

A methodology to understand how environments support health

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This paper presents a research methodology that takes an in-depth and qualitative approach to explore the role that the built environment plays in supporting health and well-being as part of everyday living. The focus is on how the built environment facilitates physical activity, social interaction, and access to fresh and nutritious foods – all important in reducing risk factors for chronic illness. The paper provides a detailed description of the research methodology currently being used in an Australian study of four diverse residential sites. The methods emphasise collecting in-depth and qualitative data. Initially, this was by way of a detailed instrument devised for the project – the healthy neighbourhood audit – which subsequently informed question schedules for interviews and focus groups. The paper concludes by illustrating how data collected using the audit enhances an in-depth understanding of the ways in which the built environment can support healthy activities in everyday life.

1. Introduction

Together with other nations across the globe, Australia faces a budgetary crisis in relation to escalating rates of obesity, diabetes, depression and other lifestyle-related diseases (AIHW, 2014). At the same time, there is a growing body of research evidence that shows that the built environment significantly influences the ability of people to undertake healthy behaviours in their everyday lives. This is especially associated with being physically active, interacting socially with others and accessing healthy foods (Barton and Tsourou, 2000; Corburn, 2009; Dannenberg *et al.*, 2011; Frumkin *et al.*, 2004; Kent and Thompson, 2014; Mead *et al.*, 2006). The absence of these behaviours is closely linked to the major risk factors for contemporary chronic disease – sedentary behaviour, obesity and social isolation. The availability of easy-to-access and affordable public transportation systems, the design of street networks, and provision of walking and cycling infrastructure, together with the composition of land uses and the location of destinations and services, including green open space, are some of the environmental factors that can affect the extent to which people are willing and able to embrace healthy behaviours as part of their daily routine (Dannenberg *et al.*, 2011; Kent *et al.*, 2012, 2011).

As urban planners, the authors have played a part in developing a better and a more nuanced understanding of the role of the built environment in supporting health. Of particular interest are design features, social interventions and locational qualities. The authors are engaged in an ongoing multi-disciplinary study of urban environments in and to the south of Sydney in the state of New South Wales (NSW), Australia. Entitled ‘Planning and Building Healthy Communities’, this research is funded by the Australian Research Council in partnership with built environment and health partners from government, semi-private and not-for-profit sectors.

In this paper, an overview of the study methodology is provided, focusing on the authors’ detailed environmental audit instrument. The authors explain the audit’s theoretical foundations in urban planning, moving on to discussing how it has been applied across the case study sites. This involves capturing residential, commercial, recreational and institutional land use information, food availability and transport options with meticulous environmental observations, geographic information system (GIS) mapping of key facilities and infrastructure, as well as the recording of qualitative data about human use of

space. Using selected examples, the paper then illustrates how data collected by way of the audit and augmented by resident interviews enhance an in-depth understanding of the ways in which the built environment supports healthy activities. The authors focus on being active in public spaces but include some preliminary analysis of results associated with access to healthy food and connecting communities. This study provides a methodology for researchers, policymakers, urban planners and public health practitioners to undertake in-depth investigations, thereby enabling a better understanding of the complex relationship between qualities of the built environment and human responses that facilitate engagement in healthy behaviours.

2. Project overview

The aim of the research is to understand how diverse residential neighbourhoods, with a range of healthy planning design features, different housing densities, varied commercial, open space and transport provision, and in different metropolitan and fringe localities, support human physical and mental health. The authors commenced the study in 2011 with their partners in built environment and health: UrbanGrowth NSW (a part government/private sector entity), South Western Sydney Local Health District (a state government health organisation) and the National Heart Foundation (Australia's leading heart health non-governmental organisation). The following research questions are guiding the study focus and approach.

- Who is attracted to the development?
- What are the motivations of residents in deciding to live in a particular development?
- What is the health status of residents over time – when they move into the development (or at the start of the study) and after they have lived there for some time?
- What features of the development make it easy/difficult for residents to be mentally healthy?
- What features of the development make it easy/difficult for residents to be physically active in their everyday lives?
- What features of the development make it easy/difficult for residents to access healthy food, public transport, community facilities and services that are linked to good health outcomes?

There are four case study sites.

- Victoria Park – located in an inner city suburb to the southeast of the Sydney central business district, this neighbourhood is currently being developed. A typical residential development is shown in Figure 1.



