



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

AIRDS BRADBURY

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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CONTENTS

EXECUTIVE SUMMARY.

STUDY OVERVIEW – background and findings.

1. INTRODUCTION.

- 1.1 background.
- 1.2 the Study aim and focus.
- 1.3 the determinants of our health – some background.
- 1.4 relationship with the other reports for this Study.
- 1.5 relationship with other work by the Project partners.

2. AIRDS BRADBURY – a description.

- 2.1 location and history of development.
- 2.2 the Study participants.
- 2.3 the ‘visibility’ of the Study in Airds Bradbury.

3. THE RESEARCH PROCESS – methodology.

- 3.1 introduction.
- 3.2 auditing the environment.
 - the physical environment.
 - the community food survey.
- 3.3 seeking the views and experiences of the residents.
 - participant interviews.
 - the focus group.
- 3.4 how the Study findings are structured.
- 3.5 Study ‘boundaries’

4. KEEPING HEALTHY in AIRDS BRADBURY – our findings.

- 4.1 physical activity – getting people active.
- 4.2 social interaction – connecting and strengthening communities.
- 4.3 nutrition – providing healthy food options.
- 4.4 wellbeing – the overall attributes of Airds Bradbury as a healthy place.

5. CONCLUSIONS – key needs for Airds Bradbury as a healthy built environment.

6. RECOMMENDATIONS.

ATTACHMENTS.

- (1) Airds Bradbury Healthy Neighbourhood Audit. (separately bound)
- (2) The recruitment flyer seeking participation in the Study.
- (3) The Neighbourhood Audit Instrument.
- (4) Interview questions.

EXECUTIVE SUMMARY: *Planning and Building Healthy Communities* - Airds Bradbury.

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 Airds Bradbury.

Airds Bradbury comprises three different though interrelated communities: an existing long-term community with strong social connections and established facilities, but also living with various structural failures in the management, maintenance and continuity of services; a community in transition and at times disruption as the current Renewal Project is implemented; and a future community not yet established that will need to be integrated and provided with new facilities that will encourage healthy behaviours, particularly good levels of physical activity and social interaction.

Study participants indicate a high degree of awareness of the importance of various behaviours to their health, particularly the need to keep active even though many also cited limitations due to age or disability; to maintain social links (personal contacts were important, and also participation in groups relating to food or hobbies, and the Men's Shed is popular); and to eat well, though mobility and low income presented difficulties for some (addressed in part by a subsidised food box program, and spasmodically by community garden produce). However, various neighbourhood features make achievement of healthy behaviours more of a chore than something that happens easily and without undue conscious effort, and/or hinders additional healthy behaviours. Engagement in physical activity is quite high, but only 12 out of 20 participants (60%) achieve recommended minimum levels and car use (for those with access to a car) is high due to a lack of local destinations, an efficient bus service, and poor footpaths; and only 50% of participants would be 'sad' to leave Airds Bradbury.

Positively, many existing deficiencies are to be addressed in the current Renewal Project, and some new or renewed facilities are already established. However, explicit attention to healthy built environment objectives needs to be maintained to ensure details do not get overlooked in the 10-year program. The Study identifies a need for attention to:

- an engagement with the private ownership of the existing Airds shopping centre and hotel in order to achieve the intended vibrant local centre, with fresh food and other shops, and recreation, social and other community facilities; thus promoting its use and access by walking and cycling, and greater incidental and formal social interactions.
- a viable public transport (here, bus) system for trips to other necessary destinations, including the regional swimming pool.
- comfortable, safe and amenable walking and cycling routes within Airds Bradbury itself.
- a range of social and recreation facilities to meet the needs of different age groups; as well as physical activities in semi-formal groups to alleviate current personal security concerns.
- attention to any need for financial assistance or subsidy to ensure these facilities are actually available to those on low incomes.
- progressive removal of security grills, etc to improve feelings of neighbourhood congeniality.

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: Airs 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 Airs Bradbury. 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 Airds Bradbury.

People seem to be quite contented here in Airds?

We've been here a long time.

Yeah. I think there is a lot of complacency too. Those of us that have been here a long time, just we adapt to this place yeah. But, having been involved with the renewal stuff, and seeing what they're planning on doing. That does revitalise the interest. ... I mean we don't get everything we want, but we're certainly getting some of it. That's very good for the mental condition.

They need a bit more things around here for people to do. If they're going to bring a whole pile of people in here, cram them in, there's got to be some outlet.

You're still going to need transport.

They're still going to need facilities for their children, they're still going to need childcare for their kids.

You're going to need a better shopping centre than just trying to get down into Campbelltown or Bradbury all the time. You know you need another satellite like the one at...Market Fair.

Well we did, we had everything here and then it went kaput.

1. There is in a sense three different though interrelated communities within Airds Bradbury:
 - (i) an existing long-term community that has raised and is raising families, and with strong social connections; with established schools, community and recreation facilities, and a shopping centre. However this community has also had to live with a number of structural failures in its underlying management, including a lack of continuity in provision of support services and social facilities and maintenance generally;
 - (ii) a community in transition, as the social and physical infrastructure components of the current Renewal Project are progressively implemented. Some improvements in community services and facilities have already commenced. Other larger structural and potentially disruptive changes are on-going; and
 - (iii) a future community of new residents not yet established that will need to be integrated with the existing community. Further, this new community will need to have access to facilities that will discourage, in this outer-urban location, the propensity for the motor car to become the default mode of transport - with consequent likely detrimental impacts on physical activity and incidental social interaction.
2. Study participants indicate a high awareness of the importance of various behaviours to their health, particularly the need to keep active even though many also had limitations due to age or disability (eg. the need for better facilities for walking and swimming were cited); to maintain social links (eg. personal contacts are important, but participation in groups relating to food or hobbies were also cited, and the Men's Shed is popular); and to eat well, even though mobility issues and low incomes presented difficulties for some (and addressed in part by a subsidised food box program, and spasmodically by community food garden produce).
3. However, there are also features about the neighbourhood that make achievement of healthy behaviours by participants more of a chore than something that happens easily and without

undue conscious effort, and/or hinders additional healthy behaviours. Although engagement in physical activity is quite high, only 60% achieve recommended minimum levels:

- a lack of local destinations and an efficient bus service means car use is high for many participants (with access to a car).
 - the walkable neighbourhood centre is uninviting, meaning the nearby Campbelltown Mall has become a default centre for those with the ability to access it.
 - a large proportion of participants were aged and/or had reduced mobility and require a generally higher standard of quality of the built environment than currently exists.
 - the available social and recreation facilities are often in poor repair, not currently or only intermittently available, or not easily accessible.
 - generally low incomes means a reliance on various social service programs, the continuity of which can be variable.
4. Only 50% of participants said they would be 'sad' to leave their neighbourhood, compared to the NSW average of 73.4%, although a higher proportion (80%) are either satisfied or neutral in respect to Airds Bradbury as an overall 'a good place to live'.
 5. Participants indicated strong concerns about their ability to undertake and access facilities for recreational physical activity, citing transport, cost, continued local availability, better footpaths with seating to facilitate walking, and safety in public areas. Other strong comment related to the need for a revitalised neighbourhood shopping centre.
 6. It is a positive indication for the future of Airds Bradbury as a healthy built environment that most of these matters are being addressed in the current Renewal Project and that various new or renewed community facilities and services have already been established. That said, the delivery program is scheduled over a 10 year period meaning some improvements will not be available for some time and also that the current sense of upheaval will remain (though with hopefully also a sense of progressive improvement as these changes come on-stream). Explicit attention needs to be maintained to ensure the details of the intended improved outcomes do not get 'lost' as the larger overall development is implemented.
 7. Here the Study identifies a number of matters for attention:
 - the establishment of sufficient local fresh food and other shops, and recreation, social and other community facilities within walking and cycling distance.
 - a viable public transport (here, bus) system for trips to other necessary destinations.
 - comfortable, safe and amenable walking and cycling routes within Airds Bradbury itself.
 - a range of social and recreation facilities to meet the needs of different age groups, and semi-formal group physical activities to alleviate current personal security concerns.
 - active engagement with the private ownership of the existing Airds shopping centre in order to fulfil the intention of a revitalised and viable neighbourhood centre, with resultant important co-benefits for physical activity, social interaction, and nutrition.
 - attention to any need for financial assistance or subsidy to ensure these facilities are actually available to those on low incomes.

A summary of findings and responses based on the three key domains and seven specific actions of healthy built environments (refer section 1.1 of the Report) follows.

Physical Activity
'Getting people active'

Facilitating 'active transport'

Facilitating recreational physical activity

Current condition.

Although designed to facilitate walking and cycling (with cross-paths through central green spaces, underpasses, quiet cul-de-sacs), this is essentially not achieved.

Low densities encourage car use and limit effectiveness of the bus service. Personal mobility levels are low for those without access to a car. Many have physical mobility issues due to age or disability, limiting ability to walk, cycle or take a bus, requiring a higher standard of provision which does not exist, eg. uneven footpaths, circuitous routes (resulting in some more direct but informal unpaved paths), lack of seating to rest on, a bus service that only meets some needs in terms of routes and timetabling, lack of facilities and places to go to generally in the neighbourhood, and feelings of insecurity for those older and less-mobile (particularly at night).

Current condition.

The respondent survey group was older, and tend to be less active; however there is variable provision of active recreation facilities for all groups. Facilities previously well-supplied have been progressively closed (eg. pool, squash courts, gym equipment). Current low population density and low incomes may make funding of continued provision and establishment of commercial facilities difficult. There is inadequate public transport to neighbouring pool at Bradbury. Outdoor basketball facilities near youth centre are open to all. There are weekly men's and women's exercise classes. Open space areas do not have any recreational equipment/exercise stations and there is a problem with discarded needles, discouraging use. A lack of longer walking tracks to sustain interest is exacerbated by personal safety concerns within public open space areas.

Response.

The Renewal Project addresses current structural deficiencies in footpath design and routing, provision of shade, bus routing, marking of cycle ways, and local 'places to go'. Additional attention is required in respect to the bus routing to the Bradbury swimming centre, provision of bus shelters at all stops, provision of public seating, making secondary streets 'complete streets' to encourage bicycle safety, and encouragement of a regenerated local shopping centre to avoid the need to default to Campbelltown for most purchases. Where able, some improvements should be done now, eg. maintenance of footpaths to be retained, provision of public seating, provision of bus shelters at stops to be retained, marking of cycle ways.

Response.

Fundamental under-provision of facilities needs to be resolved, by: improvements to equipment/facilities in open space areas, effective public transport or cycle access to neighbouring facilities, and space for commercially-provided facilities (in conjunction with the new, future population) within the neighbourhood centre. Most of these matters are to be addressed in the Renewal Project. Additional attention is required to the provision of recreational activities organised on an informal group basis to increase uptake and address current concerns about personal safety in public open space areas; to provide for potential recreation space within the new neighbourhood centre, and to improve public transport access to the Bradbury swimming centre.

Social Interaction
 'Connecting and strengthening communities'

**Facilitating incidental
 n'hood interaction**

Making community spaces

Build for crime prevention

Current condition.

Incidental interaction limited by low density of people out and about in streets and local centre given low use of 'active transport' and walking generally, and lack of a neighbourhood focus. Security fences and aggressive dogs in residential yards also reduces opportunities. High incidence of running into people at Campbelltown mall and positive interactions at the aged housing clusters cited. Uncomfortable or negative interactions are also cited (in public areas, the shopping centre and within housing blocks).

Current condition.

The neighbourhood centre and shops is not a place to go to. Other community spaces have been developed (Men's Shed, AB Central, Tharawal), but have low visibility given design and/or location. Hostile dogs can limit streets as comfortable community space. There is abundant green space but no parks as 'community spaces', except for Airds Pond which is the location for events. Individual housing blocks do not appear to have a common space to encourage sociability, and the need for a social 'catalyst' has been suggested.

Current condition.

There are high levels of feelings of insecurity, due to higher than average crime rates, and groups involved in anti-social activity. Age and low mobility means some feel extra vulnerable. The scattered development means casual surveillance is low. The internal design of the shopping centre and community buildings, security fencing and one-way windows results in a general ambience of alienation. Concern that youth do not have enough activities to keep them occupied, encouraging anti-social activity that inhibits general use of public space.

Response.

The Renewal Project addresses this through fundamental re-designs of streets, public transport, and neighbourhood centre to be more user-friendly, which will then encourage a greater density of incidental interactions. Extra attention needs to be given to:

- the overall design and integration of the shopping centre and other privately owned and operated facilities in the neighbourhood centre.
- the additional active transport' responses cited above.

Response.

The Renewal Project addresses this through fundamental re-designs of open space areas, the neighbourhood centre, and provision of a new multi-purpose community centre. Extra attention needs to be given to the overall design of the neighbourhood centre to integrate the shopping centre. Support for community groups needs to be maintained and consistent. Consider support for residents acting as catalysts within housing blocks. A Welcome program to ensure integration of new residents is likely to be required.

Response.

The Renewal Project addresses this through changes in population make-up, denser street development and use of active transport to promote greater passive surveillance, and more community facilities. Extra attention needs to be given to a fundamental re-design of the neighbourhood centre as a 'place to be'; with then removal of alienating security devices, and sustained activities and public transport mobility to occupy youthful energy.

Nutrition
‘Providing healthy food options’

Facilitating access to healthy food

Promote responsible food advertising

Current condition.

Although achieving a good score in the Study food survey, the local supermarket is not seen as supplying fresh food (though has done in the past). Rather, fresh food is sourced from shops in Campbelltown (or on-line by one respondent with mobility issues). Concerns that packaged quantities do not suit singles. A subsidised ‘food box’ program services some residents with lower mobility and disposable income (and skills). A food garden at the Men’s Shed is popular and productive, with a dedicated supervisor. Others are less successful due to management issues. Some food grown in own gardens (with an example given of surreptitious replacement of ‘landscape’ planting in housing blocks. Awareness/experience of food shows and of cooking groups with residents of other cultural backgrounds mentioned as generating an interest in the importance of food and healthy eating generally (and social interaction).

Current condition.

There is good awareness of the importance of fresh food amongst Study participants, evidenced also by the interest in community gardens. However the participants also cite examples of poor awareness and/or action by others (at shops in Campbelltown). Supermarket foods are considered to be fresh. There is no noticeable advertising of non-healthy foods in Airds itself – probably corresponding to a lack of food retailing and food premises generally in the neighbourhood. However low visibility of fresh foods in the local shops tends to mean a relatively higher noticeability of non-healthy food options. The residential zoning of the suburb means prominent advertising panels are unlikely. Little general awareness that residents generally could access (by request) fresh foods grown in the community gardens, and the gardens themselves are somewhat hidden from public view.

Response.

Provide space, subsidised if necessary, within the new development on publicly-owned land in the neighbourhood centre to ensure shops retailing healthy food are established. Maintain and extend opportunities for community gardens/allotments and provide support if required. Provide space within the neighbourhood centre for distribution of their produce. Ensure the ‘food box’ program is maintained for as long as required by residents. Provide residents opportunity to use common garden spaces to grow food within housing blocks if desired. Community programs to include healthy food events.

Response.

Ensure the design and (lease) management of new development in the neighbourhood centre, including any renewal of the shopping centre gives prominence to healthy food shops, and diminishes prominence of less healthy foods. Increase awareness of the possibility to become involved in the community gardens (which can also achieve social interaction objectives). Provide space within the neighbourhood centre for distribution of community garden produce, and to give the community food box program greater visibility. Consider provision of space for allotment gardens as a further option for residents to grow their own fresh food.

1. INTRODUCTION.

1.1 Background.

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.

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

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
<p>Getting People Active.</p> <p>The built environment can get people active by facilitating both utilitarian physical activity ('active transport') and recreational physical activity.</p>	<p>Facilitate utilitarian physical activity.</p> <p>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.</p>
	<p>Facilitate recreational physical activity.</p> <p>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.</p>
<p>Connecting and Strengthening Communities.</p> <p>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.</p>	<p>Facilitate incidental neighbourhood interaction.</p> <p>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.</p>
	<p>Make community spaces.</p> <p>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.</p>
	<p>Build for crime prevention.</p> <p>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.</p>
<p>Providing healthy food options.</p> <p>The built environment can provide healthy food options by facilitating access to healthy food, and by responsible food advertising.</p>	<p>Facilitate access to healthy food.</p> <p>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.</p>
	<p>Promote responsible food advertising.</p> <p>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.</p>

(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.	<p>Existing suburban fringe location, south-west Sydney.</p> <p>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.</p> <p>Close collaboration between UrbanGrowth NSW and State agencies to promote equitable health outcomes via social programs and a re-structuring of the built environment.</p>	<p>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.</p>
Renwick.	<p>Southern Highlands, adjacent to a township detached from the metropolitan area.</p> <p>New low density residential estate comprising 600 dwellings and an associated local commercial centre. Specific attention to integration with the existing town urban area.</p> <p>Explicit collaboration with the National Heart Foundation, and incorporation of its <i>Healthy by Design</i> guidelines in the master planning.</p>	<p>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.</p>
New Rouse Hill.	<p>Suburban fringe location, part of a metropolitan growth corridor, north-west Sydney.</p> <p>Large, comprehensive master planned development area incorporating a major regional mixed-use Town Centre, low and medium, density residential, schools and community facilities.</p> <p>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.</p>	<p>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.</p>
Victoria Park.	<p>Inner-urban Sydney, part of the major Green Square precinct urban redevelopment.</p> <p>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.</p> <p>No explicit inclusion of healthy planning principles, but with health co-benefits from its emphasis on environmental outcomes and community development.</p>	<p>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.</p>

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

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

- (ii) 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 Airids Bradbury.

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?

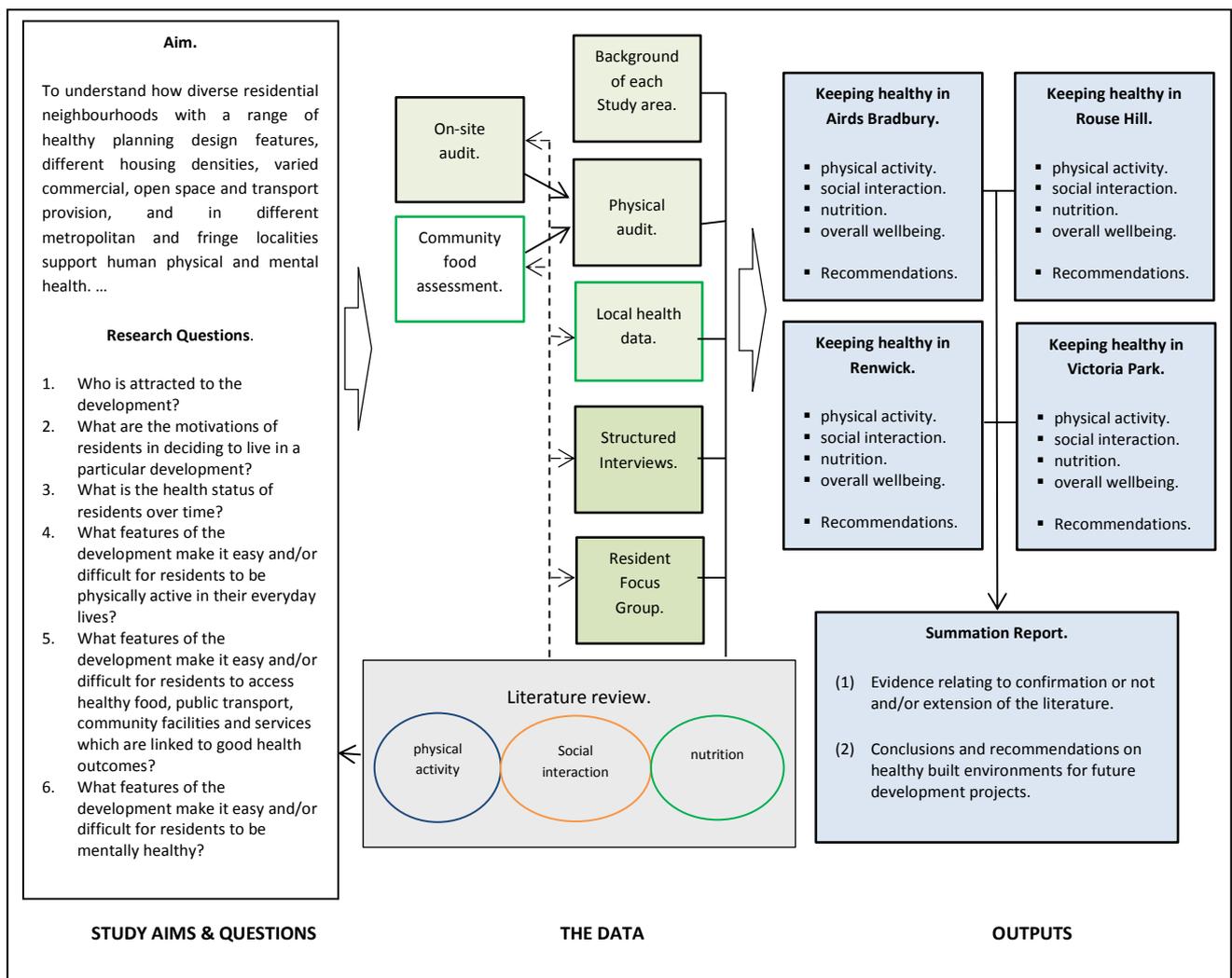
The Study used mixed quantitative and qualitative research methods, with an emphasis on the latter, to gather a 'rich picture' of data. Data collection comprised:

- 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 (with the City Wellbeing program) 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 time-frame of the study and the current and on-going nature of the 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 as subsequently designed and conducted has also sought to address 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).

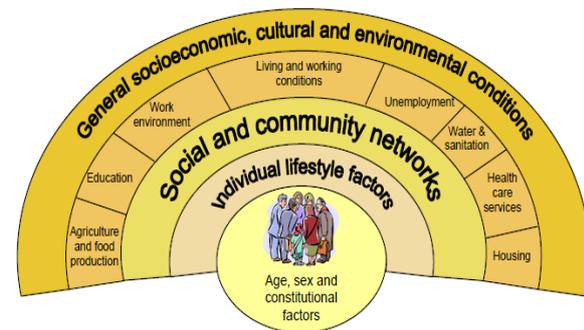


Figure 1.5: The Health Map (2006).



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.

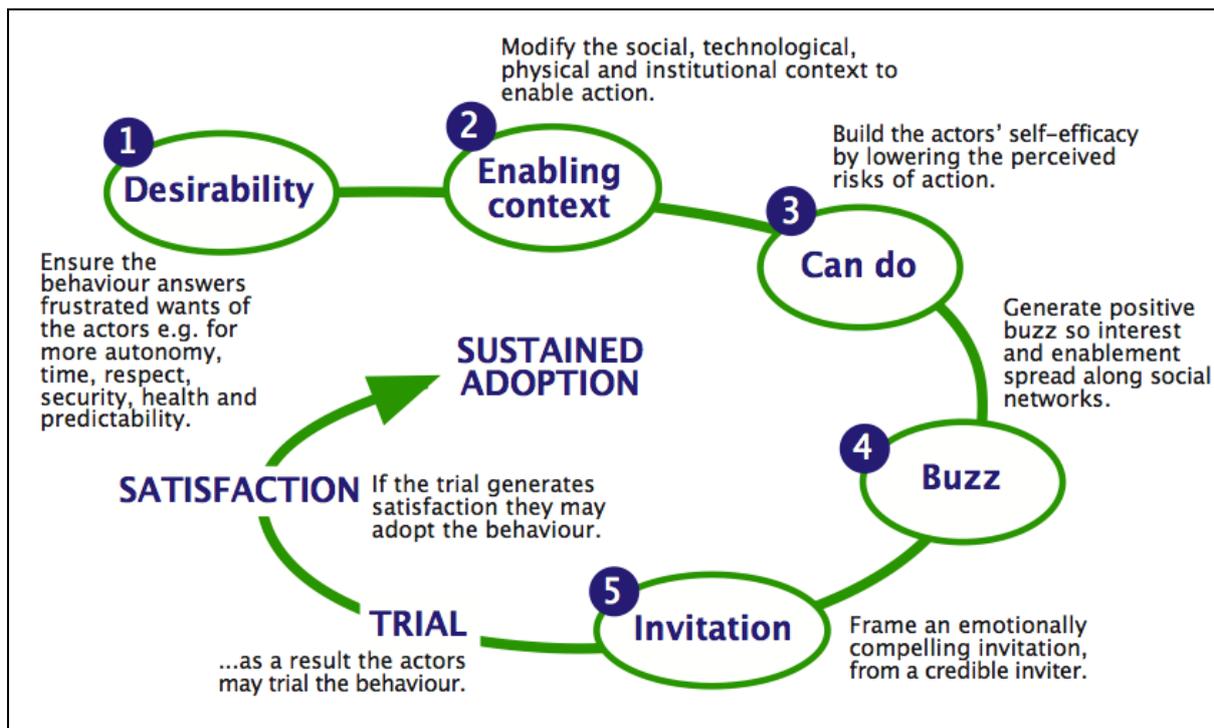
Of similar importance are then the various factors that act to influence actual personal behaviour. Again, the ways in which we act, adopt and respond to particular information and knowledge about matters is subject to numerous influences. For the purposes of this Study background reference has been 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 is 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 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), has 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. AIRDS BRADBURY – a description.

2.1 Location and history of development.

The Study Area comprises the Airds Bradbury Renewal Area as managed by Housing NSW and UrbanGrowth NSW. It includes the suburb of Airds, a small part of the suburb of Bradbury, and a small number of houses just within the boundary of the suburb of St Helens Park, and is located about four kilometres to the east of Campbelltown. Within the overall Renewal Area boundary there are a number of parcels of privately-owned land (the neighbourhood shops and service station, a bus depot, and some individual houses that had been earlier sold out of public ownership). The Renewal Project does not include this land; it however included in this Study. The new residential areas developed as part of the Renewal Project are now being marketed under the name of 'Newbrook'.

The Area comprises some 184.4 hectares, approximately 1,500 dwellings of which about 94% comprise public housing, a neighbourhood centre, and various parks, schools and other community facilities. The neighbourhood centre comprises a shopping mall, community centre and youth centre, a petrol filling station and a tavern. The Georges River Reserve, an area of important bushland, is to the east of the Study Area.

Within the overall Renewal Area boundary there are a number of parcels of privately-owned land (the neighbourhood shops and service station, a bus depot, and some individual houses that had been earlier sold out of public ownership). The Renewal Project does not include this land. It is however included in the considerations undertaken by this Study.

Figure 2.1: The Airds Bradbury study area.



The Area was originally developed in the 1970s and 1980s as a public housing estate, one of five such estates in the Campbelltown area which was identified as a 'growth corridor', with residential, employment, retail, commercial and cultural uses, in the then metropolitan plan for Sydney.

These estates were designed and built to 'Radburn' design principles, developed in an era when city populations were suburbanising, when cars were becoming the predominant means of transport, and when understandings of a 'healthy' environment gave emphasis to separation – of vehicles and pedestrians, different land uses, and of buildings – to reduce conflict and friction and maximise the penetration of light and air. In Airds Bradbury the housing consisted of a mix of detached and attached ('townhouse') dwellings. A key feature of Radburn planning was to orientate dwellings away from the street towards extensive connected central open space areas. Front yards were to face the open space; rear yards to the street. The street layout was predominantly orientated to facilitate motor vehicle access within an overall curvilinear pattern with clusters of houses in cul-de-sacs, and pedestrian movement intended to be primarily via the central open space areas. The estates included neighbourhood shopping centres, primary and high schools and a range of recreation facilities. In Airds this included an indoor swimming pool. Pedestrian underpasses were included under major roads.

In practice, the design and management of these estates has generated a number of problems. The large open space areas of the Radburn layout has resulted in prohibitive maintenance costs for local Council authorities, resulting in significant areas of poorly maintained and under-used public space. Streetscapes tended to be characterised by high rear-yard fencing. In practice there was often little informal surveillance of the centralised open space areas and their use became constrained by concerns over personal safety. The Radburn approach has now generally fallen into disrepute, as suggested in the following critique:

...these characteristics when combined with low urban density, location on the outskirts of cities and poor connection to major community facilities have created housing estates that isolate communities and enable negative uses. Radburn designs are not only unresponsive to people's needs, they also generate further needs.⁷

Additional issues arose for those suburbs which were also predominantly public housing, which now tends to be allocated predominantly to those experiencing disadvantage, resulting in concentrations of unemployment, low incomes and poor health. Crime rates can be high. Certain of these estates in the Campbelltown area were critically appraised in *Leviathan: the unauthorised biography of Sydney* published in 2000:

... laid out on what was thought to be an attractive open plan, with lots of winding cul de sacs and esplanades, walking tracks and shared recreation spaces. In fact, seen from the air, the estate resembles a giant clenched fist, trapping its reluctant residents within a painfully tangled knot of broken fingers. The shared spaces were free-fire zones contested by the young and the hopeless. The walking tracks became getaway routes. And the whole intensely inward-looking layout, which sat at the very edge of urban development, and was physically cut off from nearby suburbs by a wide stretch of road, encouraged the inhabitants, so it was said, to think of themselves as cut off from society.⁸

⁷ Olga Camacho Duarte: 'Research, development and innovation: The case of social housing in Mt. Druitt, NSW'. 5th State of Australian Cities Conference, Melbourne, 2011.

⁸ John Birmingham in his book *Leviathan: the unauthorised biography of Sydney* published in 2000

It is important though to note that such descriptions have also been questioned. The urban historian Grace Karskens for instance advises that if they do not also include their full historical contexts and identification of the aspirations and achievements of individual residents they can ‘imprison people just as effectively as distance and deprivation.’⁹

Housing NSW is now working in partnership with UrbanGrowth NSW, sometimes in private sector partnerships, to ‘renew’ these areas. Critically, these renewal programs have two points of focus:

- a ‘community renewal’ program, comprising improved provision of community services and targeted support and assistance programs, and changes in the overall demographic profile via a greater mix of household types and public and private tenure.
- a ‘physical renewal’ program, comprising often substantial changes to the physical layout of roads and open space areas, in effect ‘de-Radburnising’ the original layout, as well as changes to the neighbourhood centres and to the type and design of individual dwellings (Figure 2.2).

