mean)	43	42	41

* SES = socio-economic status.

The weekly farmers' market in Victoria Park itself is held in Joynton Park which is centrally-located and within quick, easy and level walking distance of all dwellings within Victoria Park. The Community Food Survey also undertook an assessment of the quality, variety and cost of the foods available at the market. These are detailed under Q. 31.

Since the Audit and participant interviews and focus group a large dedicated retail area ('East Village') has opened within Victoria Park itself, not far from the location of the farmers' market. It includes a major supermarket (open from 6.00am to midnight), and separate butcher, fruit and vegetable, and fish shops (one of each, open variously to 5.30 or 9.00pm). Like the farmers' market it is within quick, easy and level walking distance of all dwellings within Victoria Park; and it would not be necessary to use a car to carry shopping back home. 'East Village' opened after the Community Food Survey and as such it has not been assessed in terms of quality, variety and cost of produce. That said, a visual assessment at the time of preparing this Report suggests that these would be comparable to the other fresh food shops in the locality in terms of price and quality; and is likely to have increased in respect to variety, meaning that the previously relatively low score in this regard (refer Table 4.5) would now not be the case.

It is not known whether the opening of 'East Village' has impacted on patronage of the farmers' market.

One participant indicated they utilised the local community food box delivery program (the Food Distribution Network) because current mobility issues made it difficult to shop outside Victoria Park. It is not known whether the recent opening of 'East Village' has changed this situation.

Focus group comment on accessibility of healthy food:

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.

Food, and eating healthy. So, do you find that is facilitated, easy to do?

Not really at the moment. I mean, you do have to go to different places to get that healthy type of food.

Correct, that's right.

So the healthy [farmers''] markets, like, I suppose they're giving us some healthy options, but that's only coming every Saturday, and if you're away for the Saturday, like last week I went away, we missed out on that. Then you've got to go up and buy fresh veggies from Coles, or whatever, and they're rotten in two days. Yes.

There's apparently another market's popped up at Danks Street that we've all been told would be lovely. You've still got to get the stuff back from Danks Street. This suburb is - like, once we get our Coles, everyone's going to be fine. But how long? I've lived here for just four years, and obviously you guys have lived here a lot longer than that. So yes, it's ridiculous that there's no shopping centre.

So where do you go now?

I go down to Eastlakes, sometimes, because there's a Coles.

The markets in Chippendale. What's it called? Eveleigh.

I get mine delivered because I have problems getting around and it's through the Food Distribution Network, and now that's being squeezed too, for funding. It's not being funded. So that might go. It's getting tighter and they're discussing whether they should keep funding it.

Where are they?

They were in Surry Hills. Now they've moved … to … somewhere. They supply fresh fruit and vegetables to people with AIDS, and people that are disabled and people in the Sydney south and city area.

What are the markets like, the Saturday farmers'' market, in terms of affordability?

They're really quite good. The fruit and vegetables, I find, are pretty comparable to what you get in the supermarket.

It lasts a lot better.

Yes, it's fresher and it lasts longer, so I find them really good. We go there every week.

The meat's expensive.

The bread's good.

But expensive. It's $7 a loaf.

That's for a good quality sourdough.

For me, it's only just myself and my daughter at home, so buying a $7, $8 loaf of bread is not really...

Yes, but your comparison is, say, if you bought Sonoma bread or whatever, that's probably $9. So it's probably comparably priced or high quality bread.

See, I don't even - that's where we're going here. We're going, you eat Sonoma bread … . It would be just good to go to the supermarket and get, just, a run of the mill, reasonably-priced loaf of bread.

Yes.

Yes, for toasted sandwiches or something.

The [new] Coles and that centre here is going to be very popular, not just for us here, but also for everybody else around here. It will serve us all the same.

Yes. It won't be [everything], but still we can walk there.

Comment by interview survey participants on access to fresh foods:

- Good if there were a few more fresh food shops.
- Need more fresh food shops, cafes and entertainment places.
- Apart from the weekly farmers'' market, there is currently no place to buy day-to-day items except for an Asian supermarket. Need to do something about this. May improve with opening of the East Village development.
- Once the Coles and Green Square Aquatic Centre come along it will improve the area.
- Dissatisfied with the amount of businesses.
- We do not have a lot of places selling fresh food – waiting for the new centre to open.
- Would like a fresh fruit market (like the Adelaide Central Food Market or Victoria Markets in Melbourne).

Q. 29. Is there a relative over-abundance of EDNP food shops?[34]

The placement and relative accessibility of fast food outlets, pubs and convenience stores may entice consumers away from or even prevent consumers from purchasing healthier alternatives.

No.

At the time of the Audit and the interviews and focus group with participants the only shops in Victoria Park that sold food were a small Asian supermarket and a convenience store. The convenience store did not sell fresh foods (other than dairy products) and stocked mainly snack type foods, and the Asian supermarket only stocked a very limited range of vegetables particular to Asian cooking. Although in this sense it could be said that there was a relative over-abundance of EDNP food shops, at least at this stage of the Study, this was not the overall impression given the convenience store was not visually prominent, being located on the ground floor of a large residential building and without any accompanying strong signage. This characteristic is also the case with a subsequent small convenience store that has subsequently opened in Ascott Avenue opposite the basketball court.

The participants themselves did not raise any particular concerns about relative presence of healthy and non-healthy food shops. In the focus group, two entries about the 'things that are helping me to keep healthy' were positive in this regard; that:

[34] Food that has both high levels of energy (energy-dense) and low levels of nutrients (nutrient-poor) (EDNP in abbreviation) are regarded as being essentially unhealthy, leading to poor dietary outcomes. Such food tends to be characterized by high content levels of fats and sugars. Examples include what are typically referee to as 'fast' takeaway foods as well as many pre-packaged/processed 'snack' foods. See, for example: http://www.publish.csiro.au/?act=view_file&file_id=HE11210.pdf..

- there were not many fast food outlets in the area, compared to where the participant lived previously.
- the area had a good choice of healthy food options.

A significant proportion of shops within the new 'East Village' retail centre comprise food shops, consistent with one of the marketing slogans for the centre: 'Eat the day with East Village'. Although there are a number of shops selling prepared foods, fresh food shops appear to dominate and the shops selling prepared foods are mainly in a sit-down format and are not orientated to 'standard' 'fast foods'. This orientation appears to be intentional, as suggested in other marketing slogans for the centre, such as: 'Sydney's newest marketplace' and 'Local shops, redefined'. It also appears to be consistent with the generally high awareness about healthy eating demonstrated by the participants, and may prove positive in assisting to resolve any lingering issues with diet as expressed for instance by participants in the focus group, who advised:

- there was still some tendency to eat 'junk' food.
- healthy eating could be assisted by planning meals better and shopping accordingly.

Q. 30. Do participants have an ability to grow healthy food?

The provision of space and resources may encourage people to grow some or a lot of their own food. This assists freshness and thus nutrition, and also raise interest and awareness of healthy eating generally. Visibility of fresh food growing can also raise such interest and awareness.

Yes, though limited to pots and planter boxes and by pollution concerns.

Five (5) out of 21 participants (23.8%) indicated they grew some of their own food. This was either in pots on balconies or, for one participant, in the community planter boxes in Joynton and Tote parks. Foods grown were generally herbs and fruit trees and some small vegetables.

Two participants indicated that they used to grow foods on their balconies but stopped because of concern about contamination from air pollution.

The community planting boxes are large free-standing self-watering containers. They are provided by the local Council and managed through the Green Square Growers network which also holds events and classes aimed at encouraging local food growing in general.[35] Signage attached with the boxes invite anyone to pick and use the produce grown. However an inspection of the boxes at the time of preparing this Report revealed little was being grown, with limited maintenance.

The low level of use of these boxes by participants is somewhat inconsistent with the number (eight out of 21) who indicated that 'being close to a community garden' was important for their health. However, the actual size of the boxes is not large and at the time of the Study interviews they did appear to be fully utilised. Participants were fairly evenly divided as to the importance of

[35] Refer: https://www.facebook.com/GreenSquareGrowers.

community gardens to their health, with eight participants indicating they were important, six indicating they were not important and six being neutral (with one indicating they did not know). This is perhaps likely to reflect the inner city nature of the area, where the ability to provide community gardens is in any case very limited. That said, in late 2014 the local Council was soliciting interest in a possible community garden in the adjacent suburb of Rosebery.[36] It may also be worth investigating potential interest in establishing some community garden plots closer to Victoria Park within some of the open space and community facility developments currently planned at the nearby Gunyama Park and former South Sydney hospital sites.

Comment by survey interview participants on growing their own food:

- Grow herbs, chives and tomatoes.
- Part of Green Square Growers – use various self-watering planters near the library and in Joynton Park. Planted a few things (parsley and things like that) and use items regularly.
- Grow oranges, apples, limes and herbs on balcony in pots. Would like to grow more.
- Lime tree, herbs – in pots on the balcony.
- Grow herbs and chillies on balcony (2 entries)
- No opportunity to grow own foods. Had an orange tree on the balcony, but was concerned about pollution from aeroplanes.
- Originally planted fig, mango tree, herbs, tomatoes etc. but stopped doing it because of the air pollution – believes it is poisoning the food.

Q. 31. Can (farmed) healthy food be sourced (fresh) close to participants?

Healthy food needs to be fresh. Ensuring agricultural areas close to urban areas are retained can assist by reducing the necessity for extensive transport infrastructure to get food grown elsewhere to urban areas within critical time-frames, and reduce need to treat food to maintain freshness. Visibility of fresh food growing can raise interest and awareness of healthy eating generally.

Yes, from the weekly farmers' market held in Victoria Park.

A weekly farmers' market (the Green Square Markets) is held in Victoria Park itself in Joynton Park which is centrally-located and within quick, easy and level walking distance of all dwellings within Victoria Park. The market is held on Saturday mornings from 9.00am to 3.00pm.

There are various other famers' markets in the general locality, though are further away and invariably involve access by car: the Eveleigh Farmers' Markets (Saturdays), Sydney Sustainable

[36] Although in late 2014 the local Council was soliciting interest in a possible community garden in the adjacent suburb of Rosebery. Refer: http://greensquarehub.com/2014/10/15/green-square-growers-supports-new-community-garden-in-rosebery/.

Markets (Taylor Square, Saturdays) and the Entertainment Quarter (EQ) Village Markets (Moore Park, Wednesdays and Saturdays).

Despite the proximity of the Green Square Markets, only two participants indicated it comprised their primary source of fresh foods. However, in a separate interview question 10 out of 21 participants indicated they regularly attended the market. This, combined with other discussion in the focus group suggest that the market is reasonably well patronised and so may well be a secondary source of fresh foods. Discussion in the focus group indicated most participants thought that prices at the market were too high to make it viable for 'everyday' fresh food purchases (refer text box under Q.28). The discussion also included a comment by one participant (see below) that it was a missed opportunity that a large produce market such as found in central Adelaide and Melbourne had not been taken up in Victoria Park. The practicality of this suggestion was not further pursued, and it is not known whether the subsequent opening of the 'East Village' with its extensive range of fresh food retailing satisfies to an extent this participant's needs, or, on a wider perspective, whether it has impacted on patronage of the farmers' market.

Focus group comment on the possibility of a local central produce market:

> Sydney used to have the Queen Victoria Building many years ago that was the equivalent to the Queen Victoria Markets in Melbourne and the Central Markets in Adelaide. Apart from Paddy's Markets, Sydney has nothing now. This would have been a perfect site to do something like that, it would have been perfect. … It's purpose-built markets and they have everything there, like, there's all stalls for every type of mushroom and all this sort of thing. It's the place where, each time I've lived in Adelaide or in Melbourne, when you go there, you get to meet people and it's just, you know, so you're buying decent food, they have fresh fish and stuff, like everything that you need. But it's not a supermarket type thing. So supporting a lot of small businesses.

The Green Square Markets were not operating at the time of the Community Food Survey and as such there has been no assessment of the quality, cost and source of the food items on sale there. The survey of the Eveleigh Farmers' Market, the EQ Village Markets and the Sydney Sustainable Markets as part of the community food assessment component of the Audit indicated that on the days surveyed:

- at both the Eveleigh Market and the Sydney Sustainable Markets about 50% of the items costed were more expensive than the average for all markets surveyed, and 50% were less than or generally equal in cost.
- at the EQ market about 85% of items costed were more expensive than the average for all markets surveyed, with 25% less than or generally equal in cost.

The survey also found that there was a much higher propensity for each of the three markets to have produce sourced from the stallholder's own farm or property when compared to all the markets surveyed (Table 4.6).

Table 4.6: **Source of market produce.**

Source of produce*	EQ Village Markets	Eveleigh Farmers' market	Sydney Sustainable Markets	All markets surveyed
Own farm or property	38%	43%	50%	26%
Within local area	25%	14%	13%	20%
Within state	-	43%	25%	27%
Interstate	38%	43%	-	15%
Overseas	25%	29%	13%	12%

* The figure represents the number of stallholders stocking produce from a particular source. Most stallholders sourced their produce from more than one location.

Q. 32. Is there a diversity of sources available for the sale or other distribution of healthy food (eg. markets, co-ops, food trucks)?

> Maintaining a diversity of potential outlets for healthy food (ie. not just shops and supermarkets) increases the potential for variety of food available, responsiveness to particular local demands and needs, and fresh food environments that will also facilitate a variety of incidental social interactions.

Yes. Residents can access a market, a community food box program, and food trucks.

In addition to the recently opened 'East Village' retail centre and the longer established Asian supermarket residents of Victoria Park have access to a variety of other sources of healthy food:

(i) the weekly Green Square Markets held in Joynton Park in Victoria Park itself, as well as a number of other framers markets held in the general locality (refer Q. 31).