Figure 1. Typical residential development in Victoria Park

- Airds Bradbury – a public housing estate in Sydney's suburban southwest undergoing redevelopment. A typical residential development is in Figure 2.
- Rouse Hill – situated in Sydney's suburban northwest. A typical residential development is shown in Figure 3.
- Renwick – located in the Southern Highlands of NSW, ~100 km south of Sydney. This is the least developed of all of our sites. A typical residential development is shown in Figure 4.

The authors' built environment research partner UrbanGrowth NSW had a significant role in the planning, development



Figure 2. Typical residential development in Airds Bradbury



Figure 3. Typical residential development in Rouse Hill



Figure 4. Typical residential development in Renwick

and redevelopment of each site, including working with the National Heart Foundation to incorporate some of the principles of the ‘Healthy by Design’ guidelines (NHFA (Victorian Division), 2004) in the master plan for Renwick. The four study sites are at different points of completion in the development cycle, and have varying population characteristics, residential densities and locational attributes. These neighbourhoods were selected to investigate as they represent a continuum of interventions for human health – from comprehensive incorporation of healthy built environment principles (Renwick), through inclusion of some key design features (Rouse Hill and Airds Bradbury) to no particular conscious integration of healthy design features (Victoria Park). The sites also accommodate people with a range of socio-economic characteristics.

3. Research methodology

Despite the plethora of research in this field, ‘proving’ a direct causal link between the built environment and health has been difficult. This is related to both the type of evidence able to be collected across the built environment and health disciplines, and the way in which the vast majority of studies have been conducted. The type of evidence that one can collect has to bridge the deep philosophical divide, as well as disparate traditions of practice and research, in built environment and health/medical scholarship. In social science investigations, unlike the scientific laboratory, it is impossible to isolate variables in double-blind procedures given their real-world settings (Burke *et al.*, 2008: p. 25). Accordingly, there has been much debate on how research can best be conducted in this inter-disciplinary arena, particularly accounting for the complexity of people–place interconnections (Barton, 2007: p. 10; Dannenberg *et al.*, 2011). The complexity of the urban planning process itself is a further confounding factor.

Nevertheless, it can be argued that even if it were possible to isolate variables of interest, a simple ‘proof’ does not necessarily lead to an in-depth and comprehensive understanding of people–place relationships. Understanding the relationship between physical place and human interaction has been a longtime passion of urban planners and related professionals including urban sociologists (Whyte, 1980), geographers (Relph, 1976; Tuan, 1977) and designers/place makers (Jan Gehl, writing in Danish in the 1970s and then translated into English in 1987 (Gehl, 1987)). Detailed observations of the everyday actions of people in familiar and ordinary places are hallmarks of their work. This has enabled an appreciation of the complexities of spatial qualities and human interaction in all their diversity, complexity and messiness. Jane Jacobs (1961) observed the use of New York neighbourhoods in her groundbreaking development of principles to create people-centred cities – ones where safety, walkability, sense of belonging and vibrant street life are prioritised over and above car-dominated and socially isolating urban environments. Theories of place and place making, using detailed observations of ordinary, every-day localities, have also been linked to environmental and human health (Eyles and Williams, 2008). Jan Gehl, extending his earlier work, reinforced the importance of detailed observations of city life, enabling in-depth insights into the nature of urban spaces, how people move within and use them, and how place supports human health and well-being (Gehl, 2010; Gehl and Svarre, 2013; Gehl *et al.*, 2006).

Building on this methodological approach, together with the aim of achieving a comprehensive and in-depth understanding of how the study sites support people being healthy as part of everyday living, it was determined that the most effective

research approach was a mix of qualitative and quantitative data collection. Three methods were used to facilitate understanding of how the study sites support health promoting behaviour, focusing on the physical activity levels, social interaction and cohesion, and access to healthy food options. These topics for investigation relate to the ‘three domains’ where the built environment can be most effective in supporting healthy behaviours (Kent and Thompson, 2014).

The first and foundational method is the healthy neighbourhood audit, on which this paper focuses. While this is detailed at length in the next section of the paper, it is important at the outset to note that the audit underpins all of the study data collected. The tool allows for an assessment and exploration of the context and design of each neighbourhood, through mapping of land uses and key features, infrastructure and design elements. It also records detailed environmental observations such as the use of, and movement through, different spaces, perceptions of safety and the availability of different types of food.