Such a renewal project for the Bonnyrigg housing estate is listed as a positive example by the NSW Premier’s Council for Active Living for its ability to encourage active and thus healthy behaviours amongst its residents.¹⁰

The renewal process tends to be long-term. In Airds Bradbury some early work to reverse the orientation of houses was undertaken in the mid-1990s, and some dwellings were sold to tenants. The current program commenced in the mid-2000s and is to take place over a period of ten to fifteen years. It includes a reduction in the proportion of public housing dwellings to about 30% through the demolition of existing dwellings and sale of the land for new private dwellings, the sale of existing public dwellings to private buyers, and an increase in the number of dwellings overall (to approximately 2104). This includes a doubling of the number of aged persons units.

The Airds Bradbury Renewal Project is governed by an overall Project Plan supported by:

- a Strategic Social Plan, which guides the ‘community renewal’ program.
- a Concept Plan, which guides the physical renewal program (Figure 2.3).

The overall planning process has included extensive community consultation, the establishment of a Community Reference Group of residents, and a ‘due diligence’ social and health assessment of the community (the *Integrated Social Sustainability and Health Impact Assessment Report*) which included an assessment against the NSW Health *Healthy Urban Development Checklist*.¹¹

⁹ Grace Karskens: ‘Tales of Sydney and the telling of Sydney histories’ in *Journal of Urban History*. September 2002. Pp. 778-792.

¹⁰ In this example, both the requirements for the initial environmental assessment of the project and a condition relating to evaluation and monitoring in the subsequent project approval included reference to the Premier’s Council for Active Living *Designing Places for Active Living* guidelines. Refer: http://www.pcal.nsw.gov.au/_data/assets/pdf_file/0020/118622/PCAL0002_CaseStudies_Bonnyrigg-LRFINAL_2.pdf and http://www.pcal.nsw.gov.au/case_studies/bonnyrigg_living_communities_project.

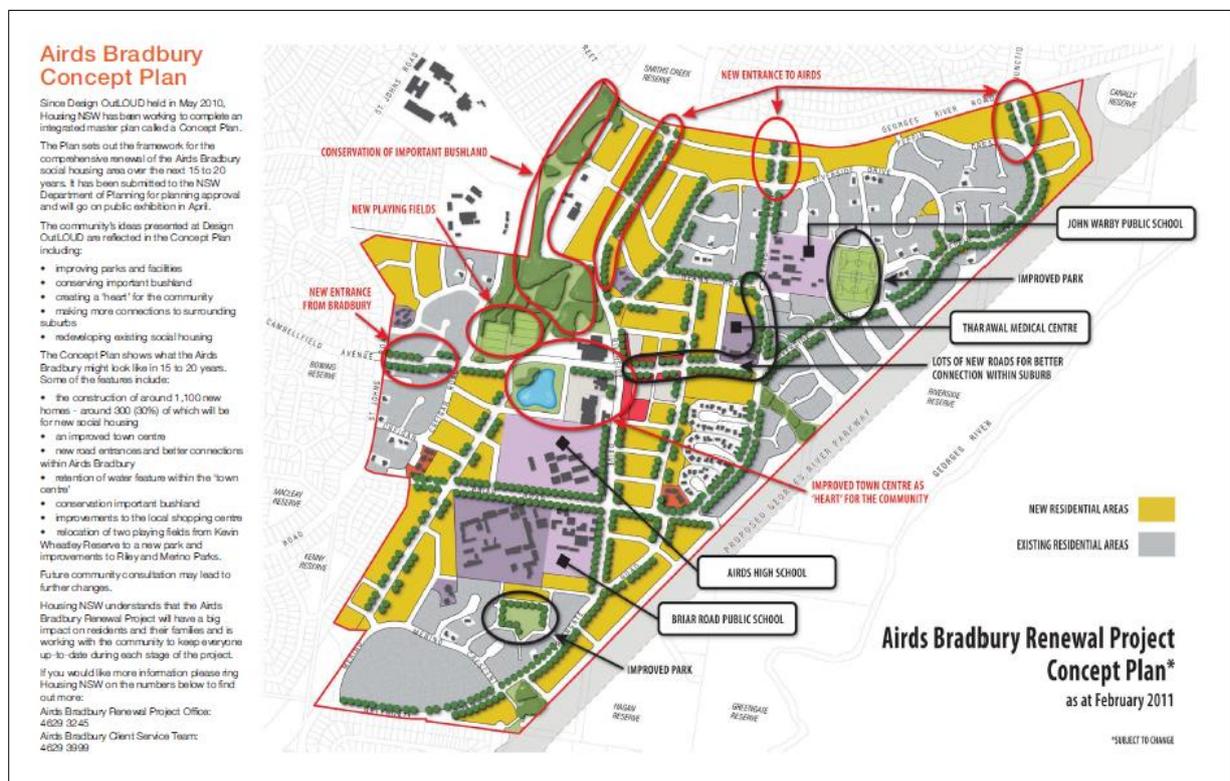
¹¹ *Healthy Urban Development Checklist: A guide for health services when commenting on development policies, plans and proposals* (NSW Department of Health, 2009).

Figure 2.2: A comparison of existing and proposed urban structure for Airds Bradbury.



Note: These two plans give a quick idea of the intended broad changes in the urban structure and road layout as a result of the renewal project. The existing layout of Airds Bradbury is on the left. The proposed layout is as shown in the marketing plan for the new estate of 'Newbrook' (on the right).

Figure 2.3: Airds Bradbury renewal Concept Plan (2011).



UrbanGrowth NSW is to lead the implementation of the Concept Plan. Necessary agreements have been made with the various public landholders within the Renewal Project area (and which include the local Council) to consolidate the land ownership (under the New South Wales Land and Housing Corporation) to ease the development process. The roadways, open space areas and various community facilities will be dedicated back to the local Council once development is complete.

Although the Renewal Project only applies to publicly-owned land the Concept Plan does make some reference to the privately-owned shopping mall and service station when proposing a future 'vision' for the neighbourhood centre as a 'regenerated town centre' and new 'community heart'. There is inconsistent reference to the privately-operated tavern: some plans show it as privately-owned, others as owned by Housing NSW.

At the time of the Study the Concept Plan had received necessary statutory planning approvals, an associated Voluntary Planning Agreement had been signed with the local Campbelltown Council, various areas of existing housing had been demolished to allow for sale of the land, and new clusters of medium density aged persons housing had been constructed and occupied. An intended public-private partnership arrangement relating to the private allotments component was discontinued in 2014 and UrbanGrowth NSW subsequently undertook the first land sales in March 2015.

Around the time of the initial development of Airds Bradbury, UrbanGrowth NSW (then constituted as Landcom) adopted a 'healthy places and healthy people' policy to guide its work. Specific mention of this work as applied within Airds Bradbury, and involving liaison with Housing NSW, NSW Health, the Campbelltown City Council and the Department of Planning to assess health implications as relating to the master planning stage, was made in the associated Landcom *Healthy Development* policy brochure.¹²

Provision of facilities off-site by way of a Voluntary Planning Agreement.

A feature of the development is the provision by the developer (the New South Wales Land and Housing Corporation) of a range of public facilities via either specific works or monetary contribution. These include new works and upgrading of existing facilities, including roadways, parks and other open space areas, drainage works, street tree planting, provision of bus stops, and various community facilities. Actual provision will be staged, related to development of the various precincts within the estate. These actions are formalised in a Voluntary Planning Agreement (the *Airds Bradbury Renewal Project Planning Agreement*) between the New South Wales Land and Housing Corporation and Campbelltown City Council, signed in late 2014.¹³

Housing Affordability Fund.

Some of the new housing lots offered for sale to private buyers are eligible for a rebate of \$20,000 under the Australian Government Housing Affordability Fund. Successful application for a rebate

¹² *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

¹³ Voluntary Planning Agreements are made under the *Environmental Planning & Assessment Act 1979* and provide for legal arrangements whereby new developments make a contribution to works, facilities and services either projected to be required as a result of the increased demand generated by that development or as otherwise agreed between the parties.

requires purchasers to either reside within the new dwelling or make it available for rent, and that the new dwelling meet minimum stated requirements for energy and water efficiency established in the Government's *Sustainable & Accessible Housing Checklist*. The Fund contributed to the infrastructure costs for the estate and the rebate passes these savings on to consumers.

Health profile of Airds Bradbury

Associated with the renewal process Project partner South Western Sydney Local Health District (SWSLHD) prepared a health impact assessment and population profile of the Airds Bradbury locality.¹⁴ This assessment concluded that:

- Airds is one of the most socially and financially disadvantaged suburbs in NSW.
- there are low rates of educational attainment, high rates of unemployment and a high proportion of single parent families. Almost 50% of households live below the poverty line.
- health issues for residents are significantly greater when compared to surrounding areas as well as the population of NSW.

The Executive Summary is included as boxed text below.

Airds Bradbury Health Impact Assessment & Population Profile (SWSLHD)

Executive Summary

This population health profile provides a picture of the health, demographic and socioeconomic context of Airds Bradbury. It draws on information from a number of sources, including the Australian Bureau of Statistics (ABS) 2011 Census of Population and Housing, the NSW Admitted Patient Data Collection and the NSW Population Health Survey.

Airds is one of the most socially and financially disadvantaged suburbs in NSW. The NSW Land and Housing Corporation manage most properties Airds. The Airds Bradbury Renewal Project involves the comprehensive renewal of the Airds Bradbury social housing area, over the next 15-20 years.

Key characteristics of Airds include low rates of educational attainment, high rates of unemployment and a high proportion of single parent families. The population in Airds is younger than surrounding areas, as 60% of residents are aged less than 20 years of age. Almost 50% of households in Airds earn less than \$600 per week and live below the poverty line.

The health issues for residents in Airds are significantly greater when compared to surrounding areas as well as the population of NSW. Hospitalisations for dialysis, childbirth related conditions, injury and poisoning and digestive system diseases were considerably higher in Airds than in surrounding areas and NSW. High rates of chronic health conditions such as cardiovascular disease, diabetes, respiratory disease and cancer were also reported. Risk factors for chronic disease such as smoking, high-risk alcohol consumption, physical inactivity and insufficient consumption of fruit and vegetables were also higher in this area when compared to NSW.

¹⁴ South Western Sydney Local Health District: *Social Housing Transition and Health and Chronic Disease Risk Factors. Health Impact Assessment Population Profile*. (May 2013).

2.2 The Study participants.

The Study included 20 residents of Airds Bradbury 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 attendee did not partake in the initial interviews).

Table 2.1: The demographics of the Study participants.

	Age	Gender	Occupation	Level of education	Household characteristic #	Current health status ##
1	22-34	F	Pensioner	TAFE	Single	Good
2 *	22-34	F	Volunteer worker	TAFE		Average
3	22-34	F	Hospitality	TAFE	Children	Good
4	22-34	F	At home parent/student	Yr. 12	Children	Poor
5	45-54	M	Pensioner	TAFE	Single	Good
6 *	45-54	F	Clerical	TAFE	Children	Good
7	45-54	F	At home parent	TAFE	Children	Average
8	55-64	M	Trade	Yr. 8		Good
9 *	55-64	F	Volunteer worker	Yr. 10	Single	Poor
10	55-64	F	Home duties	Yr. 10	Couple	Very good
11	55-64	F	Pensioner	Yr. 10	Couple	Good
12	55-64	M	Trade/now pensioner	Yr.10	Single	Average
13 *	65+	F	Volunteer worker	Yr. 10	Couple	Good
14	65+	F	Retired	Yr. 10		Very good
15	65+	M	Pensioner	Yr. 12	Couple	Average
16	65+	M	Retired (trade)	Yr. 10	Single	Good
17 *	65+	F	Retired/volunteer worker	Yr.10		Poor
18 *	65+	F	Trade	Yr. 10	Single	Good
19	65+	M	Retired (clerical)	Yr. 12	Children	Good
20 *	65+	M	Trade	Yr. 10	Children	Poor

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 Airds Bradbury.

In addition to the letter-boxing of the Study flyers (Attachment 2), information about the Project was included in various of the newsletters distributed to Airds Bradbury residents through the AB Central community centre as part of the Renewal Project.

Members of the Airds Bradbury Reference Group established to inform the Renewal Project were briefed on the Project, and some members accompanied the Study officers on the first on-site audit as a way of both familiarising themselves with the aims, intent and process of the Study, and introducing the Study officers to their suburb.

3. THE RESEARCH PROCESS - methodology.

3.1 Introduction – the difficulties of measuring place-based health relationships, and the approach of this Study.¹⁵

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.’¹⁶ 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.

¹⁵ 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.

¹⁶ 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 Airds Bradbury.

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

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.¹⁷

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).

¹⁷ 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 how people use and move 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.

Undertaking the neighbourhood audit in Airds Bradbury.

Physical assessments were undertaken of the environment of Airds Bradbury over six separate visits at various times of the year in 2012 and 2013, as detailed in Table 3.1. The total visitation time comprised 20 hours and 30 minutes.

The process of undertaking the audit within Airds Bradbury was different to the other case-study areas in that in Airds Bradbury a Reference Group for the study had been established comprising local residents, drawn from the existing reference groups established for the Renewal process, and representation from Housing NSW. This Reference Group requested that representatives attend the on-site visits by the study officers undertaking the audit. The purpose was two-fold: in part to become familiar with the approach undertaken by the study and appraise the accuracy of its conclusions, and in part because some members of the Reference Group were concerned about the safety of study officers particularly at night. The Reference Group representatives attended the first on-site audit; they did not attend the subsequent visits.

Table 3.1: Details of on-site audits (Airds Bradbury).

Date and Times	Time spent (hours)	Weather, and other conditions.
Friday 8 June 2012. 10 am – 2.30 pm.	5.3	Sunny, 15 degrees.
Wednesday 27 June 2012. 10 am – 3 pm.	5	Partly cloudy, 15 degrees. Teachers’ strike day; some schools on holidays.
Friday 20 July 2012. 10 am – 3 pm.	5	Sunny, 10 degrees.
Monday 27 August 2012. 5.30 pm – 7.30 pm.	2	Cool and clear, 16 degrees.
Tuesday 13 November 2012. 7.20 pm – 8.40 pm.	1.1	Overcast, 19 degrees.
Saturday 6 July 2013. 2.30 pm - 4.00 pm.	1.5	Sunny, 16 degrees, cool breeze. Undertaken in the middle of school holidays.

3.1.2 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*.¹⁸

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.¹⁹ A copy of the community food assessment survey tools are attached to the Summation report for this Study.

Undertaking the community food assessment in Airds Bradbury.

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. In Airds Bradbury and the surrounding area it comprised ten stores, being two supermarkets each from the two major supermarket chain stores, two discount supermarket chain stores and four independent grocery stores.

The farmers market research was undertaken between February and April 2013. In the Airds Bradbury area the (weekly) Warwick Farm Market was surveyed, with 51 customer and 6 stallholder interviews undertaken.

¹⁸ Refer: *Victorian Healthy Food Basket Survey* (Palermo and Wilson, 2007), and the *Queensland Healthy Food Access Basket* (Queensland Health, 2002).

¹⁹ 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 Airds Bradbury

The Study sought the views and experiences of the residents of Airds Bradbury via:

- (i) one-on-one semi-structured interviews with 20 residents, and following this
- (ii) a focus group to which those who had already undertaken an interview were invited.²⁰

(i) The interview.

The interview design.

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 2003-08.²¹
- 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).²²
- 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).²³
- the *NSW Adult Population Health Survey* conducted by the NSW Ministry of Health in 2011.²⁴

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.

²⁰ 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).

²¹ Refer: <http://www.sph.uwa.edu.au/research/cbeh/projects/reside>

²² Refer: <https://www.planning.org.au/viccontent/selandra-rise>

²³ Refer: https://cityfutures.be.unsw.edu.au/publications/?pub_type=Research+Reports&search=green+square

²⁴ Refer: <http://www.health.nsw.gov.au/surveys/adult/Pages/default.aspx>

Table 3.1: Schedule of interview question topics.

Section	Question Topics
Your Neighbourhood	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 20 residents, either face-to-face or by telephone. The interviews were conducted between January 2014 and June 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 study area via letterbox drop and through key community 'actors' (Attachment 5). In this respect recruitment was assisted by the existence of a Community Reference Group established by the development partners to establish a participatory process for the design of the renewal of Airds Bradbury as well as a number of other government and non-government agencies working in Airds Bradbury. The key contacts used were:

- the Housing NSW Project Managers
- the Chair, Airds Bradbury Community Reference Group
- the Coordinator of the Airds Bradbury Men's Shed
- a photographer who had recently met with a number of residents to undertake a photographic record and exhibition of local residents.

Interviewees were also asked at the time to nominate any neighbours, family members or friends who they thought may also like to participate in the Project. The extent to which additional participants were recruited via this process varied.

Although the initial recruitment program yielded a number of participants, final achievement of the targeted number of interviews subsequently relied on residents either suggested by the photographer or recruited by the coordinator of the Men's Shed.

(ii) The focus group.

The focus group design.

In addition to follow-up comments on the results of the interviews, the focus group sought to:

- (i) minimise the risk that responses might merely repeat those already obtained in the interviews, by maximising the opportunity for the participants to inform the Study 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 Study could not comprise a longitudinal appraisal as originally intended, 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 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 participants' 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 these 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.	<i>What is helping me to keep healthy, now.</i>	<i>What I need to keep healthy.</i>	The things I should be doing (but do not do) to keep healthy.
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The two focus group facilitators then convened a discussion prompted by the cards and from their knowledge of Airs Bradbury 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'?*

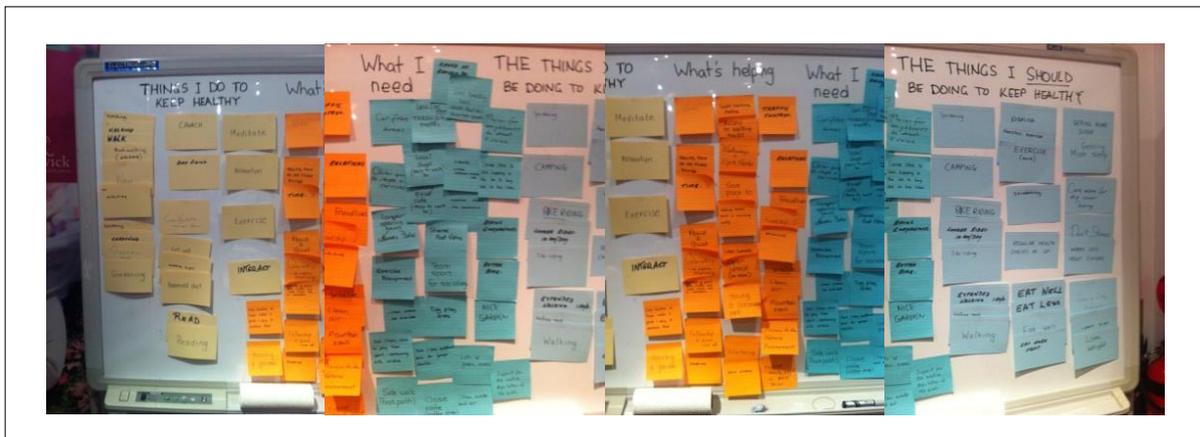
- *Are there any common features amongst the things that ‘we need but do not have to keep healthy’?*
- *Do you have any suggestions for obtaining the things that ‘we need but do not have to keep healthy’?*
- *Can you tell us more about ?*

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. They are able to be transferred into an easy-to-read table as part of the analysis stage (see Table 4.6). The transcript provided more detailed and in-depth information.

Figure 3.1: The display of participants’ completed comments cards at the Focus Group.²⁵



Recruitment and conduct of the focus group.

The focus group was held on Thursday 31st July 2014 at the Airds Bradbury community centre (‘AB Central’). It started at 1.00 pm and finished at approximately 2.30 pm. Lunch was available to participants beforehand, and participants were also given a \$50 gift voucher to recompense their time.

Invitations were sent by either email or letter to those who had earlier undertaken the interview and had agreed at that time to be advised of the subsequent focus group.

There were nine participants, including the partner of one person who had earlier undertaken an interview (and also attended the focus group) but had not themselves participated in an interview.

²⁵ This illustration is from the focus group held with Renwick residents.

The demographic profile of participants was not as wide as for the other Study Areas. This was likely due to a combination of limited interest, lack of experience and familiarity and hence comfort with the focus group process, and time demands from work combined with family demands. All participants were either in the 55-64 or 65 and over age groups; and none were working, being either retired, or a carer, or on disability support. Further, most have been long-term residents of Airds Bradbury, and most are active one way or another with one or more community organisations such as the Community Reference Group, Men's Shed and State Emergency Service. Some also identified themselves as having taken upon themselves to undertake community building activities in their residential block and/or the wider area. These characteristics may have had an impact on the discussion around provision of services and programs, and social interaction. That said, a number of participants have had experience of raising children in the neighbourhood, and the discussion was broad-ranging in that it also covered the participants' observations and thoughts on the needs of younger people in Airds Bradbury.

Following the completion of the focus group, one of the participants returned to the meeting room to speak to the Study officers to advise a concern – that the participant and some other residents have felt that their views on the future of Airds Bradbury had been dismissed by the resident representatives on the Community Reference Group established to advise the renewal program, and that it was felt there had been a similar response during the focus group. This mainly related to discussion on the effect of the proposed changes to the provision of open space in the suburb. This participant also suggested that some of her neighbours who had undertaken the earlier interview and as such had been invited to the focus group had decided not to attend because they knew some of those Community Reference Group representatives would be in attendance. The Study officers offered to arrange an additional focus group to cater for these residents if they so desired, however no further approach in this regard was made. The conclusions drawn in this Report are based on a wide spectrum of information from the Study overall, not just from the focus group. That said, the process of making these conclusions and subsequent recommendations has also been mindful of these advices.

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) the analysis of this data is 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.²⁶ 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.

- (iii) an 'overview' appraisal of the healthy built environment characteristics of Airds Bradbury 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.

This structure provides a convenient way to order the extensive data. Future appraisals of the contribution of the built environment of Airds Bradbury to residents' health can be similarly structured, permitting 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 (20 participants) (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*.

²⁶ Refer: <https://cityfutures.be.unsw.edu.au/research/programs/city-wellbeing/>

Table 3.2: Keeping healthy in Airds Bradbury: the domains, actions and 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?	11. Do participants walk for recreational physical activity?	18. Does the design of common areas in buildings foster incidental person-to-person contact?	21. Are there formal public and semi-public spaces accessible to the community at large?	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?	33. Might eating habits be adversely affected by local advertising?
3. Do participants use public transport?	12. Is walking viable for recreational physical activity (convenient, comfortable, & safe)?	19. Does the design of building frontages foster incidental person-to-person contact?	22. Is the design of formal public and semi-public space inviting to the community at large?		29. Is there a relative over-abundance of EDNP food shops?*	34. Is the presence of healthy food options visible?
4. Is public transport viable (convenient, comfortable, safe & affordable)?	13. Do participants cycle for recreational physical activity?	20. Does the design of public space foster incidental person-to-person contact?	23. Can participants be involved in the broader design and governance of their community spaces?		30. Do participants have an ability to grow healthy food?	
5. Do participants walk (or cycle) as a means of transport?	14. Is cycling viable for recreational physical activity (convenient, comfortable, & safe)?		24. Does new development include a 'Welcome' program to initiate on-going social interaction?		31. Can (farmed) healthy food be sourced (fresh) close to participants?	
6. Is walking viable for 'active transport' (convenient, comfortable, & safe)?	15. Does public open space provide for recreational physical activity?		25. Does the design and governance of public and private space allow contact with nature?		32. Is there a diversity of sources available for the sale or other distribution of healthy food (eg. markets, co-ops, food trucks)?	
7. Do participants cycle as a means of transport?	16. Are other facilities available (by either public or private providers) for recreational physical activity?					
8. Is cycling viable for 'active transport' (convenient, comfortable, & safe)?						
9. Do participants use stairs?						
10. Is use of stairs viable (convenient, comfortable)?						
Summation.		Summation.			Summation.	

* EDNP = Energy Dense, Nutrient Poor.

3.5 Study 'boundaries'.

This Study has only been able to canvass the experiences of residents in Airds Bradbury at the time. It did not canvass the experiences of those residents who had already left as a result of the re-location component of the Renewal Project. Further it is noted that a new cohort of residents will be established in Airds Bradbury in coming years as the private land sales component of the Renewal Project are undertaken.

Airds Bradbury includes a large Aboriginal population and is the location of the local Tharawal Aboriginal Corporation. Although a number of approaches were made to the Corporation through its medical centre in an attempt to recruit participants for the interviews, the Study did not receive any return contact. That said, it may well be that some of the interview participants were of Aboriginal descent; no explicit questions were asked in this regard. It could be expected that the conclusions and recommendations made in this Report are equally applicable to Aboriginal and non-Aboriginal residents; however the Study has not been able to ascertain whether there are any particular healthy built environment needs or issues that should be emphasised.

4. KEEPING HEALTHY IN AIRDS BRADBURY – our findings.

4.1 Physical activity – getting people active.

It is recommended 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.

No - only 12 out of 20 participants (60%) of participants achieved recommended physical activity levels.

Participants were asked to estimate the number of hours per week they spent walking and cycling (for both transport and recreation) and undertaking other moderate and vigorous physical exercise. Only 12 out of 20 participants (60%) achieve the recommended minimum number of hours (Table 4.1).

Most activity was by moderate activities such as gardening and home activity such as housework. Only three participants indicated they engaged in vigorous activity (generally by participation in organised fitness classes), and one of these still did not achieve the total overall recommended hours of either moderate or vigorous activity. The number of hours of physical activity cited by those who did not achieve the minimums is generally negligible.

These figures, when also read in conjunction with participants' comments about the things that hinder further physical activity (Table 4.1), present a mixed picture.

- When looked at overall, personal health or ability/disability issues comprise about 55% of reasons hindering further physical activity. A further 30% of reasons comprise issues relating to the built environment either in terms of actual provision of infrastructure or the quality of existing infrastructure (some participants cite both matters as factors).

- These reasons tend to be cited by *both* those who achieve the recommended minimum hours and those who do not, suggesting high levels of individual personal motivation whereby they do not allow these hindrances to ‘overtake’ their desire and understanding of the necessity to undertake physical activity in order to maintain their health.
- It is of concern that most physical activity is undertaken by moderate activity such as walking and gardening and home activities. It may be that the actual levels of exertion do not achieve the levels of cardiovascular activity required to maintain health.
- That said, it is also noted that of the 12 participants who achieve the recommended minimum hours, nine (75%) also well-exceed those minimums.

These observations are supported by advices received from participants in the later focus group when asked about the ‘things they did to keep healthy’, the ‘things they should be doing to keep healthy’ and the ‘things they need to keep healthy (but do not currently have’ (see Section 4.4 and Table 4.6). Combined, they suggest that:

- (i) there is an understanding about the need to engage in physical activity in order to maintain personal health.
- (ii) improvements in local infrastructure are likely to facilitate additional physical activity amongst participants.
- (iii) the infrastructure needs, both in terms of the overall provision of *local* facilities and the quality of upkeep of those facilities (eg. well-maintained paths) is probably higher where, as in the case of Airds, the local population is ageing and/or have health issues.

Particular attention needs to be given to the provision of infrastructure facilitating physical exercise for those who have a health issue/disability given the high incidence of these being cited by those participants who do not achieve the recommended minimum hours of activity. This conclusion is made here noting also that, for example, one participant who indicated they were a quadriplegic does also engage in vigorous physical activity (at a physiotherapy gym) to an extent that almost achieves the minimum recommended number of hours.²⁷

²⁷ This participant was not included in the calculation of the number of participants overall who achieve the minimum recommended number of hours of physical activity. However, it may well be that in practice the recommended minimum is effectively achieved in terms of his particular health needs (particularly given it comprises supervised activity). The participant indicated he undertook 1 hour and 10 minutes of vigorous activity per week; the recommended minimum is 1 hour and 15 minutes.

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

	No. of hours spent on different activities.						TOTAL hrs: Moderate activity. Target: 2½ - 5 hrs / week # *	TOTAL hrs: Vigorous activity. Target: 1¼ - 2¼ 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						1.2		1.2	×	Physiotherapy gym.	Am a quadriplegic.
2			0.3		1		1.3		×	Local walks. Women's centre exercise classes.	Health issues.
3	5		1		1		7		✓	Gardening, home activity.	Dirty streets. Three children to look after.
4					1		1		×	Gardening.	Arthritis. Lack of time. Poor safety for cycling.
5			3				3		✓	Local walks.	Personal motivation. Do not feel safe. No good cycling paths.
6	1.5				8		9.5		✓	Gardening. Swimming.	Cannot cycle – have had a knee replacement.
7	2		5		7		14		✓	Yoga. Swimming.	Injury. Safety concerns - but stand up to the gangs of kids.
8	6		4		3	4.5	13	4.5	✓	Gardening, swimming. Gym/dance class.	Safety concerns.
9	0.2				3		3.2		✓	Gardening. Home activity.	Health problems.
10	3		0.3	2	2		7.3		✓	Gardening.	
11	5		5				10		✓	Local walks.	Body aches and pains. And a stiff leg (can't ride)
12					2		2		×	Exercise class, Men's Shed activities.	Had a stroke.
13					3		3		✓	Gardening, home activity.	Health problems. Bad footpaths. Not really an active person.
14							Nil		×		Personal injury. Have just given up cycling.
15	0.25						0.25		×		Diabetes. Cannot walk far.
16	0.5				16		16.5		✓	Gardening, golf, Men's Shed activities.	Old age. Do not need to walk – use car and bus.
17	5.25		5.25				10.3		✓	Some swimming.	Too much weight to cycle.
18			1		7	10	8	10	✓	Gardening, Men's Shed and SES activities. Men's fitness classes.	Getting older, get exhausted more easily. Driving is quicker.
19							Nil		×		No-where to walk to. Bicycles get stolen.
20	0.25		0.5		0.5		1.25		×	Gardening.	My legs get tired quickly. I don't cycle.
	11 (55%) walk for transport	nil cycle for transport	10 (50%) walk for recreation	1 (5%) cycle for recreation	13 (65%) engage in moderate recreation	3 (15%) engage in vigorous recreation	12 (60%) 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).

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.

Only about half of participants use active transport modes.

Participants were asked to estimate their relative use of different transport modes for all trips taken in a usual week (Table 4.2). They indicate a diverse range of transport modes, with a reasonable level of active transport use:

- 14 out of 20 participants (70%) used active transport modes (in this case public transport or walking) for at least some of their trips, with 7 participants (35%) using active transport for 90% or more of all trips.
- however, this only equates to 44% of all trips being undertaken by active transport modes.
- there is a high level of use of non-active modes (private car, taxis, community transport):
 - 30% use this mode for 100% of trips.
 - 45% use this mode for 90% or more of trips.
- 11 out of 20 participants (55%) used public transport for at least some trips, with five (25%) using public transport for 50% or more of trips.
- nine out of 20 participants (45%) walked for at least some trips, with five (25%) walking for 50% or more of trips.
- no participants cycled for transport purposes.

