



City Wellbeing ■ City Futures Research Centre

Planning and Building Healthy Communities

An Australian Research Council Linkage Project conducted by the Healthy Built Environments Program within the City Futures Research Centre (University of New South Wales) with partners UrbanGrowth NSW, the Heart Foundation (NSW) and the South Western Sydney Local Health District (NSW Health).

HEALTHY NEIGHBOURHOOD AUDIT

for

VICTORIA PARK

DATA REPORT

City Futures Research Centre ■ University of New South Wales

February 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.

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Acknowledgement and appreciation is also expressed to the residents of each study area who participated in the research by way of interview and/or a workshop.

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1. PROJECT OVERVIEW.

This Audit Report has been prepared as part of an ARC Linkage funded project entitled *Planning and Building Healthy Communities: A multidisciplinary study of the relationship between the built environment and health*. The aim of the project is to explore and further understand the role of the built environment in facilitating physical activity, social interaction and access to fresh fruits and vegetables.

Physical inactivity, social isolation and poor nutrition are three of the key risk factors for chronic diseases such as diabetes, heart disease, depression and some cancers. Contemporary research indicates that town planning characterised by segregated land uses, disconnected streets, low residential densities, limited public transport and opportunities for local employment, promotes motor vehicle dependency and discourages physical activity and healthy food choices, with resultant negative contributions to the community's physical and mental health.

Conversely, a built environment characterised by mixed uses, connectivity of both streets and transport networks, and a diverse array of densities and infrastructure that is designed to facilitate active transport such as cycling and walking, encourages physical activity and allows access to a diversity of goods and services, including healthy food. In turn, these qualities result in positive contributions to physical and mental health, the latter associated with feeling safe and socially connected within the neighbourhood.

The research is being undertaken in four diverse neighbourhoods in NSW – Victoria Park (located in inner urban South East Sydney), Rouse Hill (suburban north west), Airds Bradbury (suburban south west) and Renwick (in the Southern Highlands of NSW, about 100km from Sydney).

The project is being led by the Healthy Built Environments Program at the University of NSW, and the project partners are UrbanGrowth NSW (formerly Landcom), the National Heart Foundation and the South Western Sydney Local Health District.

2. AUDIT METHODOLOGY.

In order to examine each case study site in relation to its effectiveness in supporting good physical and mental health, a Healthy Neighbourhood Audit Instrument was developed.

The instrument was designed to examine the critical determinants of health in the built environment, as identified in existing healthy built environments literature. 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 – both traditional (such as supermarkets) and alternative (such as community gardens).

Audits were conducted during the week and on weekends, in daylight and at night. This enabled accommodation of the impact of temporal context. Each audit was primarily undertaken on foot, and complemented by additional windshield observations and use of existing Geographical Information Systems (GIS) data. The audits were completed by a team of interdisciplinary auditors, incorporating skills from their experience in urban planning, GIS and public health.

Data was collected on land uses, street networks and infrastructure and entered into a GIS application on an iPad on-site. Data from detailed observations were recorded via note taking on a paper copy of the Healthy Neighbourhood Audit Instrument. Each site was also recorded photographically in detail.

3. APPROACH TO REPORTING.

This record is intended as a tool to inform further explorations of human behaviour within the built environment. It enables a detailed understanding of each study site.