The second method embraces two modes of data collection as part of a community food assessment. Initial investigations of the food environment were undertaken during the audit. These data were then augmented using two specially developed methods. One focused on food from supermarkets, and involved a ‘market basket survey’. This encompassed recording the costs of staple food items, together with availability and quality of fresh fruit and vegetables (see Thompson *et al.* (2013) for additional details). The other food environment assessment tool was a farmers’ markets survey. This assessed available produce and the factors that motivate customers and stallholders to attend such markets. The research team developed a checklist to assess the cost, availability, and visual quality of fresh fruit and vegetables. A short questionnaire was also undertaken to assess customer and stallholder perceptions of the markets.

The third research method, the analysis of which is currently ongoing, involved individual interviews and focus group discussions specifically designed to augment the detailed audit and food assessment outcomes. Data collected from this phase of the research will provide the best opportunity to explore the different ways people navigate through and make sense of their environments, and the meanings behind their everyday behaviours that contribute to their health and well-being. Questions are listed under five main themes of inquiry

- your neighbourhood
- being active
- your community
- your food
- your health.

Designing the interview schedule was a collaborative process with the project partners. The existing protocols were utilised for some sections (see Mitchell and Thompson (2013) for details) and new questions were devised to cover additional topic areas. Importantly, in-depth understanding of the environmental context derived from the detailed audit and healthy food assessments was used as part of this process.

4. The healthy neighbourhood audit

The following section contains a detailed description of the audit, its development and application.

4.1 Background and development

There are a number of specific tools that can be used to assess and quantify the relationship between the built environment and health – including accelerometers, surveys and questionnaires, GIS analysis, walkability assessment tools and audit tools. The majority of these instruments have been developed to explore the relationship between neighbourhood design and utilitarian or leisure time physical activity (Pikora *et al.*, 2002; Schaefer-McDaniel *et al.*, 2010; Wong *et al.*, 2011). There are also a number of tools that look at the social and food environments, but few have been developed to explore the impact of a particular neighbourhood on physical activity, social interaction and access to healthy food sources at the same time. It is noted that health impact assessment (HIA), given its comprehensive approach, could achieve this, but here specific tools are being referred to that might be part of an HIA (Kemmer *et al.*, 2004). The healthy neighbourhood audit instrument that the authors developed differs from the existing audit tools by including consideration of the food and social environment as well as the walking and cycling environment. The authors contend that a completed audit will provide a holistic overview of the study sites, together with an in-depth understanding of the character of the neighbourhood, including physical attributes, destinations, facilities, services and food sources available.

An audit uses ‘systematic observations’ to quantify ‘objectively and unobtrusively attributes of the built environment’ (Brownson *et al.*, 2009: p. S100). It is a reliable method for recording the presence and quality of land uses, street networks and design elements, and the behaviour of people in specific settings (Brownson *et al.*, 2004: p. 478, 2009: p. S106). Although some data relating to features of the built environment can be gathered from GIS databases and aerial photographs, many elements are not commonly captured by these sources. It is essential to use direct observation of the environments under study. Audits typically explore the presence, type and quality of land uses, streets and traffic, side-walks, bicycling facilities, public space and amenities, parking, built form and safety indicators. Some also include measures of noise, presence of dogs, incidence of health promotion supports and counting of people (Brownson *et al.*, 2009: p. S107).

Systematic social observations of the neighbourhood context can also be used to explore and measure neighbourhood conditions (Schaefer-McDaniel *et al.*, 2010: p. 278). Such observations take a number of different forms – such as making videotapes or conducting ‘windshield’ assessments while driving through a neighbourhood, or completing a checklist on foot. These methods allow researchers to capture data relating to social behaviours and interactions, signs of physical disorder such as rubbish and graffiti, and quality and use of neighbourhood facilities (Dunstan *et al.*, 2005: p. 294; Schaefer-McDaniel *et al.*, 2010: p. 278). As Brownson *et al.* (2009: p. S107) state, ‘Research questions that involve the human qualities of the environment (how a place looks and feels) are especially appropriate for a direct observation. The detailed data that can be collected by direct observation can produce results of particular value for those who can act on the findings such as urban designers, landscape architects and traffic engineers’. These understandings of auditing have been used in the development of the healthy neighbourhood audit instrument. The authors were also influenced by their background as urban planners and the principles that underpin classic urban planning observational practice and theory (outlined earlier in the paper).