There are five main reasons behind participants’ choice of transport mode:

- many participants have mobility issues as a result of age or disability, and as such travelling by car if available (or taxi or community transport for some) is either the only practical means to get about, or the means of principle comfort and convenience.
- public transport, comprising a privately-operated bus service to local areas and to Campbelltown, although satisfactory for some routes and destinations is limited in others.
- there are few local destinations to walk to, and some less-mobile participants do not feel safe on local footpaths due to poor maintenance, few resting places, and anti-social behaviour from others.
- although the Audit did not identify any particular issues in respect to the cycling environment, with the roadways appearing to be wide and quiet enough to allow cycling (with the main internal circuit road identified by signage for joint use), cycling is not viable for participants primarily because of age or ability; although safety concerns are also cited (notwithstanding the assessment in the Audit).
- the general uncongested nature of the area means that if residents have access to a car, this will tend to be the ‘easiest’ transport option to get anywhere, particularly given the propensity to leave the immediate Study Area for shopping and recreation activities.

Table 4.2: Relative mode of travel in a usual week.

Participant	Relative use of each travel mode (%)			
	Car	Public transport	Bicycle	Walking
1	100			
2	100			
3	10	50		40
4	95	5		
5		100		
6	10	80		10
7	50 (taxi)			50
8	3	50		47
9	90	10		
10		25		75
11		30		70
12	100			
13	100			
14	100			
15	5 (taxi, friends' cars, community transport)	75		
16	100			
17	35	15		50
18	70			30
19	95 (as passenger)	5		
20	50			50
Total trips using this mode (%). *	56 %	23 %	nil	21 %
Participants using this mode. #	17 (85%)	11 (55%)	nil	9 (45%)

* Percentage of all trips undertaken which use this mode of transport (total of all entries in this column ÷ 20).

Percentage of participants who use this mode of transport for at least some trips (number of entries in this column ÷ 20) (total across the Table exceeds 100 because some participants use multiple modes).

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.

Use of public transport by participants is variable.

As Table 4.2 indicates, only just over half (11 out of 20, or 55%) of participants use public transport. Further, only half of these use public transport for 50% or more of their trips, and public transport was used for only 23% of trips.

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 as bus shelters and bicycle racks). In addition, public transport can facilitate access to destinations further afield than can be achieved by walking or cycling.

The viability of public transport is variable.

Public transport in Airds comprises a local privately-owned bus service (Busabout) operating to Campbelltown Station via Bradbury as a 'loop'. Access to other bus services and to the City Rail train network is available at Campbelltown Station. The viability of public transport in the first instance therefore hinges on the effectiveness of the local bus service, which is variable.

Only 11 out of 20 participants (55%) use public transport for any of their trips. This is notwithstanding an awareness of the importance of this active transport mode for health, and a generally high level of satisfaction with public transport in the neighbourhood:

- all participants cited 'being able to catch public transport' is important to their health, with 15 out of 20 (75%) saying it was 'very' important.
- 17 out of 20 participants (85%) indicated they were satisfied with their access to public transport (with 14 out of 20 (70%) being 'strongly' satisfied).

Several reasons that could explain this apparent difference between opinion and actual public transport usage were identified:

- limited proximity of the bus service to some desired destinations (eg. the swimming pool in Bradbury).
- convenience (eg. the route through Airds comprises a one-way system which can be lengthy time-wise).
- timing (eg. the last bus leaves before the last train arrival in Campbelltown from the city).
- comfort of usage, particularly for those with low mobility (eg. availability of seats and shelters at bus stops).

Broadly, the 'shape' of the bus service appears to have been determined by the 'shape' of the suburbs to the east of Campbelltown (of which Airds is just one), which tend to be internalised, with a curvilinear street pattern, somewhat self-contained and segregated from each other by roads set within landscaping orientated towards the town centre of Campbelltown. This has resulted in 'loop' systems based on Campbelltown necessitating changes of buses there to access other areas, and a one-way loop within Airds itself which makes it inefficient for short trips. The Airds bus route does not conveniently access the swimming pool and larger shopping centre in Bradbury and the adjacent hospital (the Airds loop does cross with the Bradbury loop at one point, though whether timetabling makes this viable was not researched).

No issues were raised in terms of either the affordability or safety of using public transport, though it needs to be noted that perceptions and feelings of safety within public areas generally and which need to be used to access the bus network are of concern to a number of participants.

The Renewal Project Concept Plan proposes a change to the internal street layout in Airds and a revised bus route which would increase its proximity of dwellings. However it would still operate as a one-way loop focussed on Airds itself. As such it is not clear that all issues will be addressed.

Focus Group discussion on the local bus service.

What about getting to the shopping centre?

Well they'd have to build proper pathways and stuff for people.

They'd have to change the bus route.

Yeah.

Tell me more about that.

Well the buses go one way, around Riverside Drive, so if somebody that lives on that side needs to get the bus to get to the shop, that's fine they can get to the shop. But then to get home, they have to catch the bus all the way to Campbelltown, change buses and come all the way back to get back home on the other side. That's at the present time.

I think the buses used to go both ways didn't they?

They used to, yeah.

No, the east bus went one way around, but there was another bus that would actually come in from the other end and straight through the estate.

... another issue we've got, because we're down in the seniors complex down here. For me to get a bus up here I've got to walk up a steep hill and there's no bus seats. So I don't.

They don't go to Bradbury from here though.

No you've got to go to Campbelltown and get another bus.

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 focus here is on walking, but similar health benefits arise if people cycle for otherwise walkable trips.

There is a low use of walking for transport.

Less than half (9 out of 20, or 45%) of participants walk as a mode of transport and only 21% of all trips are undertaken by walking (Table 4.2), although this is slightly higher than the average for Sydney where 17.5% of trips are undertaken by walking.

For those participants who do walk for transport the total number of hours spent walking per week is quite variable. Five (5) participants were able to achieve their overall recommended minimum hours of physical activity (2½ - 5 hours per week) by walking for transport, however for others it was quite low, comprising only 10 – 30 minutes in total per week (Table 4.1).

The explanations are also quite variable:

- most participants who spent a high number of hours walking for transport had low rates of car usage (comparing Tables 4.1 and 4.2). It is not known whether this was by choice or whether they did not have access to a car. Many of these participants also walked for recreation (sometimes also with a high number of hours), suggesting that walking was also something they enjoyed.
- all participants cited 'being able to walk around your local area' as being important for their health (with 13 out of 20 (65%) citing it as being 'very' important), suggesting a personal awareness of the benefits of walking which would then encourage this mode of transport if viable.
- a few participants said that they walked to the local pub, even if they did not do much other walking (presumably in response to drink-driving regulations).
- there are quite a number of factors that are likely to inhibit walking in Airds Bradbury (see Q. 5), particularly for the relatively high proportion of participants who have low overall levels of mobility due to age or health or disability.

It is also worth noting here the experience of one participant who works late at night in central Sydney (and cites a high number of hours of walking per week). Although she is able to catch the last train of a night back to Campbelltown, there is then no connecting bus service to Airds at that hour and so she has to walk, an experience she finds uncomfortable as a female on her own.

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.

The viability of walking for transport is variable, and for some participants is poor.

Only 45% of participants walk for any of their trips. This is notwithstanding a high awareness amongst participants of the importance of this mode of active transport for their health.

There is a wide variety of factors that appear to inhibit the viability of walking in Airds Bradbury. Only just over half (11 out of 20, or 55%) of participants indicated they were satisfied with 'how easy and pleasant it is to walk in their neighbourhood', with six participants (30%) indicating they were dissatisfied and three participants (15%) neutral.

It is now recognised that the overall structural layout of the suburb, based on a curvilinear street pattern in conjunction with the Radburn planning model favours transport by motor vehicle over walking. This tends to negate the health benefits through 'active transport' that might otherwise be gained in accessibility by the location of main destination uses (schools, playing fields, the neighbourhood centre) on the main circuit road(s). Although the internal open space areas that also characterise Radburn planning may provide more direct routes there are various reasons why these open space areas are not themselves convenient, comfortable and safe to be within (see also Q.22).

The findings of the Audit in respect to the overall amenity and therefore viability of the environment as a place to walk are mixed, with both positive and negative attributes identified:

- the overall quality of footpaths is about evenly divided between 'good' (the highest score) and 'average'.
- footpaths are not consistently provided and there is a distinct lack of other pedestrian infrastructure (i.e. crossings, median strips, refuge islands), though there are pedestrian subways in some locations (as also characteristic of the Radburn model). That said, the overall traffic volumes would appear to be such that these features are unlikely to be necessary.
- not all 'desire lines' through open space areas have paved footpaths, and are evidenced instead via worn ground areas.
- there was some encounters with motorbikes on footpaths being ridden by youths.
- streets and footpaths generally are poorly maintained, with litter and broken glass and occasional drainage issues, with some streets with flooded kerbs and waterlogged nature strips.
- streets are not very well connected, with lots of cul-de-sacs and circuits. Connecting paths through open spaces are not always suitable for prams or electric scooters.
- however the overall amenity of streets is quite pleasant. Apart from occasional very loud traffic noise (eg. from people driving vehicles or motorcycles aggressively), the most notable sound is birdsong, and air quality was rated as very good. Neighbouring buildings are at human scale, often with pleasant well-maintained gardens.
- That said, some streets, particularly the cul-de-sacs, generate a sense of intrusion when walking, and in some locations poorly maintained residences with rubbish in the street and barking dogs contribute to a sense of hostility and insecurity.

Focus Group comment on walking to the local shopping centre.

What about getting to the shopping centre?

Well they'd have to build proper pathways and stuff for people.

Even if the physical walking infrastructure was satisfactory, further factors present issues in respect to the overall viability of walking for transport.

- (i) A lack of destinations to walk to. Although there are a number of local destinations (the schools, various community facilities, and the neighbourhood centre) the local shops, often a principal attractor of walking trips, are not in themselves highly regarded as an attractive potential destination. The local open spaces tend to have limited facilities and so only serve as 'open space' rather than as attractive recreation destinations.
- (ii) Low overall levels of safety and security, both real and perceived (see Q. 26):
 - Seven out of 20 participants (35%) are dissatisfied with the degree of 'safety from threat of crime in the neighbourhood'; with 11 participants (55%) neutral and only two participants 'satisfied'. No participant indicated they were 'strongly satisfied'.

- Nine out of 20 participants (45%) are dissatisfied with their personal safety in neighbourhood streets after dark, with only 5 participants (25%) satisfied with this aspect.
- (iii) Personal physical abilities. A substantial proportion of participants are in older age groups and/or have mobility difficulties. While this does not in itself necessarily restrict the propensity to walk, it does mean that there needs to be a generally higher level of infrastructure provision and upkeep to make walking viable. As indicated by the Audit and by participant comments, this is not currently the case in Airds Bradbury.

Interview comment on barriers to walking for transport.

- Physical disability (e.g. quadriplegia, emphysema, prosthetic arm, arthritis, sciatica).
- Injury/bodily pains (3 entries).
- Age/physical fitness/personal motivation.
- Rain.
- Prefer to drive – it’s quicker. Really depends on my mood whether I drive or walk.
- Got a car, and bus – don’t need to walk
- Footpath access needs to be improved.
- Find it difficult to walk on rough surfaces.
- It’s a bit dirty – rubbish etc.
- Nowhere to go – no attractive destinations.
- Some of the people hanging around or living in the area – can be a safety concern.
- Wouldn’t walk alone at night because of safety concerns.
- Crime.

Focus Group comment on walking to the local swimming pool.

Yeah but to go there, if you haven’t got a car you’ve got to walk all the way down the hill and you've got to walk all the way back up there.

You can’t get there.

Yeah that’s right, it's not too bad walking down, but walking up is a killer.

You see the young ones are even puffing.

There’s a lot of little Telstra boxes, they're good to sit on as you walk back up the hill.

Yeah that’s fine if it’s not halfway up the street.

I think I found every one of them on the walk back up the hill!

That's not good!

Pretty sad isn’t it?

It is, seeing as we used to be able to run up there one time, I used to push a pram up there one time.

Before we even had any footpaths, we never even had a footpath here you know. We used to come up to school through the bush, and I think I wore out two strollers pushing the younger one.

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.

No.

No participants cycle for any transport trip (Table 4.2). As such there is no use of this transport mode to assist in achieving the minimum recommended number of hours of physical exercise per week.

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.

Yes, to a reasonable extent; but not taken up for personal reasons.

Although the pattern of curvilinear streets and dead-end cul-de-sacs is not conducive to walking as a means of transport, it does not necessarily result in the same level of inhibition for cycling. Most streets would appear to be conducive to joint use - the cul-de-sacs due to their low traffic volumes; and the main streets given their reasonable width, low traffic volumes, and curvilinear nature discouraging high vehicle speeds. Cycling would also be possible on the footpaths that cross some of the open space areas (particularly where paved), although this could also result in conflict with pedestrians given their general narrow width. There are no dedicated cycle paths, but the Audit noted that cycle signs are painted on some of the main roads to facilitate joint use. Although the local Council does not appear to have a bicycle plan or strategy, the Audit did not note any particular deficiencies in terms of cycling viability.

However, no participants cycled for transport (and only one participant cycled for recreation – see Q.13). The Audit did not note any people cycling in the area, other than some groups of serious recreational cyclists who appeared to be training and not necessarily from Airds Bradbury.

The low propensity to cycle is also reflected in the low number of responses to the question in the survey interviews as to the rating that participants gave to 'how easy and pleasant' it is to cycle in the neighbourhood, with 12 out of 20 participants (60%) indicating 'don't know' or 'not applicable'. However the interview did include a specific question on barriers to cycling for transport (and for recreation – see Q.14). Responses generally referred to participants' personal physical ability as the principal constraint, though there was also some concern about overall safety including lack of segregation from road traffic (see boxed text). This concern may also be the basis of the single comment about cycling made in the focus group, by a male participant:

- You know, you should be able to push-bike around.

Interview comment on barriers to cycling for transport.

- Physical disability (e.g. quadriplegia, emphysema, prosthetic arm, arthritis, knee replacement).
- Injury.
- Age.
- Not really an active person.
- Have given up cycling as a way to get about due to my age.
- Got too much weight at present/physical fitness.
- Not interested.
- Have 3 preschool aged children-so not really practical.
- Don't have a bike.
- Don't know how to cycle

- Lack of safety – people stealing bikes at the shops.
- Lots of broken glass/trash/broken up stuff around.

- Would ride if there was a segregated cycleway – very concerned about safety
- Paths aren't that great – wouldn't really want to use the road, would prefer to use a path.

- No good routes.

However, in addition, it is also likely that there is a lack of any specific cycling 'culture' within Airds Bradbury, as suggested by the relatively high proportion (five out of 20, or 25%) of participants who indicated they 'did not know' whether being able to cycle around their local area was beneficial to their health; with an overall 11 out of 20 participants (55%) seeing it as either unimportant, were neutral on the question, or 'did not know'.

That said, the fact that nine out of 20 participants (45%) did indicate that being able to cycle around the local area was important for health also suggests that the development of additional specific cycling infrastructure may well induce a greater level of cycling by residents, with the possibility then that a greater visibility of residents cycling in the area might then start a cultural shift amongst others. Here it is noted that the Renewal project includes a plan of specific cycling routes, and the development of an improved local neighbourhood centre accessible by cycling may well encourage additional take-up of cycling as a mode of transport.

Q. 9. Do participants use stairs?

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

Not usually – given most buildings are single storey.

Residents were not asked about their use of stairs and so there is no data to answer this question. That said, most buildings in Airds Bradbury are single storey. Only a small proportion of buildings

(the two-storey townhouses, and the high school) require the use of stair access. As such most residents do not achieve any incidental physical activity by this means.

Future development of the estate may well involve a greater proportion of two-storey dwellings and various medium density residential and commercial development in the neighbourhood centre, meaning the use of stairs in those buildings would be obligatory.

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.

Not applicable – buildings are predominantly single storey.

Most dwellings in Airds Bradbury are single storey and so do not include internal stairs.

Where future development includes stair access to a second storey, then use of stairs will be obligatory regardless of the building design given the likely small scale of development is not consistent with the provision of lift 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.

Half (50%) of participants walk for recreation.

Only half of the Study participants walk for recreation, and of these only half again walk for any extended period per week (Table 4.1). This is despite all (100%) participants agreeing that ‘being able to walk around your local area’ is important for their health (with 13 out of 20 participants (65%) citing it as being ‘very’ important). This response suggests a high personal awareness of the benefits of walking which would in turn encourage greater uptake of this recreation mode if viability was improved (see Q.12).

Further, while comment in the interviews and in the focus group indicates that for some the ability to walk is hindered by age or disability, for others the reverse applies – that walking is now one of the few exercise modes they can still undertake.

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.

Not really, though the potential is there.

Although there would appear to be a large number and variety of potential walking routes, the viability of walking for recreation seems to be limited by lack of associated facilities and interesting destinations as well as lingering security concerns. These limitations are in turn exacerbated for those with limited mobility due to age or other personal circumstance.

As with the viability of walking as a means of transport (Q.6.) the Audit noted some disparity in the quality of the walking environment and therefore also of Airds Bradbury as a place to walk:

- the overall quality of footpaths is about evenly divided between 'good' (the highest score) and 'average'.
- footpaths are not consistently provided.
- although there is a lack of other pedestrian infrastructure (i.e. crossings, median strips, refuge islands) overall traffic volumes would appear to be low, meaning such features are unlikely to be necessary.
- not all 'desire lines' through open space areas have paved footpaths, being evidenced instead via worn areas.
- there was some encounters with motorbikes on footpaths being ridden by youths, and which can be off-putting particularly for older residents.
- some streets and footpaths are poorly maintained, with litter and broken glass and occasional drainage issues. In some areas flooded kerbs and waterlogged nature strips were noted, and in some streets poorly maintained residences with rubbish in the street and barking dogs contribute to a sense of hostility and insecurity.
- however the overall amenity of streets is quite pleasant with buildings at human scale often with pleasant well-maintained gardens, the sound of birdsong, and air quality is good.

Only 11 out of 20 participants (55%) indicated they were satisfied with 'how easy and pleasant it is to walk in the neighbourhood', with 6 participants (30%) indicating they were dissatisfied and three being neutral.

Discussion in the focus group was quite definite about current hindrances to any further uptake of walking, and on what was required to address these. In summary:

- better walking paths that were level, contained interesting features, and had places to sit and rest, and possibly also informal exercise stations to increase activity levels. Some examples in other nearby areas (in Camden, and Park Central at Campbelltown) were mentioned as possible models; though curiously not the recent upgrade of The Pond, perhaps because it is of only limited area and length.
- new walking trails into areas where they do not exist at present. The Smiths Creek area (the remnant bushland area to the north-west of the estate and which links to a more extensive

open space area to the north) was explicitly mentioned. However, to be viable this would need to include constructed level surfaces, and feel safe.

- organised walking groups were mentioned as a way of alleviating lingering concerns about security, particularly in bushland areas which are less visible and thus have low levels of informal surveillance; such groups would also achieve socialisation objectives, as well as be a way of encouraging others to join in physical activity. Walking in a group may also alleviate concerns about aggressive dogs.

The focus group discussion did note that the Renewal Project includes proposals for additional and improved walking paths. There will also be a street-tree planting program, in part to maintain habitat and travel routes for the local koala population. It will be important that this work recognises the particular needs of many in the population who require level and well-maintained surfaces, with resting places. Although not specifically mentioned, it would follow that a need for shade will also need to be addressed.

Interview comment on barriers to walking for recreation:

- Physical disability (e.g. quadriplegia, emphysema, prosthetic arm, arthritis, sciatica).
- Injury/bodily pains (3).
- Age/physical fitness/personal motivation.
- Rain.

- Prefer to drive – it's quicker. Really depends on mood whether he drives/walks.
- Got a car and bus – don't need to walk.

- Footpath access needs to be improved.
- Find it difficult to walk on rough surfaces.
- It's a bit dirty – rubbish etc.
- Dogs and a lack of level walking ground are a concern.
- Footpaths could be more level, and there is a problem with dogs.

- Nowhere to go – lack of appropriate destinations.

- Some of the people hanging around or living in the area – can be a safety concern.
- Wouldn't walk alone at night because of safety concerns.

Focus Group discussion on walking for recreation:

There's also a number of cards with comment that there needs to be some better walking tracks and flat walking paths and so on. Enjoyable walking trails.

I've added to that, because I used to be a bush walker, I can't walk on uneven ground now, even footpaths, some of them aren't even.

You know when you look around here, we've got like Smiths Creek [they could put] walking tracks right through there, the same as what they've done in Camden. You walk through there and you've got all the birds, you've got the creek, you've got the lakes. You could have the same type of thing here.

Is there a path there at the moment?

No.

There's a fire trail through there.

You could probably get mugged halfway through it if you tried hard enough.

When we were looking at the things that people said in the questions in the interviews about satisfaction levels on certain things there tended to be a weighting towards not being satisfied with security.

Yeah.

Is it an issue here, when listing the things related to your health?

I put down unsafe.

So how do you think that might be resolved, so that people can feel in themselves that it's safe?

We used to have groups walking from here.

Yeah like they used to years ago.

They haven't got the resources though now.

Oh they've got resources, they just don't want to use them.

The times that you do go walking, are you getting enough energy out of it, or do you need some longer walks to entice you to do that?

I walk every day, every day I walk at least an hour every day. So I make a point of doing that.

Do you find that easy and present enough?

Well I just walk around the streets because there's nowhere else for me, if I had a nice walking track or something yes I would do it. But there's no way I'd walk through the bushes on my own, no way at all.

No, well we all stopped that because there it was too dangerous.

I wouldn't say actually longer walks, but I'm just saying in general that if you take for example Park Central. They've got a bit of a lake pond over there, and a walking trail around it, and in the park they've also got those little workout zones, where you don't need a supervisor.

Yeah they've got exercise stuff out there. You can get on and do little things.

Yeah, with the walking stuff, the walking tracks, I do think we need them, but I do think they also need to cater for people like me who have mobility issues. I can't walk - I have trouble walking on normal ground, because it's so uneven. So proper like footpath type things to walk on as well. I mean I live two minutes from here [AB Central] and I can't walk here, because the ground is all uneven.

In Camden they put the walking track there, and you've got the bike and the walking track where people ride their bike along, and you can walk along. And other people can walk along, side by side. It's a nice concrete walkway.

With the walking tracks you also need proper seating, because if you've got people like me or the elderly. We have to have places to sit down every so often as well.

Rest yeah. We've put that in before in all the other surveys.

But still, there are a lot of entries here that say that people walk a lot now.

Yeah well they walk around the streets. On the road.

You see them running on the road, I pass them on the road.

On the actual tarmac itself?

On the tarmac rather than on the pathways, because the pathways are not safe to run on or walk on. There is a group from Bradbury I think, I know it's the Heart Foundation, I think it's once a month or something on the Sunday morning, quite a few young joggers. I know they do come up through here and back to Bradbury.

Yeah they go up St Johns Road too.

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 one participant cycles for recreation (Table 4.1). As such there is almost no use of this mode to assist in achieving the minimum recommended number of hours of physical exercise per week, even though 9 out of 20 participants (45%) advised that 'being able to cycle around the local area' is important for their health (with 6 participants indicating that it was 'very' important).

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.

Yes, to a reasonable extent; but not taken up for personal reasons.

As also detailed under Q. 8, there are no dedicated cycle paths and the local Council does not appear to have a bicycle plan or strategy. However, the Audit did not note any particular deficiencies in terms of cycling viability in Airds Bradbury:

- most streets would appear to be conducive to joint vehicle-bicycle use - the cul-de-sacs due to their low traffic volumes; and the main streets given their reasonable width, low traffic volumes, and curvilinear nature discouraging high vehicle speeds.
- cycling would also be possible on the footpaths that cross some of the open space areas (particularly where paved), although this could also result in conflict with pedestrians given their general narrow width.
- cycle signs are painted on some of the main roads in order to promote joint usage.

Although the Audit did not observe any general propensity to cycle in Airds Bradbury it did note the presence on the weekend audit of some groups of serious cyclists who appeared to be training and passing through Airds Bradbury as part of a longer trip; and also that young children were often present on the streets, especially the cul-de-sacs, in small groups with bikes and scooters sometimes also with adults supervising. These observations suggest:

- the on-road cycling environment is reasonable, at least for experienced cyclists, and
- the potential to encourage a greater use of cycling for both recreation and transport amongst younger age-groups as they become older and more independent.

The low propensity to cycle is also reflected in the low number of responses to the question in the survey interviews as to the rating that participants gave to 'how easy and pleasant' it is to cycle in the neighbourhood, with 12 out of 20 participants (60%) indicating 'don't know' or 'not applicable'.

Factors that might inhibit the viability or up-take of cycling were not raised in the Focus Group other than one comment from a male participant, as follows:

- You know, you should be able to push-bike around.

However, the interview did include a specific question about perceived barriers to cycling for recreation. Participant responses are similar to those advised in respect to the question about barriers to cycling for transport (see Q.8.) and relate principally to participants' personal physical ability, with also some concern about overall safety including lack of segregation from road traffic. A further comment noted a concern that bicycles left at the neighbourhood centre would likely get stolen.

In addition, it is also likely that there is a lack of any specific cycling 'culture' within Airds Bradbury, as suggested by the relatively high proportion (five out of 20, or 25%) of participants indicating they 'did not know' whether being able to cycle around their local area was beneficial to their health; with an overall 11 out of 20 participants (55%) seeing it as either unimportant, were neutral on the question, or 'did not know'.

That said, the fact that nine out of 20 participants (45%) did indicate that being able to cycle around the local area was important for health also suggests that the development of some specific cycling infrastructure may well induce a greater level of cycling by residents, with the possibility then that a greater visibility of residents cycling in the area might then start a cultural shift amongst others. Here it is noted that the Renewal project includes a plan of specific cycling routes, and the development of an improved local neighbourhood centre accessible by cycling may well encourage additional take-up of cycling as a mode of transport.

Interview comment on barriers to cycling for recreation:

- Physical disability (e.g. quadriplegia, emphysema, prosthetic arm, knee replacement).
- Injury/health.
- Not really an active person.
- Have given up cycling as a way to get about (age).
- Got too much weight at present/physical fitness
- Do not cycle/not interested.
- Have 3 preschool aged children.

- Would ride if there was a segregated cycleway – very concerned about safety.
- Paths aren't that great – wouldn't really want to use the road, would prefer to use a path.

- Don't know how to cycle.

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.

Some activities are provided for, others less so.

Consistent with the Radburn model there are extensive areas of public open space within Airs Bradbury itself, in addition to the large riparian open space area of natural vegetation to the east along the Georges River. These open space areas include various facilities that facilitate recreational physical activity:

- children's play equipment, in various reserves, including The Monster sculpture in the Kevin Wheatley Memorial Reserve.
- basketball courts at the youth centre in the Airs neighbourhood centre.
- active sports fields, in the Kevin Wheatley Memorial Reserve and in Riley Park.
- some formal and informal walking tracks in the bushland areas.

However, the facilities overall are fairly minimal, with variable maintenance. In general, the open space areas present as having little amenity and subsequent usage. When asked about their general level of satisfaction with the number and quality of parks in the neighbourhood:

- only half (10 out of 20, or 50%) of participants advised they were satisfied with the number of parks, with eight out of 20 participants (40%) dissatisfied.
- only two participants (10%) advised they were satisfied with the quality of parks. No participant indicated they were 'strongly' satisfied, and 13 participants (65%) indicated they were dissatisfied. Five participants were neutral.

The Audit noted:

- there is a significant amount of open space and natural bushland within the neighbourhood, however, few additional amenities (eg. landscaping, paths, benches) have been added, existing playground equipment is often in disrepair, and overall the number of people using the open spaces was low.
- the children's play equipment in Merino Reserve comprises a simple slide and seesaw and is in disrepair, with no related seating, shade structures or other amenities. Similarly the play equipment in Kevin Wheatley Memorial Reserve was not of high quality or appeal and in parts covered with graffiti, and did not have any co-located shade, benches or other amenities co-located with the slides, climbing frame and swings. The Audit did not observe any children using the equipment, or any groups of people gathering in this area.
- however, groups of primary school and early high school age children were seen sitting and socialising at The Monster sculpture in Kevin Wheatley Memorial Reserve during the weekend audit. The single associated seat was however assessed as being of poor quality and did not address seating needs.

- some reserves have concrete blocks placed at entrances to deter vehicles, and rubbish and discarded objects were often sighted.
- the weekend audit noted that the Riley Park playing fields were being used, however spectators had to bring their own chairs, and there were no additional amenities provided.
- the entrances to the Georges River bushland area were littered with rubbish.
- some open space areas were being used by trail bike riders, with consequent reduction in amenity for others.

By contrast, the Airds Pond was upgraded in 2008 and has a reasonable degree of amenity with a walking track, an amphitheatre, and a number of public art installations. However, the overall area is not particularly extensive, and when further inspected at the time of preparing this Report was strewn extensively with litter.

The observations made in the Audit are consistent with one of the deficiencies of the Radburn model as now experienced – that often, particularly in low population density areas, there are insufficient resources within the local community (generally through the local Council) to maintain these areas to a reasonable standard. This situation is reflected in various comments made by participants and which draw a critical distinction between ‘open space’ and ‘parks’, with the neighbourhood being seen as having a lot of the former but very few of the latter (see boxed text). One comment stands out as a good summary:

- We have lots of green space but too few ‘park’ facilities.

However, participant responses in relation to the associated issues of ‘quantity’ and ‘quality’ of open spaces varies. There is a general agreement that the quality of the spaces needs to substantially improve. Specific needs raised in the focus group mainly reflected the needs of the older age group of its participants, being:

- walking paths that had even, level surfaces.
- provision of associated resting places (seating).
- some desire for formalized ‘exercise stations’.
- some desire for organized walking groups and the like (and which would address needs for relating to personal security, and socialisation).

Here it is noted that the Renewal Project although proposing a reduction in the overall area of open space includes, as provided within the associated Voluntary Planning Agreement, the provision of additional facilities within the open space areas to be retained (or in some cases re-located), including new playing fields and associated amenities blocks, new playgrounds, and a half basketball court.