(ii) a program of subsidised food boxes prepared and delivered by the local community-based Food Distribution Network, if required due to mobility or affordability or other issues. Although the participant who indicated they used this service also noted that there were now issue with continuity of funding for this program (see text box under Q.28).

(iii) different mobile food trucks which locate at various times adjacent to Joynton Park. The food trucks have been established and supported in recent years under a policy adopted by the local Council. It is up to the operators of the food trucks themselves to decide where they wish to locate within the larger local government area at any particular time. Patrons can find the current location of the now 20 food trucks via a mobile phone app. The food trucks sell prepared, mostly cooked foods rather than fresh food items. The Council guidelines for applications for new food trucks include as an objective that they provide 'high quality, healthy and affordable food options'; however there appears to be no specific definitions or requirements in this regard.[37] No assessment is made here in respect to the health status of the food sold in the food trucks except to note that they would appear generally to be at the 'healthy' end of the food spectrum.

[37] Refer: http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0009/199017/02-Food-Truck-Guidelines-March-2014.pdf

It is also relevant to note the response of one participant, and which was not anticipated in the design of the interview questions: he advised that he did not buy any fresh foods because he did not cook for himself at home. Rather he ate at a local café or restaurant most (95%) of the time. This was both a time-saving measure (in respect to both shopping and cooking) and a way to socialise given he lived alone. The participant stressed that he did not go to EDNP (or as he described, 'fast food') shops and considered that he ate healthily. The remainder of meals he would buy at a local food truck and take home to eat. He commented: 'I do like the food trucks – they have added to the experience of the area'.

Q. 33. Are eating habits being adversely affected by local advertising?

The relative marketing and advertising of healthy and unhealthy foods influences consumption habits. Public exposure to signage advertising healthy food in, around and near public spaces, sporting grounds and schools may affect patterns of consumption.

No.

The zoning and predominant use of the area as a residential with only small, neighbourhood-scale other uses is unlikely to result in an undue quantity or size of general signage. There are no stand-alone signs; the only commercial signage in Victoria Park are attached to specific commercial premises. These are relatively small in size and in number (except for the new East Village centre) and give no particular prominence to non-healthy foods. The external window signage to the Asian supermarket (Figure 4.1) on a prominent corner position on Gadigal Avenue actually specifically mentions the existence of healthy foods (even though it sells relatively few fresh food items).

Signage within the 'East Village' centre is again relatively small-scale and relate directly to the individual premises there, and also give no particular prominence to non-healthy foods.

Further, there appears in any case to be an overall awareness amongst the Study participants of the importance of healthy eating to their overall health, suggesting that the likelihood of their eating habits being influenced by advertising would be low.

Q. 34. Is the presence of healthy food options visible?

The relative marketing and advertising of healthy and unhealthy foods influences consumption habits. If healthy food options are hidden away they are less likely to be taken up.

Yes.

There are a number of ways in which healthy foods are visible to residents of Victoria Park:

(i) the individual fresh food shops (fruit & vegetable, meat and fish shops) in the 'East Village' retail centre are quite visible. The fruit and vegetable area in particular is designed in a highly visible 'market' format.

(ii) as is now current practice in supermarket floor layout, the supermarket in 'East Village' gives visual and locational prominence to its fresh food sections.

(iii) the weekly farmers'' market in Joynton Park is centrally-located, is well-patronised, and sells a good variety of fresh foods.

(iv) although not overly prominent, the community planting boxes are located within the public parks which are themselves well-used; and signs on the boxes invite anyone to use the produce and/or become involved in the associated Green Square Growers Network which has its own Facebook page.

In terms of the relative visibility of healthy food options relative to non-healthy foods it is considered there are insufficient ENDP food outlets for this to be a concern. Here it is noted that the Study participants themselves did not raise any particular concerns in this regard.

The food trucks provide another visible source of foods. These sell prepared, mostly cooked foods rather than fresh food items themselves. As discussed under Q.32, no assessment has been made in this Study as to the health status of the food sold in the food trucks, although it is noted that they would appear generally to be at the 'healthy' end of the food spectrum.

Figure 4.1: **Window signage on local food store, Victoria Park.***



* Photographs taken September 2015.

Summation – Nutrition.

(i) Participants appear to have a high degree of awareness of the importance of healthy eating to their own health. Significant frustration was expressed about the lack of options, at the time of the interviews and focus group, to purchase fresh foods within Victoria Park itself.

(ii) This high level of awareness combined with high levels of personal mobility meant that the lack of immediate shops selling healthy food in Victoria Park did not present any issues. However note also needs to be taken of:

- comment about the importance for some of the community food box program, and
- a suggestion, made in the focus group that a lack of local shops combined with personal time pressures can lead to poor eating due to a lack of pre-planning.

(iii) In the period since the interviews and focus group, a major new retail centre has opened in Victoria Park. This has resolved the issues in respect to the availability and access to fresh foods locally. Although this centre was not able to be included within the (earlier) Community Food Survey the variety, affordability and quality of produce available would appear to be consistent with that in stores in surrounding localities and which the Survey found to be of a good standard. A visual appraisal of the Centre also suggests that an emphasis on fresh foods appears to be a particular orientation in its design and management. It may be worthwhile to make this orientation more explicit to ensure it is maintained.

(iv) A local Council policy in respect to the relative emphasis on healthy and non-healthy foods in both local shops and local signage could encourage and if necessary enforce this orientation.

(v) Residents can also access a subsidised community food box program if needed due to mobility, cost or other reasons. The continued need for this program should be monitored to ensure it is maintained for as long as needed, particularly given the affordable housing component of the overall development and comment in the focus group about a possible reduction in funding.

(vi) The local Green Square Markets and visits to Victoria Park of various food trucks, as encourage by a local Council policy provide useful additional sources of healthy foods, as well as important social interaction co-benefits. It may be worthwhile to continually monitor the viability of the Markets in terms of variety and cost of produce sold, particularly now with the opening of the 'East Village' development, in order to ensure its continuation.

(vii) Few participants grow their own food notwithstanding that there is a local group (Green Square Growers) promoting this, and the presence in two of the main local parks of planter boxes in which food plants are grown. The fact that most dwellings have no ground area will be a primary reason, although participants also indicate low interest in community gardens. Some participants have grown food items in balcony pots but have discontinued because of a concern about air pollution. The public planter boxes are highly visible and should be maintained as both an opportunity for the involvement of other residents and the promotion of locally-grown fresh foods generally. The growing of food items on balconies is also likely to

be highly visible and should be encouraged. This Study is not able to comment on the validity of the stated concerns about the effect of local pollution. Some assessment of this should be made by a reputable body, with the results published. The local council should continue with its proposal to establish a community garden in an adjacent suburb, and consider extension within new proposed public spaces and community facilities in the adjacent Green Square development area.

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4.4 Wellbeing – the overall attributes of Victoria Park as a healthy place.

Introduction.

The previous sections (Sections 4.1 to 4.3) have assessed the Study findings against the known healthy built environment determinants as described in each of the three domains and seven key actions identified in the earlier literature review, and the related series of 34 questions.

This Section takes a further look at these findings, now from the perspective of the 'overall' relationship between the physical make-up of Victoria Park and the health of its residents. In this sense it is about how all the elements of Victoria Park interact to generate a level of 'wellbeing'. It is structured around four topics:

(1) participants' overall satisfaction with Victoria Park as a 'good place to live' and in terms of whether they would be 'sad to leave'.
(2) participants' overall satisfaction with specific health-related matters as experienced when living in Victoria Park.
(3) the degree to which participants have access to the factors they need to keep healthy.
(4) the nature of any on-going annoyances expressed by participants.

The assessment in item (2) draws in particular on responses to a series of questions asked in the interviews. The results are illustrated in Table 4.7, in two ways: [38]

(i) by including the *actual numerical* total of participants citing the particular 'level' of satisfaction with the particular matters asked in the interview questions (out of a total of 20 participant interviews).
(ii) by representing the *relative* levels of satisfaction and dissatisfaction with the various matters via bands of shading. Darker bandings represent higher 'scores' or numbers of participants citing a particular level of satisfaction; the lighter bandings represent fewer numbers of participants citing that particular level. When looking at the Table as a whole they give a quick visual indication of:

- whether participants are *overall* satisfied or dissatisfied with the experience of living in Victoria Park (as measured through this list of specific matters).
- those matters which stand out (i.e. as darker shadings) as leading to high levels of satisfaction, or to high levels of dissatisfaction and thus requiring attention.

[38] The list of matters is the same as those used in a similar study of Selandra Rise, a new residential estate in Melbourne, Victoria (*The Selandra Rise Neighbourhood Health and Wellbeing Survey*; Maller, C. & Nicholls, L. (2012), unpublished research, RMIT University). They were chosen as a way of enabling future comparative assessments of projects in different areas in Australia. However, two matters have been deleted from Table 4.5 on the basis they are not directly applicable to the healthy built environment focus of this Study: 'access to major roads or freeways', and 'access to car parking in your street'.

Table 4.7: **Living in Victoria Park - overall levels of satisfaction.**

	STRONGLY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	STRONGLY SATISFIED	DON'T KNOW/ NOT APPLICABLE
1. Access to public transport in your neighbourhood.		2	1	11	7	
2. Travel time to work.		2	1	5	7	6
3. Travel time to your place of study.				1	2	18
4. Travel time to children's school or place of study.		1		1	2	18
5. Speed of vehicle traffic in the local streets near your home.	2	8	2	9		
6. Traffic noise near your home.	5	7	1	4	4	
7. How easy and pleasant it is to walk in your neighbourhood.	2	1	2	5	11	
8. How easy and pleasant it is to cycle in your neighbourhood.		2	2	4	3	10
9. Safety from threat of crime in your neighbourhood.	1	1	2	7	10	
10. Personal safety in neighbourhood streets after dark.	1			12	8	
11. Access to entertainment in your neighbourhood.	4	5	6	6		
12. Access to fresh food shops in your neighbourhood.	3	13	1	3	1	
13. Access to cafes and restaurants in your neighbourhood.	1	8	4	4	4	
14. Opportunities to meet people in your neighbourhood.		2	7	7	5	
15. Number of friends you have in your neighbourhood.	1	4	4	9	3	
16. Number of people you know in your neighbourhood.		5	1	11	4	
17. Child care in the neighbourhood.	1			2	1	17
18. Primary schools in the neighbourhood.	2					19
19. High schools in the neighbourhood.	1	1				19
20. Number of parks in your neighbourhood.	2	2		7	10	
21. Quality of parks in your neighbourhood	1	1	2	8	9	
22. Community Centres in your neighbourhood.	2	2	5	5	4	
23. Access to medical services in your neighbourhood.	1	6	2	4	7	1
24. Your neighbourhood as a good place to raise children.	2	2	1	7	1	8
25. Your neighbourhood as a good place to live.	3			11	7	

(1) Participants' overall satisfaction with living in Victoria Park.

Overall levels of satisfaction with living in Victoria Park are very high.

Participants were asked to rate their level of satisfaction with Victoria Park 'as a good place to live'. As shown in Table 4.7 (Item 25):

- 18 out of 21 participants (85.5%) advised that they were either 'strongly' or 'somewhat' satisfied.

This high overall satisfaction is also illustrated in Table 4.7 by the high relative weighting of the coloured bandings representing key groupings of satisfaction and dissatisfaction towards the 'satisfaction' side of the Table (the right-hand side). Although there are also a number of matters with high scores of dissatisfaction, as discussed in more detail below many of these are likely to be alleviated as additional facilities become available in the general locality as the larger Green Square redevelopment progresses. The matter scoring the highest level of dissatisfaction, 'access to fresh food shops in the neighbourhood', is likely to have already been alleviated with the opening of the East Village retail development in the latter stages of this Study.

In a subsequent question in the interviews participants were asked whether they would be 'sad' to leave Victoria Park. The responses are less positive:

- 12 out of 21 participants (57%) indicated they would be sad to leave.
- six (6) participants (28.5%) indicated they would not be sad to leave.
- three (3) participants 14%) indicated they did not know.

The 3 participants who indicated they were dissatisfied with Victoria Park as a 'good place to live' indicated they were 'strongly' dissatisfied. A review of their comments indicates:

- for two participants (who were from the same household) the main concerns appeared to be cultural in respect to their affinity and perceived ability to interact with other residents in Victoria Park, rather than about built environment features – although high levels of dissatisfaction with the management of parks were also cited. Specific comments included:

> Treatment of parks and green spaces important. Culture-issues with the large Asian population, kids, couples, large extended families, assimilation. There is no entertainment in the neighbourhood. Opportunities to meet people are limited, and there are cultural barriers to making friends and getting to know people. There should be one large park instead of smaller disconnected parks. Use of existing parks is poor, particularly because of dogs, lack of signage.
>
> Find it difficult to get used to the culture and habits of people in the neighbourhood-do not feel happy or comfortable with it. Disconnected from the places likes to walk to-would like a continuous path, not be stopped at traffic lights, etc. Cycling is dangerous within traffic-lack of segregated lanes. Would buy a bike if there were more cycle paths.

  These participants had left Victoria Park by the time of the later focus group.

- for the other participant there were also some issues with the nature of the population, mainly in respect to feelings of insecurity generated by groups of youth on the streets, and

the transitoriness resulting from a large number of overseas students. However there were also substantial expressions of dissatisfaction with built environment matters ranging from the neighbourhood level (concerns about air pollution (resulting in personal respiratory problems), traffic noise, lack of entertainment facilities, easy walking opportunities, access to food shops and to local medical services) to the design of individual dwellings (need for better noise insulation, a second bathroom, and storage space).