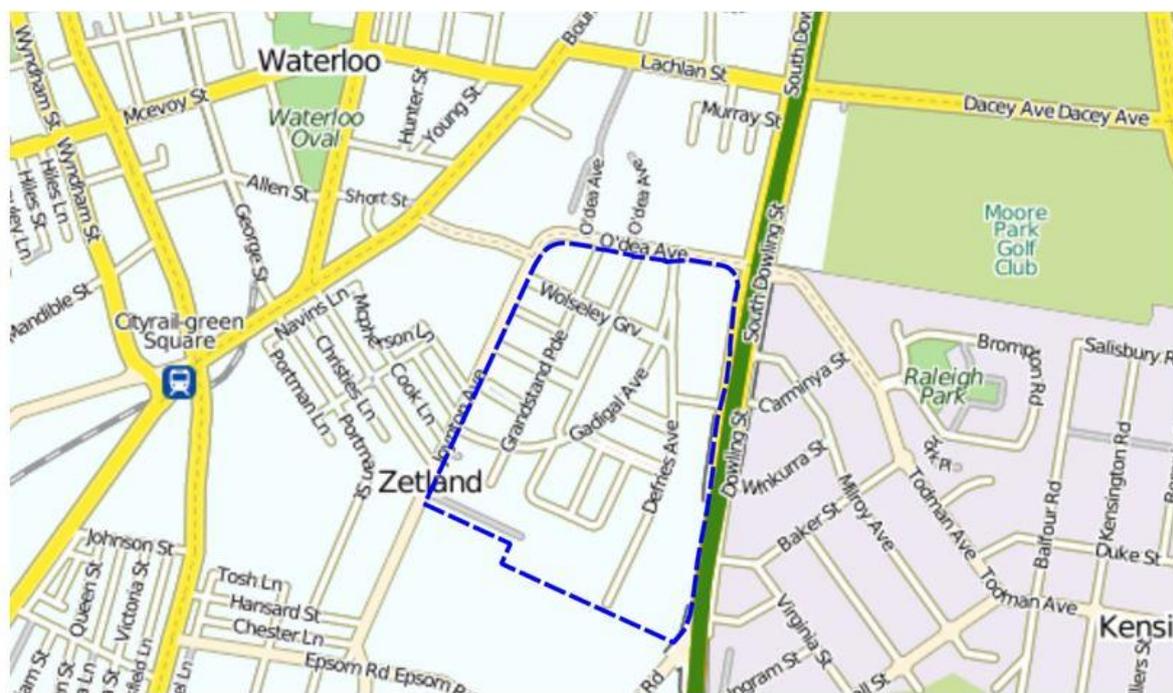
The information presented in this report is a record of the site as observed by the auditors at the time of the audit. The data collected is detailed and rich. It is the culmination of over 22 hours of observations, assessments and mapping. Representing this data in a way that is useful, yet reflective of its depth and diversity, presents a substantial challenge. There is a need to present a meaningful assessment of the health-related elements of each environment, yet also an obligation to acknowledge the complexity of each site. This complexity relates to a number of factors. Firstly, built environments are dynamic. Each case study site is currently experiencing some form of development and as such the physical features and land uses recorded in this report are a snapshot of the environment mapped and perceived at a certain time. Secondly, the subjectivity of the auditors must be acknowledged. The Audit Instrument was designed to encourage the auditors to experience and immerse themselves within the case study sites. However, the auditors' experience of the site cannot be divorced from their position as an outside observer. Each variable reported is open to varying degrees of interpretation. Thirdly, the auditors were trained to consider how the site supported people of all ages and abilities, and therefore each element of the built environment was assessed in relation to how the most vulnerable and least able groups of society would use and experience it. In sections, auditors were also asked to reflect on how the site might support people of different sexual orientations, genders, religions and cultural backgrounds. These reflections were inevitably informed by the auditors' own attributes, genders, values and life experiences, again contributing to the complexity of data gathered using the audit tool. To simply map and quantify each built environment element would ignore these various elements of complexity. Indeed, such quantification would misrepresent the different spaces within each site as falsely homogeneous.

In light of this complexity, different formats have been used to report different variables. This flexibility has enabled a clear demonstration of the depth and diversity of data collected, allowing a consistent picture to be painted of each site in its unique and dynamic context. We consider this flexibility a prerequisite for accuracy in reporting of the results of studies that acknowledge both subjective and objective interpretations. The record is therefore presented here as a combination of maps, photographs and descriptive text. It comprises 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), and subjective observations based on auditor perceptions and feelings (such as sense of safety). A comprehensive rationale for the choice of format in the context of each specific variable is presented throughout the report.

4. SITE DESCRIPTION.

Victoria Park is a master planned neighbourhood located in the suburb of Zetland (in the City of Sydney local government area). The neighbourhood, which is part of the larger Green Square development, is approximately 4 kilometres south of the Sydney Central Business District (CBD) and Sydney International Airport. The site is bounded to the north by O’Dea Avenue, to the west by Joynton Avenue, to the south by residential development behind Kirby Walk, and to the east by South Dowling Street (illustrated below on Map 1).

UrbanGrowth NSW (formerly Landcom¹) was the master planner and master developer for the site. A range of developers and architects have taken carriage of the development of individual lots, following detailed design guidelines. The planning principle behind the site was: ‘To create a memorable and sustainable urban community incorporating medium to high density living with abundant public open space in an inner city urban development’ (Landcom, 2008).