However the overall reduction in open space area prompted some difference of opinion in the focus group discussion about the appropriate future quantity of open space. While some participants accepted the proposals on the basis of the improvement of facilities to be provided, and also noting that overall Renewal Project has included specific consultations, through the local schools, with younger age-groups to ascertain needs, others were concerned that the overall reduction in area

coupled with a larger concern about future ‘crowding’ of residential areas due to the additional housing proposed and smaller individual allotment sizes would lead to:

- loss of the ‘open’ nature of the area and of tree cover, including potential koala habitat;.
- the general availability of open space for children’s activities.²⁸

One additional point of discussion in the focus group is also relevant here (see boxed text) - a perceived lack of respect by children for the facilities that are provided, resulting in vandalism and which has led to the closure of various facilities that have been provided in the past such as a BMX track.

Interview comment on facilities for physical recreation:

- In terms of walking around the neighbourhood – dogs and a lack of level walking ground are a concern.
- Footpaths could be more level, and there is a problem with dogs.
- We have lots of green space but too few ‘park’ facilities.
- Need a few more parks in the neighbourhood.
- Parks are mostly just vacant blocks of land.
- High quality parks are provided but not respected (especially by kids).
- You need to do a scan for needles before using the parks.

Focus Group comment on facilities to assist active recreation:

I’ve just thought, in terms of things that I need to keep healthy, like if they put exercise stations , around the park like they have in other places.

They’re those long plank things and the cement at the end you’re supposed to...

Yes, but I mean like exercise stations that actually tell you what to do. Like, a sit up bench. That would be a really 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.

²⁸ It was this matter in particular that lead to one focus group participant to return to the meeting room after the focus group had concluded to raise with the Study officers a concern that opinions contrary to the Concept Plan proposals, as endorsed by the Community Reference Group, were not being listened to (refer Section 3.3).

Focus Group discussion on open space and other needs for children:

A feature of Airds seems to be that you are not short of open space as such?

No we will be when they finish.

When they finish we won't have the open space we've got now, we won't have the trees we've got now.

Not if the government goes ahead and does that they want to do.

They're going to get their own way in what they want to do.

Everyone here is used to this greenbelt of trees and you know, I look out my kitchen at all of that now, and it's - to see all that gone and look at all the concrete walls.

The kids are going to suffer big time, because there's nowhere for them go and play.

They've reduced sizes of yards down now there, if you put a clothesline up you hang yourself if you try to run across your back garden.

Kids can't put swings.

Respect has gone out the door, under the younger kids these days.

There's no discipline.

So is anything about the way the suburb is designed and the facilities, that you think contributes to what we just talked about, which was sort of a generational issue of lack of respect and so on? What could help address that?

Not really, not often.

Well perhaps having facilities for them to keep them active, more amused so they're not so damn bored and get into trouble.

Yeah that's right.

Probably design.

Yeah and I have to disagree with you about the green space and the parks, I think there will be plenty of them, and plenty for them to do.

Well they're talking about taking out all of the central open space for starters.

Yeah but there are other places that are being proposed. Putting in a football field.

We've had a couple of days in schools and had young ones in, they've brought up a lot of things how the area should be developed, as far as having most of the stuff we've covered here today. Under the long term, but whether or not that goes through in the actual contract or whether they come up with something similar within those guidelines. Only time can tell ...

I know the plans that are coming they're doing up the parks and putting in the trails to connect them as well.

Which parks?

See there's no nice parks around here either.

No they're all getting done up.

Not being nasty, whenever there is something like that around here, you've got young kids that just come and destroy everything. So really it's a waste of time. Because the young ones they just don't care, they wreck everything and I'm not being nasty it's the truth.

Well that's where the consultation went to the schools and everything to try and give them input and therefore ownership into it. So they don't wreck it.

Well there are a lot of kids out there that are good, but then there's a hell of a lot more that just don't do the right thing, they destroy anything and everything.

I've seen that over the years since I've been here.

It's usually the few, it's usually the few that spoil it for the many.

Well yeah, there's quite a few though, I've seen quite a few kids destroy stuff around the area.

Oh my cars been wrecked three times in the car park.

That's what I mean, you know and it's sad to think that you can't go out and enjoy all this without these young kids come along and just destroying everything. It's sad, it really is.

But a lot of it comes down to boredom, a lot of it comes down to boredom.

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 issues of continuity in relation to facilities provided in Airds Bradbury and affordability.

There appears to be a good range of active recreation facilities available within Airds Bradbury and in the wider Campbelltown locality. They include:

- a youth centre in Airds.
- a recreation hall in the Airds Bradbury community centre (AB Central), which also holds exercise classes and has a range of gym equipment.
- a large Council-operated swimming centre at Bradbury (Gordon Fetterplace Aquatic Centre), and which has reasonably long opening hours (eg. 5.00am - 8.00 pm weekdays).
- various other Council-operated facilities in various neighbouring suburbs.
- a number of commercially-operated gymnasiums in Campbelltown.
- a number of golf courses in the wider locality.

However, participants cite a number of concerns about the details of how these facilities are provided, and which can limit their usefulness in assisting them to meet their physical activity needs:

- (i) accessibility. For those participants with low personal mobility the ability to access facilities by the local bus system is important. As discussed in Q. 4 there are some limitations in this regard. A particular example is access to the swimming centre in Bradbury which offers exercise classes as well as general swimming facilities. Although the centre is otherwise within reasonable distance to the bus route to Campbelltown, it requires an up-hill walk to the bus-stop on the return journey which is then difficult for older participants, especially after having already undertaken physical activity at the centre itself.
- (ii) affordability. Comment was made in the focus group about the expense of using available facilities such as commercially-operated exercise and aquarobic classes, and gymnasiums.
- (iii) continuity in provision of services. This issue can take various forms. One is that if facilities are not consistently provided or have inconsistent opening hours there will be confusion about just what is available and whether it is currently running or open. This in turn can act to break any beneficial habitual physical activity that utilises such facilities, particularly if there is also a concurrent access issue that needs to be overcome. Another is that Airds Bradbury appears to have a history of facilities being provided but which are then closed or removed due to neglect or lack of maintenance or through vandalism or the cessation of funding (or various combinations of these factors). Discussion at the focus group for example cited the previous existence within Airds at various times of a local indoor swimming pool (now converted to the AB Central Community Centre), squash courts, a BMX track, and a gym. As one participant commented: 'They start things up and then they just stop them.'

Here the provision of gymnasium equipment provided a particularly visible example. Consistent with 15 out of 20 participants (75%) citing having access to a gym or exercise equipment as either 'important' or 'very important' to their health, the recreation hall in the AB Central community Centre (where the focus group was also held) included a substantial range of such equipment. However at the time of the focus group they were barricaded off and not available for use because, as advised by the focus group participants, it was now deemed to be unsafe because it had not been marinated properly (see boxed text).

Focus group discussion on access to and affordability of swimming pool facilities.

Can we discuss some more about the things that would assist you to get more exercise.

Swimming because it supports the body.

Yes, that's come up a number of times on the entry cards as something people should be doing more of.

What's stopping this?

Motivation.

Transport.

I mean I'm willing to go, I just haven't been able to arrange transport.

There's a pool at Campbelltown?

Yes, at Bradbury. There used to be a pool here years ago.

Yes but it's closed down, it's not viable anymore.

So the bus has to go there, is that what you mean by transport?

They don't go to Bradbury from here though.

No you've got to go to Campbelltown and get another bus.

It's all downhill, if you want to come home it's all uphill.

If you want to come home you've got to walk uphill.

After you've done the swim?

I couldn't do it.

The bus stops about half a kilometre from it, from the pool, so you walk there, but again you've got to walk back up either way.

I'm supposed to do it three times a week, the pool. I'm having knee replacement. I just can't walk - I can walk down but I just can't get back up.

I've got to drive in.

So it's a problem with the bus access, any other problems with the swimming? Is the pool heated?

The one inside yeah.

The other thing too with swimming is whether you're going to do normal swimming or if you're going to join one of the classes. It's when the classes are on and the cost of the class. For me, I mean I need to do swimming it's the only form of exercise I can do. But with swimming though the best thing I can do are the aqua aerobics, and yeah that costs.

That's not cheap.

No.

Focus group discussion on the continuity of provision of facilities.

How often does the equipment here get used?

Up until the men's fitness thing finished, the last lot not the ones we've got now, the last time it was used. They have all been deemed out of order, maybe it's out of fitness. They had a bloke come in, I think it's on a Wednesday or Thursday or something, doing fitness. Then the men's fitness was using it at the last April I think it was. We used some of the equipment, under the other fitness girls who were here a while ago. One of the treadmills actually stopped working, so they put it to the management, they said look as far as we're concerned, block it off. No good. Still exercise on the machinery, but because they've been there since how long, haven't been serviced, deemed - that's why it's all blocked off. They're going to sell it to the - or donate it.

So you've got the equipment and you've got the space, but it's not just being managed properly to make it workable?

They do have an exercise class here it is quite popular.

We used to have a gym here, before the ladies gym was formed.

Well they've got a men's fitness thing which they do every Wednesday, afternoon 2:30

Isn't it Monday mornings they've got the...

The women's fitness.

Yeah that's quite popular.

Yeah and we used to have a gym here, that used to be all gym equipment you could use the whole lot.

You used to come down and do that, but that's not...

They used to have the squash courts too out the back.

They start things up and then they just stop them.

Who ran the squash courts, was that private or was that part of this?

No NSW Housing.

It was council that owned or leased the building off of Bunbury Housing.

Yeah and it's gone back to NSW Housing.

Their lease was up and then the pool needed a whole lot of work done to it, and it wasn't viable to fix it.

So they gave the building back to the Department of Housing who then remodified it [some for] office space, and they just use this [section] for anybody that wants it.

What happened to the squash court? Was it a similar story?

No the squash courts are still there, they've been redone.

Yeah it's more like a handball court now isn't it.

Handball or soccer, whatever they do kick around in there.

It was good when it was squash courts I used to play up there.

Yeah a lot of the guys used to play.

So why did they change them over then?

Who knows.

They just ... got a little notice saying that the squash courts were closing, that was the end of it. So we ended up going to Camden playing up there.

I think Bradbury's still got an old squash court down there, I'm not too sure.

Bradbury yeah it did have.

Down at the shops, I know a few years ago I used to go to that myself, many years ago.

Yeah behind the shops.

So it sounds like you had everything at one stage and then it sort of all been...

Well, Council was running this place at one stage.

At one stage here they had one of the most modern BMX bike tracks in New South Wales, it was out there. With the drop down gates for the kids and everything, but over a period of time everyone took everything home.

That's it. They ruined it.

It's better in my yard than out in the paddock.

You know they had the starters box and everything, that got burnt down then the gates got stolen, and wooden posts turned up in people's back yards.

Focus group discussion on the continuity of provision of facilities for youth activities.

There's a lot of stuff for the kids here too, but they just don't do it. They have so much stuff that is put out for them.

Exactly. You've got the Youth Centre down there that caters for kids to do things, but it's just never open for them to get in there.

It's never open.

I blame the parents to be honest with you, I think it's the parents fault. I really do.

Down Bradbury you've got the basketball court, down near the pool.

That basketball court was used a lot because I used to volunteer there 15 years ago. Three nights a week with that stuff.

Yeah but even up here behind the shops, they've got that stuff there.

They've got that basketball thing up there.

They did all that up again for the kids, just behind the shops.

Can you wander in there at any time?

No.

The basketball courts you can. Youth Off the Streets was volunteering there for a while, and they did it three nights a week. There were nights we'd get over 100 kids there.

But the youth centre there is locked up ... it's been going downhill for a lot of years.

... I mean we've got a youth centre here, why isn't it open and for the hours the kids need it. Because we even said years ago, it needs to be open when the kids need it. We have kids that roam the streets at night, it should be open...

It was open for them too, quite young children.

Yeah, if they had it open at night, giving them something to eat and just keeping them off the really young children.

But were they being discriminating with kids?

No.

Because I've always found them to be.

Well in theory anybody's welcome.

Summation – physical activity.

- (i) Although participants indicate an awareness of the need for physical activity only 60% of participants achieve minimum recommended activity levels. The reasons for this are quite diverse, including for many participants constraints due to age or disability or personal health; which are then exacerbated by deficiencies in the built environment due variously to a lack of facilities, a lack of maintenance of facilities that are provided, and overall concerns about security. The provision and maintenance of facilities has not kept up with the additional needs generated by age or disability of other health issues – which generally require a higher standard of ‘service’.
- (ii) That said, the wider locality provides a good range of facilities supportive of physical activity and a range of renewed facilities are to be provided in Airds Bradbury itself as part of the Renewal Project. However, certain participants have difficulty in accessing these existing more regional facilities due to issues of affordability and transport access; consideration needs to be given to ensuring these are resolved as part of the overall community renewal process.
- (iii) Nevertheless, participants also show a persistence in their willingness to not allow current limitations to curtail physical activity altogether. This willingness suggests that even small improvements in quality and access arrangements may achieve important increases in physical activity levels, often also with social interaction co-benefits. Possible examples include:
 - improvements in transport access to the existing public aquatic centre in Bradbury.
 - assistance to make exercise and aquarobic classes and gymnasium exercise affordable.
 - group walking and exercise activities to overcome existing concerns about personal safety and security in outdoor areas.
 - group cycling classes to draw on a perceived latent interest in cycling.
 - maintenance of footpaths, provision of resting places (seats), and informal exercise equipment in public open spaces.
 - consistent and responsive opening hours of facilities catering for the youth population.
- (iv) The public transport (bus) system appears to be reasonable, however is essentially limited given the low density of the locality and structural difficulties arising from the physical layout of the suburb and its location relative to other destinations in the wider locality. Issues relating to the internal routing of the bus service within Airds Bradbury itself are to be addressed in the changes to the internal road system proposed in the Renewal Project. An additional targeted assessment of whether these proposals will address all existing limitations to the use of public transport, as a form of active transport, should also be undertaken. It is possible that some improvements could be made now, including a possible later night bus service, provision of seating and shelters at bus stops to be retained, and adjustments to routing external to Airds Bradbury.
- (v) Early attention to the establishment of a regenerated neighbourhoods centre as a viable local destination will assist in encouraging a greater degree of walking and cycling for local transport.

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.

Yes, although there is variability in the actual nature, level and satisfaction with this social interaction.

Participants were asked about the importance they gave to the ‘ability to meet with friends and neighbours in their local area’ in relation to their health, the extent to which they interacted with neighbours and others, and about their satisfaction with this interaction.

- 18 out of 20 participants (90%) rated the ability to meet with friends and neighbours as important to their health, with 10 out of 20 participants (50%) rating it as ‘very’ important. Only one participant thought it was unimportant, with one participant neutral.
- five participants (25%) indicated they considered their neighbours to be close friends, another five (25%) indicated they regularly socialised with their neighbours, and another nine participants (45%) indicated that they spoke with their neighbours occasionally.
- 11 participants (55%) indicated that they had visited someone in the neighbourhood in the last week, compared with 61.8% of the NSW population who had done so.
- 13 participants (65%) indicated that they ran into people they knew when shopping, which is substantially lower than the NSW average of 82%.
- 15 participants (75%) indicated they were an active member of a group or club.
- all participants (100%), therefore comprising those who had low levels of interaction as well as those who had high levels of interaction, indicated that they were satisfied with their level of interaction with their neighbours.

- 15 participants (75%) were either strongly or somewhat satisfied with the opportunities they have to meet people in the neighbourhood, with four participants (20%) dissatisfied.
- 14 participants (70%) were either strongly or somewhat satisfied with the number of people they know in the neighbourhood, with three participants (15%) being dissatisfied.
- 15 participants (75%) were either strongly or somewhat satisfied with the number of friends they had in the neighbourhood, with three participants (15%) being dissatisfied.

These results suggest a mixed picture of social interaction within Airs Bradbury. While overall levels of social interaction appear to be reasonable and participants indicate generally high levels of satisfaction with this, there are still some participants who would like to experience a higher level of social interaction than at present. Further, while there is a reasonably high level of membership of groups or clubs, there appears to be some reticence by many to interact with their immediate neighbours (as evidenced in particular by various comments made in the interviews and in the focus group discussion) and *actual* levels of certain social interactions are lower than the relevant NSW averages. There would appear to be a number of potential factors behind this diversity in responses:

- (i) Airs Bradbury is an established community, allowing for long-term positive relationships to be established between residents with common interests ('...it's something we do ourselves' one participant in the focus group for example noted about a women's art and craft group).
- (ii) There are also a number of established programs aimed at fostering such interactions and sponsored by either the local council or Housing NSW, such as (the former) Hart House community centre, the existing AB Central Community Centre and associated programs, and the Men's Shed; as well as one-off events such as Housing NSW-sponsored Christmas activities.
- (iii) However, as some participants indicate, given the high proportion of tenancies there also tends to be a high transitory population making, with consequent difficulties in establishing social interactions.
- (iv) When participants were asked to nominate the things that may or may not limit the extent to which they socialised with their neighbours, the matters listed were quite diverse. Out of 29 matters:²⁹
 - not enough time was cited 28% of times.
 - health reasons - 17%.
 - that they do not feel welcome - 10%.
 - that they themselves were not interested - 13%.
 - financial reasons, or language difficulties - 3% each.
 - 'other' reasons were cited 24% of times, and which included differences in age and interests, that others had less time because they worked, and that people tended 'to keep to themselves'.
- (v) There is a relatively low level of trust within the community. When asked whether 'most people can be trusted', only 12 out of 20 participants (60%) agreed (with no participant indicating they 'strongly agreed') compared to 71.3% of the overall NSW population; although this figure for the Study participants is slightly higher than the average for the wider Campbelltown local government area, which is 56.9%. This, combined with the lack of inviting public spaces (as discussed under Q. 20 and Q. 22) and a low level of perceived safety (as

²⁹ Note the question allowed respondents to nominate more than one reason.

discussed under Q.26), can be expected to limit the propensity for informal and incidental social interactions.

- (vi) The relatively low level of participants who indicated that they ran into people they knew when shopping would be attributable in part to the lack of an inviting shopping centre in Airds itself, with most participants indicating that they shopped primarily in Campbelltown which has a much larger patronage meaning friends and acquaintances are likely to be less 'noticeable'. It suggests the importance of ensuring a regenerated neighbourhood centre comprising a more amenable group of shops (as discussed under Questions 20 and 22), as envisaged in the Renewal Project.
- (vii) The level of membership of groups or clubs suggests a need to ensure continuation of the social networking programs already established in Airds Bradbury if the existing levels of social interaction are to be maintained - and even increased in order to meet the needs of those participants who indicate a desire for an increased level of social interaction. Here, 14 out of 20 participants (70%) indicate a high level of satisfaction with community centres in the neighbourhood, although three participants each were either 'strongly' dissatisfied or neutral. Discussion in the focus group indicated a level of frustration with:
- a lack of continuity in community programs, generally because of variable funding, and
 - a lack of consistent local information about such programs so that residents can be aware of what is available. Although the discussion indicated that there was a community newsletter which contained such information, the continuity of this newsletter itself was also variable.

Interview comment on social interaction:

- It's very important for your health to feel 'in your community'.
- Need communication and interaction within the community, e.g. volunteer work, to keep your brain active and occupied.
- Regular social interaction is important for your health.
- Mental stimulation –keeping your mind active.
- Need ability to discuss things in a group.
- Like having the opportunity to sit down and talk with friends – particularly during hard times.

- Socialises with her neighbours in the street – but this usually only occurs when triggered by an unpleasant event.
- In a senior's complex of 30 units – we all know and look after each other.
- Transitory population – often difficult to get to know them. The ones who are always there keep to themselves, but talk to each other occasionally.
- I prefer to keep neighbours as neighbours.

- Strongly dissatisfied with Community Centres except for AB Central, which is excellent (2 entries).
- There is some local entertainment, but mostly we make their own.
- School staff are fantastic – particularly at the high school.
- Primary schools are quite good in the area.
- AB Central is quite good, but at the Neighbourhood Centre nothing happens there.

Focus group discussion on relationships with neighbours:

Oh I've got a few friends that I've made through the centre here, where I did the courses. But with my neighbours, I say hello and that's it, that's all I want to know.

You don't live in their houses, no I don't either.

I don't like that no.

So that's your preference?

That's my preference yeah, I don't like to get friendly with my neighbours, never have no.

No all our neighbours are good like that, everyone talks and yaks outside, but nobody's living in anybody's house.

Yeah, no if I see them, it's only one neighbour I speak to, it's hi how are you, that's it, keep going.

Yeah. I say g'day to my neighbours and they say g'day back, but that's as far as it goes.

Exactly that's it.

But you know what's going on, you keep an eye out for one another. If they're ever in trouble.

Oh I know if we need them at all they'd be there yeah, not a problem, but no I just don't like to get friendly with my neighbours.

Yes, conversation-wise because you tell somebody something and it will go somewhere else.

Exactly right I've had that in the past.

But g'day and how're you going.

That's enough, exactly yeah.

So that sort of maintenance of your privacy is very important to your wellbeing?

Yeah, yeah.

Yeah we've got a few good neighbours, they look after our animals if we want to, we look after theirs.

We go out for dinner once a month or whatever, you know. But we don't live in each other's houses, that is all it is.

Focus Group discussion on meeting people informally when shopping:

So, when shopping, most people seem to go to Campbelltown for their main shop?

Or like me, do it online. Shopping that way gets too much for me sometimes.

Right, because one of the things that this Study is interested in is when you go out to the shops, how often do you actually bump into people that you know?

Quite often.

Yeah I do yeah.

I just go to the pub!

I shopped in the last two weeks, two different shopping centres and both times I ran into the same woman.

Actually another way we bump into people is on the buses. We discovered that; we have what we call bus friends, we keep running into them on the bus.

The people you run into in the shopping centres are the people you don't want to know!

[to one of the participants] *You were saying you don't tend to run into people?*

No I don't. I can go to Campbelltown and not see a soul that I know.

It depends on your shopping days, like I go every Thursday

Me too.

Probably Tuesday or Wednesday or something like that, just to get out of the house. I'm always bumping into somebody within the area. You always, because they're doing the same thing, they're just walking round.

Focus Group discussion on facilities in Airds Bradbury that foster social interaction:

In the list of cards here of things that are assisting you to keep healthy no, there are quite a few entries about social activities, and sociability in general. Is that because of people do you think, or the length of time you've been here? Or has it been something else, some catalyst for that?

I think it helps that the Housing Department have done things. Yeah, doing the big Christmas function and the like. That's bringing a lot of people out.

I don't think I've ever been to one.

Christmas Out Loud and the markets, yeah.

I've never been to one.

We should go.

What Out Loud? I haven't either.

No, no the Christmas thing....It's usually held at the high school.

Or out here out at The Pond. Because that's one of the things that we've said here for the last 15 years, we wanted The Pond done up and have it as an entertainment area. That's sort of happening, they've done it up, they've put the stage area out there, and then we have the functions here every year. They get the bands in, they have markets there

They have movie nights.

This year they started the good neighbour policy and the response was that residents here wanted more of that. What else do we have here? We do seniors week here as well. One of the big issues we find with doing stuff, is again money. The Housing Department has a budget and their budgets been shrinking for all this stuff. One of the things they talked about [in the Renewal Project, with the private-public partnership] was bringing in other organisations besides Housing. One of the things we said here as residents, is that whoever comes in needs to take over the community involvement stuff, the activities that we do as well. Because that's something that's become important here, the stuff that we do and we shouldn't lose it. But money's becoming a big issue.

Things develop over a 20 year period and then it changes.

One of the card entries here says 'money'.

That was me. I wrote that from a personal perspective as well, being on a pension I often don't have money for a lot of stuff anyway.

I don't think no one does any more.

I think we're all in the same boat really.

We're not working.

That's right yeah.

So we haven't got it.

Which is why the events here have been really good, because they've been doing them free for residents; I mean even the barbecues they do when they have them here, the sausage sizzle.

Focus Group discussion on lack of continuity in social programs:

So you've got this place over here which used to do computer courses.

They've stopped that now.

They've stopped that whatever.

For funding.

They did have an art and craft or a craft group over there, that one.

That's Council, the local Council one. WorkVentures they run courses, or they used to, I don't know whether they still do now, but have closed down a few times and then they've reopened. They run courses up there for people in the area, also whatever - learning computers and all that sort of stuff. They also have veggie garden too, they also had Asian vegetables.

Yeah, I was involved in some of the early processes, they had gardens there. But ...

Didn't seem to last long.

Well a lot of it's to do with nobody puts pamphlets out to let people know what's going on in the neighbourhood. So the only thing I ever used to do was do the computer courses over at the centre. I've done quite a few of those.

In the gardens at the Men's Shed, we grow everything. So come spring ... you can get anything you want ... we don't actually charge anybody; the gates are open and the gardens are advertised in the pamphlets that the Housing Department letterbox.

There's been photographs in the local magazine.

Yeah, they advertise the Men's Shed, and other things, what goes on in the local area.

Yeah they do put pamphlets out every, I don't know, two months, three months or something. Some of their letterbox delivery people weren't delivering some areas, because I wasn't getting them for a while. Now they've actually got other people doing it, and I think they actually do a check on them. Because they're paying those people to deliver the pamphlets, so if you're not getting it, let them know in the AB Central office. Then they can get on to it.

Yeah fair enough.

A further aspect of social interaction specific to Airds Bradbury is worth noting here: the experience, as related by one participant of living in one of the clusters of aged persons housing units (generally referred to as 'complexes'), the construction of which (to replace earlier housing units) comprise one of the early stages of the Renewal Project. That participant described how she had taken it upon herself to initiate a level of friendly social interaction amongst residents, both as a way to avoid the potential for future conflicts and as a support network should individuals need assistance. The result has also been, for some in that cluster, a high level of other social engagement including visits in each other's units, and outings. Although Housing NSW has apparently recognised the potential to establish such 'social catalyst' roles in other clusters and even within street groupings of dwellings this has not yet occurred.

Focus Group discussion on social interaction in the seniors living housing complexes:

So is there stuff that's working or not working in Airds that relate to that thing about having a reasonable group of people that you know that you can call friends?

I mean our complex, we get together on a regular basis, but that's only because...

We do, say parties and Christmas, just amongst ourselves and we get together and talk. In general we get along reasonably well where we are.

What do you think has facilitated that? Is it simply your personalities or has it got anything to do with the design of the housing?

They're such wonderful people!

No, it came about because I have over the years had friends that have lived in different complexes.

They've mentioned the fights that go on between neighbours, and I did not want that here. So I - and being one of the first in, it gave me that opportunity to be there every time somebody new moved in, and got them to know other neighbours. Particularly too if they ever had an issue, they had a neighbour they knew they could go to and ask for help. It just came out of that, we just started getting together for morning teas and we decided to expand that to Christmas.

Significant birthdays we do.

Yeah.

So that's worked?

Yes, I'd like to see it in all the complexes, but you've got to have somebody living in those complexes to be the driving force sort of thing.

Do you think that's possible, in other complexes?

I think it is possible, it's just a matter of who's willing.

They have actually stated that they'd like it to happen, but nobody's willing to take it on.

What do other people think about that?

We're not in complexes, we're in housing, houses.

But the same principle could apply to houses in a street?

Well where we are, we've got all good neighbours, we've never had any problems. So we've got a happy little place.

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.

Not applicable.

This matter is most applicable to multi-unit residential buildings or employment-based buildings such as office blocks and the like which contain common internal areas which can then be designed

to encourage informal contact between residents and workers. There are no such building types in Airds Bradbury.

The internal public space within the Airds shopping mall is discussed under the questions relating to *formal* public spaces (Q. 21, 22 and 23), and the common access areas within the aged persons housing complexes is discussed under the question dealing with public space and incidental social interaction (Q.20).

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.

Not in the neighbourhood centre; possibly within the residential areas.

One of the criticisms of the Radburn layout has been that the orientation of individual houses away from the street and towards central open space areas has meant that the traditional function of the street as a meeting place or contact point for neighbours is diminished. The extent to which this applies in Airds Bradbury is variable: in some locations where housing lots do adjoin open space areas this is still noticeable; in other cases this orientation has been reversed in earlier ‘renewal’ work; and in other locations dwellings were sited with the more traditional orientation to the street.

Overall, this does not appear to be a substantial current issue in Airds Bradbury. Participants in the survey interviews were asked to nominate the locations where they met with their neighbours. ‘The street’ was the most common location, comprising about one-third of all locations cited. In addition, the Audit observed that:

- when walking through the streets, quite a number of people were seen sitting on their front porches or pottering about in their front yards.
- houses and townhouses have windows that face the street and footpath, and many dwellings also have porches, thus allowing for passive surveillance.
- the new aged housing developments provide fairly good opportunities for passive surveillance – with balconies and windows overlooking the street.

The Renewal Project Master Plan provides that all new dwellings be orientated to the street. However, to better ensure the potential for incidental social interactions and informal surveillance this primary orientation should also be accompanied by house designs that have doors, windows, porches and verandahs purposefully designed to achieve this objective.

The neighbourhood centre comprises the shopping mall, pub, youth centre, AB Central community centre, and the service station. None of these buildings provide a frontage to the street that facilitates incidental social contact. Rather, the way the buildings are designed, and then subsequently managed in terms of security arrangements actively precludes such interaction by the

presence of security fencing, limited access points, security grills and mesh over doors and windows, and reflective film or other coverings to external windows. The Audit noted that:

- the shopping centre is closed off with no outlook.

Most premises within the shopping mall itself are orientated to an internal courtyard, with blank walls and/or service areas facing the public street. The result is a daunting experience, as noted in discussion at the focus group:

So what would it take to make the shopping centre and I guess the rest of Airds feel safe?

Build a new one, a new shopping centre.

Yeah knock it down.

Change the design of it, it shouldn't be closed in the way it is, it should be more open.
That should never have been.

One of the things that came up in one of the Housing surveys, was the local shopping centre, to make it more viable, is to turn the shops around. Where you've got the back of the shops facing the car park, make that the front of the shops. So nobody needs to go inside in the little plaza, they're all out. That'll probably bring back people, that's again turning the shops around or rebuilding them.

The condition of the public streets themselves in terms of their ability to facilitate incidental social contact, is dealt with in Q.20. *Does the design of public space foster incidental person-to-person contact?*

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.

Variable, depending on the location.

This measure primarily relates to 'informal' public space areas such as roadways and parks and other open space areas where incidental interactions may take place between residents and others.