The reasons for the large variation in response between participant's overall levels of satisfaction and whether they would be sad to leave are unclear. They could be a combination of:

- participants being in a more transient stage of their lives, and where close access to jobs in the CBD and the range of entertainment available in the inner city takes precedence in choice of housing location.
- the frustrations which have been expressed about a certain anonymity that comes from living in multi-unit residential buildings, and which have lead also to some comment about a desire for some greater 'connection' with neighbours and others.
- the frustrations that have been expressed about the inherent noise (generally from traffic) and dirtiness (generally from air grit) associated with inner-city living, and also about the increased impacts on amenity from the larger scale of buildings that have been constructed in the later stages of impact of the overall development.

It may also be the case that participants may be less 'sad' to leave their area once the additional and quite substantial community facilities in the wider Green Square locality come on-stream, and given also the current proposals for which indicate they are to be provided at a particularly high standard. These include an aquatic centre, active sports fields, a community centre, and a library. Future proposals also include a light rail system and links with regional bicycle routes. Conversely, it may also be that the parallel substantially increased scale and density of development proposed in the nearby Green Square Town Centre development acts for some as a further reason to not feel 'sad' about leaving Victoria Park.

(2) Participants' overall satisfaction with specific health-related matters.

In addition to the more composite matter of 'your neighbourhood as a good place to live', participants were asked to rate their levels of satisfaction with 24 individual matters relating to living in Victoria Park (Items 1-24 in Table 4.7). As noted, although there is a strong weighting to the 'satisfaction' side of the Table there are also there are also some 'stand out' matters with high scores of dissatisfaction.

Most of these responses have been discussed in the preceding sections relating to each of the three domains of physical activity (refer Items 1, 7, 8, and 21), social interaction (refer Items 9, 10, 14, 15, 16, and 22), and nutrition (refer Item 12). In summary:

- There is a high level of satisfaction with matters to do with participants' ability to 'get around' their neighbourhood, levels of accessibility to their work, and general feelings of security

(access to public transport, travel time to work, ease and pleasantness of walking, personal safety).

- This satisfaction does not however extend to the ease and pleasantness of cycling or to access to entertainment facilities, cafes and restaurants, fresh food shops and medical facilities. There is though the potential for an increase in satisfaction in these matters as development in the broader locality 'matures', including the establishment of dedicated cycle paths and a greater range of facilities in and around the nearby Town Centre which is currently under construction. Access to fresh food shops and medical facilities is already likely to have improved with the recent opening of a new retail/business development in Victoria Park itself.
- There is also a high level of satisfaction with local parks. Satisfaction with local community facilities is more variable, though may be addressed in the future as facilities in and around the nearby Town Centre come on-stream.
- The high levels of satisfaction with the ease and pleasantness of walking and with local parks is however tempered, when more detailed comment is made, in terms of how local parks are managed (issues of dog poo limiting use by others, accessibility to playgrounds across busy adjacent roads, and adequacy of the ball courts in meeting demand by all potential users, and a reduced pedestrian amenity in areas adjacent to Victoria Park).
- There is a certain variance in opinion in respect to levels of satisfaction in respect to meeting with and getting to know other people in the neighbourhood. While there is generally good levels of overall satisfaction, and embryonic social networks apparent, there is also an element of frustration expressed (though not by all) in the ability to know 'who is who' in terms of immediate neighbours in multi-unit residential buildings, and in the availability of avenues to become closer acquainted.

Importantly, of the seven matters that give rise to levels of dissatisfaction, four would seem to arise largely because of the early stage of development of the surrounding Green Square redevelopment area within which Victoria Park is situated (being access to entertainment facilities, fresh food shops, cafes and restaurants and medical services). Given that Victoria Park is primarily a residential area, it is within the more mixed-use surrounding area that most of the non-residential land uses comprising new entertainment, retail and community facilities will be constructed. The intended scale of this area will mean that these facilities will also in themselves be substantial. Further, the ease and pleasantness of walking or cycling to these future facilities should also improve as the surrounding locality further 'matures'. In any case the issue of access to fresh food shops and medical services may well be already resolved for participants given the opening in Victoria Park itself, but after the interviews and focus group were conducted, of a supermarket and affiliated individual fresh food shops and a medical centre in the 'East Village' development.

Of the remaining matters:

- The issue of traffic speed could be potentially resolved through local traffic control measures. There is some suggestion that it results from drivers attempting to use local streets to by-pass congested surrounding main roads, and from patrons of the Audi car showroom in Victoria Park. In respect to the latter a targeted 'driver awareness' campaign might assist.
- The issue of traffic noise will be more difficult to resolve. Issues relating to noise from construction vehicles at local building sites will be resolved as these sites are completed in the near future. It will not be possible to reduce noise emanating from surrounding streets. As

mentioned by some participants, this points to the need to pay greater attention to noise amelioration within individual dwelling designs.

- The, slightly lesser, concern about the numbers of people that participants know in the area or could regard as friends may be assisted as the length of residency increases, and also by the proposed increase in community facilities and entertainment facilities more generally increases within the surrounding area. Nevertheless, participant comment does also indicate a need to develop better ways in which residents of large multi-unit buildings can get to know each other.

Focus group comment on local traffic speeds:

> They could do a bit more [traffic] calming devices or things like that, to stop people actually coming from the M5, making a short cut through, racing down Gadigal Avenue to get up to Elizabeth and they come flying down there. So if they slowed it down with a calming device, they could make it safer for everybody.
> It's a speedway, yes, a speed road…
> We need calming devices, definitely.
> People [at the Audi offices], they've got their high performance cards and they use that as a test strip. Yes, five o'clock knock off, the boys get in those cars, bring them home, and they will come through here, at 60 and 70 [km/h] where you're trying to cross with a dog, women with prams, elderly people, and you can ring up, you complain, and it never stops, even though you can say, you can identify who it is. Five o'clock knock off, all the time.
> It's also [about] drive through, people coming in from the freeway down on to Gadigal, then they avoid all of the lights and traffic along the [main road].

(3) Access to factors participants advise they require to keep healthy.

Participants in the focus group were asked to list the behaviours and things they considered they need to be healthy, and then:

- those matters they currently had access to, and as such were currently assisting them to keep healthy, and
- those matters they currently did not have access to, and as such, if available, would further assist their ability to keep healthy.

Although participants were aware the Study was primarily orientated to matters relating to the built environment, no restriction was placed on what participants could advise see Section 3: 'Methodology'). The responses to all questions are shown in Table 4.8.

Most matters relate either directly or indirectly to the three domains of chronic disease risk factors that have been the focus of this Study (physical activity, social interaction, and nutrition). Additional matters that fall outside the three domains were also identified by the participants. They are shown as circled in Table 4.8.

Matters relating to the three domains.

The responses to the questions about matters participants do or do not currently have access to are shown in Columns 2 and 3. The matters that can be addressed through built environment actions are highlighted in two ways:

- actual 'direct' built environment matters are shown in darker highlighting.
- associated, more 'management' related items are shown in lighter highlighting.

Addressing these matters will assist participants to achieve the things they list as important for their health and which they also need to give more attention to in terms of their personal behaviour (Column 4).

A key feature of the responses in Columns 2 and 3 is that most relate to the built environment. In particular key built environment features such as open space and associated facilities, access public transport and/or the ability to use other forms of 'active transport', and a good choice of healthy food items relative to non-healthy food outlets are given strong mention when participants cite the matters which are contributing to them keeping healthy *now* (Column 2).

Further, most of the remaining items can also be considered to relate to the built environment, but more in terms of the provision of services and the ability to socialise. The 'total' layout of the area, in a sense the combination of all these factors, is also mentioned (twice).

However, notwithstanding these existing positive attributes of Victoria Park as a healthy built environment, built environment matters are also strongly cited when participants list the matters they still require to keep healthy (Column 3). Addressing this matters will in turn assist participants to achieve (provided the personal will is there and/or not hindered by other matters of personal circumstance) those additional things they should be doing to keep healthy (Column 4). Most of these matters raised have already been covered elsewhere in this Report. Positively, about half are to be provided within the broader Green Square locality in coming years as specific developments (the Town Centre, the aquatic centre and associated active recreation facilities, dedicated cycle paths) come on-stream, and some are already likely to have been achieved within Victoria park itself with the recent opening of the East Village retail and commercial services development. The ability to address remaining matters varies. Achievement of some (controlling dog poo, providing personal trainers and cheaper gyms, reducing traffic speeds, and perhaps social order matters in serviced apartments) could be assisted by active community-orientated 'management' actions by the local Council. Others appear to be more 'fixed' and are likely to remain a feature (trade-off) of dense inner-city living: noise, pollution, general congestion, privacy within individual dwellings). As such they deserve specific additional attention in terms of:

(i) providing quality compensatory built environment (and other) features – and which appear to be already included within the existing longer-term planning for the surrounding Green Square locality (as mentioned above).

(ii) giving greater attention in future similar high-density developments to key design details such as reducing over-looking to retain privacy, greater separation of dwelling living areas from pollution sources (driveways, garbage storage areas), and a greater feeling of 'space' between individual developments.

Table 4.8: **Focus Group responses: Victoria Park.**

What I do to keep healthy.	***What is helping me to keep healthy.*** (things I have now)	***What I need to keep healthy.*** (things I do not have now)	***What I should be doing to keep healthy.***
Walk(6 entries)	The locality of where I live	Cheaper gyms	Walk more (2 entries)
Walking the dog	Leash-free dog park	Swimming pool (hydrotherapy)	Walking in the parks provided
Walk 3 times / day	Tennis courts (Surry Hills)	Close swimming pool (2 entries)	Yoga / pilates
Tennis	Parks	Keep plenty of open areas/parks	Exercise more
Run	Park to run	Access to private personal trainers in park	Exercise
Exercise	Several small parks	More parks/playgrounds/ activity centres	Move all limbs when you get the opportunity
Fernwood Gym (3-4 times/week)	Nearby parks for cycling or jogging	Cycling tracks	Don't skip Pilates despite how busy
Take stairs, not lift	Parks, playgrounds, activity centres	More shaded areas with seating	Gardening
Weekly Pilates classes	BBQ, picnic area	Control dog poo in park	Less time on computer
Gym	Increased public facilities eg. library, markets	Chemist	Planning meals / big grocery shop
Play sport with my daughter	Parks (clears the mind) esp. like the water feature	Reasonable-priced supermarket	Stop eating junk food
Swim (2 entries)	Great communication in and around the park	Major fresh food market (eg. Melb., Adelaide)	Eat less treats
Shop local	Classes at local centres (exercise, dancing, yoga)	Healthy food stores (even supermarkets)	Eating different food options (healthy)
Buy healthy food at weekly market (2 entries)	Connecting with people when walking dog	Close by supermarket	Stop eating supper
Eat healthily	Walk dog in park provided	Fresh food shops	Control portion size
Eat well – lots of veges	Motivation from friends	Closer shopping facilities	Avoid bad food
Eat lots of fruit + vegetables and lean meat	Don't have a car, so forced to walk	Variety of cafes/restaurants	Drink more water
Try to eat sensible and healthy	Amount of public transport encourages you to walk	Bulk-billing doctor	Limiting alcohol (2 entries)
Balanced home cooked food	The transport	Better transportation	Not visit the bottle shop
Eat a balanced diet (with occasional exception)	Increased public transport	Over-crowding leading to rubbish/parking issues	Worry less about finances
Socialising with local community	Bus stops are at walking distance	No more building	Taking time out for myself
Enjoy time out with friends	Bike lanes - encourages you to use your bike	Fumes from too many cars	Getting more sleep
Looking after my children	Delivery of fresh fruit and veges	More order with people in the serviced apartments	Meditation (2 entries)
Spend time with loved ones	Not many fast food outlets (unlike previous location)	No speeding cars	More reading
Try not to stress	Food market	No noise	Physiotherapy
Time to myself, space	Area has good choice of healthy food options.	Air pollution from design of building driveway	Move to a cleaner healthier environment
Work	Gym within closer proximity (5-10 min)	Less cars/pollution/ building work/busy roads	More sun, more fresh air, get away.
Get plenty of fresh air	Pilates centre	More personal space	
Use public transport	Local gym	No pollution	
Close windows/doors to avoid air & noise pollution	The layout of the area – not congested, open space	Rubbish bins not emptied in front of windows	
		Privacy in my unit	
		Privacy	
		Self-control	

Additional matters.

The matters raised by participants that fall outside the three domains are also worth noting. Most tend to relate to quite personal issues and behaviours. Some can however also point to potential built environment responses (either through the provision of physical infrastructure or the management of that infrastructure or the provision of community services) in order to maximise the achievement of overall health. Examples (some of which either already exist in Victoria Park or will be provided in the on-going development of the locality) include:

- the interest in meditation and reading could be complemented by a meditation group and a book club, with the co-benefit of increased social interaction and also physical activity if active transport modes are used to get there.
- the support of a good range of local medical services (here to include a physiotherapist) could encourage greater visitation and use.
- a good range of facilities to support physical activity and social interaction can encourage time spent with loved ones and children also supports healthy behaviour.

(4) On-going annoyances.

As a final determinant of how the built environment of Victoria Park contributes to the wellbeing of participants the Study noted any particular annoyances that were expressed on the basis that:

- a low level of annoyances can suggest that participants are overall contented with the area, contributing to high overall levels of wellbeing and hence general health.
- certain on-going annoyances or an unreasonable number of concurrent annoyances can lead to an accumulation of frustrations which in turn may reduce wellbeing and impact negatively on general health.