To better understand how health is supported by different environmental qualities, reference was made to Australian and international healthy built environment resources, including walkability audits and checklists (Table 1). The principles embodied in crime prevention were also used through environmental design models (Cozens, 2007).

From this work, the audit tool evolved and after testing and retesting in the field, it was reworked to allow for greater efficiency in data collection and incorporation of complementary GIS data. The intention was to capture and incorporate the broadest range of built environment considerations identified by researchers, practitioners and industry leaders into one comprehensive audit instrument. A full copy of the audit can be downloaded from the Healthy Built Environments Program website (HBEP, 2014).

4.2 The audit instrument

The healthy neighbourhood audit instrument facilitates systematic recording, mapping and evaluation of the environments in which people live, move and interact through direct observation. The aim is to explore and understand in-depth, the impact of these environments on physical activity levels, social interaction and cohesion, and access to healthy food options.

Initially, basic data regarding auditors, localities, weather and other conditions on the day of data collection are recorded. Next, land use data are collected and assessed. Lists of typical residential, recreational, institutional, commercial, community and other uses are provided in table format, with corresponding map reference codes. Community facilities, food gardens and edible plantings, as well as derelict buildings and vacant spaces are also noted. The auditor can use these reference codes to record quickly and efficiently the land uses on either a paper or digital map. Further, there are questions relating to the character and quality of land uses in the neighbourhood; the behaviour of people present in the locality at the time of the audit; availability, quality and affordability of commercial food sources; the presence and quality of community gardens and farmers’ markets; and the impact of form and style of buildings on the quality of the pedestrian environment.

Using a cadastral map of the site, auditors note the category of land use on each allotment. Aerial photographs and site plans can be used to collect land use information, but such sources must be current and verified through site visits. The emphasis of data collection is on the detailed observations in the field – mostly on foot as auditors undertake the work in teams.

Audit data collection also includes site photography and careful recording of the exact location of images so that they can be digitally linked to the GIS maps. In addition to mapping land uses, auditors must make a detailed qualitative assessment of the site. Information is collected using questions

Resource	Source
Neighbourhood walkability checklist	National Heart Foundation of Australia (NHFA, 2011)
Healthy planning checklist	NSW Premier’s Council for Active Living (2015)
Active neighbourhood checklist	St Louis University School of Public Health (2006)
Healthy urban environments site assessment audit	National Heart Foundation of Australia, VicHealth, SunSmart and the Planning Institute of Australia (NHFA, 2015)

Table 1. Healthy built environment audits and checklists

with direct observations. Auditors are asked about the general quality and character of the neighbourhood that dominates the land use. In doing this they are prompted to take note of the residential density, housing types, extent of commercial development and any other key built, natural or social features that are present. As well, there are questions about the use of spaces by different demographic groups and the ways in which the built form encourages pedestrian activity. Characteristics of safety, by way of passive surveillance, and quality and maintenance of buildings and streets, are also noted. Further questions in the audit are directed to evaluating the nature of the food environment, including the range of commercial outlets and local food growing opportunities.

The second section of the audit focuses on the street network. Cadastral maps are used to record data on street pattern and details of the road network, parking availability, walking and cycling infrastructure, street furniture, traffic calming elements, public transport, and safety and surveillance. Rating systems and reference codes are provided. There are questions about how the streets accommodate the needs of all users, offer general amenity and provide connectivity between different land uses. As with the land use data collection, aerial photographs and site plans can be used for street network information, as long as the material is up-to-date and verified on site. Qualitative assessments related to amenity, useability and connectivity between different land uses, the street and available transport modes, augment the mapping.

The third section of the audit is an overall assessment. The auditor's attention is directed to the relationship of the site to the broader area, including public transport nodes, availability of services, shops and destinations. Feelings and perceptions of safety are also sought. This is particularly important, taking into account both day and evening conditions, as well as the different sensitivities and realities for men, women, the aged, children and those with disabilities. Spaces and facilities that encourage social interaction, inclusion and belonging are also noted with commentary. The final sections of the audit enable the auditor to record recommendations for improvements in the neighbourhood, as well as any additional observations, thoughts or reflections.

In the final section of the paper, some of the rich descriptive data resulting from applying the audit instrument is illustrated. While the focus is on the environmental attributes that have an impact on physical activity – both positively and negatively – preliminary results on accessing healthy food and social connection are included. Both quantitative and qualitative data are provided, showing how the latter deepens understanding about the features of the environment that go well beyond the physical nature of the infrastructure. The material presented here is still undergoing analysis.