In respect to the roadways:

- the Audit concluded that the overall structure of the streets was conducive to incidental social contact. They are generally quiet in terms of traffic volumes and generally have street tree plantings which improves overall amenity. In addition, and as noted under Q. 19, the neighbouring houses tend to front the street and include pleasant front yard spaces.
- however, and as also discussed under Q. 6 and Q. 12 relating to the viability of walking in Airds Bradbury, these positive aspects are often outweighed by poor maintenance and

cleanliness, 'anti-social' activities such as rubbish dumping and the presence of barking dogs, and a lack of resting places (seats) – all of which will limit use, and thus the propensity for people to informally interact with each other. Only 11 out of 20 participants (55%) indicated they were satisfied with 'how easy and pleasant it is to walk in the neighbourhood', with 6 participants indicating they were dissatisfied and 3 being neutral.

In respect to open space areas:

- both participant responses and the Audit identified significant deficiencies in the quality and maintenance of open space areas, and in the provision of facilities. All are factors which will limit use and thus the propensity for people to informally interact with each other. The deficiencies include a lack of seating and 'meeting' areas generally, the use of open space areas by trail bikes which then inhibit other uses, and the fear of discarded needles. When asked about their level of satisfaction with the *quality* of parks only two out of 20 participants (10%) indicated any level of satisfaction. Further, these participants advised that they were only 'somewhat' satisfied. Dissatisfaction was expressed by 13 participants (65%), with five participants (25%) being neutral.

In respect to the common areas within the aged persons housing clusters:

- the new aged persons housing units constructed as part of the overall Renewal Project are designed in clusters situated around a central common area comprising access pathways and garden areas. Although these spaces are not meant to cater for the community at large they comprise a fundamental public space and hence potential meeting area for the residents themselves.
- although some of the Study participants lived in these clusters there was no particular comment made about the effectiveness of these areas in encouraging incidental social interaction. These areas were also not covered in the Audit given their semi-public nature.
- however given the importance of fostering social interactions in these housing clusters (as discussed in Q.17) it would be useful to audit the use of these common areas and survey residents as to whether the design and facilities provided (such as seating or table and bench sets or garden areas) encourage lingering and thus social interaction.

Q. 21. Are there formal public and semi-public space 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, although actual access is often limited by poor maintenance and limited facilities.

There are two main formal public and semi-public spaces in Airds Bradbury:

- the public open space areas and roadways.
- the neighbourhood centre, which includes the AB Central community centre, the youth centre, the local pub and the shopping mall.

In addition, there are:

- other community spaces targeted to specific user-groups: the Tharawal Aboriginal Centre, the Men's Shed, and the WorkVentures Connect Centre. On the basis that they are used by particular groups to meet particular needs, these spaces are not dealt with specifically here, but rather mentioned in passing where relevant.
- common areas within the aged persons housing complexes. These spaces are not meant to cater for the community at large and are dealt with under Q.20.

Public open space areas, including the playing ovals at Kevin Wheatley Memorial Reserve and Riley Park are freely accessible by all.

The public spaces generally within the neighbourhood centre and surrounding the various buildings and also comprising The Pond landscaped area are freely accessible by all.

The internal covered public space within the Airds shopping mall is freely accessible during opening hours.

That said, participant comment suggests that actual accessibility can be limited in some areas given:

- inadequate attention to the needs of users with low mobility due to age or disability, due to unpaved or poorly-maintained paths and lack of resting places and facilities.
- competition from other incompatible users – in particular the use of walking tracks by trail bikes.

The importance of having formal spaces that can be utilised by particular groups for semi-formal activities which then aid socialisation was raised at the Focus Group when discussing how a group of women meet regularly to partake in sewing activities. In this case these spaces comprised the AB Central community centre and a nearby Council-run centre:

Can you tell us what the mention about arts and crafts activity is about? Is it facilitated or is it something more informal?

I think it's something we do ourselves.

It's also something that goes on in this place here [AB Central] on, what, once a week? I know there's a couple of ladies who attend.

Yes. [] does some sewing classes.

They had that over the road too, they have all the stuff over there, it's been going for years.

Yes, but that's just something within the local community, different groups or different organisations.

What is the place over the road?

Over the road is where they do all the arts and crafts and stuff. They've been doing it for years over there.

Over at the Neighbourhood Centre.

The Neighbourhood Centre, yes, that's been there for yonks.

Here though it is worth noting the importance to also have public spaces that may be focussed to particular sections of the community. This was raised in the focus group by the participants themselves following a suggestion by a male participant and member of the local Men's Shed that there may be a need for a similar facility for women. The resultant discussion, although generally

supportive, did also suggest that there were already spaces available for women's groups to meet if required and that it was important, as stated by the female participants themselves, that men have a dedicated facility 'to do their own thing'.

Focus group discussion on men's and women's spaces:

The Men's Shed is a very good idea, but I'm wondering why there is no similar organisation for women. Something like they gather together to - and they do sewing.
We do that here, [] takes it.
Yeah they do that, here and over the road at the neighbourhood centre as well.

Exploring that comment a bit, is there a women's equivalent to the Men's Shed, or a need?

I don't know - there's people who are interested in gardening.

[Male] They've got bingo down West's.

Do women feel the need for a 'Women's Shed'?

It would be nice to go somewhere to do craft and arts, and where somebody can teach you how to do things.

[] is doing it here now, and she supplies material.

See nobody knows about it, I didn't know about it, because there's no pamphlets that go around and let people know.

She hasn't been doing it for long, it is something comparatively new.

Because over here where they do their crafts, you just take whatever you're doing, you go down.

At Minto where I used to live, we'd go down to the church once a week, the lady would show you what you're making.

Well here's good for that too.

That's what I was interested in doing, there's nothing like that around here.

My mother and my grandmother did that.

If there was something like that around here I'd be the first down there, not a problem.

There was a Men's Shed in Newcastle, opened the door for women to join them. The Men's Shed originally had 35 men, when they opened the door for women, within three months they become 35 women and five men only.

[Female] I was going to say because the men don't want the women there. They like their own space and their own privacy.

[Female] I think it is important too, men should have time for their things.

[Female] That's something for them.

[Female] I really think that yes.

[Female] They do.

But you can, you do it on a different day.

There's one day that our Shed is not being used, but I mean if there was another facility, mainly for women to get in and socialise...

These existing formal public and semi-public spaces are to be retained within the Renewal Project, and generally improved in terms of quality. Some, such as the AB Central community centre and the Men's Shed comprise early initiatives in the implementation of the community renewal components of the larger Renewal Project. As discussed elsewhere in this Report:

- although there has been some concern expressed by some participants that the Renewal Project will lead to a reduction in the overall area of open spaces within Airds Bradbury, the

intention is to improve the quality of the resultant spaces and as such encourage increased usage and better long-term maintenance.

- the Renewal Project is inconclusive in respect to how the intention to regenerate the existing neighbourhood centre into a vibrant 'town centre' is to be achieved given the varying public and private land ownerships. This is considered a major current limitation in the overall Master Plan requiring early attention.

Q. 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.

Variable, depending on the location.

There are two main formal public and semi-public spaces in Airds Bradbury:

- the public open space areas and roadways.
- the neighbourhood centre, which includes various community facility buildings, the local pub and the shopping mall.

In addition, there are:

- various community spaces, but which are targeted to specific user-groups, in other locations: the Tharawal Aboriginal Centre, the Men's Shed, and the WorkVentures Connect Centre. On the basis that they are used by particular groups to meet particular needs, these spaces are not dealt with specifically here, but rather mentioned in passing where relevant.
- common areas within the aged persons housing complexes. These spaces are not meant to cater for the community at large and are dealt with under Q.20.

(i) in relation to the public open space areas and roadways:

The Audit concluded that the overall structure of the streets was conducive to incidental social contact, being generally quiet in terms of traffic volumes and with street tree plantings which improve overall amenity. In addition, neighbouring houses tend to front the street and include pleasant front yard spaces, and the Audit observed that quite a number of people were seen sitting on their front porches or pottering about in their front yards.

However, these positive aspects are often outweighed by poor maintenance and cleanliness, 'anti-social' activities such as rubbish dumping and the presence of barking dogs, and a lack of resting places (seats) – all of which will limit use for walking and cycling and thus the propensity for people to informally interact with each other. Only 11 out of 20 participants (55%) indicated they were satisfied with 'how easy and pleasant it is to walk in the neighbourhood', with 6 participants indicating they were dissatisfied and 3 being neutral. Although 'the street' was the most common location cited by participants as to where they socialised with neighbours, this only comprised about one-third of all locations cited.

The Renewal Project Master Plan provides that all new dwellings be orientated to the street. However, to better ensure that the design of the public roadways are inviting to the community at large this primary orientation should also be accompanied by house designs that have doors, windows, porches and verandahs purposefully designed to achieve good natural surveillance and incidental social interaction.

Both the Audit and participant responses identified significant deficiencies in the amenity of public open space areas due to the existing level of provision and quality of facilities, and maintenance. Deficiencies include a lack of seating and 'meeting' areas generally, the use of open space areas by trail bikes which then inhibit other uses, and the fear of discarded needles. When asked about their level of satisfaction with the *quality* of parks only two out of 20 participants (10%) indicated any level of satisfaction. Further, these participants advised that they were only 'somewhat' satisfied. Dissatisfaction was expressed by 13 participants (65%), with five participants (25%) being neutral.

A key component of the Renewal Project is to improve the overall amenity of public open space areas through an overall redesign of functions and activities and the provision of additional facilities. Although some participants expressed concern that the Renewal Project will lead to a reduction in the overall area of open space the intention is to improve the overall quality and maintenance of the resultant spaces, and as such facilitate increased amenity and thus usage.

(ii) in relation to the neighbourhood centre:

The neighbourhood centre comprises the shopping mall and service station (both privately-owned), the hotel (the Riverside Inn), the local Youth Centre and adjacent basketball courts, the AB Central Community Centre, and The Pond open space area. The Airds High School is adjacent.

Although the neighbourhood centre provides a good range of facilities and would therefore be conducive to encouraging use and social interaction, the overall standard of facilities and amenity of the centre is poor meaning that patronage is limited. Further:

- each individual facility is somewhat isolated from all the others.
- the design of each individual facility, in particular the security arrangements, means that attendances at each are internalised with little potential to generate an inviting 'buzz' to the outdoor area of the centre overall.

The neighbourhood centre is identified for substantial improvements in the Renewal Project Concept Plan, with a note to the graphic plan stating 'Improved town centre as 'heart' for the community.' The existing grouping of facilities provides a good nucleus for this, and further opportunities are presented by the proposed new link road to Bradbury which will run through the centre, the proposed re-location to an adjoining site of the active sports playing fields, and the relatively large amount of existing 'open' land and/or carpark area that is not fully utilised. However, neither the Concept Plan nor the local Council's planning controls include further advices as to how the objective of an 'improved town centre' is to be achieved, particularly given the private

ownership of the shopping mall (improvements to which will be a critical component in achieving a healthier built environment in Airds generally).³⁰

The public space area within the Airds shopping mall itself is an internal, roofed area around which shops and other tenancies are orientated (rather than facing externally to the public street).

Although this space has the potential to foster both incidental and planned social contact and the Audit noted that the area felt safe particularly given the presence of a security guard, such contact appears minimal. There are few public seats, and no specific seating areas related to any 'outdoor' dining or the like. Although 13 out of 20 participants (65%) indicated that they met someone they knew while shopping at least 'some of the time', other responses suggest that most shopping, and therefore any incidental social contact while shopping, occurs at the Campbelltown Mall rather than at Airds. The Audit noted that the shopping mall is uninviting overall, has little variety and amenity; and did not observe any significant numbers of patrons using the centre at any particular time. There are a number of vacant premises, with for instance the butcher shop closing during the Study.

Particular comment about the design of the shopping mall was made at the focus group, noting that it was alienating and needed a radical re-design (refer boxed text).

By contrast, the Airds Pond was upgraded in 2008 and has a reasonable degree of amenity with a walking track, seating, an amphitheatre, and a number of public art installations. Discussion in the focus group noted that it is the location of various community events. However, the overall area is not particularly extensive, and when further inspected at the time of preparing this Report was strewn extensively with litter. Further improvements appear to be flagged in the Concept Plan as part of the wider neighbourhood centre improvements, with the water feature area shown as the focus for a new community centre building in one of (the few) concept drawings.

³⁰ It is also noted the shopping mall was for sale at the time of compiling this Report.

Focus group discussion on the Airds shopping mall:

What sort of shopping centre would work here? Or are people happy to go to where the excitement is at Campbelltown?

Similar like they put out at Market Fair I'd say, you know they put on like Market Fair, at the moment they've got everything out there.¹

Yeah but to get that you need one of the big supermarkets to come in, like Market Fair was absolute mess, it was an absolute mess before Woolworths came in.

Well Woolworths coming in is all due to the Park Central.

That's when it took off.

I think home delivery with shopping is I think if you don't have your own transport, you've got to have home shopping or you resort to what I do and do it online and they deliver it.

What would it take for you to come back and shop in Airds?

If it was safer for one.

I think safety mainly up here.

Yeah.

Say safety, but again cleanliness of the shops.

Oh the places are filthy. It's disgusting.

But I mean you very rarely go there without, especially Sunday morning, you go there and there's somebody there trying to tap you for your change. Do you have 20 cents love, you know, or you got a spare dollar love. Well no I don't.

I've never used a teller machine there, never.

If they work.

I never use them out there.

So what would it take to make the shopping centre and I guess the rest of Airds feel safe?

Build a new one, a new shopping centre.

Yeah knock it down.

Change the design of it, it shouldn't be closed in the way it is, it should be more open.

That should never have been.

One of the things that came up in one of the Housing surveys, was the local shopping centre, to make it more viable, is to turn the shops around. Where you've got the back of the shops facing the car park, make that the front of the shops. So nobody needs to go inside in the little plaza, they're all out. That'll probably bring back people, that's again turning the shops around or rebuilding them.

They were going to do that at Bradbury but it wasn't viable.

Yeah well that's the same probably here.

Yeah but Bradbury's different to here, Bradbury's always fine.

Well that Foodworks store made a difference with Bradbury.

Yeah, Foodworks made a difference over there.

Q. 23. Can participants be involved 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, in different ways depending on the relevant public authority.

There are three broad layers of governance related to community spaces currently in play in Airds Bradbury:

- the 'standard' role of the local Council in relation to parks and roadways, the establishment of criteria for development on private and other public lands, and the provision of community and recreational facilities.
- Housing NSW, as owner and manager of most of the land area in the neighbourhood centre including The Pond recreation area, and of the common areas in the grouped clusters ('complexes') of seniors housing.
- the Airds Bradbury Renewal Project.

No specific questions about the management and broader governance arrangements of the estate were asked in the interviews. However associated comment has been made as part of wider discussions with participants.

(i) in relation to the local Council:

The role of the local Council, in particular as owner and manager of public open spaces and in providing community and recreational facilities was not mentioned by participants, even though specific issues and matters of concern about these areas were raised. It is not known whether participants are in contact with their Council about these matters and simply did not mention this in their responses, or whether they are not aware of the Council's role in this regard. It is quite likely there is some confusion given the somewhat equal role of Housing NSW in providing facilities and services in Airds Bradbury³¹, and now also its additional role in the Renewal Project. It may be that some more visible distinction in the roles of the local Council and Housing NSW may be worthwhile.

Implementation of the Master Plan will involve a substantial amount of future detailed design, building and landscaping work, including in relation to the important community spaces comprising the new roadways, cycle and pedestrian paths, the regeneration of the neighbourhood centre and the local parks. Some of these will require further detailed development approval by the local Council. Consultation processes in respect to such development are established in the *Campbelltown (Sustainable City) Development Control Plan 2014*. However strict interpretation of the public participation provisions in this Plan may result in only limited notification and consultation (being where in the opinion of Council development would have a *major* impact on *adjoining* private property, or where in the public interest) given:

- most adjoining land is owned publicly, with residents as tenants of Housing NSW, and
- specific individual developments in relation to roads, open space areas and the neighbourhood centre will impact on the wider community, not just adjoining land.

There may be a need for the local council to establish a broader consultation protocol in relation to these developments as relating to the *implementation* of the Renewal Project, as a continuation of the existing wide participation processes established for the *planning* components of the Renewal Project.

³¹ As in for instance the recent upgrade of The Pond open space area adjacent to the neighbourhood centre, and the provision of the community food box program.

(ii) in relation to the seniors housing common areas:

This level of governance is very location-specific and affects only a small number of areas (and also discussed in Q. 18). These areas are owned and maintained by Housing NSW. It is not known what the policy or practice of Housing NSW is in respect to the involvement of residents in the management of these areas or if there are any particular issues in this regard. However they are included here on the basis of two comments raised by the Study participants:

- that one resident has ‘surreptitiously’ replaced the publicly-installed plantings within some of the landscaped areas with food plants. It suggests that obtaining formal permission to do so was either too difficult or likely to be refused – and that a more ‘devolved’ system of governance may be more appropriate.
- that one participant has personally sought to act as a social ‘catalyst’ within her housing group in order to avoid conflicts between residents in other clusters that she was aware of. There may be a need to develop similar more formal arrangements in all such housing groups.

(iii) in relation to the Airds Bradbury Renewal Project:

This Project includes a substantial local resident participation component within a number of different programs. This Study has not sought to review the effectiveness of these programs. However, the following observations are made as a result of the conduct of the Study:

- some participants commented that the renewal process and participation programs has assisted social interaction generally, both through the formal meeting processes and through stimulating general feelings of engagement within the community.
- that said, a further comment, made in response to the focus group needs to be noted. The focus group discussion included some difference of opinion regarding the adequacy of some of the open space proposals in the Master Plan (see Q. 25). One participant later approached the Study officers to express concern that their comments, and similar comments by other residents, were not being given due recognition and that further discussion was now being curtailed given the formalised consultation processes were complete.
- the Renewal Project includes a number of components, as described in various publications and website references. However when read together it can be difficult to determine the specific purpose of each, their currency, and how they might relate to each other. In turn this may hinder possible take-up of individual programs by residents. This matter was not mentioned by the Study participants themselves and so it is not known whether this is in fact the situation. It is mentioned here as a possible matter to look at, with some clear ‘map’ of the various programs, their purpose and contact points established. By way of illustration, a list of some eleven often similar-sounding programs as gleaned by this Study is given below.

Various programs and processes associated with the Airds Bradbury Renewal Project.

- Airds Bradbury Renewal Project Project Plan.
- Airds Bradbury Concept Plan.
- Airds Bradbury People's Plan.
- Airds Bradbury Master Plan Group.
- Design OutLOUD.
- Community Reference Group.
- Bradbury Airds Neighbourhood Connection.
- Community Change Makers.
- Integrated Social Sustainability and Health Impact Assessment.
- Strategic Social Plan.
- Living Communities Program.

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.

Not applicable (at the current stage of development).

The estate renewal project has not yet reached the stage where there are new residents moving in from other localities.

It is not known whether a 'Welcome' program is intended as this part of the Renewal Project becomes enacted. However it is likely that a Welcome program will be beneficial given:

- although participants, as existing residents, indicate they enjoy good levels of socialisation, this appears to be the result of their long-term residency and engagement with the locality. In particular this does not necessarily translate into high levels of interaction with immediate neighbours, and there appears to be some reticence in this regard with generally low levels of trust reported. There is a risk that there may be a similar reticence shown in respect to socialising with the new in-coming residents.
- the proposed regeneration of the neighbourhood centre as a community focus and place of incidental and formal social interaction may be some time away.
- existing community facilities have an alienating appearance, potentially discouraging use.
- the desirability of avoiding any possibility of an 'us and them' attitude between existing and new residents.

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.

Yes, in part.

Airds Bradbury is located adjacent to a bushland reserve bordering the St. Georges River (to the east and south) and itself has a reasonable extent of tree cover, including some bushland area with an associated partial watercourse on its north-west boundary (Smiths Creek reserve, which also equates with a wide utility easement). It also has extensive open space areas, though these tend to be mainly grassed and with limited tree cover. A natural water feature (The Pond) adjacent to the neighbourhood centre has recently been upgraded into a more managed wetland area with passive recreation facilities as part of the Renewal Project. To some extent, with its large areas of open space, tree cover and fresh air Airds presents as somewhat semi-rural, and thus also with good contact with 'nature'. The Audit noted that the most notable sound within some streets was birdsong.

That said, except for the recent work on The Pond there does not appear to be any particular design and governance arrangements to maintain or reinforce these natural elements other than the open space zonings. In the focus group mention was made of the need for better formed and dedicated walking trails in the bushland areas to encourage use, including for exercise. Some participants indicated that going for walks within these bushland areas is not currently an option given:

- personal age and mobility issues, meaning that more level pathways with adequate resting places are required, and
- concerns about personal security, especially if alone, and perceived threats from groups of youths on trail bikes.

The Audit noted the prevalence of groups of young people (generally males) on motor bikes as leading to a threatening presence in open space areas generally, thus discouraging use by others (see Q. 26). To be effective therefore, the design and management of any such walking trails will also need to concurrently address these associated issues. An inspection of The Pond at the time of preparing this Report also noted that it was extensively degraded by rubbish in the water and surrounding land area.

Although the Master Plan does include the specific retention and rehabilitation of the Smiths Creek bushland areas along the north-west boundary of Airds, there is now also some concern, expressed in the focus group, in some interviews, and in the local press, that the overall re-design of the open space and street layouts and generally closer density of development proposed in the Renewal Project will diminish the level of existing contact with nature. Two specific matters of concern were:

- (i) about impact on local koala habitat as identified in the *Campbelltown (Sustainable City) Development Control Plan 2014*, in particular from the alignment of the new east-west road proposed to link the centre of Airds with Bradbury. There was though some difference of opinion in the focus group, with some contending the proposals are reasonable in this regard.

Part of the concern also relates to potential impact on koala habitat. Since the focus group, negotiations between the local Council and Housing NSW have resulted in agreement for a more extensive street-tree planting program in order to maintain habitat and travel routes for the local koala population.

- (ii) whether the Master Plan gives adequate retention to the Smiths Creek remnant bushland area, which is now to have more intensive adjacent development comprising housing and re-located playing fields. There does not appear to be any changes proposed for this area.

Focus Group discussion on contact with nature:

A feature of Airds seems to be that you are not short of open space as such?

No we will be when they finish.

When they finish we won't have the open space we've got now, we won't have the trees we've got now.

Not if the government goes ahead and does that they want to do.

They're going to get their own way in what they want to do.

Everyone here is used to this greenbelt of trees and you know, I look out my kitchen at all of that now, and it's - to see all that gone and look at all the concrete walls.

How do you think that will affect people's health?

Oh it affects them big time.

The kids are going to suffer big time, because there's nowhere for them go and play.

They've reduced sizes of yards down now there, if you put a clothesline up you hang yourself if you try to run across your back garden.

Kids can't put swings.

You walk out your back door you're into your clothes line.

I saw an experiment years ago in a black and white movie on TV with rats. The closer you put them together, the more they fight.

That's right exactly. We're going to have more domestic violence than we've ever had in our lives in this place.

It's going to be worse.

You need some peacefulness you know. Somewhere you do feel safe. Somewhere that you can get your fresh air and things like that.

That's right.

Too much crowding is not good for people.

You going to have someone next door blasting music or having a party and someone over the roads going to be having one. I mean you're not going to sleep, it's going to be - because the younger generation that's coming up, are different to our generation.

Got a different outlook on life.

Oh well I walk every day, every day I walk at least an hour every day. So I make a point of doing that.

Do you find that easy and present enough?

Well I just walk around the streets because there's nowhere else for me, if I had a nice walking track or something yes I would do it. But there's no way I'd walk through the bushes on my own, no way at all.

No, well we all stopped that because it was too dangerous.

Q. 26. Is the 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?

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.

No.

Perceptions of security within Airds Bradbury are low, with generally about half of participants indicating concerns about personal safety.

Only two out of 20 participants (10%) agreed that Airds Bradbury had a reputation as a safe place to live (with no participant 'strongly' agreeing). This is in substantial contrast with averages for both the wider Campbelltown local government area (54.7%) and NSW (75.5%). Of the 18 participants (90%) who agreed that Airds Bradbury did not have a reputation as a safe place to live, four participants 'strongly' agreed with this contention.

However, this perception of Airds Bradbury as having a low reputation in terms of safety does not necessarily translate into similar levels of concern by participants about their *own* safety. When asked about their levels of satisfaction with safety in the area participants still indicated high levels of concern, but overall were more 'neutral' than what the responses regarding 'reputation' might suggest:

- only two out of 20 participants (10%) indicated they were satisfied, with these participants only indicating they were 'somewhat' satisfied. No participant indicated they were 'strongly satisfied' with their level of perceived security.
- seven participants (35%) indicated they were either 'strongly' or 'somewhat' dissatisfied.
- 11 participants (55%) were neutral (neither satisfied nor dissatisfied).

Nevertheless these figures do show that about half of the participants have some level of concern about their personal safety. This will obviously have a detrimental impact on the use of public spaces for active transport, recreational activity, and socialising generally.

This is particularly so at night. When asked whether they were satisfied with their level of security generally after dark. Although 5 out of 20 participants (25%) indicated they were satisfied in this regard, which is higher than the number of participants indicating that they were satisfied with levels of safety generally:

- a slightly higher number (nine participants, or 45%) indicated they were dissatisfied, with six participants (30%) indicating they were 'strongly' dissatisfied.
- a higher number again (10 out of 20, or 50%) indicated in response to a separate question indicated they did not feel safe when walking down the street after dark (although nine participants (45%) indicated that they did feel safe).

The figure of 45% of participants who indicated they felt safe walking down the street after dark is however substantially lower than the NSW average of 72.4%.

Comment made in the interviews and in the focus group suggests that for many a key reason for feeling unsafe is because do so because they have a low ability to respond to threatening situations should they arise, particularly as a result of age and/or limited mobility. In terms of the source of the perceived threat to safety, most comment seems to refer to groups of younger people 'hanging around' in public areas with little purposeful activity. One participant particularly indicated that she tries not to let this factor limit her, by actively standing-up to groups of children if they attempt to heckle her. Other comment in the focus group suggested such concerns were also of particular issue in nearby natural open space areas given the low level of passive surveillance in such areas, and as such discouraged recreational walking there. A further comment was made about the likelihood of bikes being stolen at the shopping centre did then discourage cycling there as a mode of transport.

In addition, if there has been a history of disturbances, it may take some time before the resultant negative perceptions are reversed even if the causes of those disturbances has been addressed. Here one further comment from the interview surveys is noted: that actual crime levels may have decreased since some parts of the suburb have been vacated.

A further component here is the overall level of trust within the community. When asked whether 'most people can be trusted', 12 out of 20 participants (60%) indicated they could, which is lower than the NSW average of 71.3% - though, interestingly higher than the average for the local government area of Campbelltown (56.9%) within which Airds Bradbury is situated.

This range of responses by participants is somewhat similar to the findings of the Audit. The general reputation of the neighbourhood combined with some instances during visits of low level anti-social behaviour led to some wariness, particularly at night. Further, the female auditor had also been warned by various people local to the area that it would not be safe for her to walk around alone. However:

- the auditors generally observed that during the day, most areas feel safe; and that the only areas that felt unsafe were where there were groups of young males who were behaving antisocially e.g. swearing and drinking alcohol openly.
- the female auditor also did not feel unsafe or threatened during the Audit, but did query whether it is advisable for a woman to walk around alone in the neighbourhood given an overall perception of a lack of safety for vulnerable parties and occasionally feeling unwelcome because she was very obviously not from the area.

That said, although many streets presented as safe with potential passive surveillance from adjacent dwellings and within the 'closed' cul-de-sacs, and established gardens contributing to feelings of belonging, it was also noted that in other locations a sense of unpredictability based around the behaviour of some (e.g. the dirt bike riders, those engaging in other anti-social behaviour in open space areas), groups of young teenagers (predominantly males) hanging out without a purpose, broken glass bottles, graffiti, trail bike riders racing through bushland and open spaces, aggressive dogs, unkempt gardens and verges, burned out cars and properties, and litter detracted from feelings of belonging, safety and community connectedness.

The shopping arcade felt reasonably safe with the visible presence of a security staff and other centre patrons, and the Audit also noted that the sporting fields also felt safe at the time due to the larger numbers of people who were using the fields.

Focus group discussion about neighbourhood safety:

Is there a path there at the moment?

No.

There's a fire trail though.

You could probably get mugged halfway through it if you tried hard enough.

When we were asking in the questionnaire surveys about feelings of security, the answers tended to be weighted towards not being satisfied, although it does not come up so much in your cards about things that help you or not to keep healthy.

I put down unsafe.

So how do you think that might be resolved?

We used to have groups walking from here.

Not just chasing hoodlums, but one can actually walk around.

Yeah like they used to years ago.

They haven't got the resources though now.

Oh they've got resource, they just don't want to use it.

Well there are a lot of kids out there that are good, but then there's a hell of a lot more that just don't do the right thing, they destroy anything and everything.

I've seen that over the years since I've been here.

It's usually the few, it's usually the few that spoil it for the many.

Well yeah, there's quite a few though, I've seen quite a few kids destroy stuff around the area.

Oh my, cars been wrecked three times in the car park.

That's what I mean, you know and it's sad to think that you can't go out and enjoy all this without these young kids come along and just destroying everything. It's sad, it really is.

But a lot of it comes down to boredom, a lot of it comes down to boredom.

How do you keep those kids occupied?

As we've already discussed lack of discipline.

I don't care what you say there's a lot of stuff for the kids here too, but they just don't do it. They have so much stuff that is put out for them.

Exactly you've got the centre down there that caters for kids to do things, and it's just...

But it's never open.

... it's never open for them to get in there.

Interview comment about neighbourhood safety:

- Community cleanliness, especially on paths – to not have broken glass everywhere.
- Need to feel safe in your area e.g. if there's a disturbance – quick response from police – to reduce feelings of vulnerability.
- Crime has decreased since they got rid of some of the places.
- Not satisfied with use of trail bikes in the neighbourhood – which the police are unable to stop.
- Lighting needs to be improved.
- Kids on bikes are an issue.
- Wouldn't walk after dark, because I can no longer run.
- Infrastructure in the area is good – but the mental health and drugs and alcohol problems of others have a huge impact on my life.
- Cannot let my child out on the streets to socialise with other kids.
- You need to do a scan for needles before using the parks.
- The neighbourhood is okay, but there are lots of naughty people living there!

- * A number of participants, particularly those who were older and less mobile, also cited concerns about safety from the perspective of risk of accident from poorly maintained footpaths, etc; and others cited a concern about discarded needles in open space areas. These matters are dealt with in the other sections of this Report dealing with the viability of utilitarian and recreational physical activity.

Summation – Social interaction.