A number of matters have been cited and discussed in earlier sections, generally relating to where participants have expressed some measure of dissatisfaction with how various aspects of their neighbourhood hinder their ability to achieve desired outcomes in terms of physical activity, social interaction and nutrition, or are absent altogether. The following three matters are added here on the basis that they represent some more-encompassing concerns about Victoria Park as a healthy built environment, and as such can also inform future urban development processes in general.

1. The original objective of a quiet, mixed-age group residential precinct is being lost. This expressions of annoyance here involve a number of factors:
   (i) the development sequence for the area has involved the construction of the taller residential buildings at the end of the overall redevelopment, and some buildings appear to be higher than in initial advertised development plans. While participants appear to be accepting of the general mid-range building heights, where there is still an 'open-ness' to the sky comment is that the streets where the newer higher buildings are located are more closed-in, with greater shadowing and adverse wind effects.
   (ii) the precinct is subject to increasing volumes of through-traffic, and speeding vehicles, with a consequent reduction in residential amenity.

(iii) the ability to achieve a community of diverse age-groups has been diminished with a decision to not construct an original proposal for an over-55's residential development; and a concern that young families may not stay if the provision of facilities for children of all age-groups is not given greater attention.

(iv) the transient nature of some of the local population (the actual proportion of which is not known). This comprises not only those who use the specific serviced apartment development, but also the number of rented rather than owner-occupied dwellings.

Focus group comment facilities to encourage an age-diverse population:

There's everybody here, from babies all the way through and I don't think that's going to change.
I wouldn't hang around here, because there's nothing, like you're saying, nothing for young people.

So the building site down there was supposed to be [for] over-55s and they canned it.
That was a real shame, it's supposed to be an over-55s development right in the middle which I think would have been great for the community, because it would have been a lot of people at home, a lot of people walking around. I don't know what happened to it now, it's all gone private.
Yes. Who makes those decisions?
Maybe they couldn't afford it, I don't know what happened, but it did originally get advertised, the signs were up and everything.
I think that would have been great for the community.
That was in the initial plan.

… like, in Sydney Park they've got that cycling track for kids. I don't know if you've seen that. I've got a young child and I think there's going to be lots of young kids growing up here. I think we need more. There's one playground. I don't know, is there more than one playground?

Focus group comment on transience in the local population:

So, what you're raising is an issue of the tenure, that it's rental apartments without much supervision as compared to owner occupiers.

[The result is] unruly behaviour.
That one [serviced apartments building] over there is mainly just…there's not many, I don't think, many people living there from what I see, because every time I look there's always different people. They target mainly for just rental. Just like people staying for the weekend. Ten guys, just staying, go nuts for the weekend kind of thing. That's their main target.

So what happens to the apartment during the week?

During the week, say, Monday to Thursday, there's no-one, normally. But Fridays and Saturday, always - most of the time you get people go crazy. So yes. Monday and Tuesdays, Wednesdays are always the nice nights where it's quiet. Then you get Thursdays, and then Fridays where they...

So it's like a hotel?

Essentially, yes. Think of it as a hotel, yes. It's just they call it serviced apartments, but it's a hotel.
So Monday, Tuesday, Wednesdays, probably businessmen in there and that's why it's quiet, because they'll just come and do their work.

There's also a lot of investment properties here, too, don't forget, so it's not all owner-occupier.
So there's a lot of transient tenants here as well and I think that's causing issues as well, which they may have not have planned on in the first place as well. Got a lot of students that are coming in and they might only be here for six months, so they'll basically buy everything they need from K-Mart, then when they leave it all gets left on the footpath. So maybe that wasn't factored in when they did the plans up that, yes, it's great to rent to the international students but then you need some type of mechanism in place for when they leave, when the new lot come in.

Focus group comment on diminishing residential amenity:

It's not too congested, it's an open space. That's why we moved in the first place, the layout of the area. I liked it. We came from the country and I thought, this is pretty close…I thought it was pretty good.

What do others feel about that? Because some earlier discussion seemed to indicate some frustrations?

[It] depends where you are, doesn't it.

Yes, the original footprint, I think, it was all built around the open spaces but now they've just gone down here and up along there, you've got your big 20 story ones that are just getting...

You've only got a narrow street and you've got units where there were supposed to be a park area.

So how does that affect your health or are you neutral about it?

Well, queues, too many people. You can't get in and out.

The noise factor.

You constantly get woken up.

Thing is, usually, it's just a bit of a downer, like they're having all these concrete brick walls. Like, you go, where the park is, it's fine, but now you get - it's only the past year, I think they've been putting all these crazy high rises in.

Yes, it's just the last year. It's out of control.

Especially, yes, like…your mindset is, just walking through, it's a lot more…and then sometimes I go back home to Adelaide in the safe working space and you feel a lot better.

You said it was a bit of a downer. What do you mean by that?

Well…so you imagine, like, you're walking home. Instead of being like somewhere like, you know, around the park, it's quite nice. You walk down the park. You have a nice, clear mindset walking home. But then you walk by with these big high rises and you just want to pass through quickly. You can't see, it's almost depressing.

The sun, it's blocking the sun. They look horrible. It's just a big slab of...

Yes, it's dark already, isn't it, and they're like little wind tunnels, too.

The existing footprint when you were walking, you could see the sky, if you looked up around the park. Even around all the edges here, but now they've pushed those edges out, and that's where, like you said, if you hop off the bus up here, or get on the bus, that's it. There's nothing to look at. It's just building, building, building all the way up.

It's badly-designed.

It's funny you should say that. I cannot see the sky and it's really...

I read that [the Lord Mayor] said at one point, one third of the area will be parkland. So is it, or not?

There's a lot of open spaces in all the new buildings over there, if you want to go…

I know, but they're inside the building.

The amount of people that have moved in is incredible. There's a lot more moving in especially in the next year.

The next year is going to be even bigger, I reckon.

It would be hard to keep up from that perspective on what to try and offer us and keep us happy and involved.

There were only supposed to be three buildings on that [site], and now there's four, another 20 storeys going up.

I actually like it being reasonably quiet. I don't want a lot of people coming in to our community.

Why do we want more traffic and more people here all the time? We just want our residential people, it's nice and quiet.

So you can imagine how we feel when we've been here longer than that and now all of a sudden we're getting...

The buildings are too high, there's too many people, too much traffic...

You can't wait until it settles down.

Yes, and that's why we chose here, because it was quieter than some of the other areas. That's what we would like, to see it stay that way.

2. <u>A continuing issue reacting to dust and poor air quality</u>. There is a concern that existing problems from dust and grit levels reducing the amenity of both external balcony spaces and interior rooms when windows are left open will continue after local building construction is completed because of the general congested nature of the area, particularly in relation to vehicular traffic.

Focus group comment on air quality:

There is one card here on 'what I should be doing to keep healthy' that includes 'move to a cleaner healthier environment. That's pretty - a fundamental comment.

[It's] the exact opposite of what it was supposed to be.

So it's dirty?

That's road dust and construction dust on your verandas. I've got a view out to Centrepoint and [yet] I barely walk on my veranda because it's filthy, and no matter how much you wipe it down. You can't sit out there, because it's too noisy as well. You can't hear yourself think.

[It's] damaging for electronics as well.

The air quality is so bad.

He has an industrial strength [air filter]. I have a small one in the bedroom, but - and you have to keep windows and doors and everything closed because of the fumes.

Yes. I have two ionisers.

So, just to clarify that - do you think that it is mainly the construction stuff, so that it is hopefully a passing phase, or...?

No, because then you've actually got tire dust from the cars, just constant cars coming and coming and coming. Where I live, when we moved in, from the side bedroom, you could see the Anzac Parade, so since the building's gone up across the road that's right in front of my - my daughter hasn't had her window. I get in there on the weekends when she's not there and open it up, and put the blinds up. She can't have the blinds open anymore. So she hasn't had her blinds open in the room for, what, 18 months since [that building has] gone up. So that can't be good, that we can't have the blind up for the sun to come in and to get some fresh air.

It's the planning.

Besides all the whinging, I'm quite happy. Besides the dust and the noise.

3. <u>There needs to be a recognition and up-front provision of a minimum level of 'basic' residential facilities.</u> Participants note and indicate appreciation of various community facilities that have been provided, and also recognise that additional community, retail and commercial facilities are to be provide in the wider locality in the future. However they also expressed a lingering frustration about a lack of up-front provision of what they see as 'essential' 'basic' facilities, listing as examples: a bulk-billing doctor, a post office, a chemist, and safe road crossings.

Focus group comment on minimum provision of 'basic' services:

So again, 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.

Do you know how long it took us to get a light crossing where the pizza place is?

We're having to do letters to the councils and all that, and this is earlier on. Just to get a light so people don't get run over on the crossing.

So there's been a lot of work also put in - just simple things that were needed.

The lack of services…. Whoever's doing the planning in the government departments is falling down, I believe. They're doing better, but not good enough. We keep hearing about local community and creating community. To some extent it can be engineered, but it's the people that make the community. It's not some government department or some group saying, well there's this, this and this. The people have got to make the community and I don't know whether anyone's listening. You know, like, the bus services are really poor, the services that we may have had here. Then some bureaucrat decides to save X amount of money and that service gets cut. There needs to be a big discussion within those areas, like, let's agree upon certain things that a community must have, medical health facilities, chemist, post office, you know, let's agree - which we did have in years gone by. But Australia Post's all been sold off now. Do you know what I mean? Like, when we were nation building...

Everything's been privatised.

That's right. As a community, we need to agree what each of these communities should have as a minimum and then build on that.

Yes, it's all too commercial.

It's because it's all been privatised that those services are no longer - you know, they were standard in any new town or anything, and now because it's all been privatised, it's up to whoever wants to pick up the mantle, whether they want to run a private business there.

Summation - Overall wellbeing.

(i) There are high levels of satisfaction, and as such one can conclude high levels of overall wellbeing, for those participants who are accepting of the general nature of inner-city living. These feelings are however also tempered by lingering on-going frustrations with noise, air pollution and general grit, some apparent drug-related though non-violent crime, the transient nature of some of the local population, and the difficulties of getting to know neighbours in multi-unit buildings.

(ii) A small number of participants express more fundamental frustrations in terms of these matters, and also give greater emphasis to local congestion and the cultural make-up of the local population. Some of these participants have left Victoria Park during the course of the Study; another indicated they would 'not be sad to leave'. It may be that a proportion of other, younger, participants do not see Victoria Park as a long-term place of residence, particularly if job opportunities change and/or their young families grow. Participants were not specifically asked about their intentions to stay; only 12 out of 21 participants (57%) indicated they would be sad to leave, though a larger number (18 participants or 85.5%) indicated they were satisfied with Victoria Park as a 'good place to live'. It may also be that as the surrounding Green Square redevelopment area 'matures' and the wide range of additional facilities proposed come on-stream there will be more reasons to stay. A common frustration expressed by participants about a lack of local shopping and medical facilities has already been addressed during the course of the Study with the opening of a new development in Victoria Park itself.

(iii) The frustration expressed about a lack of certain facilities is basically a function of the intention that Victoria Park be a predominantly residential neighbourhood coupled with the 'early' stage of the surrounding more mixed-use development area. In this sense it is not unlike 'traditional' greenfield development on the city fringes where there is typically a lag in the provision of facilities compared to the establishment of the residential population. The extensive facilities planned to be completed in the (relatively) near future (three to five years) in the surrounding Green Square should address this need; although participants also express some concern as to whether certain community facilities will keep pace with the substantial planned population increase.

(iv) It is not known whether the particular issues of noise and air pollution, both seemingly an inherent part of inner-city living, will ever be able to be resolved, and whether they will become accepted by participants. Both have implications for individuals' health.

(v) Otherwise, the matters that participants cite as things they need to keep healthy are either currently well-provided or are planned in the near future.

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5. CONCLUSIONS – key needs for Victoria Park as a healthy built environment.

5.1 Introduction.

Victoria Park comprises a significant example of a large-site brownfield inner-urban renewal project. It is both a significant development in itself, and has acted as a catalyst to stimulate development in the surrounding larger Green Square renewal area, which is probably the largest undertaking of its type in Australia. This role of Victoria Park has been sponsored by Landcom and the design of the estate gave early particular emphasis on (amongst other matters) providing attractive green space areas and good walkable connections to surrounding transport links and regional recreation facilities. In a sense the development sought to create a green and leafy ('natural') residential environment in a dense inner-city format.

To implement the development Landcom acted as 'master developer', constructing the road and drainage infrastructure and the open space areas up-front, and then dividing the site into smaller parcels which were then developed by different private development companies. This has allowed for some diversity in architectural styling, tenure, and dwelling configurations. One development parcel included a 'subregional' shopping centre with neighbourhood retail and service facilities; however this component was not completed until relatively late in the overall estate development, and in terms of this Study, after the completion of the interviews and focus group with the Study participants. The lack, at the time, of these facilities within the immediate neighbourhood was the subject of some frustration and annoyance amongst participants; and also contributed to an increase in car use as participants travelled to other nearby shopping facilities, particularly supermarkets, for their household shopping.

The overall design of Victoria Park did not consciously include any specific focus on the role of the built environment in influencing residents' health. Rather, and indicative of the time in which it was planned, the key focus was on environmental matters (energy and water conservation, water-sensitive urban design, and 'green' travel) and the generation of a feeling of 'community'.

Importantly, Victoria Park is well-located in respect to wider metropolitan and regional services and facilities, and in respect to the considerable range of expanded local community, commercial, transport and recreation facilities planned within the surrounding Green Square urban renewal. A number of these facilities are currently under construction.