5. Audit reporting examples: facilitating an in-depth understanding

The healthy neighbourhood audit was used in each study site, during the working week and on weekends, in daylight and at night, ensuring an understanding of different temporal contexts. Each audit was primarily undertaken on foot, complemented by additional windshield observations and use of existing GIS data. The audits were completed by a team of interdisciplinary auditors, incorporating skills in urban planning, GIS and public health. Data were collected on land uses, street networks and infrastructure and entered while in the field into a GIS application on an iPad. In addition, detailed observations were recorded by way of note taking. Each site was recorded photographically with images linked to the GIS map. Auditors were trained to use the audit prior to commencing the fieldwork that occurred over 14 months during 2012–2013.

Two of the research sites have been selected to demonstrate the breadth and depth of the audit findings. First, Victoria Park, which is in an inner city locality and second, Airds Bradbury, an outer suburban area where the population has lower socio-economic characteristics. While the paper mainly presents results in relation to walkability and bikeability, there is inclusion of some preliminary insights, augmented by interviews and focus groups, into the current analysis of social connection and access to healthy food for these sites.

5.1 Victoria Park

As part of investigating walkability, every footpath in the case study site was mapped and assessed using a qualitative descriptor of 'good', 'average' or 'poor'. This assessment was based on the following variables: the material, quality and gradient of the footpath; the buffer between the footpath and the street; visibility along the footpath; connectivity; and quality of shading. Using the audit tool, the vast majority of the footpaths in Victoria Park were given a rating of 'good', with only a few being classified as 'average'. None of the footpaths were given a 'poor' rating. This is detailed in Table 2.

Figure 5 shows footpath ratings and location of amenities from collected GIS data. As none of the footpaths in Victoria Park were rated as 'poor', this is not included in the legend of the figure.

The auditors' observations relating to walkability and bikeability are part of the audit data and have been instrumental in augmenting both our understanding of the site's health-supportive nature and informing subsequent interviews and focus groups. Below some examples are presented of auditor observations.

Rating	Number and percentage of footpaths	Example, image (date taken) and attributes
Good	$n = 65$; 87%	 <p>Gadigal Avenue (16 February 2012) Attributes: paved, good quality, 5.2 m in width, flat, parking and trees act as buffer between path and street, continuous, average visibility, shading present, shading of good quality</p>
Average	$n = 10$; 13%	 <p>South Dowling Street (20 January 2012) Attributes: bitumen, good quality, 2 m wide, flat, no buffer provided, good visibility, abrupt end, shading not always present, average quality shading</p>
Poor	0	N/A

Table 2. Footpath ratings – Victoria Park

- The site has many large, wide footpaths, generously landscaped – with adequate space for pedestrians, people in wheelchairs and parents pushing prams.
- The width of the majority of streets, in combination with landscaping elements (i.e. swales), reduces the speeds of cars driving around the majority of the internal street network.
- The street pattern allows for a high level of connectivity within the site.
- Public transport is only available outside the site but crossing the street to get to the bus stop is difficult due to the level of traffic and lack of pedestrian crossings.
- It is very easy to walk around this site, and ample bike parking is provided. Low levels of traffic on the majority of streets would encourage cycling, although there are no separate cycling lanes.

When the authors review the initial interview data from Victoria Park, residents report high levels of satisfaction with how easy and pleasant it is to walk in the neighbourhood.

There is high participation in walking for transport and recreation, with particular enjoyment of the open space and landscaped streets. There are very low rates of cycling given both the absence of separate lanes to do this safely and the presence of many cars travelling quickly around the site. Even though this area is well located to the city centre with nearby destinations, high traffic volumes, ongoing construction noise and dust pose challenges for the uptake of walking.

The auditors noted that there is a lack of food stores available within walking distance which adds to the frustration of residents keen to access healthy food using sustainable transport. A Saturday fresh food market is well patronised and considered affordable with good-quality produce available. This is also an identifiable community hub where people meet friends, as well as connect with newcomers. Social connection is further facilitated by people feeling safe in the neighbourhood. The presence of others on the streets is part of this, as is good lighting in public spaces.