- (i) Overall levels of social interaction appear to be quite high, but there is some variation in how this occurs. This would be as expected in an established community where there has been considerable time for a range of experiences and relationships to have developed, with corresponding various degrees of satisfaction with these.
- most interactions appear to be ‘formalised’, whether as a membership or other attendance at a group or arranged activities, or between friends.
 - incidental interactions within streets and at the local shopping centre are low, generally as a result of a low amenity to these places, a low amenity of the walking environment particularly for older and/or less mobile people, and concerns about personal security, all of which lead to low usage of these spaces.
 - participants do though cite a frequency to ‘run into’ people they know when shopping at the main shopping destination of Campbelltown.
 - interactions with neighbours is lower than the average for Sydney, but all participants (100%) indicate they are satisfied with this level of interaction.
 - as noted by the Audit, there are a range of other interactions – organised sport on the playing fields, children playing in cul-de-sacs sometimes with adult supervision, small groups around the neighbourhood centre (The Pond, the community centre, and the shops), and trail-bike riding groups in the open space areas (though these can then discourage other users).
- (ii) It may be that the reason why these visible public space interactions do not appear to be significant or overly numerous is because of the low density of the area and the large amounts of open space area – so that while interactions occur, the *density* of those interactions remains correspondingly low.
- (iii) Similarly, the various community facilities (including schools) that would generally act as foci for both formal and informal social interaction tend to be scattered and often not highly visible because they are located in side streets and/or otherwise visually remote. As such there are limited synergies between these facilities. Although a number are clustered in the neighbourhood centre area, again they tend to be spatially separated and the building designs tend to be inwardly focussed, generally because of security features.
- (iv) The neighbourhood shopping centre, which would normally act as an important focus for social interactions is particularly poorly-designed, and came in for substantial criticism from participants. These design limitations are exacerbated by a reduced number of shops due to a declining population (market) base as the suburb transitions, and by low incomes generally within the centre’s market catchment.
- The Renewal Project has recognised these limitations and include a number of actions to address this. The upgrade of The Pond as a specific recreation area and the establishment of the AB Central community centre has already occurred. The Concept Plan also proposes a revitalised ‘Town Centre’, building on the existing facilities, the new east-west link road and

re-located playing fields. However it is silent on how appropriate renewal of the privately-owned pub and shopping mall is to be encouraged/achieved.

- (v) Participants report high levels of concern about personal security, particularly those who themselves feel that they have a low level of ability to respond, whether due to age or personal mobility or the like. Although these concerns are not as high as the low level of 'reputation' that Airds Bradbury has in this regard, they would appear to be a major constraint on use of public spaces generally and especially after dark, and of use of the neighbourhood shopping centre (notwithstanding the Audit noted the presence of a security guard). The main issues, at least within the public areas, would appear to relate to anti-social activities and property damage rather than to personal injury, with the perpetrators being from younger age groups. One response is to ensure there are sufficient interesting alternative activities for such groups, however discussion in the focus group also suggests that issues of self and family 'discipline' are also explanations.
- (vi) There is also a need to address a lack of continuity (which appears to be both real and perceived, depending on the matter at hand) with community activities, and with up-to-date information about the types of activities available.

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?

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 number of sources in addition to retail shops.

There would appear to be no issue with the availability of fresh healthy foods, which can be sourced in a number of ways:

- the IGA supermarket in the Airds neighbourhood centre. (This centre also includes a bakery, but which is not classified here as a ‘healthy food’ shop).
- the much larger Campbelltown Mall, which includes the two major supermarket chains, an Aldi supermarket, and separate fish, chicken, meat and fruit shops.
- where in season and operation, the community gardens at the Men’s Shed, WorkVentures and the Youth Centre.
- a subsidised community ‘food box’ purchase and delivery service.
- farmers’ markets at Camden and Warwick Farm.

Participants in the focus group did not list any items relating to food in response to the question ‘what I need to keep healthy (and do not currently have access to)’ (Table 4.6), and comments in the interviews (see boxed text) were primarily related to accessibility (see Q. 28). Participants do not appear to use the nearby local shopping centre in Bradbury. By bus this would require using two bus routes and if travelling by car it would be just as convenient to go to Campbelltown, where a greater choice is available.

Interview comment about access to food.

- Have helped to create a fruit and veg delivery service (run through AB Central) in response to a dearth of retail options in the neighbourhood.
- Fresh food in local shops a problem – to address this we have had it delivered to us via a neighbourhood system where someone goes to the markets
- Do my fresh food shopping, and use medical services in Campbelltown.
- Need better access to shops – it is inconvenient with babies and children.
- Goes to fresh food shops, cafes and medical services in Campbelltown.

The Community Food Survey indicates that (refer Table 4.3):

- the quality of fresh produce available in Airds is comparable with that available in surrounding areas, and with the other Sydney locations surveyed regardless of SES status. This is notwithstanding there is no dedicated fruit and vegetable shop, with fresh produce only being available in the small local supermarket (where it might otherwise have been expected management may not pay as much attention to quality as would the owner of a dedicated fruit and vegetable shop – refer also discussion below).
- the cost of a basket of fresh fruit and vegetables in Airds is comparable with the surrounding area, and only marginally higher than that in low SES suburbs.
- however Airds ranks low in terms of variety of food available (though the surrounding area ranks with the high SES suburbs), and the cost of a basket of healthy food overall is high – even higher than the average for high SES suburbs. This a poor outcome given that Airds ranks in the lowest decile of SES suburbs and, as noted in the *Airds Bradbury Social Sustainability and Health Impact Assessment*, has an average weekly income that is less than 50% of the Sydney average.³²

There are different views about the quality of food available in Airds. The Community Food Survey found that the quality and price of fresh fruits and vegetables (as different to healthy foods overall) was good, equal to all other areas surveyed (Table 4.3). However, the quality of fresh foods has apparently been a problem in the past, leading in part to the establishment of the community food box program. This is a subsidised program run through the AB Central community centre where fresh food is purchased in bulk and re-packaged into boxes for home delivery. It was established following findings in the social assessment undertaken as part of the Renewal Project that some residents have difficulty purchasing fresh food due to perceived high cost, poor knowledge of nutrition, and a lack of cooking skills. While discussion in the focus group left the matter of quality and cost somewhat open there was also the observation that the operator of the local Airds

³² Refer (i) Heather Nesbitt Planning and Community Dimensions. 2011. *Airds Bradbury Social Sustainability and Health Impact Assessment: Integrated Social Sustainability and Healthy Impact Assessment Stage 1 Report*; (ii) South Western Sydney Local Health District. 2013. *Social Housing Transition and Health and Chronic Disease Risk Factors Health Impact Assessment & Population Profile*.

supermarket often monitored the content of the community food boxes, presumably in order to maintain competitiveness, and that the overall quality of fresh foods had improved since the food box program was instigated. As such it may be that this public-sector-sponsored program is having an additional un-planned (and beneficial) consequence by encouraging improvements in the quality and cost of fresh foods available for sale locally in Airds. Though it may also be that this has limited consequence for those with the mobility to shop in Campbelltown with its greater range of services and more attractive overall environment (see Q.28).

Table 4.3: A comparison of supermarket prices, quality and variety of fresh produce.

	Airds Bradbury,	Airds surrounding area*	High SES Sydney suburbs	Low SES Sydney suburbs
Cost of fruit and vegetable basket (mean)	\$25	\$25	\$27	\$23
Cost of healthy food basket (mean)	\$196	\$176	\$194	\$177
Produce variety (mean)	38	54	55	49
Produce quality score (mean)	41	40	42	41

*Includes supermarkets in Blair Athol, Campbelltown, Minto and Rosemeadow.

There are various community gardens in Airds, though not all appear to be managed in a long-term or permanent way or are necessarily open for use by all residents. That said, discussion in the focus group regarding the community garden at the Men’s Shed suggested that its produce would be available to anyone who asked, perhaps with a donation in return (see Q. 30).

The two farmers’ markets are discussed below under Q. 31.

Focus Group discussion on the Community Food Box Program:

... doing the fruit and veg co-op, I've had each one of the shops over there, have actually bought bags off me, just to see what the locals were getting. Because originally, not the owners they've got their now, but the previous ones. I used to go in and have a look at their fruit, and I've never done my shopping over here. But what you do see is, I don't know some people say it was all right, I reckon it was a bit how-do-you-do. Then as soon as he's seen what's in the bag he decided to - that's the bloke that's there now, his fruit and veggies shot up, improved a bit. From what I've been hearing.

So do you see that as a positive outcome of what you're doing?

Probably I would yeah, yeah because he...

Or competition?

Well, it's something we're just running as a local thing to get. I'm not saying it's competition for me. But if the shop does get hold of a box every six months or so to see what they're still getting, he knows what he's got to put in here to get the customers in.

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, but with wide variation due to individual personal circumstance.

The accessibility of fresh food to residents in Airds Bradbury varies, depending largely on the degree of personal mobility and income. Although the local supermarket in Airds appears to have a reasonable level of quality and price for fresh fruit and vegetables (Table 4.3), use of this supermarket appears to be low given:

- poor overall amenity, and an ambience of insecurity within the shopping centre overall.
- poor footpath access, as also applying generally within the suburb.
- low overall variety of choice, and high cost of other items.

Combined, these factors appear to encourage most shopping being done at Campbelltown Mall (and Macarthur Square, in the same general vicinity). Those who make the trip to Campbelltown Mall also have the benefit and convenience of a larger range of retailing and other services there. In turn, this raises potential issues about the level of accessibility of these alternative locations for some Airds residents given it will require residents to have the necessary mobility by way of either personal use of a car, a lift by others, or agility to use the local bus service. Some participants with access to a car also indicate patronage of a community-based food cooperative also located in Campbelltown.

Where such access is not available or convenient other measures to compensate have been established over time:

- (i) the system of subsidised food boxes run through the AB Central community centre (see Q. 27).
- (ii) the community gardens, the establishment of which also includes physical activity and social interaction objectives.
- (iii) in one case amongst the Project participants, the use of on-line purchasing and delivery.

The Audit also observed that the Airds shopping centre was uninviting with little variety and amenity and with low numbers of patrons, and concluded that the majority of residents would travel to Campbelltown to do their weekly grocery shop, and would only utilise the Airds centre for small purchases.

Although two farmers markets are available in the region, they are some distance away requiring access by car, and there is minimal usage by participants (see Q. 33).

Participants indicate a clear desire for a more effective local shopping centre and overall local 'neighbourhood centre' experience in Airds (see boxed text).

A further issue about the 'accessibility' of fresh healthy food was raised at the focus group and is worthwhile noting here although it does not relate to physical access. Comment was made that

retailers seem to package food in quantities related to family households, and as such was inconvenient, cost more, and required freezing of excess (which was seen as detrimental to freshness) for the smaller households that are typical as the population ages. The discussion which followed did not however always agree with these comments, with some indicating they commonly bought in larger quantities, which was cheaper, and froze what is not needed immediately or prepared a number of meals in one session and then freeze those. Other comment indicated that supermarkets did indeed now stock a range of single-serve prepared items, though this elicited other comment that these were expensive and/or involved processing and so were not as healthy.

These issues could also be said to be addressed, in part, by the community food box program where food items are distributed in quantities suitable for weekly consumption.

Focus Group discussion on accessibility of fresh food for small households:

One of the issues I find with shopping is that I live alone. You buy food - most foods are packaged for families which means I've got to have then the freezer or whatever for the excess. Because I wouldn't eat all of that in one go.

They've got a lot of single stuff out now, heaps of it. A lot of frozen stuff that's already cooked, just preheat, they've got heaps of it out there now.

That's the next best thing to fresh.

A new one now is the Jamie Oliver range, and all those ones. They're all for one person. The soups everything.

But are you talking about whole foods or are you talking about processed foods?

No, no these are all fresh packed now, these are all freshly packed.

It's all processed.

No. All freshly cooked.

No it's all processed food.

Not all.

But it's the cost yeah.

It's more packaging.

Fresh is out of the garden, the stuff you're buying frozen is all processed.

Often find, being on a pension I've got to go for what I can afford, and quite often it's a case of buying the cheaper, yeah.

It's dearer just buying for one person.

I still cook like I've got five children, you know. You make it up - like I've done with the soups and all - and put it in the freezer, take it out when you want it. Quick easy, quick easy is like what I just said. For one person buy a lot, do it, freeze it, it is cheaper in the long run. It is also healthy because frozen stuff is next best to fresh right. So that's what you do.

That's what I do. Put it in the freezer and then you have it another night and another meal.

So do I.

It's hard to break that habit. I freeze it and actually that then works out cheaper for me.

It is. It is in the long run it works out cheaper, do stews or anything, bolognese, soups, whatever. Make extra freeze it, reuse it.

Focus Group discussion about the experience of food shopping in Airds.

Most people seem to go to Campbelltown for their main shop?

Or like me do it online. Yeah going shopping gets too much for me sometimes.

Would there still be the demand for on-line shopping or the food boxes if there was a decent fruit and veggie shop in Airds itself?

Probably not.

We need more shops here.

We did have, the shopping here was absolutely fantastic, it was absolutely fantastic, you couldn't leave this place.

Then what happened?

Just died off.

Well, Campbelltown Mall come along, then Macarthur Square came along.

The shopping centre in Airds, if you look in you'll see where they've had bolt holes. There used to be shops all the way down the central part, all stalls.

We'd buy stuff there.

It used to be Jewel Supermarket and then it was IGA or something.

Yeah but that's going back 40 years ago.

Yeah I remember a lot of the shops were there, even though I wasn't a local.

It dropped off and then the kids became unruly and I don't go near it. You feel absolutely threatened going in a place, I just don't go there.

It's like a lot of the shopping centres in housing areas, they're rough and ready and it needs a bit of a clean-up down there in general.

But what started the downturn? Was it rough and Tough kids or was it the more interesting Campbelltown?

People could go to the Mall and it was an outing, and over to Macarthur Square was an outing.

I think they also went to the bank there as well.

Yeah that's right, I went downtown to the bank.

You had more variety, you could take the kids and give them junk food and you know...

So, what sort of shopping centre would work here? Or are people happy to go to the excitement of Campbelltown?

Similar like they put out at Market Fair [at Macarthur] I'd say, at the moment they've got everything out there.

Yeah but to get that you need one of the big supermarkets to come in, like Market Fair was absolute mess before Woolworths came in.

That's when it took off.

I think home delivery with shopping is I think if you don't have your own transport, you've got to have home shopping or you resort to what I do and do it online and they deliver it.

But not everyone's got computers that's the trouble, they can't.

So what would it take for you to come back and shop in Airds?

If it was safer for one.

What about getting to the shopping centre?

Well they'd have to build proper pathways and stuff for people.

They'd have to change the bus route.

Tell me more about that.

Well the buses go one way, around Riverside Drive, so if somebody that lives on that side needs to get the bus to get to the shop, that's fine they can get to the shop. But then to get home, they have to catch the bus all the way to Campbelltown, change busses and come all the way back to get back home on the other side. That's at the present time.

Focus Group discussion about home delivery:

I think it's positive for a lot of people who can't get out and get around, they can have it delivered to them sort of thing. They can't go and lug it home themselves, if they haven't got transport.

I think home delivery with shopping is I think if you don't have your own transport, you've got to have home shopping or you resort to what I do and do it online and they deliver it.
Yeah, see not everyone's got computers that's the trouble, they can't.

Focus Group discussion about accessing community garden produce:

You know Jimmy, don't you? He goes to the Men's Shed. If you want herbs see him. We've got heaps, we just throw it out, so if you want some, just say to Jimmy bring some herbs home.
Yeah if you want herbs just ask him, he's got plenty up there that nobody uses.

We've got two places up here for community gardens, which is the Men's shed and the place next door which is workVentures or something they call themselves. But there is stuff there for the community ...

The Men's Shed up on Greenbank, we grow everything. The gardens are nothing at the moment because everything's out of season because of cold weather. But when it is viable, there's nothing stopping anybody coming up saying look can I get some herbs or whatever. The gates are open. We don't actually charge anybody. Make a donation well that's it.

The sweet potato was nice.

Well they, the Tongan community's got two big beds ...

Q. 29. Is there a relative over-abundance of EDNP food shops?³³

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.

Yes.

The overall range of shops in the Airds shopping mall, including those which retail food, is very limited. There is only one shop which stocks fresh foods, being the IGA supermarket. The overall quantity of fresh foods available and their relative prominence within this supermarket is also limited (see Q. 35). The other food shops in the shopping mall comprise a milk bar/lolly shop, a Chinese takeaway, a general take-away food shop that included fish, a charcoal chicken shop, and a

³³ 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 a high levels of fats and sugars. Examples include what are typically referred 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.

bakery. The shopping mall did include a butcher shop, but it closed during the course of the Study. The Audit indicates:

- there are no shops in the centre dedicated solely to the supply of fresh foods.
- foods on sale in the centre are not generally distinguished in terms of being healthy or less healthy.
- there is no particular visibility of healthy foods that might prompt their consumption.

Nearby in the neighbourhood centre there is also a service station which sells a small range of snack foods, and a pub.

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. Although sometimes this is done surreptitiously (in the rental housing complexes).

Most dwellings have sufficient yard space to permit the growing of foods if desired, although the Audit did not note any particular prevalence in this regard except for a few exceptions which were obvious because of their scale. There is an active community garden at the Men's Shed, and others that appear to be more spasmodically maintained at WorkVentures and the youth centre. A community garden in Hartigan Way as part of a former community centre noted by the Audit has now been removed as part of the redevelopment of this area. The Audit also noted that:

- although the produce from these gardens appeared to be shared, actual participation seemed to be undertaken only by specific groups, and
- there may be the opportunity to expand community gardening activity generally, possibly in open space around The Pond or elsewhere.

However, overall interest by participants in growing their own food is variable. Although 15 out of 20 participants (75%) indicate that 'being close to a community garden' was important to their health, only eight participants (40%) advised that they were involved in actually growing their own foods (whether as part of a community garden or otherwise). Nevertheless, these figures do indicate a reasonable level of overall interest and latent demand which could be drawn on to achieve combined nutrition, socialisation and physical activity benefits. One particular characteristic of the population of Airds Bradbury has the potential to be significant in this respect - that there appears to be a large proportion of residents with the available time to garden either because they are retired or otherwise not employed.

One participant in the focus group who had lived on farm in the locality before moving to Airds did however question whether the local soils were sufficiently fertile to successfully grow fruit and

vegetables without additional action (and which appears to be being undertaken in at least some of the formalised community gardens).

A further limitation was also advised – that in the public housing complexes (which had only small private yard spaces) the garden spaces in the public areas were already landscaped, generally with native species. Discussion in the focus group mentioned one instance where a resident was ‘surreptitiously’ replacing the landscaping already in place with food plants (the produce from which was then shared), suggesting that obtaining formal permission to do so was either too difficult or likely to be refused.

Focus Group discussion about growing your own food.

It's nice if you can grow a few herbs or veggies yourself. Not everybody's interested in gardening. I am, but I have neglected mine because my sister was in hospital all last year and I had other things I had to do. So I've let it go, but I'm thinking about doing it again. It's nice it really does taste better when you pick it fresh.

What do you think about community gardens, as compared to just growing your own?

We have that too. There's a neighbour that lives up above me. In our car park he's surreptitiously every now and again pulled out a few things in the landscaping areas and put in vegetables. He's away at the moment but his wife and I keep watering it.

We've got two places up here for community gardens, the Men's Shed is one of them and the place next door which is WorkVentures or something they call themselves. But there's stuff there for the community. They run courses or they used to, I don't know whether they still do now, but have closed down a few times and then they've reopened. They run courses up there for people in the area, also whatever - learning computers and all that sort of stuff.

They also have veggie garden too, they also had Asian vegetables.

Didn't seem to last long.

Yeah, I was involved in some of the early processes, they had gardens there. The thing was, even the people that worked there they had to have a meeting as a group. Rather than using vegetables out of the garden, they'd go and buy them down the road. Then I started to sell them to the locals, I said come and help yourself to whatever you want and give \$2.50, that was a plastic bag. Then it just went down the hill.

With gardening it involves some effort but it's exercise as well.

The Men's Shed's got I don't know 12 gardens, 13 gardens next door - and we grow everything, so come spring when the weeds are finished. You can buy anything you want, or you can get it, they're actually giving it, we don't actually charge anybody; but the gates are open and the gardens are advertised in the pamphlets that the Housing Department letterbox.

But I know of ladies that grow their own vegetables or herbs, and the thing with herbs is you can grow them in pots. With the soil here and the gardens in our complex, it's meant for Australian plants. So you have to put your own pots or I've got two veggie trucks up on legs, so I don't have to bend down too much. So I can still garden, I put the vegetables in there, they're quite big, though they cost a fair bit to set up.

You're talking about eating better in the long term, the only way to get around that is to grow your own.

It really tastes better.

Is there anything about the design of the suburb that might help?

Well you need somewhere to grow it if you're going to do that and with the proper soil. I was just saying they've got Australian plants which I'm in favour of myself. But you can't grow vegetables with them, it needs a different soil.

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, but this is dependent on residents having access to personal transport.

Airds Bradbury is located within the urban fringe of Sydney and as such is reasonably close to rural areas. However the scale and intensity of farming activity in those areas is varied. Participants did not indicate any particular use of produce sourced directly in this way:

- no participant indicated that they used a farm shop or the like. The Study did not undertake any survey of the availability of such outlets in the surrounding area and so it is not known whether this would be a practical option even for residents with access to a private vehicle.
- only two participants indicated they regularly attended a farmers' market (the Camden Produce Market) even though 15 out of 20 participants (75%) indicated that 'being able to go to a farmers' market was either 'important' or 'very important' in keeping healthy. Again, it is likely that transport would be an issue here, with the Camden market being some 16 kilometres away and requiring transport by car, and the only other nearby market (Warwick Farm Trackside Markets) being further away. A further issue was mentioned by one participant – that although she enjoyed going to a farmers' market, it was not really a practical way to purchase food because as a single household she did not need to buy much.

The Camden Produce Market is held on Saturdays, weekly from 7am to 12 noon at the Camden Town Farm. This is about a 20 minute (16 kilometre) drive from Airds, or by public transport would require a change of bus in Campbelltown. The Warwick Farm Trackside Market is held on Saturdays, weekly from 8am to 12 noon at the Warwick Farm Race Course. This is about a 30 minute (28 kilometre) drive from Airds. The survey of farmers markets in Sydney as part of the Community Food Assessment included both markets.

The management of both markets explicitly emphasise predominantly farm-based and local suppliers, and this is reflected in the data from the Community Food Assessment (see Table 4.4). A survey of the retail cost of selected produce also showed that:

- at the Camden market some 55% of items were either similar to or cheaper than the average for all farmers markets surveyed in Sydney.
- at the Warwick Farm market some 70% of items were either similar to or cheaper than the average for all farmers markets surveyed in Sydney.

Table 4.4: Source of farmers market produce.

Source of produce *	Camden Produce Market	Warwick Farm Trackside Market	All markets surveyed
Own farm or property	67 %	67 %	26 %
Within local area	33 %	50 %	20 %
Within state	11 %	33 %	27 %
Interstate	nil	nil	15 %
Overseas	nil	nil	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.

In addition to standard retail food shops, participants have the ability to access fresh food by way of:

- where in season and operation, the community gardens at the Men’s Shed, WorkVentures and the Youth Centre, the produce from which is generally available to anyone who asks.
- the subsidised community ‘food box’ purchase and delivery service.
- farmers’ markets at Camden and Warwick Farm.

The Men’s Shed with its associated community garden and the community food box program have been established under the Community Renewal component of the Airds Bradbury Renewal Project.

Mention was made at the focus group mention of an earlier program that, like the current Community Food Box program, involved a community group bulk buying fresh foods which were then divided up amongst participants. The associated focus group discussion (see boxed text) indicated, in response to a specific question, that the current program was unlikely to be needed if there were better fresh food shops in Airds itself. However, some thorough appraisal would be appropriate prior to any closure of the program given that it addresses a range of access issues as identified in the earlier social assessment of Airds Bradbury, including the limited mobility of some households particularly when carrying heavy shopping items, affordability, and knowledge of nutrition.

Focus Group discussion about the Community Food Box program:

In this area I cater for about 15 people who are in the seniors complexes, and a few odd people around the area. We also do a fruit and vegetable co-op out of here on a Friday. But they pay for it themselves, it's only \$5 a bag or \$15 a bag. We do fresh fruit and veggies. Dependant on if they're cooking, but they get three feeds, or two thereabouts, plus half a dozen different types of fruit.

What would happen if you didn't do that do you think, in terms of their eating habits and what they ate?

Well I've now been doing it for four years. It costs nothing – well, they pay for the vegetables they receive. We buy a bulk of stuff and then divide it up so everybody gets the same, depending on their order. The Department of Housing pays for the fuel and they pay a wage. It's been going pretty well. Sometimes it might pick up, other times it drops back.

So did it started, was it because of transport difficulties for the individuals or was it because it was found that people perhaps weren't eating as well as they should?

When I first started about 14 years ago., we could get up to 30 orders, but we used to go into the Sydney markets, and the issue was around transport with that. But I used to buy a whole range of different things, and that was good going to the markets, because it was cheaper. It went really well and yeah, sort of dropped off for a while and they started it up here again.

We started off with another program originally, which is an afterschool program with the two primary schools. That went for two terms I think it was, and after that we just thought we'd give the fruit and veg a go, and we did. We've been to different fruit shops, big places, and depending on the feedback I get from the customers. Been to another place I'd say probably two years now, I've had no complaints, so you just go by trial and error.

It's about where we go to get the fruit and veg, that was always an issue when I was doing it, but everyone loved it.

But again it's from within the local area.

Would there still be the demand for that if there was a decent fruit and veggie shop in Airds itself?

Probably not.

Q. 34. Might eating habits be 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, this is not really applicable in Airds Bradbury itself.

This is minimal advertising in Airds Bradbury, and its mainly residential zoning would not permit large-scale advertising signs.

Q. 35. 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.

Not really.

There is no particular visibility of healthy foods in Airds Bradbury that might prompt their consumption. There are no shops dedicated solely to the sale of fresh foods. The only location where fresh fruit and vegetables are sold is in the small local supermarket where they are located in one small area to the side.

Although there are a number of community gardens, the one which appears to be the most permanent and well-used (being at the Men's Shed) is not readily visible from any public street. As such its ability to take on an additional role of visually 'promoting' the consumption of fresh food is limited. A food garden at the Youth Centre which is within the Airds neighbourhood centre and hence more visible appeared to be poorly maintained at the time of the Study and as such was also limited in any potential promotional role.

The Audit noted that fresh foods were seen growing in some private yard spaces in Airds. While this provides a positive presence visible from the public streets, it was also limited to one or two properties only within the suburb overall.

As earlier noted most shopping is undertaken at the Campbelltown Mall. Here the relative presence of healthy foods differs. The layout of the Mall includes an area dedicated to fresh food shops and the supermarkets, as per current practice, gives visual and locational prominence to their fresh food sections. However, participants in the focus group also made adverse comment, when food and nutrition generally was discussed, about the impact on the eating habits of some patrons of the presence of non-healthy foods – see boxed text.

Focus Group comment on eating habits at Campbelltown Mall:

What started the downturn of the shopping centre at Airds? Was it rough, and rough kids or was it more the attraction of Campbelltown?

People could go to the Mall and it was an outing, and also over at Macarthur Square was an outing.

I think they also went to the bank as well.

Yeah that's right we had the banks down there.

You had a more variety, you could take the kids and give them junk food and you know they'd take them down they'd do their shopping there.

When McDonalds and all that came in, that sort of...

In Campbelltown?

Yeah, see we didn't have all that, so once all those fast food...

We used to go to the fish and chip shop every Friday, and that was mums night off.

That was a big treat, have fish and chips in those days or have a chicken was a big treat.

I walked down to the Mall sometimes and you walk through them, and you see the amount of mothers with little babies, and what are they feeding them: chips, at 8:00, 9:00, 10 o'clock or Macca's at 10 o'clock in the morning.

Separate to the more physical visibility of healthy food mentioned above, discussion at the focus group also pointed to two other ways in which healthy eating achieves a presence within the Airds Bradbury community:

- (i) through the range of cooking shows which are now on TV.
- (ii) through certain community activities in Airds which have centred around cooking and communal eating generally, often also with reference to the foods of the various cultural groups in the area.

Comment at the Focus Group about healthy eating:

One of the other things we are interested in is about healthy food; and being able to buy it at an affordable price and so on. I see that eating well features a lot in the cards that describe what people are doing now to keep healthy. What's assisting that?

Probably all the cooking shows on TV and the fact that the chefs aren't snobby about it now. They're cooking for diabetic people, they're cooking for people with celiac and other diet problems, and they're giving recipes.

Some people have become interested in cooking; like at HART House at different times we have had different ladies from different nationalities come and cook a dish, national dishes and things like that.

I'm trying to include ladies that come from different backgrounds, that's what you want, the interest. You know it's great, all the different foods and it is usually healthy.

Summation – nutrition.

- (i) Access to healthy foods in Airds Bradbury is quite complicated. On the surface there appears to be a good level of availability. However a deeper look suggests a tenuousness, with the availability of healthy foods perhaps being more accurately described in terms of its *potential* - which may or may not be achieved depending on the individual circumstances of participants.

There is a good potential range of sources of healthy fresh foods:

- the local supermarket, which rates well in terms of fresh quality.
- a good choice of shops in nearby Campbelltown, which includes supermarkets, individual fresh food stores, and a food co-op.
- a farmers' market at Camden which is a 20 minute drive away.
- a weekly community food box program.
- a number of community gardens growing food plants.
- many residents, being retired or otherwise not employed, have time to grow their own foods and often the yard space to do so.

However there are significant factors in realising the potential of these food sources:

- the local supermarket does not rate highly in terms of affordability of other healthy food items, and the shopping centre within which it is located is not well patronised because of poor walkability, low perceived levels of safety, low amenity, and low variety generally of other retailing and services.
- there is some suggestion that the good rating of the supermarket in terms of fresh food quality would appear to be due in some measure to 'competition' provided by the subsidised community food box program (and which may be an additional un-planned beneficial consequence of this public-sector program).
- the community food box program was established to address actual nutrition issues identified in the earlier social assessment undertaken as part of the Renewal Project resulting from low access to healthy foods due to low income and/or mobility. The program is however dependent on continued public funding.
- the community gardens at the Men's Shed and the Youth Centre have also been established to address, in part, issues relating to nutrition; and are similarly dependent on continued public funding and participant interest. Some community gardens appear to have closed, or operate only spasmodically.
- affordability remains an issue for those on limited income, particularly where, as single households, buying bulk items is less practical.