5.2 Victoria Park as a healthy built environment?

Overall, Victoria Park presents as a healthy built environment. In practice, many of the 'green' environmental and community matters listed above by their nature have a co-beneficial effect on the health outcomes of residents. The built environment of Victoria Park rates highly in providing the broad necessary elements of healthy living: the opportunity to engage in active transport modes; an environment that is pleasantly walkable and with destinations (local open spaces and now the neighbourhood shopping centre), and so is conducive to exercise and incidental social

interaction; a choice of recreation facilities; and a range of options to source fresh food (particularly now with the opening of the neighbourhood shopping centre).

When the focus group participants were asked about the things that are currently assisting them to keep healthy, entries predominantly comprise built environment matters, by and large provided within Victoria Park itself or if not then within reasonable distance in the immediate locality. When the participants were asked about the things they need to keep healthy but do not currently have access to, entries also predominantly comprise built environment matters. However this is unlikely to be a significant issue given:

(i) a number of the matters listed have now been provided with the opening of the neighbourhood shopping centre ('East Village').
(ii) a number of other matters listed are planned to be provided within the next few years as part of the wider Green Square urban renewal.

Some of the remaining matters relate to 'management'-type actions and which can be addressed through standard local government processes. A few other matters do however stand-out as being more difficult to resolve given they are somewhat inherent within inner-urban living:

- noise and air pollution, and general grit.
- a lack of privacy due to inter-looking between dwellings.
- issues of amenity from the placement of driveways and garbage storage and retrieval areas relative to dwelling units.

All can impact on individuals' health and general feelings of wellbeing. The issues cited relating to privacy and amenity relating to driveways and garbage areas comprise important lessons for the design and control of building development in similar high-density urban developments.

These overall built environment characteristics of Victoria Park – variously, some frustration combined with a recognition of the developing nature of the area – were usefully summarised in a discussion in the focus group:

> In Australia, like, they've built forever in the '50s and '60s, all these new suburbs…There was no public transport, no hospitals, no schools, but they were keen. It's a typical problem, here in Australia…They've tried...making complete new suburbs, you know, within the inner city, they've tried to address that but they just haven't quite got it.
>
> …I just think through all of the areas, can people agree upon a minimum service that should we provide while it is being developed. So, a chemist and post office and a doctor. Do you know what I mean? Just for every area? Because the basic things that one area needs, every area...
> …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.
>
> Looks like a lot of the issues that we have, though, will be resolved and we're working to rectify them with getting the shopping centre there. They'll have the chemist and there is one doctor, sounds like there'll be another one, there'll be less traffic, there'll be less noise, and pollution, all that kind of thing, because all of the extra [construction] traffic and the trucks will be stopped. So a lot of our issues are going to be resolved. It's already in the plans, so that's good.

In addition to the overall positive contribution of the built environment of Victoria Park to the health of residents, the Study also revealed that participants by and large availed themselves of these attributes. In particular all participants achieved the minimum recommended number of hours of physical exercise per week, generally via a mix of moderate and vigorous activity, and a diverse range of activities. Walking, both for transport and for recreation, was particularly important, but so also was going to the gym and sporting activities such as squash, tennis and basketball. This engagement with physical activity is notwithstanding most participants worked and some had young families. It is likely that a relatively close proximity to work destinations and an emphasis on active transport modes assists, along with the relatively younger age of most participants. Although participants do not interact to any particular extent with their immediate neighbours, the neighbourhood streets and parks are generally busy with activity thus promoting incidental interactions and participants indicate reasonable levels of satisfaction with their levels of interaction, tempered by lingering frustrations about not knowing who-is-who in the immediate buildings.

An additional factor – the wider Green Square renewal.

Victoria Park is a reasonably self-contained residential neighbourhood, particularly now with the opening of the new retail and commercial centre in Victoria Park itself. Its existing generally positive characteristics as a healthy built environment are likely to be considerably enhanced by virtue of also being centrally located within the wider Green Square renewal area which is to include a substantial additional range of community, commercial, transport and recreation facilities. For example:

- although swimming was not particularly mentioned as a source of physical activity this may change in the future when the proposed nearby aquatic centre is opened.
- the progressive establishment of new destinations in the Green Square locality will likely increase rates and length of time spent walking (and cycling). This will 'compensate' for the characteristic that although there are various existing destinations within Victoria Park itself the actual distances to these are minimal and so will reduce the beneficial physical activity effects.
- more direct access to the Green Square railway station via the proposed Town Centre will likely increase use of this form of active transport, and walking and cycling trips to access it.
- the establishment of, variously, safer, more attractive and more direct subregional cycling and walking routes will also likely increase physical activity levels generated by these activities.
- a greater range of community, and commercial, facilities generally (in the Town Centre, and the development of the old South Sydney Hospital site) will increase opportunities for social interactions.
- the substantially increased local population may assist the long-term viability of maintaining fresh food stalls within the Green Square Markets (located within Victoria Park itself), and perhaps also the establishment of a neighbourhood community garden.

Co-benefits.

As evidenced in the discussion of the Study findings in section 4, there is a high degree of interrelationship between:

- individual physical aspects of the built environment,
- the ways in which that built environment is managed governed, and
- individual personal aspects of health and associated behaviour.

In turn, these strong interrelationships also mean that actions (or inactions) in one area can have important leverage or flow-on affects in another. Positively, it can mean a compounding effect whereby resources and attention applied to one matter can produce, often with no additional resource inputs, important benefits ('co-benefits') in another.

The comments in this Section and the recommendations in the following Section of 'key needs' actions for Renwick to address the limitations to generating a healthy population identified by the Study are drafted, in part, around these understandings.

5.3 Key needs for Victoria Park as a healthy built environment.

(1) Continue attention to the attractiveness and viability of local active transport modes.

It is unlikely that there will be any significant modal shift from active transport to personal car use, and use of the car is likely to decrease as more local facilities within easy walking and cycling access are opened (which may already have occurred with respect to supermarket shopping trips). However, levels of frustration, with consequent detrimental effect on overall personal wellbeing, may increase if active transport facilities do not keep pace with population growth and the efficiency of (bus) services is impacted by continued traffic congestion. Attention needs to be given to establishing:

- direct and easy local walking and cycling routes to the Green Square railway station, and to other local facilities as they come on-stream.
- the regional cycling network in the Council's cycling strategy.
- a local light-rail.

(2) Provision of often smaller-scale 'management' actions to facilitate recreational exercise.

Participants currently achieve recommended minimum levels of physical activity, through a combination of active transport, walking for recreation and more intentional vigorous exercise. Physical built environment opportunities in these regards will increase as the nearby aquatic centre and associated sporting field is built, as additional local destinations accessible by walking and cycling are developed, and if the active transport suggestions above are implemented. It is also likely that additional commercially-operated facilities will be provided as the commercial components of the major new Town Centre are opened. Attention should also though be given to the more localised and often management-based 'needs' suggested by the participants themselves:

- the provision of informal exercise equipment within public open space areas.
- the provision and/or sponsorship of group exercise classes within public indoor and outdoor spaces.
- better quality longer-distance recreational walking routes and pathways that access regional open space and other facilities, and to counter the situation that although local

walking routs within Victoria Park are high quality the overall distances they cover are quite short.

- manage the issue of dog-poo within Gadigal Park in order to facilitate its use by others, such as joggers and informal ball games, etc.

Further, it will be worthwhile to monitor in the future whether additional commercially-operated recreation facilities are indeed provided within the expanded commercial components of the wider Green Square area.

(3) Learn from current residential building deficiencies, with potential retrofit actions.

The built form of Victoria Park on a macro-level is now fixed. Advices by participants indicate there are:

(i) lessons to be learnt for similar-scaled urban development elsewhere, and

(ii) features worth considering in terms of the potential retro-fitting of existing buildings.

Matters include:

- better attention to privacy/inter-looking in respect to residential dwellings, on the basis that issues of privacy can have substantial impacts on overall mental wellbeing and can hinder the use of outdoor space.
- the proximity of vehicle access points and garbage storage and removal areas relative to residential dwellings, in terms of detrimental impacts from noise, fumes and smells.
- the impact on public space and the wellbeing of users of that space in terms of shadowing, wind effect, and closure of general 'open' ambience from higher buildings. In the case of Victoria Park the height and scale of the later buildings within the eastern precinct are cited as being deleterious in these regards.
- measures to reduce the impact on both indoor and outdoor spaces within individual dwellings of air pollution and 'inner-city' grit.

(4) Better integration with the more transient component of the local population.

Although the diversity of residential population within Victoria Park is generally viewed favourably by participants, certain characteristics also lead to on-going annoyances that deserve 'management' attention. In particular the transience of some of the population, in part but not solely due to the presence of a service apartment development has led to concerns about:

- noisy and unruly behaviour.
- drug-related crime.
- a lesser ability for longer-term residents to become acquainted with neighbours, and a lesser interest by shorter-term residents in the 'community' that was an initial objective of the development.
- piles of unwanted furniture and other items left on footpaths as tenants vacate premises.

(5) A better ability to get to know one's neighbours.

Although participants indicate they are generally satisfied with their social interactions within the neighbourhood there is at the same time a lingering frustration caused by an inability to

know who-is-who in multi-unit residential buildings, in part generated by the 'transient' nature of common areas (foyers, lifts and corridors). It is noted that this is not peculiar to Victoria Park; and deserves some wider attention as part of an increased propensity for new dwellings to be part of such developments. Although not particularly evident from participants in Victoria Park there is a risk that an increasing tendency to not know one's neighbours may lead to increased levels of anxiety, concern and distrust of others, with consequent impacts on feelings of safety and security – and then a cumulative reduction in levels of formal and incidental social interaction.

(6) Dealing with local traffic safety.

The design of Victoria Park was envisaged to comprise a neighbourhood 'enclave' of quieter residential streets bounded by more major through roads. The layout of the local street network supports this intention. However participants have advised of some management deficiencies and issues, which have raised various safety concerns (and resulted in some accidents). There is a need to address:

- the volume or at least the speed of traffic using local streets to by-pass congestion on O'Dea Avenue and Joynton Avenue.
- the provision of structured pedestrian crossings within Victoria Park. There is for example no crossing facilities provided on Gadigal Avenue or Defries Avenue outside the recently-opened East Gardens retail development which is now a major local attractor.
- the provision of structured pedestrian crossings on O'Dea Avenue and Joynton Avenue to facilitate safe access by residents to nearby local facilities within the Green Square locality, and which are planned to increase.
- the speed of vehicles related to the Audi showroom and head office development.

(7) Some attention to maintain a diversity of local food sources.

There is a good range of commercially-provided sources of healthy food available locally, and although it is unlikely that home-grown foods will play more than a minor role in local nutrition a number of participants do indicate they have made attempts to grow some of their own foods and there is a nascent local food growers network. That said, a number of actions would be worthwhile to ensure a continuance of this diversity:

- working with the operators of the local Green Square weekly markets to ensure the viability of fresh food stall operators as complementary to existing and likely future commercial providers, particularly as the wider population in Green Square increases.
- providing factual information related to individuals' concerns about the potential contamination effect of local air pollution.
- giving management and other support, including the possibility of larger growing areas/plots to maintain the viability of the community garden boxes.
- ensuring the community food box program is maintained for as long as required by those who have limited access to healthy food shops, a lack of skills, or lack of income.

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6. RECOMMENDATIONS.

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(1) The viability of local active transport modes need to be maintained and improved in order to avoid potential increases in frustration, with consequent detrimental effect on overall personal wellbeing, if they do not keep pace with population growth and continued traffic congestion. Give attention to:

- direct and easy local walking and cycling routes to the Green Square railway station, and to other local facilities as they come on-stream.
- the regional cycling network in the Council's cycling strategy.
- a local light-rail.

(2) Although opportunities to achieve recommended minimum levels of physical activity should progressively increase with improvements in the viability of active transport routes and destinations and with additional public and commercial active recreation facilities, attention should nevertheless also be given to the more localised and often management-based physical activity 'needs' suggested by the participants themselves. These include:

- the provision of informal exercise equipment within public open space areas.
- the provision and/or sponsorship of group exercise classes within public indoor and outdoor spaces.
- better quality longer-distance recreational walking routes and pathways that access regional open space and other facilities, and to counter the situation that although local walking routs within Victoria Park are high quality the overall distances they cover are quite short.
- better management of the issue of dog-poo within Gadigal Park in order to facilitate its use by others, such as joggers and informal ball games, etc.

Further, it will be worthwhile to monitor in the future whether additional commercially-operated recreation facilities are indeed provided within the expanded commercial components of the wider Green Square area.

(3) The built form of Victoria Park on a macro-level is now fixed. However, advices by participants indicate there are:

(i) lessons to be learnt for similar-scaled urban development elsewhere, and

(ii) features worth considering in terms of the potential retro-fitting of existing buildings.

Matters include:

- better attention to privacy/inter-looking in respect to residential dwellings, on the basis that issues of privacy can have substantial impacts on overall mental wellbeing and can hinder the use of outdoor space.

- the proximity of vehicle access points and garbage storage and removal areas relative to residential dwellings, in terms of detrimental impacts from noise, fumes and smells.
- the impact on public space and the wellbeing of users of that space in terms of shadowing, wind effect, and closure of general 'open' ambience from higher buildings. In the case of Victoria Park the height and scale of the later buildings within the eastern precinct are cited as being deleterious in these regards.
- measures to reduce the impact on both indoor and outdoor spaces within individual dwellings of air pollution and 'inner-city' grit.

(4) Although the diversity of residential population within Victoria Park is generally viewed favourably by participants, attention needs to be given to addressing certain concerns arising from the transient nature of some of the population, and which has resulted in expressions of on-going annoyance:

- noisy and unruly behaviour within apartments themselves.
- suspected drug-related crime within buildings themselves.
- a lesser ability for longer-term residents to become acquainted with neighbours, and a lesser interest by shorter-term residents in the 'community' that was an initial objective of the development.
- piles of unwanted furniture and other items left on footpaths as tenants vacate premises.