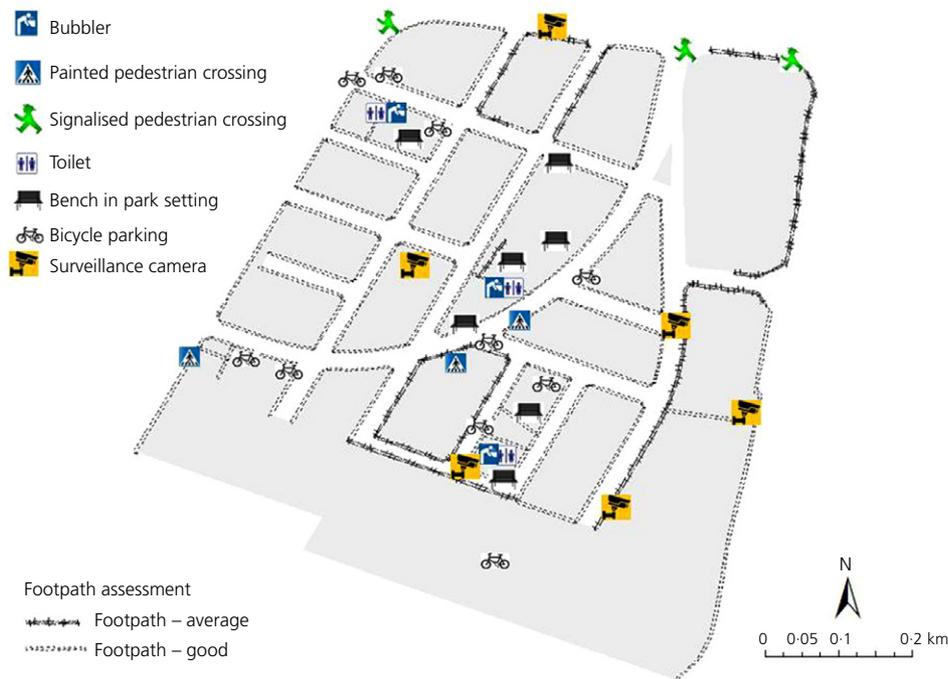


Figure 5. Victoria Park footpaths and amenities

5.2 Airds Bradbury

In contrast, the open and scattered nature of development in Airds Bradbury does not generate feelings of security. Incidental interaction is limited by the low use of active transport and walking generally, and lack of a neighbourhood focus. The density of people about in the streets or shopping centre is low and while there is abundant green space, parks are not identified as community spaces by those who live in the suburb, which further exacerbates perceptions of personal insecurity. No doubt incidents of low-level antisocial behaviour, such as inebriated people yelling in the streets and illegal, dangerous trail bike riding observed during the audits, would not add to feelings of safety or neighbourliness.

The rating of footpaths in Airds Bradbury is consistent with low levels of walking identified by residents. Around half of the footpaths were given a rating of ‘good’, with most of the remainder classified as ‘average’ and two rated ‘poor’. This is detailed in Table 3.

Figure 6 shows footpath ratings and location of amenities from collected GIS data.

In undertaking their observations of the street network, the auditors observed that while buildings are at a human scale, addressing the street with large setbacks, gardens and low fences, there is little pedestrian activity. The streets are mainly

residential, and unless walking to or from the community centres, open spaces or schools, there are few destinations. The frequent presence of ‘beware of the dog’ signs and aggressive barking canines does not add to feelings of personal safety, nor a desire to be walking about. The suburb has a limited network of footpaths, lacks public transport options and would be difficult to move around pushing a pram or negotiating the streets riding a scooter or in a wheelchair. There is a distinct lack of pedestrian-friendly infrastructure such as crossings, median strips and refuge islands, and amenities such as seating. Roads are meandering and there is a confusing network of footpaths and walkways between and behind houses, making way-finding difficult.

The auditors noted that the shopping centre in Airds is uninviting, with limited variety in the products available. During interviews residents revealed that they purchase fresh food from other stores in nearby Campbelltown, or utilise a local subsidised ‘food box’ network. A community garden at the local Men’s Shed is also popular and productive. However, the social and nutritional benefits of this garden and others in the area are not necessarily equally shared throughout the community. As noted, incidences of antisocial behaviour and a low uptake of active transport modes negatively impact incidental interaction and feelings of safety. Community spaces, such as the Men’s Shed, promote social inclusion and interaction of a more structured nature.