Map 1: Site boundaries of Victoria Park

Victoria Park is 24.5 hectares, with a mix of housing types including one, two and three bedroom low, mid and high-rise apartments and terraces; 3.7 hectares of green space; commercial and retail uses; and a shopping centre (which was yet to be constructed at the time of the audits, but is now operational. See: <http://eastvillage.com.au/>). The development of the site has spanned over 15 years. In 2014, it was reported that the neighbourhood was home to over 4,000 residents, with an expectation that the population would increase to more than 10,000 people in the coming years.

¹ NB. UrbanGrowth NSW was established in 2013, replacing both Landcom and the Sydney Metropolitan Development Authority. In this report, ‘Landcom’ and ‘UrbanGrowth NSW’ will be used interchangeably. The organisation will be referred to as ‘Landcom’ when using sources or discussing activities from the time when they were so named; and will be referred to as ‘UrbanGrowth NSW’ when discussing current activities or using more recent sources.

Planning History and Context

Historically, the site of the Victoria Park development was used for recreational and industrial activities. It was initially swampland, which was drained to create the Victoria Park Racing and Recreation Grounds in 1908. In 1945, the racetrack was turned into British Motor Company’s first Australian manufacturing plant. Finally, in the mid 1980’s, the site was used as a Naval Supply Centre for the Department of Defence. In 1997, Landcom purchased the land, and commenced the process of remediating and master planning the site (Landcom, 2008). Table 1 below provides a timeline of key development milestones (including relevant concurrent milestones relating to the Green Square Development Area).

| | |
|------|---|
| 1997 | <ul style="list-style-type: none"> ▪ Site purchased by Landcom ▪ Green Square Draft Structural Master Plan prepared by Stansic, Turner/Hassall (Ziller, 2004) |
| 1998 | <ul style="list-style-type: none"> ▪ Commencement of master planning process for Victoria Park ▪ Green Square Community Plan commissioned by the South Sydney Development Corporation (SSDC). This plan was prepared by Australia Street Company. |
| 1999 | <ul style="list-style-type: none"> ▪ Design of Victoria Park Master Plan complete ▪ Green Square Community Plan adopted by SSDC |
| | |
| | |
| 2005 | Landcom established and funded the Victoria Park Community Group, made up of residents from the different buildings in the neighbourhood (Landcom, 2008). |
| | |
| | |
| 2014 | The East Village Shopping Centre opened. |

Table 1: Timeline of planning and development milestones

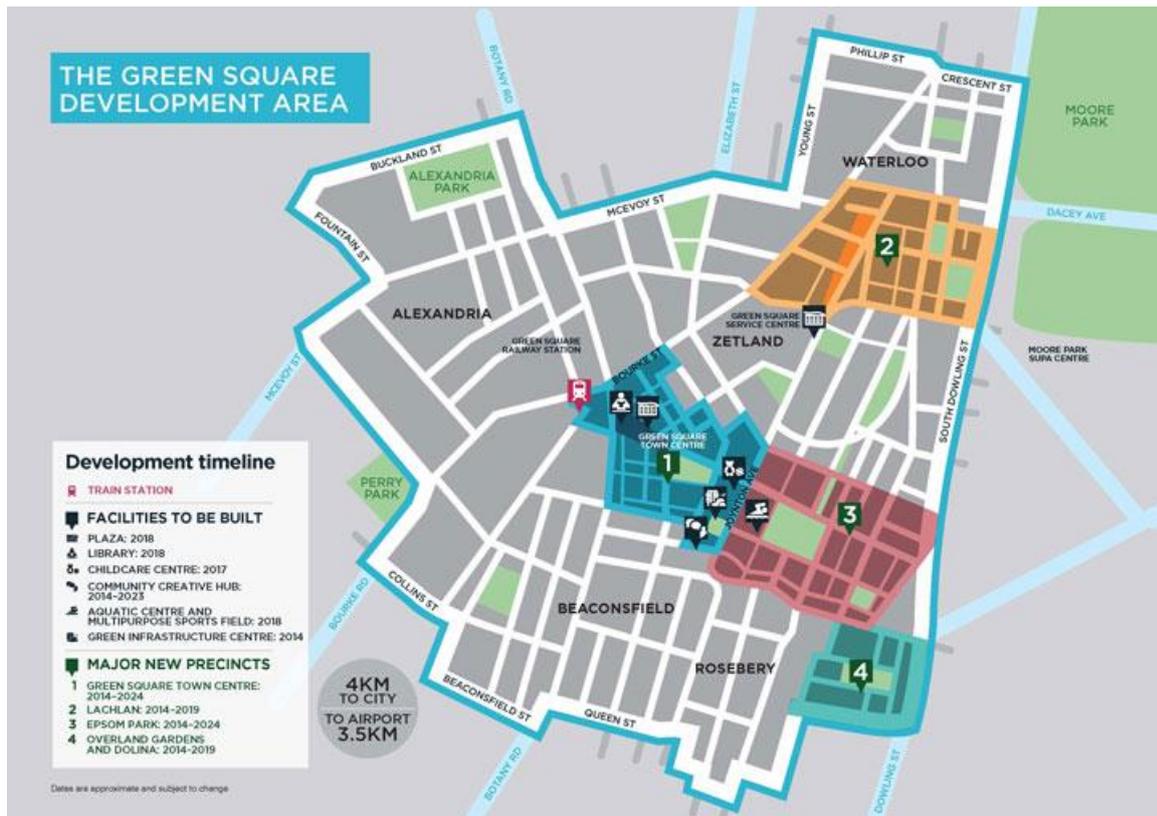
One of the key objectives of the master plan (shown at Map 2 below), as stated by Landcom, was to create ‘a permeable network of streets and open spaces to encourage movement throughout the site and facilitate easy access to public transport and roads’ (Landcom, 2009). Another key feature of the development is the application of environmentally friendly design elements, such as a bio-retention swale system for stormwater treatment and management. The first of its kind in Sydney, the system allows for the collection and filtering of stormwater via swales located in the roadways and green spaces. The cleansed water is then used for landscape irrigation, a water fountain, and to replenish the underground aquifer. Other sustainable measures include recycling of demolition materials and use of renewable building materials; adaptive reuse of a heritage building; passive solar access; adoption of energy efficiency strategies (e.g. cross-flow ventilation); a permeable street network and open spaces to facilitate easy movement throughout the site and access to public transport services; and provision of car-share spaces to promote alternative transport modes (Landcom, 2009). Additionally, a levy is made on each new residential and commercial development to fund the construction of new affordable housing units within the Green Square Development Area, some of which have already been constructed in Victoria Park.