(5) Participants indicate they are generally satisfied with their social interactions within the neighbourhood. However there is also a concurrent lingering frustration caused by an inability to know who-is-who in multi-unit residential buildings, in part generated by the 'transient' nature of common areas (foyers, lifts and corridors). There is the potential for this characteristic of higher-density living to lead to increased levels of anxiety, concern and distrust of others, with consequent impacts on feelings of safety and security – and then a cumulative reduction in levels of formal and incidental social interaction. It deserves some wider attention as part of an increased propensity for new dwellings to be part of such developments. Consider using Victoria Park as a case-study for actions to address this stated need.

(6) Although the layout of Victoria Park is designed to generate an 'enclave' of quieter residential streets there are a number of management deficiencies and issues which have resulted in various safety concerns, and some accidents. There is a need to address:

- the volume or at least the speed of traffic using local streets to by-pass congestion on O'Dea Avenue and Joynton Avenue.
- the provision of structured pedestrian crossings within Victoria Park. There is for example no crossing facilities provided on Gadigal Avenue or Defries Avenue outside the recently-opened East Gardens retail development which is now a major local attractor.
- the provision of structured pedestrian crossings on O'Dea Avenue and Joynton Avenue to facilitate safe access by residents to nearby local facilities within the Green Square locality, and which are planned to increase.
- the speed of vehicles related to the Audi showroom and head office development.

(7) Take action to ensure the maintenance of a diversity of local healthy food sources:

- work with the operators of the local Green Square weekly markets to ensure the viability of fresh food stall operators as complementary to existing and likely future commercial providers, particularly as the wider population in Green Square increases.
- provide factual information related to individuals' concerns about the potential contamination effect of local air pollution.
- give management and other support including the possibility of larger growing areas and/or plots to maintain the viability of the community garden boxes.
- ensure the community food box program is maintained for as long as required by those who have limited access to healthy food shops, a lack of skills, or lack of income.

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ATTACHMENTS.

1. **Victoria Park Healthy Neighbourhood Audit** - Refer separately bound document.

2. **The Study flyer, as distributed as part of the recruitment of participants.**

3. **The Neighbourhood Audit Instrument**.

4. **Interview questions.**

Attachment 2: The Study flyer (as distributed as part of the recruitment of participants).

HEALTHY BUILT ENVIRONMENTS PROGRAM

PLANNING AND BUILDING HEALTHY COMMUNITIES

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT

The Healthy Built Environments Program at the University of New South Wales is undertaking research on what makes a neighbourhood healthy for community members. This information sheet has been prepared for residents of Victoria Park.

Who is involved in the project?

The project is being run by the Healthy Built Environments Program at the University of New South Wales, in partnership with Landcom, the National Heart Foundation and the South Western Sydney Local Health District.

What is the research about?

Chronic diseases such as heart disease, diabetes, depression and cancer are the most common cause of death worldwide. The built environment has a significant impact on three of the main behavioural risk factors for these diseases - physical inactivity, social isolation and obesity.

The aim of the project is to understand how different residential localities can make healthy everyday living a reality, and reduce the burden of chronic disease.

Where is the research taking place?

The research is being undertaken in four neighbourhoods in NSW – Victoria Park, Rouse Hill, Airds Bradbury and Renwick.

Who is eligible to participate in the project?

Participants in the research must be over 18 years of age, and currently living in Victoria Park (within the area bounded in red on the map overleaf).

What will I be asked to do?

The first stage of the research involves structured individual interviews. This interview includes questions about the place where you live and the way you experience your neighbourhood and city. The interview will be undertaken over the phone.

You will receive a $20 GIFT VOUCHER for your participation in an interview.

As the study progresses you may be invited to participate in further aspects of the research.

How do I get involved?

If you or someone in your household is interested in participating in the project, please register your interest at:

www.surveys.unsw.edu.au/survey/157498/10fd/

Alternatively, you can contact us by phone or email:

Emily Mitchell, Research Officer
Healthy Built Environments Program, UNSW
Email: e.m.mitchell@unsw.edu.au
Phone: (02) 9385 6441

Please visit our website www.be.unsw.edu.au/healthy-built-environments-program/research for more information.

CASE STUDY SITE BOUNDARIES:



HEALTHY NEIGHBOURHOOD AUDIT INSTRUMENT

CONTENTS:

I. Audit Particulars

II. Land Use
- a. Land Use Map
- b. Further Detail of Land Uses

III. Street Network
- a. Street Network Maps
- b. Further Detail of Street Networks

IV. Overall Issues/Impressions
- a. Relationship of the Site to the Broader Area
- b. Social Interaction
- c. Psychological, Emotional and Spiritual Belonging
- d. Overall Impression

V. Improvements

VI. Additional Thoughts

I. AUDIT PARTICULARS

a. Names of auditors:

b. Date (including the day of the week) and time of audit:

c. Description of weather conditions:

d. Please note any other particulars which may have an impact on the results of the audit (e.g. whether the audit is being undertaken during the school holiday period):

II. LAND USE

a. Land Use Map

Using a cadastral map of the site, note the category of land use on each allotment according to the following table.

(NB. Aerial photos and site plans can be used to collect land use information, however, it is important to ensure that any photos, maps and plans utilised for audit purposes are up to date – if possible, please note the date. Further, data from aerial photos and site plans must be verified through site visits and windscreen observations – this needs to be noted on the audit.)

Nature of land use		**Ref. on map**
Residential:	Detached dwelling	R1
	Terrace/ townhouse	R2
	Duplex/semi-detached	R3
	Dual occupancy	R4
	Unit (up to 3 storey)	R5
	Unit (3 storeys and above – note the amount of storeys on the map)	R6
	Other	Describe on map
Mixed use:	Commercial/Residential - Note the specific uses on the map	MU
Recreational:	Open/green space	Rec1
	Park	Rec2
	Playground	Rec3

	Equal access playground	Rec4
	Sports field	Rec5
	Recreational walking path/cycleway	Rec6
	Outdoor gym	Rec7
	Basketball/tennis court	Rec8
	Swimming pool	Rec9
	Lawn bowling green	Rec10
	Amenities for people with physical impairments (describe on map)	Rec11
	Water Sensitive Urban Design/open space	Rec12
	Private open space	Rec13
	Other	Describe on map
Institutional/ services:	Hospital or 'long hours' medical centre	S1
	Doctor's surgery	S2
	Chemist	S3
	Dentist	S4
	Other health/medical facility (describe on map)	S5
	Child care centre	S6
	Nursing home/aged housing	S7
	Primary school	S8
	Secondary school	S9
	Other	Describe on map
Commercial:	Fast food/takeaway shop	F1
	Café/restaurant	F2
	Pub/bar	F3
	Supermarket/grocery store	F4
	Convenience store	F5
	Retail store (describe on map)	C1
	Office (describe on map)	C2
	Other	Describe on map
Community facilities:	Community centre	Com1
	Library	Com2
	Town square	Com3
	Other	Describe on map
Community gardens/edible plantings:	Note the location of community, verge or school gardens	Com.G
Derelict buildings/spaces:	Note the location of derelict buildings/spaces (if possible note last use)	D
Vacant buildings/spaces or construction:	Note the location of vacant buildings or spaces (if possible note last use)	V
	Note the details of any construction (i.e. future use)	Con

b. Further Detail of Land Uses:

General

What overall quality/character dominates the land use?

(N.B. Take note of the residential density, types of housing, extent of commercial development, and any other key built, natural or social features present within the neighbourhood).

Describe the number of people present in the locality at the time of the audit. What spaces are they using? Make a note of particular spaces which are popular with children, young people, adults and older adults.

Commercial and Food Access

Is there a sufficient mix of retail to serve the local community?

Prepared Meals

What is the general price of a meal in a fast food/takeaway shop? (Entrée, main & drink?)

What is the general price of a meal in a café/restaurant? (Entrée, main & non-alcoholic drink?)

What is the general price of a meal in a pub/bar? (Entrée, main & alcoholic drink?)

Overall comments about the quality of prepared meals available – quality and value

Community Gardens & Farmers'' Markets

Describe the types of crops in the garden/s.

If there are no edible gardens in the area, is there potential for some? Where?

Nearest location of farmers'' market:

Frequency of farmers'' markets:

What is the price of a kilo of a basic vegetable or fruit (i.e. carrot, lettuce, apple, orange) at the farmers'' market?

What is the price of a kilo of organic carrots at the farmers'' market?

Built Form

Consider the form and style of the residential, institutional and commercial buildings.

Does the built form provide an opportunity for passive surveillance (i.e. through allowing people to overlook the street)?

Do the buildings and their uses encourage pedestrian activity?

How does the building relate to the human scale? (i.e. is it welcoming, does it contribute to a pleasant and safe environment for those walking past?)

How easy is it to identify the land use from the facade of the building?

III. STREET NETWORK

a. Street Network Maps

Using a cadastral map of the site, create a number of street network maps by noting and describing elements of the street pattern and road network; parking; walking and cycling infrastructure; street furniture; and public transport systems. The tables below provide reference codes for the different elements. Add comments to the maps to describe elements in more detail where necessary.

(NB. Aerial photos and site plans can be used to collect street network information, however, it is important to ensure that any photos, maps and plans utilised for audit purposes are up to date – if possible, please note the date. Further, data from aerial photos and site plans must be verified through site visits and windscreen observations – this needs to be noted on the audit.)

Map	Element	Ref. On map
Roadways:	Traffic lanes	Note the number of lanes and direction of traffic on the map
	Posted speed limits	Note speed limits for each street on the map
	Road use	Light (T-L) Moderate (T-M) Heavy (T-H)
	Signage/way finding	Note and describe the directional and instructional signage around the site
	Other	Describe on map
Parking:	Unrestricted parking	P1
	Metered parking	P2
	Time restricted parking (note time on map)	P3

	Parking station	P4
	Resident only parking	P5
	Disabled parking	P6
	Mothers with prams parking	P7
	Car share parking spaces	P8
	Motorcycle parking	P9
	Bicycle parking	P8
	Loading zones	P10
	Taxi rank	P11
	Bus stop	P12
	Other	Describe on map
Walking/Footpaths:	Footpaths	W1
	Signalised pedestrian crossings	W2
	Painted pedestrian crossings	W3
	Note whether crossing the street is accessible for all (e.g. people with limited mobility or parents with prams)*	Accessible (Acc.) Not accessible (N/Acc.)
	Material of footpaths	Dirt (D) Concrete (Con) Bitumen (Bit) Paving (Pav) Cobblestone (Cobb) Other (describe on map)
	Quality of footpaths (i.e. consistency and evenness of surfaces, presence of trip/slip hazards)	Poor (M-P) Average (M-A) Good (M-G)
	Width of footpaths	Measure and note the width of footpaths on the map
	Gradient of footpaths	Flat (G-F) Moderate (G-M) Steep (G-S) Other (describe on map)
	Type of buffer between footpath and street (i.e. trees, fence/railing)	Note and describe on the map
	Types of obstructions along the footpaths (e.g. overgrown vegetation, café dining)	Note and describe on the map
	Visibility along footpaths	Poor (V-P) Average (V-A) Good (V-G)
	Connectivity of footpaths	Continuous (Cont.) Abrupt end (Abr.)
	Type of shading of footpaths	Awning (Awn.) Shade structures (Sh.St) Vegetation (Veg) Other (describe on map)
	Quality of shading of footpaths	Poor (Sh-P) Average (Sh-A) Good (Sh-G)
	Other	Describe on map
Street furniture/amenities:	Street lights	A1
	Benches/seating	A2

	Shade structure/awnings	A3
	Trees	A4
	Gardens/plants	A5
	Telephone booths	A6
	Bubblers/ drinking fountains	A7
	Public toilets	A8
	Rubbish bins	A9
	Flagpoles/banners	A10
	Community noticeboards	A11
	Public art (describe on map)	A12
	Dog litter bags and bins	A13
	Post boxes	A14
	Other	Describe on map
Cycling:	Recreational cycling lanes	C1
	Utilitarian cycling lanes (i.e. for transport)	C2
	Shower/changing facilities	C3
	Bicycle storage	C4
	Types of obstructions along cycle lanes (e.g. overgrown vegetation)	Note and describe on the map
	Connectivity of cycle lanes	Continuous (Cont.) Abrupt end (Abr.)
	Other	Describe on map
Traffic calming:	Speed hump	TC1
	Chicane/ one way slow point	TC2
	Roundabout	TC3
	Flashing lights	TC4
	Restricted street entry	TC5
	Landscaping	TC6
	Designated share zones	TC7
	Traffic calming absent but required (describe particular issues on the map)	No TC
	Other	Describe on map
Public Transport:	Bus stops	PT1
	Train stations	PT2
	Time schedule	TS
	Frequency of service arrival	Note and describe on the map
	Signage/ way finding	Note and describe the directional and instructional signage relating to the public transport stop
	Amenity of public transport stops	Lighting (L) Shade/weather Protection (Sh) Benches/seating (Be) Bubblers (Bu) Other (describe on map)
	Quality of amenities	Poor (PTA-P) Average (PTA-A) Good (PTA-G)
	Natural surveillance – include comments on how natural surveillance	Poor (PTS-P) Average (PTS-A)

	is provided or inhibited	Good (PTS-G)
	Other	Describe on map
Safety/Surveillance:	Surveillance cameras	SC
	Natural surveillance – include comments on how natural surveillance is provided or inhibited	Poor (S-P) Average (S-A) Good (S-G) Other (describe on map)
	Note the adequacy of the street lighting in each area (i.e. is it evenly distributed and of a level which would allow a face to be identified at a distance of 15 metres).	Poor (SL-P) Average (SL-A) Good (SL-G) Other (describe on map)
	Note if any street lights are not working	Equipment failure (No SL – EF) Damage/vandalism (No SL – D)
	Sightlines (i.e. open and uninterrupted vision of the street ahead. Examples of obstructions to sightlines include overgrown vegetation, corners, curving streets and hills)	Poor (Sight-P) Average (Sight-A) Good (Sight-G) Other (describe on map)
	Signs of physical disorder (e.g. vandalism, graffiti, broken bottles, rubbish etc.)	Note and describe on the map
	Other	Describe on map

*To assess accessibility, consider the placement of crossings; gradient and alignment of kerb ramps; level changes; audio-tactile facilities (i.e. at signalised pedestrian crossings); tactile paving; markings, signals and signage; sightlines at crossing points; provision of medians and refuge islands; and speed limits.

b. Further Detail of Street Networks

The following general questions relate to the entire site area.