Rating	Number and percentage of footpaths	Example, image (date taken) and attributes
Good	$n=68$; 50%	 <p>St Johns Road (27 June 2012) Attributes: concrete, good quality, 1·2 m in width, flat, nature strip and trees acting as a buffer between street and path, good visibility, continuous, average–good shading</p>
Average	$n=65$; 48%	 <p>Peppin Crescent (29 June 2012) Attributes: concrete, average–good quality, 1·2 m wide, moderate gradient, trees and nature strip act as buffer between the path and the street, good visibility, continuous, poor shading</p>
Poor	$n=2$; 1·5%	 <p>Path between Briar Road and Waterhouse Place (20 July 2012) Attributes: informal path made of dirt and grass, poor quality, moderate gradient, good visibility, abrupt ending, poor-quality shading</p>

Table 3. Footpath ratings – Airds Bradbury

6. Conclusion

This paper has presented the authors' healthy neighbourhood audit to illustrate both the method and how its application can provide an in-depth understanding of a broad range

of environmental attributes that are believed to be supportive of healthy behaviour. A combination of the instrument's meticulous and detailed observational approach, grounded in the traditions of urban planning, its use of quantitative and qualitative data and the incorporation of GIS mapping facilitate a

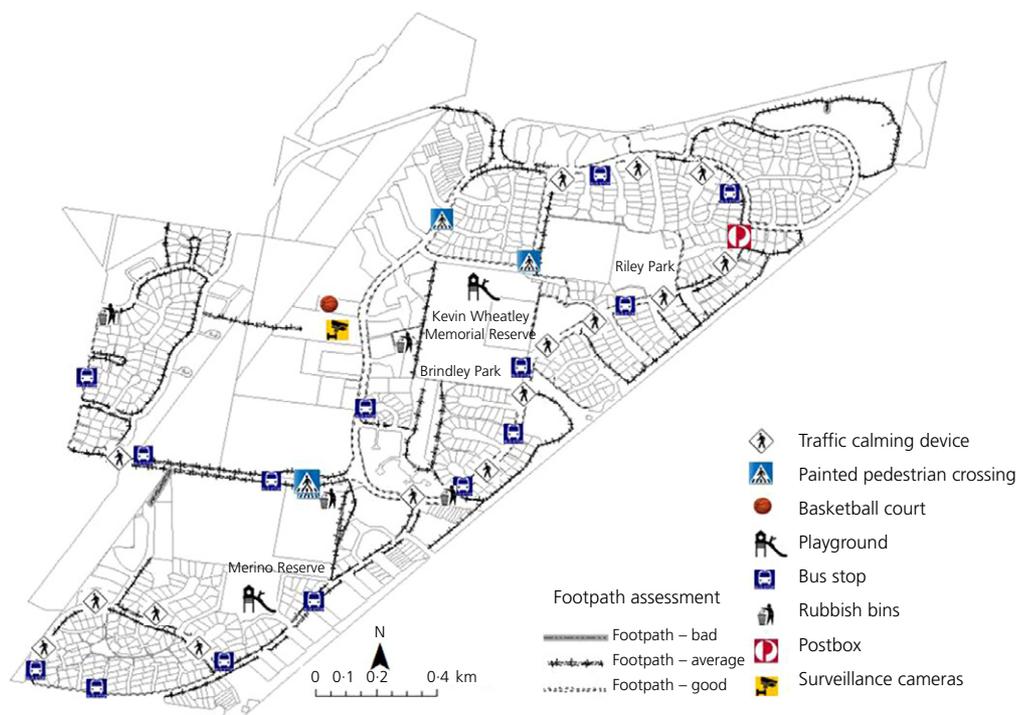


Figure 6. Airds Bradbury footpaths and amenities

comprehensive understanding of the qualities of the built environment. Together with interview data, the healthy neighbourhood audit can help researchers understand, on a deeper level, how people interact with their local environment – and the sorts of facilities, infrastructure and different design elements one needs to provide, to enable people to live healthier lives. This type of in-depth qualitative analysis complements other more quantitative audits where the number of people is counted and recorded.

An analysis of resident interview and focus group data is now well underway. The results will permit further exploration of the ways in which the study sites support or hinder healthy behaviour – no doubt some findings supporting, with others challenging what is already known about the health-supportive nature of the environment. The authors' work, which brings research partners from the health and built environment sectors together, is contributing to a more nuanced appreciation of the complex and contextual nature of supportive environments for healthy living.

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