victoria park masterplan



Map 2: Victoria Park Master Plan

As mentioned above, Victoria Park is part of the Green Square Development Area, shown on Map 3 below. This Development Area, which comprises the suburbs of Beaconsfield and Zetland, and parts of Rosebery, Alexandria and Waterloo, is 278 hectares in size. The Green Square Town Centre, next to the Green Square train station and located just south west of Victoria Park, is a key component of the development. UrbanGrowth NSW are responsible for the delivery of around 1,800 dwellings, 48,600 square metres of office space, and 14,000 square metres of retail in the Town Centre. The City of Sydney Council is responsible for community facilities such as a library, plaza, open spaces and an aquatic centre (UrbanGrowth NSW, 2015). It is anticipated that the population of the Green Square Development Area will be 19,000 by 2019, and may reach 53,000 by the estimated completion date of 2030 (City of Sydney, 2015). According to UrbanGrowth NSW, essential infrastructure civil works commenced in July 2014, while construction of the first residential apartment building began in February 2015. This has been followed by significant land releases and apartment sales (UrbanGrowth NSW, 2015).

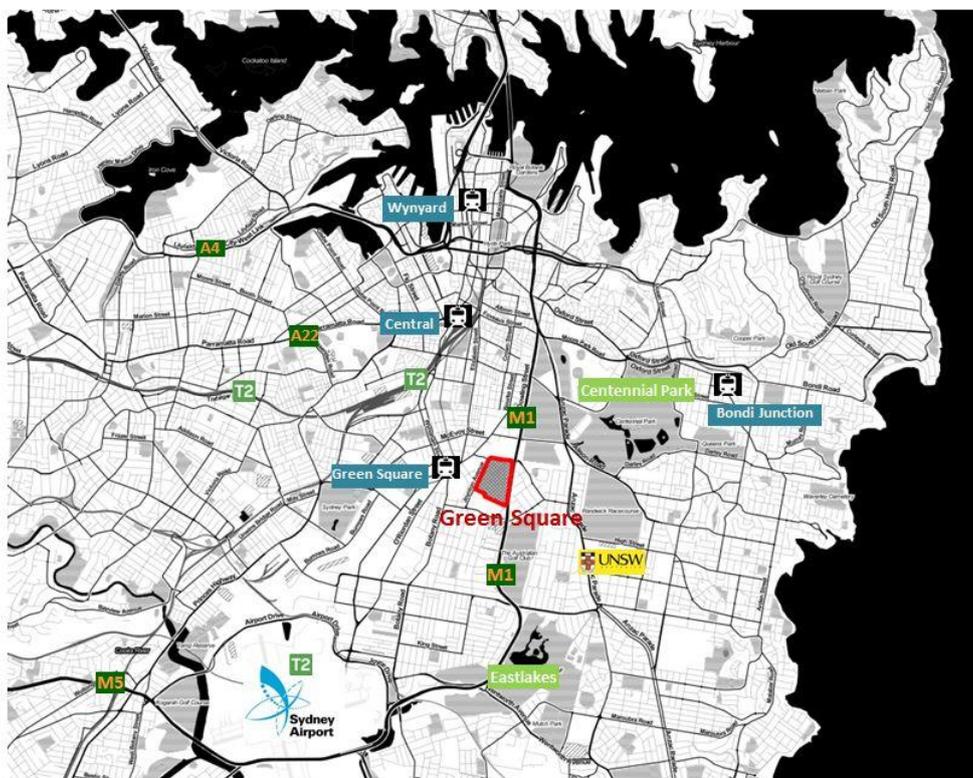


Map 3: The Green Square Development Area (Source: City of Sydney Council, 2015)

5. RELATIONSHIP OF THE SITE TO THE LOCALITY.

The audit instrument provides for the consideration of how the site relates to the broader area in terms of access, transport, and use of shops and services. The auditors were asked to identify public transport nodes surrounding the site, and the relationship between those nodes and public transport services within the site, as well as take note of the location and accessibility of key services, shops and destinations surrounding the site.

As illustrated on Map 4 below, the site is located to the south of the Sydney CBD, and in close proximity to key landmarks such as Sydney International Airport, the University of NSW, and Centennial Park. Access to services, employment, educational facilities and recreational opportunities for residents of Victoria Park is therefore high, when considered in terms of proximity to this cluster of desirable elements.



Map 4: Victoria Park in regional context