The Study did not investigate whether the publicly-funded programmes noted above are reaching all residents who need it (eg. because of income or mobility).

- (ii) Additional issues exist in terms of awareness levels relating to nutrition. Here, there may well be a disparity between the awareness, and associated ability to access healthy foods, between the Study participants and other residents of Airds Bradbury. While the participants themselves demonstrated a good awareness and were often involved in growing their own foods to an extent and/or participating to community activities relating to food:

- they also commented on and expressed concern about the nutritional behaviour of others, particularly as seen at Campbelltown Mall (and as such may or may not be residents of Airds Bradbury), in terms of the consumption of EDNP foods.
 - the earlier social needs assessment undertaken as part of the Renewal Project concluded that some residents have difficulty purchasing fresh food due not only to cost and accessibility issues, but also because of a general poor knowledge of nutrition and a lack of cooking skills.
- (iii) These issues are sometimes exacerbated and/or made more difficult to resolve by the current inconclusive state of play of the physical components of the Renewal Program:
- although mention of a new improved shopping centre is included in the Master Plan, the centre is in fact privately-owned with no particular 'public purpose' in its management policies (for example in respect to making healthy foods more prevalent or visible relative to other foods).
 - the Renewal process is actually contributing to a downward spiral of the centre as shops close because their market is declining as the population is re-located to allow for future new development.
 - a lack of certainty about the open space areas limits the current ability to establish new community garden or 'private' allotment initiatives.
- (iv) The establishment of a new local shopping centre with a range of viable food stores selling a range of affordable fresh produce is a key need. At the time of preparing this Report the centre was for sale. This provides the potential to establish up-front expectations in respect to any future development, and to work with any new owner to achieve these. Alternatively, drawing on the experience of the community food box program, new publicly-provided and/or subsidized shop-front space could be provided elsewhere on public lands within the neighbourhood centre specifically for the establishment of a healthy food retailer or other provider such as a co-operative, as well as 'market' space for the selling of produce from the existing community gardens. In addition, management policies need to be established to ensure overall advertising and visibility of foods gives prominence to healthy rather than non-healthy foods.
- (v) There is the opportunity to capitalise on the number of residents who have the time to engage in growing foods because they are retired or otherwise not working by providing space within the extensive public open space areas for additional gardens. This could include 'allotment' space for use by residents who do not wish to join an established group.

4.4 Wellbeing – the overall attributes of Airds Bradbury 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 Airds Bradbury and the health of its residents. In this sense it is about how all the elements of Renwick interact to generate a level of ‘wellbeing’. It is structured around four topics:

- (1) participants’ overall satisfaction with Airds Bradbury 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 Airds Bradbury.
- (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 4.5, in two ways:³⁴

- (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 Renwick (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.

³⁴ 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 4.5: Living in Airds Bradbury - 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		3	14	
2. Travel time to work.	1		1	2	3	13
3. Travel time to your place of study.			1	2		17
4. Travel time to children's school or place of study.				3	4	13
5. Speed of vehicle traffic in the local streets near your home.	3	3		12	1	
6. Traffic noise near your home.	2	4	2	8	4	
7. How easy and pleasant it is to walk in your neighbourhood.	1	5	3	6	5	
8. How easy and pleasant it is to cycle in your neighbourhood.	1	1		6		12
9. Safety from threat of crime in your neighbourhood.	3	4	11	2		
10. Personal safety in neighbourhood streets after dark.	6	3	6	4	1	
11. Access to entertainment in your neighbourhood.	3	3	1	8	4	1
12. Access to fresh food shops in your neighbourhood.	2	5	2	8	3	
13. Access to cafes and restaurants in your neighbourhood.	4	5	3	7	1	
14. Opportunities to meet people in your neighbourhood.	1	3	1	8	7	
15. Number of friends you have in your neighbourhood.	2	1	2	6	9	
16. Number of people you know in your neighbourhood.	1	2	3	5	9	
17. Child care in the neighbourhood.				1	3	16
18. Primary schools in the neighbourhood.			1	3	2	14
19. High schools in the neighbourhood.			1	3	3	13
20. Number of parks in your neighbourhood.	4	4	2	6	4	
21. Quality of parks in your neighbourhood	6	7	5	2		
22. Community Centres in your neighbourhood.	3		3	10	4	
23. Access to medical services in your neighbourhood.	3	3		5	7	1
24. Your neighbourhood as a good place to raise children.	2	1	4	6	1	6
25. Your neighbourhood as a good place to live.	2	2	5	4	7	

(1) Participants' overall satisfaction with living in Airds Bradbury.

Overall levels of satisfaction with living in Airds Bradbury are varied.

Participants were asked to rate their level of satisfaction with Airds Bradbury 'as a good place to live' (Table 4.5, Item 25). The results suggest a level of ambivalence:

- only a little over half (11 out of 20) of participants indicated a measure of satisfaction.
- however, only four participants indicate a level of dissatisfaction, with two each indicating they were 'somewhat' and 'strongly' dissatisfied.
- 5 out of 20 participants (25%) are 'neutral' on this assessment.

Participants were also asked, in a separate question, whether they would be 'sad' to leave Airds Bradbury. Here the responses are more definite, with equal number of participants indicating they would be sad to leave and that they would not be sad to leave. This is in substantial contrast with the NSW average where 73.4% of the population would be sad to leave their current neighbourhood.

Read together, the responses suggest there is a need to undertake improvements that will assist participants' overall wellbeing, as measured in terms of Airds Bradbury as 'a good place to live'.

(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 the 24 individual matters relating to living in Airds Bradbury (Items 1-24 in Table 4.5). Although, as illustrated by the coloured bandings in Table 4.5, there is a reasonable weighting towards expressions of 'satisfaction' (the right-hand side) participants also report substantial overall levels of dissatisfaction:

- there is a relatively high number of individual matters with weightings on the 'dissatisfaction' side, in particular: walkability (Item 7), personal safety (Items 9 and 10), access to fresh food shops and to cafes and restaurants (Items 12 and 13), and quality of parks (Item 21). In addition, although the individual scores on the dissatisfaction side are low in relation to speed and noise of vehicle traffic (Items 5 and 6), number of parks (Item 20), and access to medical services (Item 23), they do also indicate some concerns when the 'strongly' and 'somewhat' dissatisfied scores are added together.
- the individual scores on the 'satisfaction' side of the Table are still relatively low, with each being generally being cited by less than half of participants. It confirms a need to give particular emphasis to an overall improvement of the area to assist participants' overall wellbeing.

The following comments are made about those matters with significant levels of dissatisfaction:

- (i) walkability (Item 7). Here it is also noted that a large number of entries made at the focus group in respect to the 'things participants need to keep healthy but do not currently have' relate to the provision of walking facilities. The Renewal Project includes explicit proposals aimed at generating a better overall walking environment. However the entries here, and the

comments made by participants throughout the Study point to the need for explicit attention to detail: level and even paths, with associated places to sit and rest and with good informal surveillance to improve feelings of safety. Further, the continued *maintenance* of these facilities is as important as their initial provision.

- (ii) personal safety (Items 9 and 10). This a significant factor influencing the ability of some participants to be generally out and about (physically and socially active) in the neighbourhood, and is likely to also contribute to a lower level of trust as nominated by participants relative to NSW averages and therefore also interactions with immediate neighbours. The Renewal Project will substantially alter the demographics of the future population of Airds, and some comment at the focus group suggests that crime incidents may have reduced since the re-location of some tenants. Further, the reconfiguration of open space and other public space areas should assist in greater informal surveillance and overall feelings of safety. However, a key component will also be the reconfiguration of the neighbourhood centre, which receives only limited attention within the current Master Plan. Further, the establishment of more group outdoor activities will assist by providing a feeling of 'safety in numbers' until a broader overall ambience of safety becomes established.
- (iii) access to fresh food shops and to cafes and restaurants (Items 12 and 13). Most participants have access to Campbelltown which has a good range of shops and other facilities. However, there is also an overwhelming desire for an attractive local shopping centre with a good range of services that participants can easily access. Although the Renewal Project envisages a new revitalised 'town centre' for the existing neighbourhood centre, the format of this and the means by which it will be achieved, particularly given the various public and private land ownerships, receives only limited attention within the current Master Plan. There needs to be significantly more attention to this aspect.
- (iv) quality and number of parks (Items 20 and 21). As an inherent component of the original Radburn layout of the suburb, there are substantial open space areas within Airds Bradbury. However, and also as one of the limitations of the Radburn layout, there has been insufficient resources allocated to ensuring the provision and maintenance of adequate facilities within these spaces; essentially a matter of providing quality rather than simply quantity of open space. This should be addressed in the Renewal Project, which proposes a major reconfiguration of open space areas and the provision of substantial facilities. Attention to detail will be necessary to ensure these facilities are targeted to demand, and also that they are adequately maintained. Discussion in the focus group did however also reveal a concern by some that the proposed reduction in overall open space area would have a detrimental impact in terms of recreation area for children (given also proposed smaller dwelling allotment sizes) and in terms of impact on the native koala population. Both of these matters have been further considered in the final approval of the Master Plan, with various changes made; and the actual quantity of open space was given attention in the initial design process. It is considered here that in terms of the healthy built environment objectives of physical activity and socialisation an increased attention to the quality of facilities to be provided will negate any lingering concerns about the overall quantity of open space in Airds Bradbury, given also the substantial amount of open space present in the surrounding area. The only

additional comment here relates to investigating the possibility of allocating some open space area to allotment gardens as part of the healthy built environment objective relating to nutrition (though with also physical activity and socialisation co-benefits).

- (v) speed and noise of vehicle traffic (Items 5 and 6). This was raised in the interviews, but not further mentioned in the focus group. It is not known what the exact concern is, particularly given that the Audit noted that often there was a predominant presence of birdsong in the public streets. The Audit did though also note individual incidents of noisy use of trail bikes and the like. It would be worthwhile investigating this concern further given both the increase in residential population, and hence potential for traffic movements, proposed and the construction of a new link road through the centre of the suburb.
- (vi) access to medical services (Item 23). Notwithstanding there is a doctors surgery within the Airds shopping mall a number of concerns about the adequacy of the existing local medical facilities were raised during the interviews. Particular comments were:
- the local GPs are really poor and there is no care for people with disabilities.
 - does fresh food shopping and uses medical services in Campbelltown.
 - goes to fresh food shops, cafes and medical services in Campbelltown.

These comments suggest that the issue here may well be localised to Airds Bradbury; particularly when considered against wider survey statistics which indicate that only 9.3% of residents of the wider Campbelltown local government area have difficulty in accessing health care when needed compared with a NSW average of 17.9%.³⁵ Here the Study officers also noted that the local doctor's surgery did not appear to be open during any of their visits to Airds. It is likely that market demand will lead to the establishment of a better medical service based within Airds Bradbury in the longer term as the population increases with new residents. However, this would be worth monitoring, with the possibility of allocating dedicated space within the public-owned component of the neighbourhood centre redevelopment as an incentive should a market-led practice not be established. In the interim it may be worth further investigation of the actual concerns about the existing service in order to determine the need for any remedial action.

(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.

³⁵ South Western Sydney Local Health District: *Social Housing Transition and Health and Chronic Disease Risk Factors. Health Impact Assessment Population Profile.* (May 2013).

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 4.6.

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 of the three domains were also identified by the participants. They are shown as circled in Table 4.6.

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).

All of the matters listed in Column 3 (matters which participants say they require but do not currently have) relate to the built environment. Similarly, there are very few built environment items listed in Column 2 as things which are currently assisting participants to keep healthy. Both sets of entries suggest that an improvement in the built environment features in this regard 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).

Most matters raised have already been covered elsewhere in this Report. The following additional comments are made:

- (i) The comment about an affordable gym points to the need to ensure not only the physical provision of facilities but also that the management of those facilities meets the needs of residents. As raised here, cost will be important in this low income area. Other management issues may include such things as opening hours, childcare and ease of access for those with low mobility.
- (ii) The issue of a 'more convenient' swimming facility relates to access to the swimming pool in the adjacent suburb of Bradbury for those without access to a private vehicle, given access by public transport requires either an up-hill walk to the bus stop for the return trip to Airds, or the use of two bus routes with a change of bus in Campbelltown. Resolution of this issue may encourage greater use of the swimming pool and associated exercise classes by those without access to a car.
- (iii) The matter relating to 'transport' generally is being addressed in the Renewal Project via a proposed re-routing of the existing bus service to take advantage of the proposed new road layout to ensure residents are closer to bus stops. However, the efficacy of this should be checked in relation to the existing one-way loop arrangement of this bus service, as a particular limitation mentioned by participants.

- (iv) The entries in relation to not overcrowding housing and the retention of bushland areas are noted only here. They relate to the extent of change in land use being proposed in the Master Plan as a way of addressing the underlying issues which have led to the Renewal Project in the first place. The development of the Master Plan has included a substantial participation exercise with residents and it is this process that should be used to resolve any outstanding issues and concerns.
- (v) Two entries in Column 2 about things which are helping the participant to keep healthy identify the giving up of some activities and is perhaps contrary to expectation. However in this case these entries would appear to reflect the situation that people are getting older and are tailoring their activities to their stage in the life-cycle. As noted in section 4.1 (relating to physical activity) a feature of the Study participants is that there is still a recognition of the need to maintain appropriate levels of physical activity, and that different people are making different decisions about how best to achieve this.

Finally, it is also relevant to note here the experiences of one participant, as described during the interview, and who has had a different experience to most of the other participants who have generally lived in Airds Bradbury for quite some time. When asked in the interview to compare their current health to a previous time they generally indicated that it had lessened, by and large because they themselves had aged. One implication of this is that these participants now tend to require a more supportive built environment. By contrast this particular participant, a single older male, had only recently moved to Airds Bradbury where he now lived in supported aged accommodation. Previously he had lived alone in a more remote location in the region where there were no immediate services or facilities. He indicated that his diet had now improved, that he had a greater number of acquaintances, and that fellow residents in his accommodation complex tended to look out for each other. Overall, he indicated that his health had actually improved since moving to Airds Bradbury.

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. For example:

- the interest in knitting and sewing and reading could be complemented by knitting groups and book clubs, 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 local doctor (also discussed above) could encourage greater visitation and more regular check-ups.
- reduced travel times from closer employment and other facilities may mean more available time for health-supportive behaviours.
- a community workspace or the like could assist people to undertake a hobby, with the co-benefit of increased social interaction and also physical activity if active transport modes are used to get there.

Table 4.6: Focus Group responses: Airds Bradbury.

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 (5 entries).	A good diet.	A walking track (2 entries).	Walking for exercise.
Walk at least ½ hour a day.	Drink & eat well.	Flat walking track.	Longer walks.
Walk every day.	Energy (2 entries).	Walking track through Smiths Creek reserve.	Walk more.
Exercise bike.	Working around my garden.	Safe level paths for walking.	Exercise more (4 entries).
Exercise (2 entries).	Getting tired.	A nice park to walk through.	Swimming more (4 entries).
Stay active.	My wife.	Level walking paths, no trip hazards.	Gardening.
Watch what I eat.	Myself.	Walking. Enjoyable walking paths.	Jogging.
Moderate intake of food.	Time (2 entries).	Exercise [stations] on walking track [2 entries].	Bike riding (2 entries).
Eat fresh vegetables.	Easy access.	A gym people can afford.	Stop eating junk food altogether.
Eat healthy.	Giving up some activities.	Fitness equipment.	Eat better (3 entries).
Eat fruits and vegetables (2 entries).	Giving up bushwalking.	Not safe enough to walk around this area.	Lose weight.
Eat fresh fruits and vegetables.	Walking the dog.	Places to sit.	Keep in touch (phone) more often.
Gardening.	Easy access to swimming pools (i.e. transport).	Money.	Should mix with more people.
Read a lot.	Busy with the computer.	Practising my hobby.	Visit doctor more often.
Do crossword puzzles.	Social activities.	Not overcrowding housing.	Meditate more.
Do knitting, sewing, quilting, gardening.	Staying involved in community activities.	Being pain free, or in less pain.	Drink more water.
Read, knit, crochet.	Community activities, meetings, etc.	Transport.	
Knit and crochet.	Friends.	More convenient swimming facility.	
Volunteer work.	Making new friends.	Lack of time.	
Visit doctor regularly.	Outings with friends.	Leave bushland areas for birds and animals.	
Play golf.	Laughter, good times.		
Dance while doing housework.	Using my brain with crosswords & reading.		
Swim.	Regular check-up with doctor.		
Keep up with medications.			
Run around after grandchildren.			

(4) On-going annoyances.

As a final determinant of the extent to which the built environment of Airds Bradbury 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.

Responses by the Study participants suggest that they experience a high number of annoyances, and that there is an on-going nature to these. By and large, the annoyances cited relate directly to built environment matters, consistent with the focus of the interview and focus group interactions with the participants. As such they have been covered in other parts of this Report.

However two additional matters which became apparent in the focus group discussion are worth recording here given that both resulted in some lengthy comment in that discussion.

- (i) The first relates to perceived deficiencies in how community assistance programs are now run, with the result being a lack of continuity because of inappropriate evaluations of success coupled with a lack of up-front consultation with residents themselves in order to determine actual need.

Focus group discussion on the limitations of government-funded programs:

Airds appears to have a history of having had a lot of facilities here, but which then sort of get whittled away for various reasons.

Because a lot of the problems you get in organisations come in and oh yeah we're going to run this project. But the project has a limited life span, there is nothing in place for that to continue on.

[Nothing] long term, exactly that's it exactly.

Haven't got the sustainability.

That's right, they do it for so long, think that's it we've had enough. It's wrong.

The thing too with organisations and I know this having volunteered with various organisations. That if they get funding, their method of evaluating what they've done doesn't really take into account the people. They see it in terms of you have this number of people attend, but they don't see the benefit on people and then the chain reaction into their kids and family members as well that it benefits – in organisations I've volunteered with it's not just the person that turns up [that benefits].

So they're only looking at the number of people who attend and not delving into it a bit deeper?

The actual benefit of that project. Funding's gotten tougher over the last few years too.

Yeah funding's more specific now, they have to be more specific.

They kind of forget people as in people and they think of them as numbers.

That's the world isn't it, you're a number now.

Then of course you get the ones with the university degrees who come in and say we know what you need.

Oh yes: 'I've done the course, I know what you need, this is what we're going to do' - and it doesn't work.

- (ii) The second annoyance comprises a series of frustrations expressed about a perceived deterioration in 'respect' amongst younger age groups (noting also here that those attending the focus group were all from the older cohorts of the study participants), with resultant

impacts in terms of vandalisation of facilities and the generation of a threatening feel to outdoor areas for other residents. The concerns expressed comprised a number of components including whether the problem was one of discipline generally or a lack of other activities, the extent to which 'parents' or 'government' was to blame, and frustrations about welfare payments.

Focus group discussion on 'the younger generation', discipline and welfare:

...the younger generation coming up are different to our generation.

What do you think the difference is?

Well respect for one thing ...

No, there's no discipline.

Respect has gone out the door, under the younger kids these days.

Because the teachers aren't allowed to have any control over them, they're not allowed.

The parents are not allowed to have any control over them.

That's right, and that was taken away....

So is anything about the way the suburb is designed. Is there anything that you think contributes to what we just talked about, which was sort of a generational issue of lack of respect and so on?

Not really, not often.

Well perhaps having facilities for them to keep them active, more amused so they're not so damn bored...

Exactly you've got the centre down there that caters for kids to do things, and it's just never open.

I blame the parents to be honest with you, I think it's the parents fault. I really do.

But so many of them are just total repetitious repeaters, it's gone from three generations now.

Has it got anything to do with the design of the suburb or is it about bigger things like employment and so on?

The parents, unemployment stuff yeah.

Campbelltown made an effort to get employment, after the bypasses and things were done, over towards Leumeah there were a whole lot of factories and things came in at one stage.

Yeah but providing jobs is only one part of the issue. You've got to have the transport to get there, if you've got kids you've got to have childcare.

I always had to pay my neighbour to mind my kids, so I could work.

You had a neighbour you could trust though, some people don't. I mean childcare, actually childcare...

You couldn't afford childcare anyway in those days - you can't even afford it now.

We've diverged a little bit haven't we?

It all comes back to the same thing though.

Because it's intertwined.

I walked down to the Mall sometimes and you walk through them, and you see the amount of mothers with little babies, and what are they feeding them: chips, at 8, 9 10 o'clock or Macca's at 10 o'clock in the morning.

In the dead of winter they've got no shoes and no blanket on them in the pram.

Yes. A lot of the parents now are dumping their kids and going to clubs and stuff too.

That's it yeah.

When that started, clubs started a lot of things went wrong here.

So the parents need something different to go to?

Yeah the parents, we blame the parents, you can blame the parents, because that's where a lot of it started. It was a lot of the - I'm not saying all of them, but a lot started that way. We know a lot of these are dumping kids and just leave them [to go to the clubs].

So is that because the parents haven't got anywhere else much choice of where else to go?

There's choices.

Yeah, but a lot of them are working people too. But I don't understand I never understood it.

Their interests are different to what yours would be or mine.

Probably the way I was brought up and that's right, I wasn't ever brought up like that. [cont. next page]

But as far as raising - the worst thing they did, and my eldest daughter's 43, she come home from kindergarten and said, mummy I have rights, and I said, yes you do. What about your responsibilities? They told them their rights, they never told them their responsibilities.

I remember our youngest one coming home and telling Beth that she couldn't hit her anymore.

Yes, I had that too.

Yeah, after generations of it, they took the power away from the teachers, they took the power away from the parents and they took the power away from the police.

That's right, the government, you can thank them for that.

That's where everything went wrong here.

They took the power from the police, the police are powerless most of the time to do anything about the vandals in this area, because they're underage. They know it, they know it, they go to the police: you can't do anything.

I just like to mention a problems or something going on could be part of the problem around the area here. That's that \$5000 given to a mother from the government.

I think we all agree on that.

I think now the breeding or giving birth is only for money not for love.

Just to mention a case, next to us..., there's a woman with her partners or husband I'm not sure. They give it - she gives birth every year, but they still have only one child. I don't know what's - within 10 years that I live next to them, they have only one child, but she is always pregnant. We see her with a newborn only for a few days and then the last one disappeared and...

Probably DoCS has taken them. But you know...

She got \$5000...

Summation - overall wellbeing.

- (i) Although there are significant levels of dissatisfaction and on-going concern about key elements of the built environment that are known to influence healthy behaviour there are, perhaps unexpectedly, also significant overall levels of satisfaction. 11 out of 20 participants (55%) regard Airds Bradbury as a 'good place to live', with a further 5 participants (25%) being neutral.
- (ii) These figures suggest a combination of resilience, comfort with what is known, and also perhaps a 'weary acceptance' of the current situation, as a result of a longevity of residence and the consequent social and activity networks that are then established. That said, only half of all participants indicated that they would be 'sad to leave' Airds Bradbury.
- (iii) It may also be that there is a feeling of expectation that things will improve in Airds Bradbury as the renewal project progresses. However there was only limited mention of this possibility by participants. Some participants expressed active concern about the resultant increases in residential density and decreases in the quantity of open space (although the actual quality of open space facilities should improve). For others it may be that the Renewal Project is just another in a long line of changes experienced in the suburb.
- (iv) That said, improvements in key built environment elements proposed in the Renewal Project are likely to address many concerns, and thus also facilitate changes in personal health-related behaviour as described by the participants themselves. However, non-physical components to those built environment elements are equally important in Airds Bradbury: continuity of service provision, on-going maintenance, affordable charges, and group activities to encourage uptake and dispel concerns about personal safety in public spaces.
- (v) Final comments by the focus group participants also suggest there is a key need to engage with the youth population, in terms of promoting their own healthy behaviours and improving the overall ambience of security and congeniality of key public spaces for others.

5. CONCLUSIONS – key needs for Airds Bradbury as a healthy built environment.

5.1 Introduction.

During the Study a number of ‘faces’ to the Airds Bradbury community became apparent. This characteristic makes it correspondingly more difficult to ‘sum up’ in a concise manner.

- First, Airds Bradbury is an established community, with many residents having lived there for some decades, raised families, and established strong social connections. There are also established schools, community and recreation facilities, and a shopping centre. In this sense the community also exhibits a resilience in the face of a number of structural failures in its underlying governance and management – and which have led to an on-going sense of instability. One is the failure of the fundamental town planning concept (the Radburn Model) on which its physical layout is based notwithstanding that it was at the time in a sense ‘visionary’ and explicitly orientated to achieving a healthy community with a full range of facilities and services. However, although initially planned to give equal emphasis to both cars and pedestrians (and generally allocating separate routes for each), in practice it has become essentially car-based and thus not conducive to active transport and incidental social interactions, and with large amounts of open space that are prohibitively expensive to maintain at any reasonable level of quality. Another failure has been the concentration, through the public housing tenancy process, of households with low incomes (and which then do not support a viable local neighbourhood of businesses) and/or of households ‘in need’ of various support services. Further, there is a lack of continuity in the provision of these services and of social facilities generally. Discussion with the established residents of Airds invariably yields comments like: ‘we used to have...’, or ‘there used to be ... but it was removed ...’ due to lack of maintenance or vandalism or the reallocation of funding.
- Second, Airds Bradbury is also a community in transition. This transition is based on another model, already tested in similar estates in the locality, in which ‘community renewal’ and ‘physical renewal’ programs are combined to address the earlier deficiencies and failures. This Renewal Project overlaps with the existing community through its consultation processes, through physical changes to the layout of the suburb, and through the establishment and re-establishment of various community services. Some earlier components such as the ‘de-Radburnisation’ of dwellings (re-orientation to the street, and incorporation of rear open spaces into private allotments), and the sale of some dwellings into private ownership have already taken place. A number of community programs to establish new facilities and services are now also ongoing. At the time of this Report the construction of new road layouts and the subdivision and sale of land had just commenced. This transition presents both positives and negatives.

On the positive side it will yield improvements, some of which have already been established, in both the physical and community infrastructure that will address specific current deficiencies and as such provide something for existing residents to ‘look forward to’. Further,

it would also appear that the proposed changes and the associated consultative processes have in themselves acted as a catalyst for community and personal engagement.

On the negative side the (temporary) reduction in the population through re-location and subsequent demolition of dwellings as part of the change in tenure mix has reduced patronage in the local shopping centre with the resultant closure of businesses and reduction in amenity, which was already low. Further, there is to be a change to familiar physical environments, in particular to the existing 'openness' of the suburb as the layout of roads and open space areas undergo substantial change and some open spaces are converted to houses. Concerns about impact on native species have also been raised. There is also likely to be a certain amount of annoyance from construction activity as that stage progresses, though this was not cited by the Study participants themselves.

- Finally, Airds Bradbury is a future community not yet established, in a sense a vision and a hope that is encapsulated in the new name developed as part of its marketing program: 'Newbrook'. This future is bold and comprehensive, based on the new model described above. It holds the prospect of better long-term and sustained facilities and infrastructure targeted to address current limitations. There will be a substantial new population. In this sense (a new physical layout and a new population) the 'future' Airds Bradbury will be similar to the other three Study Areas in this Study, and have similar needs. In particular, in this outer-urban location, it will mean minimising a propensity for the motor car to become the default mode of transport with consequent detrimental impacts on the amount of physical activity and incidental social interaction likely to be undertaken by residents. This will require:
 - the establishment of sufficient and affordable local fresh food and other shops, and recreation, social and other community facilities within walking and cycling distance.
 - a viable public transport (bus) system for trips to other necessary destinations.
 - comfortable, safe and amenable walking and cycling routes within the neighbourhood itself.
 - a range of social and recreation facilities that meet the needs of different age groups.

However Airds Bradbury also presents some important differences requiring additional attention. One is a need to ensure the new population will 'fit in' with the existing established community (with this potential issue perhaps unwittingly captured in the fact that the new 'name' for the area (Newbrook) does not replace and so must somehow co-exist with the existing established and formal suburb names of Airds and Bradbury). Another is that a key component of the Renewal Project (and with neighbourhood renewal and healthy built environments in general) – the establishment of a viable and amenable local neighbourhood centre – will require the active participation of the private ownership of the existing Airds shopping centre. Other differences in land ownerships between the various public authority land owners have been resolved as an inherent part of the Renewal Project; however the Project appears to be silent to date on how the different (private) ownership of this key facility will be similarly dealt with.

Positioning this Report.

There have been a number of studies and appraisals of Airds Bradbury, to define the issues at hand and to identify solutions. Two studies directly related to the Renewal Project are relevant here:

- the *Integrated Social Sustainability and Health Impact Assessment Report* (2011) prepared as part of the 'due diligence' investigations undertaken for the Renewal Project.³⁶ This assessment includes an appraisal based on the physical environment of Airds Bradbury using the NSW Health *Healthy Urban Development Checklist* (2009).
- the *Airds Bradbury Community Survey* (May, 2009) conducted for Housing NSW to determine a 'base-line' of community attitudes and expectations.³⁷ The survey comprised 300 telephone interviews with Department of Housing tenants in Airds and Bradbury.

The Renewal Project itself includes both physical construction changes and works (which are identified in the Concept Plan) and community facilities and social support initiatives (which are identified in the Strategic Social Plan). The aims and objectives of the Renewal Project are essentially consistent with the establishment of a healthy built environment in Airds (as prompted by the recommendations of the *Integrated Social Sustainability and Health Impact Assessment Report* and by reference to the NSW Health *Healthy Urban Development Checklist*).

This Study does not appraise the Renewal Project or its contributory studies. Rather, it is a focussed assessment of the healthy built environment needs of the existing community and the extent to which the existing built environment assists or hinders those needs.

This focus does though also mean this Study will be useful to the ongoing implementation of the Renewal Project – which will impact on both that existing community and the new extended community of new residents as the new housing areas develop. In this regard, this Study differs from but also complements earlier study work given its:

- more in-depth on-site audit,
- participant interview surveys, and
- focus group discussion.

To assist this larger usefulness the Study does, where considered necessary, include comment on any perceived limitations in the Renewal Project Concept Plan and any matters it concludes need to be given particular emphasis.

5.2 Airds Bradbury as a healthy built environment?

Assessment of the overall environment of Airds Bradbury from the perspective of whether it is likely to be conducive to the long-term health of its residents yields mixed results.

³⁶ *Integrated Social Sustainability and Health Impact Assessment Report*. Heather Nesbitt Planning and Community Dimensions Pty Ltd. March 2011. This Report comprises Stage 1 of the wider *Integrated Social Sustainability and Health Impact Assessment and Plan for Airds Bradbury*. Stage 2 is the Plan itself (the Strategic Social Plan).