How does the street balance the needs of all users – is one user privileged over others? (e.g. cars, buses, bicycle, pedestrians, prams)

What is the amenity of the street like? (e.g. in relation to air quality/pollution, noise pollution, quality of drainage, odours, pools of still water etc.)

How well does the street network connect with the following areas, and which modes of transport are accommodated?

Residential:

Recreational:

Institutional:

Commercial:

IV. OVERALL ISSUES/IMPRESSIONS

a. Relationship of the Site to the Broader Area

Consider how the site relates to the broader area in terms of access, transport, and use of shops and services.

What public transport nodes surround the site? What is the relationship between these nodes and public transport services within the site?

What key services, shops and destinations surround the site? How can these be accessed?

b. Social Interaction

Consider each of the residential, recreational, institutional and commercial areas. Do you feel safe? Would you feel safe at night? Mark on the map if there are any particular areas which may be unsafe and/or perceived to be unsafe.

Would other people feel safe in this area? During the day? At night?

Is there a gendered presence in the area? For example, would a man/woman feel comfortable in the area? Why/ why not?

Are there signs of social inclusion, cultural diversity and religious diversity within the neighbourhood? Consider whether people of different sexual orientations, cultures and religions would feel comfortable within the area, and whether there are specific facilities, services and spaces provided for different groups. Take note of any 'physical' manifestations of culture – buildings, gardens, monuments etc.

Do people congregate in the area with a common purpose? (e.g. pram walkers, book club, adolescents hanging out). How does one find out about these groups and when they meet?

c. Psychological, emotional and spiritual belonging

What aspects of this environment might contribute to a feeling of belonging in this locality? Consider the physical features as well as the socio-cultural features.

What specific facilities – person made and natural – might enhance these feelings?

What specific facilities – person made and natural – might detract from these feelings?

Any other comments?

d. Overall Impression

What is your overall impression of the neighbourhood?
How do you think others from different backgrounds would feel about this area?
What is the general accessibility of the area?
What is the general level of safety in the area?
Is it easy to be physically active in this area?
Is it easy to access healthy foods in this area?
What is the aesthetic condition of the neighbourhood?
Is this neighbourhood a healthy built environment?
Would you live here? Why/why not?

V. IMPROVEMENTS

What improvements would you recommend to make the area healthier?

VI. ADDITIONAL THOUGHTS

Did you need extra room to record your thoughts? Place them here. OR are there additional observations made not covered by the Healthy Neighbourhood Audit? If so, what are they?

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UNSW AUSTRALIA

CITYFUTURES HBEB HEALTHY BUILT ENVIRONMENTS PROGRAM

PLANNING AND BUILDING HEALTHY COMMUNITIES STRUCTURED INTERVIEW

Eligibility for this interview

1. Are you over 18 years of age?

Yes ☐ No ☐→ Thank you for your interest, but you are not eligible for this interview.

Disclaimer: This interview includes questions about mental and physical health that some people may find confronting. You are not obligated to answer a question if you would prefer not to do so. Please be assured that all answers you give will be confidential.

Your Neighbourhood[1]

In this section, I'm going to ask about which features of the environment you think are most important in keeping you healthy. I will also ask you to rate your level of satisfaction with different elements of your neighbourhood.

2. I am now going to read out a list of things that you may or may not think are important in keeping you healthy. Please tell me how important each feature is to you. Are they very important, important, neither important nor unimportant, unimportant, or very unimportant?

	VERY IMPORTANT	IMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	DON'T KNOW
Low levels of air pollution	☐	☐	☐	☐	☐	☐
Low levels of noise pollution	☐	☐	☐	☐	☐	☐
Being able to walk around your local area	☐	☐	☐	☐	☐	☐
Being able to cycle around your local area	☐	☐	☐	☐	☐	☐
Being able to catch public transport	☐	☐	☐	☐	☐	☐
Being close to parks and open/green spaces	☐	☐	☐	☐	☐	☐
Being able to go to gyms/exercise equipment	☐	☐	☐	☐	☐	☐
Being able to go to a farmers' market	☐	☐	☐	☐	☐	☐

[1] Some questions in this section are adapted from: Maller, C. & Nicholls, L. 2012. *The Selandra Rise Neighbourhood Health and Wellbeing Survey*. Unpublished research, RMIT University Melbourne.

1

Continuation of Question 2: Please tell me how important each feature is to you. Are they very important, important, neither important nor unimportant, or very unimportant?

	VERY IMPORTANT	IMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	DON'T KNOW
Being close to a community garden	☐	☐	☐	☐	☐	☐
Being able to spend time with a pet in your local area	☐	☐	☐	☐	☐	☐
Being able to meet with friends and neighbours in your local area	☐	☐	☐	☐	☐	☐

Are there any other things you think are important for keeping you healthy that we did not mention?

_____

3. I am now going to read out a list of things that you may or may not be satisfied with in your current neighbourhood. Please tell me your level of satisfaction with each item. Are you strongly dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or strongly satisfied? You may also indicate if an item does not apply to you.

	STRONGLY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	STRONGLY SATISFIED	DON'T KNOW/ NOT APPLICABLE
Access from your home to major roads or freeways	☐	☐	☐	☐	☐	☐
Access to public transport in your neighbourhood	☐	☐	☐	☐	☐	☐
Access to car parking in your street	☐	☐	☐	☐	☐	☐
Your travel time to work	☐	☐	☐	☐	☐	☐
Your travel time to your place of study	☐	☐	☐	☐	☐	☐
Your travel time to your child-ren/s school or place of study	☐	☐	☐	☐	☐	☐
Speed of vehicle traffic in the local streets near your home	☐	☐	☐	☐	☐	☐
Noise from traffic near your home	☐	☐	☐	☐	☐	☐

Continuation of Question 3: Please tell me your level of satisfaction with each item. Are you strongly dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or strongly satisfied?

	STRONGLY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	STRONGLY SATISFIED	DON'T KNOW/ NOT APPLICABLE
How easy and pleasant it is to walk in your neighbourhood	☐	☐	☐	☐	☐	☐
How easy and pleasant it is to bicycle in your neighbourhood	☐	☐	☐	☐	☐	☐
Safety from threat of crime in your neighbourhood	☐	☐	☐	☐	☐	☐
Personal safety in your neighbourhood streets after dark	☐	☐	☐	☐	☐	☐
Access to entertainment in your neighbourhood (e.g. movies, clubs…)	☐	☐	☐	☐	☐	☐
Access to fresh food shops in your neighbourhood (e.g. green grocer, supermarket, butcher)	☐	☐	☐	☐	☐	☐
Access to cafes and restaurants in your neighbourhood	☐	☐	☐	☐	☐	☐
Opportunities to meet people in your neighbourhood	☐	☐	☐	☐	☐	☐
Number of friends you have in your neighbourhood	☐	☐	☐	☐	☐	☐
Number of people you know in your neighbourhood	☐	☐	☐	☐	☐	☐
Child care in your neighbourhood	☐	☐	☐	☐	☐	☐
Primary schools in your neighbourhood	☐	☐	☐	☐	☐	☐
High schools in your neighbourhood	☐	☐	☐	☐	☐	☐
Number of parks in your neighbourhood	☐	☐	☐	☐	☐	☐

3

Continuation of Question 3: Please tell me your level of satisfaction with each item. Are you strongly dissatisfied, somewhat dissatisfied, neither satisfied nor dissatisfied, somewhat satisfied or strongly satisfied?

	STRONGLY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	STRONGLY SATISFIED	DON'T KNOW/ NOT APPLICABLE
Quality of parks in your neighbourhood	☐	☐	☐	☐	☐	☐
Community Centres in your neighbourhood	☐	☐	☐	☐	☐	☐
Access to medical services in your neighbourhood (e.g. GPs)	☐	☐	☐	☐	☐	☐
Your neighbourhood as a good place to live	☐	☐	☐	☐	☐	☐
Your neighbourhood as a good place to raise children	☐	☐	☐	☐	☐	☐

Are there any other issues that you are satisfied or not satisfied with in your neighbourhood?

_____

Being Active[2]

In this section, I am going to ask you about the different kinds of physical activities you do during a usual week. This includes walking and cycling for transport, walking and cycling for recreation, sports and other forms of exercise like gardening.

Getting around your neighbourhood to do the things you need to do

4. In a usual week, do you walk around your neighbourhood to get to or from somewhere, such as going to and from work, walking to the shop or walking to public transport? (***If no, skip to Question 8***).

   Yes ☐ No ☐

5. How many times do you walk **as a means of transport** in a usual week? (e.g. walking to and from work once a week = 1 time).

   1-2 walks ☐
   3-6 walks ☐
   7-10 walks ☐
   More than 10 walks ☐

[2] The following questions have been adapted from Giles-Corti B, Cutt H, Timperio A, Pikora TJ, Bull FL, Knuiman M, Bulsara M, Van Niel K, Shilton T. *Development of a reliable measure of walking within and outside the local neighborhood: RESIDE's Neighbourhood Physical Activity Questionnaire.* Preventive Medicine (In press, accepted January 26, 2006).

6. Please estimate the total time you spend walking **as a means of transport** in a usual week (e.g. 5 times by 10 minutes = 50 minutes).

Hours _____ Minutes _____

7. Please tell me the places where you walk to **as a means of transport** in your neighbourhood in a usual week.

Places interviewee might walk to as a means of transport in their neighbourhood in a usual week	**Tick ALL the places interviewee WALKS to in a usual week**
To or from work (or study)	☐
To or from public transport	☐
To or from shops (for small purchases – e.g. a bottle of milk)	☐
To or from shops (for large purchases – e.g. a full grocery shop)	☐
To or from school	☐
To or from café or restaurant	☐
To or from friend's house	☐
To recreation (e.g. gym, organised sport etc.)	☐
Somewhere else: Please write where	

8. Is there anything that stops you from walking for transport around your neighbourhood? Please describe the main reasons.

_____

9. In a usual week, do you cycle around your neighbourhood to get to or from somewhere, such as cycling to a shop or to public transport? (***If no, skip to Question 13***).

Yes ☐ No ☐

10. In a usual week, how many times do you cycle **as a means of transport**, such as going to and from work, cycling to the shop or cycling to public transport in your neighbourhood? (e.g. cycling to and from work once a week = 1 time).

1-2 rides ☐
3-6 rides ☐
7-10 rides ☐
More than 10 rides ☐

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11. Please estimate the total time you spend cycling **as a means of transport** in your neighbourhood in a usual week (e.g. 5 times by 10 minutes = 50 minutes).

Hours _____ Minutes _____

12. Please tell me the places where you cycle to **as a means of transport** in your neighbourhood in a usual week.

Places interviewee might cycle to as a means of transport in their neighbourhood in a usual week	**Tick ALL the places interviewee CYCLES to in a usual week**
To or from work (or study)	☐
To or from public transport	☐
To or from shops (for small purchases – e.g. a bottle of milk)	☐
To or from shops (for large purchases – e.g. a full grocery shop)	☐
To or from school	☐
To or from café or restaurant	☐
To or from friend's house	☐
Somewhere else: Please write where	

13. Is there anything that stops you from cycling for transport around your neighbourhood? Please describe the main reasons.

_____

Enjoying active recreation in your neighbourhood

14. In a usual week, do you walk around your neighbourhood **for recreation, health or fitness** (including walking your dog)? (***If no, skip to Question 18***).

Yes ☐ No ☐

15. In a usual week, how many times do you walk **for recreation, health or fitness** around your neighbourhood?

1-2 walks ☐
3-6 walks ☐
7-10 walks ☐
More than 10 walks ☐

16. Please estimate the total time you spend walking **for recreation, health or fitness** around your neighbourhood in a usual week (e.g. 5 times by 20 minutes = 100 minutes).

Hours _____ Minutes _____

17. Please tell me the places where you walk **for recreation, health or fitness** in your neighbourhood in a usual week.

Places interviewee might walk for recreation, health or fitness in their neighbourhood in a usual week	**Tick ALL the places interviewee WALKS in a usual week**
Park	☐
Sports field	☐
Bushlands	☐
Around the neighbourhood using the streets/footpaths (no specific destination)	☐
Walking trails/bicycle paths NOT in a park	☐
To or from café or restaurant	☐
To or from a shop	☐
Somewhere else: Please write where	

18. Is there anything that stops you from walking for recreation, health or fitness around your neighbourhood? Please describe the main reasons.

_____

19. In a usual week, do you cycle around your neighbourhood **for recreation, health or fitness**? (***If no, skip to Question 23***).