³⁷ *Airds/Bradbury Community Survey: Main Qualitative Report*. Sweeney Research. May 2009 (Ref. No. 18066).

On the one hand there is a high degree of awareness amongst participants of the importance of various behaviours to their health. For example:

- all participants cite being able to walk around the local area as either 'important' or 'very important'.
- all participants cite being able to catch public transport as either 'important' or 'very important'.
- 15 out of 20 participants (75%) cite having access to a gym or exercise equipment as either 'important' or 'very important'.
- nine out of 10 participants (90%) cite being able to meet with friends and neighbours as either 'important' or 'very important'.

When the focus group participants were asked to nominate the things that were keeping them healthy, exercise, food and socialisation-related matters were frequent entries, and various group activities in the locality involve food, such as group cooking classes or community gardening.

However, there are also substantial features that hinder additional healthy behaviours and/or make the achievement of existing healthy behaviours more of a chore than something that happens easily and without undue conscious effort. On the one hand, and regardless of any other factors, Airds Bradbury is similar to the type of outer-urban, lower-density and car-orientated dormitory suburb that results in lifestyles that are familiar and comfortable but which have also led to the current concern about an epidemic of chronic 'lifestyle' diseases. Even though Airds Bradbury was designed to be pedestrian friendly, with central open spaces linking to the schools and neighbourhood shops, and with underpasses to facilitate crossing of major roads, car use is high for many participants with nine out of 20 participants (45%) using the car for 90% or more of their trips. And although the number of participants who do engage in physical activity is quite high only 12 out of 20 (60%) achieve minimum recommended levels of activity.

In addition:

- a large proportion of participants were aged and/or had reduced mobility due to disability. Their experiences suggest a need for a higher standard of quality of the built environment than currently exists, eg. well-graded and well-maintained pathways, with resting places and an overall ambience of personal security. Here there is a disjuncture between this need for a higher standard of 'service' and the actual level of service provided or available given:
 - the low socio-economic levels of the community, and
 - the large areas of open space involved and distances between facilities combined with a low population density.
- the neighbourhood centre, although containing the necessary elements conducive to being a community focus (various community facilities including a youth centre, shops, hotel and recreation area with a water feature) the actual management of the area means that it is essentially uninviting. Buildings do not have 'active frontages', the opening hours of the youth centre appear to be limited and/or variable, there is a poor range of shops, and often

substantial litter around the water feature area. As a result the nearby Campbelltown Mall has become a default centre for those with the ability to access it.

- the local bus service, although reasonable for a low-density area such as this, has limitations in terms of its overall operating hours and routing.
- low incomes and/or mobility means that for many participants access to resources and facilities that assist healthy living requires assistance through various social service programs (eg. the delivery of healthy food boxes, access to affordable exercise equipment, the establishment of meeting groups and the provision of necessary physical space for these). However, the continuity of such programs has been variable.

Overall, participants seem to be keen to avail themselves of the various social and recreational facilities that are available but these facilities are often in poor repair, are not currently available, not easily accessible, or are only intermittent meaning that residents are never quite sure whether it is operating or not. Airs Bradbury ranks lower than the NSW average on all scores relating to interactions between neighbours, feelings of security, and levels of trust. The latter two criteria may also explain why although participants indicate relatively low levels of interaction with neighbours, all participants (100%) also advise that they are satisfied with that level of interaction.

When asked whether they would be sad to leave their neighbourhood, only 10 out of 20 participants (50%) said they would compared to the NSW average of 73.4%. This figure is consistent with participant responses when also asked about their overall level of satisfaction with living in Airs Bradbury. Only 11 out of 20 participants (55%) are satisfied that overall Airs Bradbury is 'a good place to live'. However, of the remainder, five out of 20 participants (25%) were equivocal in their response (ie. neither satisfied nor dissatisfied) suggesting that the opportunity to increase total levels of satisfaction to a score of 16 participants (80%) may not be particularly difficult. As illustrated in Table 4.5, the matters which need to be addressed in this regard can be readily identified. High levels of dissatisfaction were advised in respect to:

- the ease and pleasantness of walking.
- personal safety and security.
- access to fresh food shops.
- the quality of parks.

In addition, when the focus group participants were asked to nominate the things they needed to keep healthy but do not currently have access to, matters relating to the ability to exercise (including access to facilities, and safety in public areas) were most commonly cited. (Table 4.6).

It is a positive indication for the future of Airs Bradbury as a healthy built environment that most of these matters are being addressed in the current Renewal Project. Various new community facilities have already been established (eg. the AB Central community centre and the Men's Shed) and participants generally refer to these facilities in the positive with reasonable levels of satisfaction. The community food box program seeks to address issues relating to nutrition and access to healthy food as identified in the earlier social assessment informing the Renewal Project. Upgrades to the street network including pedestrian paths and routing of the bus service, and to open space facilities

are proposed for future delivery. The neighbourhood centre is identified for renewal as a neighbourhood 'heart'.

That said, the program for physical infrastructure delivery is scheduled over a 10 year period, meaning that some of these improvements will not be able to be accessed for some time and that the current sense of upheaval in the community will also remain (though perhaps with a sense of progressive improvement as these changes come on-stream). Further, the Study also identifies a number of matters that should either be given greater attention in the Renewal Project or monitored to ensure they are implemented to achieve the objectives as intended (see Section 5.3 *Key needs for Airds Bradbury as a healthy built environment*).

Co-benefits.

As evidenced in the Study findings 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
- personal individual health-related 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 inputs, important benefits ('co-benefits') in another.

The comments in this Section and the subsequent Recommendations are drafted, in part, around this understanding.

5.3 Key needs for Airds Bradbury as a healthy built environment.

(1) An improved walking environment.

A high proportion of participants walk for transport and/or for recreation. This is consistent with the high degree of awareness that participants have of walking as good for their health, and also indicative of two other characteristics of the population – that some have limited access to private vehicles and/or to other forms of physical activity for exercise because of low income, or age or disability.

However the viability of the walking environment is highly variable and requires upgrade to allow and encourage higher levels of walking. Further, the standard of walkability needs to be high in order to cater for the particular needs of the relatively high proportion of the population that have limited mobility. This includes the need for well maintained and well-graded surfaces (not necessarily level), resting places in the form of seating, shade, and circuit trails with points of interest.

Concerns about personal security within public spaces also limits uptake of walking. This could be addressed in the short-term via the establishment of walking groups, with the added benefit of increased social interactions.

(2) More consistent and visible delivery of services and activities.

There is a reasonable level of satisfaction with existing formal meeting places and activity centres, of which there are a number. However there can also be a lack of knowledge about formal activity programs and opportunities, and the buildings in which they are located tend to be scattered, with low visibility from the street and with high fencing or other security installations. Combined these features tends to give the impression that one has to be 'in the know'. Here, the Study project officers also tended to find it difficult to ascertain the full range of activities and service available. These facilities need to be:

- (i) well-maintained, consistently provided and open at times when most needed.
- (ii) promoted more visibly and consistently.
- (iii) possibly grouped to assist that visibility, and to generate potential synergies in terms of social interactions.

(3) Making destinations more attractive.

The encouragement of walking (for active transport and for recreation) and of formal and incidental social interactions requires attractive local destinations. Destinations already exist in the form of the local schools, parks and recreation areas, community buildings and the local shops. However there are substantial deficiencies in the amenity of two of these destinations, the local parks and the neighbourhood shops, that need to be rectified.

The Renewal Project includes both a substantial re-structuring of the layout, location and amount of public open space, and improvements in the recreation facilities within the resultant new open space areas. This includes facilities for both active and passive recreation. These changes should address the concerns about these areas expressed in this Study and are consistent with establishing a healthy built environment. Except for the comments in section (7) below, no further comment is made here about these proposals.

The Renewal Project also identifies the neighbourhood centre for substantial change. This is further discussed below.

(4) A regenerated neighbourhood centre is key.

A key element in the development of Airds Bradbury as a healthy built environment is the regeneration of the local neighbourhood centre. The need for improvements to the shopping mall within this centre is raised in many comments by participants, and particularly in the focus group discussion. A viable and attractive local centre can impact positively on each of the three primary healthy built environment domains. As an attractive destination it will encourage more walking and cycling as a way to get there, and increased informal social interactions – for existing residents, for the new incoming residents in terms of establishing themselves, and between these two groups. It will also provide an opportunity to increase local sources of healthy foods. The Concept Plan recognises this need, with reference to a new comprehensive community centre, additional retail and commercial uses, a 'town square' space adjacent to The Pond, and the re-location of existing playing fields from the centre of the suburb. The new east-west link road will run through the centre, thus potentially

increasing patronage. Further, Council's Residential Strategy identifies part of the area for mixed use development at an increased (medium) density.

However there is also an important deficiency. The Concept Plan contains little further indication on how this will be achieved. In particular, although reference is made to the existing privately-owned shopping mall and service station (and to the tavern), there appears to be little integration of these uses and land areas into the proposals that are suggested. The land ownership status of the tavern is shown differently on different plans (sometimes as privately-owned, sometimes as owned by Housing NSW). There is a risk that the full potential to achieve a viable regenerated neighbourhood centre will be lost if the fragmented land ownerships and tenures are reflected in fragmented planning and implementation of new buildings and uses. For example, the proposed town square space may be better located adjacent to retail and commercial activities rather than the community services and recreation activities as currently envisaged; and the scale of new retail development on the publicly-owned land may then jeopardise the viability of the, otherwise necessary, redevelopment of the existing shopping mall. It requires an intensive design exercise in itself in collaboration with all land owners. Considerations should include:

- (i) inclusion of possibly subsidised commercial space for:
 - the establishment of affordable healthy food shops, at least until the market is available to support private operators.
 - a re-located WorkVentures, to make this facility more visible with potential greater uptake of its services.
 - a community food cooperative, operating the 'food box' program and allowing for sale and distribution of produce from community gardens in a more accessible and visible way.
 - an affordable gymnasium.
- (ii) inclusion of additional residential development (which could include aged persons dwellings), including 'shop-top' housing to assist informal surveillance.
- (iii) testing of the design against Crime Prevention Through Environmental Design (CPTED) principles.
- (iv) including 'active' building frontages and the organisation of car parking on the adjacent streets (the proposed Campbellfield Avenue and Wheatley Drive) to increase 'friction' here as a way of slowing traffic speeds along these new, straighter through roads.
- (v) expansion of the conceptual boundaries of the centre to include:
 - good walking linkages to the adjacent high school and nearby primary school.
 - good walking linkages to the Tharawal Aboriginal Corporation centre.
 - possible medium density housing (which could include aged persons dwellings) to the east of the new intersection with the proposed Campbellfield Avenue and Wheatley Drive to reinforce a 'town centre' feel to the precinct.
- (vi) close collaboration between the design of the centre and the design of the proposed playing field area in order to maximise synergies from the co-location of these uses.
- (vii) establishment of management policies that disallow leasing of any new public retail and commercial spaces for either the sale or advertising of non-healthy foods.

(5) Residents are likely to cycle more.

There is an opportunity to capitalise on a potential interest in increased use of bicycles. It is noted that the Concept Plan intends to do this through a combination of marked bicycle lanes on main roads and separate bicycle ways. This will be particularly important given a potential undesirable outcome of the realignment of major streets to be straighter and more connective is that vehicle traffic speeds will increase. Further, consideration should be given to configuring secondary streets as 'complete streets', inherently catering for both motor vehicle and cycle use. This will be important given the relative narrow width of proposed allotments will mean that the 'density' of driveway crossings, and thus reversing vehicles, will increase, to the potential detriment of bicycle safety.

(6) Making the bus service more effective.

Concerns have been raised about the efficacy of the current one-way routing of the existing bus service to Campbelltown, and the adequacy of service for residents wishing to use the swimming centre in Bradbury.

The revised street layout in the Concept Plan is designed in part to address the efficacy of the existing routing within Airds. The Concept Plan also includes the provision of bus stops, but only three bus shelters. All bus stops should be provided with seats, at a minimum. A program to provide all stops with shelters should be established.

The possibility of a deviation of the existing bus route to allow for a bus stop closer to the Bradbury swimming centre (and to avoid an up-hill return walk) should be investigated.

(7) Provision of usable and affordable active exercise equipment.

Participants have suggested the need for public exercise equipment within open space areas, and for a gym that is affordable.

The Concept Plan proposes exercise equipment within some of the upgraded park areas. These should be included in all parks.

Use of the existing gym equipment within the AB Central community centre should be re-established. In the longer term it may be that an affordable commercial gym could be established within subsidised commercial space within the new neighbourhood centre.

(8) Ensure continuity of the Men's Shed, and expand food garden options.

The Men's Shed appears to be well-used and a successful activity and social meeting point. The associated food gardens also achieve nutrition objectives. Although instigated under the community renewal component of the Renewal Project there is no corresponding identification of the premises (which is located on land owned by the Department of Juvenile Justice) within the Concept Plan. An original plan showed this area as new future housing. This has now been re-configured, however without any explicit identification of this facility. Identification could also include expanded garden areas, perhaps to also provide for the possibility of 'allotments' to provide a diversity of choice for residents wanting to be involved in local food growing.

(9) Allowing residents to feel more secure when out and about.

Concerns over personal safety within public areas is likely to have a continuing impact on the use of those spaces for physical activity (both active transport and recreational activity) and informal social interaction. Addressing this concern can therefore have a corresponding positive impact on the levels of physical activity and social interaction, as well as general personal wellbeing by reducing stress about personal security. Participant comment suggests particular issues arise from younger age-groups, and also that the recent re-location of some residents appears to have reduced levels of crime or perceived threat.

The Concept Plan addresses this issue through a change in the demographics of the resident community, the removal of broad acre open space with low informal surveillance, the establishment of a new community centre which includes an orientation to families and children, retention of the youth centre, and the provision of more focussed recreation facilities in parks.

However some additional and more immediate actions should also be undertaken:

- (i) a clarification of whether the opening hours and available activities within the existing youth centre meet needs.
- (ii) a Crime Prevention Through Environmental Design (CPTED) audit of the Concept Plan overall, in particular looking at how best to reverse/remove the current characteristic within neighbourhood facilities generally of security fencing and screening thus presenting a feeling of exclusion rather than inclusion.
- (iii) the establishment of more group activities for the population at large to generate a feeling of safety in numbers, but also with the co-benefit of increased positive social interactions, eg. walking groups, exercise groups.

(10) Community food boxes as a necessary source of nutrition.

The community food box program appears necessary in terms of ensuring good nutrition is maintained for those who have limited access to healthy food shops, a lack of skills, or lack of income. Basing this program in a visible location in the neighbourhood centre may assist take-up by others if required and encourage additional volunteers, with the co-benefit of increased social interactions.

(11) Promoting social interaction in the aged housing clusters.

The existing aged persons housing units are being re-built, and new additional dwellings are proposed. The common areas of these housing 'clusters' should include facilities (space, seating, tables, shade, possible garden areas) that facilitate and encourage social interaction amongst the immediate residents. The location of some of the new additional dwellings within the revised neighbourhood centre can also give easy access to facilities, and provide informal surveillance of the neighbourhood centre itself.

(12) Social interaction and the future 'Newbrook' residents.

Participants indicated they enjoyed good levels of socialisation, which appears to be the result of their long-term residency and engagement with the locality. However, this does not

necessarily translate into high levels of interaction with immediate neighbours, and there appears to be some reticence in this regard. To overcome any possible similar reticence by the new in-coming residents, and to 'fast track' overall levels of socialisation assistance via a Welcome program may be required, particularly given the proposed regeneration of the neighbourhood centre as a community focus may be some time away; that existing community facilities have an alienating appearance, potentially discouraging use; and to avoid the possibility of the development of an 'us and them' attitude between existing and new residents.

6. RECOMMENDATIONS.

- (1) Additional physical activity needs to be facilitated to address the concern that only 60% of participants currently achieve minimum recommended number of hours of physical activity. While there appears to be reasonable levels of intention by participants in this regard, this is hindered by a lack of suitable infrastructure. Attention needs to be given to:
- (i) an improved walking environment, which gives particular attention to the needs for those who are less mobile. This includes well maintained and well-graded surfaces (not necessarily level), resting places in the form of seating, shade, and circuit trails with points of interest; and the establishment of walking groups to address concerns about personal security within public spaces (and which will give the added benefit of increased social interactions).
 - (ii) the encouragement of cycling, by marking preferred cycling space on the main roads and configuration of secondary streets as ‘complete streets’, inherently catering for both motor vehicle and cycle use and possibly with a reduced speed limit.
 - (iii) a more effective bus service, including a review of existing and proposed routings to ensure efficient access to both local facilities and other facilities in the locality such as the Bradbury swimming centre, and the installation of seating, shelters and timetable information at bus stops.
 - (iv) provision of usable and affordable active exercise equipment, including public exercise equipment within open space areas, and affordable access to gymnasium equipment. Use of the existing gym equipment within the AB Central community centre should be re-established. In the longer term it may be that an affordable commercial gym could be established within subsidised commercial space within the new neighbourhood centre.
 - (v) the continuity of provision and affordability of group exercise and other physical activity classes, including the existing aquarobics classes at the Bradbury swimming centre.
 - (vi) provision of attractive local destinations able to be accessed by active transport modes (walking and cycling). Ample destinations already exist in the form of the local schools, parks and recreation areas, community buildings and the local shops. However there are substantial deficiencies in the amenity of local parks and the neighbourhood shops that need to be rectified.
- (2) A regenerated neighbourhood centre is a key element in the development of Airds Bradbury as a healthy built environment and will have positive impact on each of the three primary healthy built environment domains. Attention needs to be given to:
- (i) how the intentions of the Concept Plan for a new ‘town centre’ are to be achieved given the different land tenures/ownerships in the existing neighbourhood centre. There is a risk the full potential will be lost if the fragmented land ownerships and tenures are reflected in fragmented planning and implementation of new buildings and uses, in particular the location of the proposed town square space and the impact on the commercial viability and hence redevelopment potential of the existing shopping mall of new retail development on the publicly-owned land.

- (ii) the inclusion of possibly subsidised commercial space for:
 - affordable healthy food shops, at least until the market is available to support private operators.
 - a re-located WorkVentures, to make this facility more visible with potential greater uptake of its services.
 - a community food cooperative, operating the 'food box' program and allowing for sale and distribution of produce from community gardens in a more accessible and visible way.
 - an affordable gymnasium.
 - (iii) the inclusion of additional residential development (which could include aged persons dwellings and 'shop-top' housing) to assist informal surveillance and give 'after-hours' life to the centre.
 - (iv) testing of the design against Crime Prevention Through Environmental Design (CPTED) principles.
 - (v) including 'active' building frontages and the organisation of car parking on new proposed adjacent street system to increase 'friction' as a way of slowing traffic speeds along these new, straighter through roads.
 - (vi) expansion of the conceptual design boundaries of the centre to include:
 - good walking linkages to the adjacent high school and nearby primary school.
 - good walking linkages to the Tharawal Aboriginal Corporation centre.
 - possible medium density housing (which could include aged persons dwellings) to the east of the new intersection with the proposed Campbellfield Avenue and Wheatley Drive to reinforce a 'town centre' feel to the precinct.
 - (vii) close collaboration between the design of the centre and the design of the proposed playing field area in order to maximise synergies from the co-location of these uses.
 - (viii) establishment of management policies that disallow leasing of any new public retail and commercial spaces for either the sale or advertising of non-healthy foods.
- (3) More consistent and visible delivery of services and activities. Although there are reasonable levels of satisfaction with existing formal meeting places and activity centres, there are also gaps in the level of local knowledge about currently available formal activity programs and opportunities, and the buildings in which they are located tend to be scattered, with low visibility from the street and with high fencing or other security installations. Combined, there is the impression that one has to be 'in the know' in order to avail oneself of these facilities. Consideration should be given to:
- (i) ensuring facilities are well-maintained, consistently provided and open at times when most needed.
 - (ii) promoting existing facilities more visibly and consistently.
 - (iii) grouping facilities to assist visibility and to generate potential synergies in terms of social interactions.
- (4) Ensure continuity of the Men's Shed, and expand food garden options. Although the Men's Shed appears to be well-used and comprises a successful social meeting point and prompt for physical activity there is no identification of the premises (located on land owned by the Department of Juvenile Justice) within the Renewal Project Concept Plan. Identification could

also include expanded garden areas, perhaps to also provide for the possibility of 'allotments' to provide a diversity of choice for residents wanting to be involved in local food growing.

- (5) Improvements in feelings of security when out and about in public spaces will have positive impacts on levels of physical activity and social interaction, as well as general personal wellbeing by reducing stress about personal safety. The Study findings suggest particular issues arise from younger age-groups, and also that the recent re-location of some residents appears to have reduced levels of crime and perceived threat. Consideration should be given to:
- (i) a clarification of whether the opening hours and available activities within the existing youth centre meet needs.
 - (ii) a Crime Prevention Through Environmental Design (CPTED) audit of the Concept Plan overall, in particular looking at how best to reverse/remove the current characteristic within neighbourhood facilities generally of security fencing and screening thus presenting a feeling of exclusion rather than inclusion.
 - (iii) the establishment of more group activities for the population at large to generate a feeling of safety in numbers, but also with the co-benefit of increased positive social interactions, eg. walking groups, exercise groups.
- (6) Community food boxes as a necessary source of nutrition, particularly for those with limited access to healthy food shops, a lack of food skills, or lack of income. Any proposed changes to the program should be first assessed against these needs. Basing the program in a visible location in the neighbourhood centre may assist take-up by others if required and encourage additional volunteers, with the co-benefit of increased social interactions.
- (7) Promoting social interaction in the new aged housing clusters, by including seating, tables, shade and possible garden areas in the common areas to facilitate and encourage social interaction amongst immediate residents. The location of some of the new additional dwellings within the revised neighbourhood centre can also give easy access to facilities, and provide informal surveillance of the neighbourhood centre itself.
- (8) A 'Welcome' program to assist social interaction with and between future 'Newbrook' residents is likely to be required in order to overcome an existing reticence for residents to engage with immediate neighbours; the likelihood that the proposed regeneration of the neighbourhood centre as a community focus may be some time away; the often alienating appearance of existing community facilities, potentially discouraging use; and the possibility of the development of an 'us and them' attitude between existing and new residents.

ATTACHMENTS.

- 1. Airds Bradbury 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.**



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 Airs Bradbury.

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, Airs 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 Airs Bradbury (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 can be undertaken by telephone or in person.

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.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:

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b. Date (including the day of the week) and time of audit:

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c. Description of weather conditions:

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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):

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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
<i>Residential:</i>	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
<i>Mixed use:</i>	Commercial/Residential - Note the specific uses on the map	MU
<i>Recreational:</i>	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
<i>Institutional/ services:</i>	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
<i>Commercial:</i>	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
<i>Community facilities:</i>	Community centre	Com1
	Library	Com2
	Town square	Com3
	Other	Describe on map
<i>Community gardens/edible plantings:</i>	Note the location of community, verge or school gardens	Com.G
<i>Derelict buildings/spaces:</i>	Note the location of derelict buildings/spaces (if possible note last use)	D
<i>Vacant buildings/spaces or construction:</i>	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
<i>Cycling:</i>	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
<i>Traffic calming:</i>	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
<i>Public Transport:</i>	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
<i>Safety/Surveillance:</i>	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?

Attachment 4: INTERVIEW QUESTIONS.



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 Neighbourhood¹

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low levels of noise pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to walk around your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to cycle around your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to catch public transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being close to parks and open/green spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to go to gyms/exercise equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to go to a farmers' market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to spend time with a pet in your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to meet with friends and neighbours in your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to public transport in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to car parking in your street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your travel time to work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your travel time to your place of study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your travel time to your child- ren/s school or place of study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of vehicle traffic in the local streets near your home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise from traffic near your home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How easy and pleasant it is to bicycle in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety from threat of crime in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal safety in your neighbourhood streets after dark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to entertainment in your neighbourhood (e.g. movies, clubs...)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to fresh food shops in your neighbourhood (e.g. green grocer, supermarket, butcher)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to cafes and restaurants in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunities to meet people in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of friends you have in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of people you know in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child care in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Primary schools in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High schools in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of parks in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Centres in your neighbourhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to medical services in your neighbourhood (e.g. GPs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your neighbourhood as a good place to live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your neighbourhood as a good place to raise children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any other issues that you are satisfied or not satisfied with in your neighbourhood?

Being Active²

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, Knuiaman 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 <u>WALKS</u> to in a usual week
To or from work (or study)	<input type="checkbox"/>
To or from public transport	<input type="checkbox"/>
To or from shops (for small purchases – e.g. a bottle of milk)	<input type="checkbox"/>
To or from shops (for large purchases – e.g. a full grocery shop)	<input type="checkbox"/>
To or from school	<input type="checkbox"/>
To or from café or restaurant	<input type="checkbox"/>
To or from friend's house	<input type="checkbox"/>
To recreation (e.g. gym, organised sport etc.)	<input type="checkbox"/>
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

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 <u>CYCLES</u> to in a usual week
To or from work (or study)	<input type="checkbox"/>
To or from public transport	<input type="checkbox"/>
To or from shops (for small purchases – e.g. a bottle of milk)	<input type="checkbox"/>
To or from shops (for large purchases – e.g. a full grocery shop)	<input type="checkbox"/>
To or from school	<input type="checkbox"/>
To or from café or restaurant	<input type="checkbox"/>
To or from friend's house	<input type="checkbox"/>
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 <u>WALKS</u> in a usual week
Park	<input type="checkbox"/>
Sports field	<input type="checkbox"/>
Bushlands	<input type="checkbox"/>
Around the neighbourhood using the streets/footpaths (no specific destination)	<input type="checkbox"/>
Walking trails/bicycle paths NOT in a park	<input type="checkbox"/>
To or from café or restaurant	<input type="checkbox"/>
To or from a shop	<input type="checkbox"/>
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 <u>CYCLES</u> in a usual week
Park	<input type="checkbox"/>
Sports field	<input type="checkbox"/>
Bushlands	<input type="checkbox"/>
Around the neighbourhood using the streets/footpaths (no specific destination)	<input type="checkbox"/>
Walking trails/bicycle paths NOT in a park	<input type="checkbox"/>
To or from café or restaurant	<input type="checkbox"/>
To or from a shop	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	
Garden	<input type="checkbox"/>	<input type="checkbox"/>	
Beach	<input type="checkbox"/>	<input type="checkbox"/>	
Park	<input type="checkbox"/>	<input type="checkbox"/>	
Sports field	<input type="checkbox"/>	<input type="checkbox"/>	
Bushlands	<input type="checkbox"/>	<input type="checkbox"/>	
Around another neighbourhood using the streets/footpaths (no specific destination)	<input type="checkbox"/>	<input type="checkbox"/>	
Walking trails/bicycle paths NOT in a park or beach	<input type="checkbox"/>	<input type="checkbox"/>	
Gym	<input type="checkbox"/>	<input type="checkbox"/>	
Sports centre/recreational facility	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhere else (1): Please write where	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhere else (2): Please write where	<input type="checkbox"/>	<input type="checkbox"/>	

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 _____

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	<input type="checkbox"/>	<input type="checkbox"/>	
Park	<input type="checkbox"/>	<input type="checkbox"/>	
Sports field	<input type="checkbox"/>	<input type="checkbox"/>	
Bushlands	<input type="checkbox"/>	<input type="checkbox"/>	
Around another neighbourhood using the streets/footpaths (no specific destination)	<input type="checkbox"/>	<input type="checkbox"/>	
Walking trails/paths NOT in a park or beach	<input type="checkbox"/>	<input type="checkbox"/>	
Gym	<input type="checkbox"/>	<input type="checkbox"/>	
Sports centre/recreational facility	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhere else (1): Please write where	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhere else (2): Please write where	<input type="checkbox"/>	<input type="checkbox"/>	

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	<input type="checkbox"/>	
By public transport	<input type="checkbox"/>	
By bicycle	<input type="checkbox"/>	
By walking	<input type="checkbox"/>	
Other (please specify)	<input type="checkbox"/>	

Your Community³

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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language difficulties or barriers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't feel welcome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>
The street	<input type="checkbox"/>	<input type="checkbox"/>
Town square	<input type="checkbox"/>	<input type="checkbox"/>
Local shops	<input type="checkbox"/>	<input type="checkbox"/>
Shopping mall	<input type="checkbox"/>	<input type="checkbox"/>
Local café/ restaurant	<input type="checkbox"/>	<input type="checkbox"/>
Park	<input type="checkbox"/>	<input type="checkbox"/>
Sports field	<input type="checkbox"/>	<input type="checkbox"/>
Bushland	<input type="checkbox"/>	<input type="checkbox"/>
Community centre	<input type="checkbox"/>	<input type="checkbox"/>
School or child care	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community or special interest group activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Church or religious activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Went out to a café, restaurant or bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Took part in sport or physical activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a sporting event as a spectator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited a library, museum or art gallery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended the movies, a theatre or a concert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited a park, botanic gardens , zoo or theme park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

12

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

47. Please tell me all the places you buy fresh fruits and vegetables.

- | | | | |
|---------------------------|--------------------------|---------------------|--------------------------|
| Supermarket | <input type="checkbox"/> | Farmers' market | <input type="checkbox"/> |
| Fruit and vegetable store | <input type="checkbox"/> | Other (write where) | <input type="checkbox"/> |
-

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 | <input type="checkbox"/> | Variety of fruits and vegetables | <input type="checkbox"/> |
| Affordable | <input type="checkbox"/> | Selection of other foods available | <input type="checkbox"/> |
| Quality of fruits and vegetables | <input type="checkbox"/> | Other (please specify) | <input type="checkbox"/> |
-

50. How do you get to the place where you buy fruits and vegetables from **most often**?

- | | | | |
|------------|--------------------------|---------------------------------------|--------------------------|
| By car | <input type="checkbox"/> | By public transport | <input type="checkbox"/> |
| By bicycle | <input type="checkbox"/> | Multiple modes (e.g. cycling and bus) | <input type="checkbox"/> |
| By walking | <input type="checkbox"/> | Other (please specify) | <input type="checkbox"/> |
-

51. For the mode of travel you just mentioned, how long does the journey take you?

- | | | | |
|---------------------|--------------------------|---------------------|--------------------------|
| Less than 5 minutes | <input type="checkbox"/> | 30 – 45 minutes | <input type="checkbox"/> |
| 5 – 15 minutes | <input type="checkbox"/> | 45 minutes – 1 hour | <input type="checkbox"/> |
| 15 – 30 minutes | <input type="checkbox"/> | More than 1 hour | <input type="checkbox"/> |

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 Health⁴

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.*)