Yes ☐ No ☐

20. In a usual week, how many times do you cycle **for recreation, health or fitness** around your neighbourhood?

1-2 rides ☐
3-6 rides ☐
7-10 rides ☐
More than 10 rides ☐

21. Please estimate the total time you spend cycling **for recreation, health or fitness** around your neighbourhood in a usual week (e.g. 5 times by 20 minutes = 100 minutes).

Hours _____ Minutes _____

22. Please tell me the places where you cycle **for recreation, health or fitness** in your neighbourhood in a usual week.

Places interviewee might cycle for recreation, health or fitness in their neighbourhood in a usual week	**Tick ALL the places interviewee CYCLES in a usual week**
Park	☐
Sports field	☐
Bushlands	☐
Around the neighbourhood using the streets/footpaths (no specific destination)	☐
Walking trails/bicycle paths NOT in a park	☐
To or from café or restaurant	☐
To or from a shop	☐
Somewhere else: Please write where	

23. Is there anything that stops you from cycling for recreation, health or fitness around your neighbourhood? Please describe the main reasons.

_____

Other recreational physical activities

In this section I am going to ask you about other kinds of recreational physical activities you take part in during a usual week. First, I will ask about how often you take part in **moderate intensity** recreational physical activities, and then then I will ask about **vigorous intensity** recreational physical activities. I will also ask about the places where you take part in recreational physical activities, and the modes of transport you use to get to these places.

24. In a usual week, do you do any **moderate intensity recreational physical activities** (i.e. activities which ***do not*** make you breathe harder or puff and pant, such as gentle swimming, social tennis, golf or heavy gardening)? Do not include any walking or cycling. (***If no, skip to Question 28***).

Yes ☐ No ☐

25. In a usual week, how many times do you do moderate intensity recreational physical activities?

Write in number of times _____

26. What do you estimate is the total time you spend doing moderate intensity recreational physical activities in a usual week? (e.g. 1 time for 1 hour = 1 hour)

Hours _____ Minutes _____

27. Please tell me all the places where you do moderate intensity recreational activities in a usual week, including whether or not the places are in your neighbourhood. Then please tell me which method of transport you use to get to each place.

Places interviewee does moderate intensity recreational activities in a usual week	**Tick ALL the places INSIDE their neighbourhood**	**Tick ALL the places OUTSIDE their neighbourhood**	**How do they get there? (i.e. by car, walking, cycling, public transport, or a number of modes)**
Home	☐	☐	
Garden	☐	☐	
Beach	☐	☐	
Park	☐	☐	
Sports field	☐	☐	
Bushlands	☐	☐	
Around another neighbourhood using the streets/footpaths (no specific destination)	☐	☐	
Walking trails/bicycle paths NOT in a park or beach	☐	☐	
Gym	☐	☐	
Sports centre/recreational facility	☐	☐	
Somewhere else (1): Please write where	☐	☐	
Somewhere else (2): Please write where	☐	☐	

28. In a usual week, do you do any **vigorous intensity recreational physical activities** which *do* make you puff and pant, such as jogging, aerobics, soccer or competitive tennis? Do not include walking or cycling or moderate intensity physical activities. (***If no, skip to Question 32***).

Yes ☐ No ☐

29. In a usual week, how many times do you do vigorous intensity recreational physical activities which make you breathe harder or puff and pant?

Write in number of times _____

30. What do you estimate is the total time you spend doing vigorous intensity recreational physical activities in a usual week? (e.g. 3 times for 20 minutes = 60 minutes)

Hours _____ Minutes _____

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31. Please tell me the places where you do vigorous intensity recreational activities in a usual week, including whether or not the places are in your neighbourhood. Then please tell me which method of transport you use to get to each place.

Places interviewee does vigorous intensity recreational activities in a usual week	Tick ALL the places INSIDE their neighbourhood	Tick ALL the places OUTSIDE their neighbourhood	How do they get there? (i.e. by car, walking, cycling, public transport, or a number of modes)
Beach	☐	☐	
Park	☐	☐	
Sports field	☐	☐	
Bushlands	☐	☐	
Around another neighbourhood using the streets/footpaths (no specific destination)	☐	☐	
Walking trails/paths NOT in a park or beach	☐	☐	
Gym	☐	☐	
Sports centre/recreational facility	☐	☐	
Somewhere else (1): Please write where	☐	☐	
Somewhere else (2): Please write where	☐	☐	

32. In an average week, how do you normally travel? If, in the average week, you usually travel by different modes, please nominate an approximate percentage for each mode (e.g. 50% by car, 50% by public transport):

Mode	Tick ALL the modes of transport usually used in an average week	Approximate % breakdown for each mode
By car/motorbike/scooter	☐	
By public transport	☐	
By bicycle	☐	
By walking	☐	
Other (please specify)	☐	

Your Community[3]

In this section, I am going to ask you about your relationships with your neighbours. I will also ask about the places you use in your local area to meet with and spend time with your neighbours (i.e. people living in adjacent/nearby apartments or houses). I will also ask about any social or community activities you may take part in.

33. Please tell me which of the following options most accurately describe how well you know your neighbours.

I do not speak to or socialise with my neighbours	☐
I speak to my neighbours occasionally	☐
I regularly socialise with my neighbours	☐
I consider my neighbours to be close friends	☐

34. Are you satisfied with the level of interaction you have with your neighbours?

Yes ☐ No ☐ Don't know ☐

35. I am going to read you a list of things that may or may not limit the extent to which you socialise with your neighbours. Please tell me whether or not the following things have an impact on your interactions with your neighbours.

	YES	NO	DON'T KNOW
Not enough time due to other commitments (e.g. family, work)	☐	☐	☐
Language difficulties or barriers	☐	☐	☐
Health reasons	☐	☐	☐
Financial reasons	☐	☐	☐
Don't feel welcome	☐	☐	☐
Not interested	☐	☐	☐

Other (please specify):

_____

[3] Some questions in this section are adapted from the NSW Adult Population Health Survey, Centre for Epidemiology and Evidence, NSW Ministry of Health (http://www.health.nsw.gov.au/surveys/pages/default.aspx); and the Green Square Snapshot Survey, City Futures Research Centre, UNSW.

36. ***If interviewee indicated above that they do not socialise with their neighbours, skip to Question 37.***When you meet with your neighbours and spend time together, do you use the following places?

	YES	NO
Your/their home	☐	☐
The street	☐	☐
Town square	☐	☐
Local shops	☐	☐
Shopping mall	☐	☐
Local café/ restaurant	☐	☐
Park	☐	☐
Sports field	☐	☐
Bushland	☐	☐
Community centre	☐	☐
School or child care	☐	☐

Somewhere else: Please write where

_____

37. In the last 12 months, have you participated in any of the following activities (either inside or outside your neighbourhood)?

	YES	NO	DON'T KNOW
Recreational group or cultural group activities	☐	☐	☐
Community or special interest group activities	☐	☐	☐
Church or religious activities	☐	☐	☐
Went out to a café, restaurant or bar	☐	☐	☐
Took part in sport or physical activities	☐	☐	☐
Attended a sporting event as a spectator	☐	☐	☐
Visited a library, museum or art gallery	☐	☐	☐
Attended the movies, a theatre or a concert	☐	☐	☐
Visited a park, botanic gardens , zoo or theme park	☐	☐	☐

38. Are you an active member of a local organisation, church or club, such as a sport, craft, or social club?

Yes, very active ☐ Yes, somewhat active ☐ Yes, a little active ☐ No, not an active member ☐ Don't know/Not Applicable ☐

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39. If you were caring for a child and needed to go out for a while, and could not take the child with you, would you ask someone in your neighbourhood for help?

Yes, definitely ☐ Yes, possibly ☐ No, probably not ☐ No, definitely not ☐ Don't know/Not Applicable ☐

40. How often have you visited someone in your neighbourhood in the last week?

Frequently ☐ A few times ☐ At least once ☐ Never (in the last week) ☐ Don't know ☐

41. When you go shopping in your local area how often are you likely to run into friends and acquaintances?

Nearly always ☐ Most of the time ☐ Some of the time ☐ Rarely or never ☐ Don't know ☐

42. Would you be sad if you had to leave this neighbourhood?

Yes ☐ No ☐ Don't know ☐

43. Most people can be trusted. Do you agree or disagree?

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ Don't know ☐

44. I feel safe walking down my street after dark. Do you agree or disagree?

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ Don't know ☐

45. My area has a reputation for being a safe place. Do you agree or disagree?

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐ Don't know ☐

Your Food

In this section, I am going to ask you about where, and how often, you buy fresh fruits and vegetables. I will also ask about how you get to the places where you buy your food. Then I will ask about other means of getting food – such as growing your own, or participating in a community garden.

46. In a usual week, how many times do you buy fresh fruits and vegetables?

None ☐ 1 time ☐ 2 times ☐ 3 times ☐ More than 3 times ☐

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47. Please tell me all the places you buy fresh fruits and vegetables.

Supermarket	☐	Farmers' market	☐
Fruit and vegetable store	☐	Other (write where)	☐

_____

48. Where do you buy fruits and vegetables **most often**?

_____

49. For the location you just mentioned, why do you buy your fruits and vegetables from there?

Easy to travel to	☐	Variety of fruits and vegetables	☐
Affordable	☐	Selection of other foods available	☐
Quality of fruits and vegetables	☐	Other (please specify)	☐

_____

50. How do you get to the place where you buy fruits and vegetables from **most often**?

By car	☐	By public transport	☐
By bicycle	☐	Multiple modes (e.g. cycling and bus)	☐
By walking	☐	Other (please specify)	☐

_____

51. For the mode of travel you just mentioned, how long does the journey take you?

Less than 5 minutes	☐	30 – 45 minutes	☐
5 – 15 minutes	☐	45 minutes – 1 hour	☐
15 – 30 minutes	☐	More than 1 hour	☐

52. Do you grow any foods at home? If so, please describe where/how, as well as the types of foods you grow.

_____

53. Do you participate in a community garden? (***If no, skip to Question 56***).

Yes ☐ No ☐

54. Where is the community garden located?

_____

55. What is your role in the community garden?

_____

56. Do you regularly go to a farmers' market? (***If no, skip to Question 58***).

Yes ☐ No ☐

57. Where is the farmers' market located?

_____

Your Health[4]

In this section, I am going to ask you about how you would rate your physical and mental health, and whether you have experienced any changes in your health since moving to your current location. Just to remind you, you are not obligated to answer a question if you would prefer not to do so. Please be assured that all answers you give will be confidential.

58. How do you rate your general health?

Very Good ☐ Good ☐ Average ☐ Poor ☐ Very Poor ☐ Declined ☐

Please outline any health problems you have, if relevant.

_____

[4] Some questions in this section are adapted from the NSW Adult Population Health Survey, Centre for Epidemiology and Evidence, NSW Ministry of Health (http://www.health.nsw.gov.au/surveys/pages/default.aspx).

59. What was your health status before you lived in this location?

Very Good ☐ Good ☐ Average ☐ Poor ☐ Very Poor ☐ Declined ☐

Please outline any health problems you had before moving to this location, if relevant.

_____

60. During the past 30 days, how much difficulty did you have doing your daily work or activities?

No difficulty at all ☐ A little bit of difficulty ☐ Some difficulty ☐ Much difficulty ☐ Could not do work/ activities ☐ Don't know ☐ Declined ☐

61. During the past 30 days, how much bodily pain have you generally had?

No pain ☐ Very mild pain ☐ Mild pain ☐ Moderate pain ☐ Severe pain ☐ Don't know ☐ Declined ☐

62. During the past 30 days, about how often did you feel nervous?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

63. During the past 30 days, about how often did you feel hopeless?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

64. During the past 30 days, about how often did you feel restless or fidgety?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

65. During the past 30 days, about how often did you feel that everything was an effort?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

66. During the past 30 days, about how often did you feel so depressed that nothing could cheer you up?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

67. During the past 30 days, about how often did you feel worthless?

All of the time ☐ Most of the time ☐ Some of the time ☐ A little of the time ☐ None of the time ☐ Don't know ☐ Declined ☐

About You and Where You Live

In this section, I am going to ask you for a few details about yourself and where you live. We need this information to see if there are any links between specific personal characteristics, specific locations and health outcomes. We will not use any of the information you share in this section to identify you by name in our research.

Note gender of interviewee:

Male ☐ Female ☐

68. What is your age?

18 – 21 ☐ 22-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 and over ☐ Decline ☐ → If interviewee declines to answer, please estimate age: _____

69. What is your occupation?

_____

70. What is your highest level of education? (i.e. primary school, TAFE, high school, bachelor degree, postgraduate degree)

_____

71. Where, approximately, do you live?

Your street: _____

A nearby cross street: _____

Your suburb: _____

(Please note that providing this information does not disclose your address).

72. We would like to talk further about the impact of the neighbourhood on health outcomes with some people in a focus group. The focus group will take approximately two hours. It will involve a discussion with a facilitator and other residents about how your neighbourhood supports you being healthy. Participants will receive a $50 gift voucher to thank them for their time. Would you be willing to participate in a focus group?

Yes ☐ No ☐

(Please note that by saying yes, you have indicated that you allow us to contact you to arrange a focus group. The number of participants selected for focus groups is limited, and we cannot guarantee that you will be contacted).

73. ***Ask only if interviewee answered yes to Question 72***. Could you please provide your contact details, so that we can be in touch to organise the time and location of the focus group. Please be assured this information will be filed separately from this questionnaire to ensure your privacy.

Name: _____

E-mail address: _____

Phone no: _____

74. Do you know any other residents in [Study Area] who may be interested in participating in our research? (List contact details if provided).

Name: _____

E-mail address: _____

Phone no: _____

This is the end of the interview.

Thank you for participating. In appreciation of your time, you will receive a $20 gift voucher. (***Interviewer to organise how to deliver gift voucher to the interviewee***).