In terms of accessibility, there are several bus stops located along the perimeter of the study site, on O’Dea Avenue and Joynton Avenue. These buses provide a high level of access to the city and surrounding suburbs. In addition, Green Square train station is located approximately 1 km to the west of the site, on the corner of Botany Road and O’Riordan Street in Alexandria. It would take a resident around 10 minutes to walk to the station (based on auditor experience), 5 minutes by car, or 15 minutes by bus (e.g. from the Joynton Ave bus stop, via the M20 route to Rosebery, then 370 route to Alexandria, followed by a 100 metre walk to the station) (according to Google Maps and Transport Info estimates). Green Square station provides a high level of access to Sydney Airport, the Sydney CBD, Sydney University and the University of Technology, and the broader rail network. Other key destinations, such as UNSW, Eastlakes and Prince of Wales Hospital, can be easily accessed via bus. The Homemaker’s Supacentra at Moore Park and the Alexandria Industrial Estate are within walking distance of the site. Access to key recreational, community, institutional and retail facilities will be discussed further in the sections below.

6. AUDIT PARTICULARS.

The site was assessed on the following dates:

| DATE AND TIMES | HOURS | WEATHER AND SPECIAL CONDITIONS |
|---|-------------|---|
| Friday 21 October 2011, 10.30am – 3.00pm | 5.3 | Sunny and clear skies, around 29 degrees. The audit was undertaken on a Friday and in nice weather, which may have impacted on the number of people outdoors. |
| Friday 11 November 2011, 9.20am – 12.00pm | 2.4 | Sunny, clear skies changing to slightly overcast throughout the morning. Moderate wind. Around 21 degrees. Undertaken during the university exam period. |
| Monday 23 January 2012, 9.30am – 3.30pm | 6 | Around 24 degrees, sunny with patches of overcast skies. Undertaken during school holidays. |
| Thursday 16 February 2012, 9.00am – 3.00pm | 6 | Sunny, clear skies, around 27 degrees. |
| Thursday 6 December 2012, 6.30pm – 8.00pm | 1.3 | Sunny, around 20 degrees. Windy. Some schools on holidays. |
| Saturday 13 July 2013, 2.30 – 4.00pm | 1.5 | Sunny, warm, around 18 degrees with the occasional cool, gentle breeze. Undertaken at the end of the school holiday period. |
| TOTAL: | 22.5 | |

7. LAND USE.

Map 5 below shows the different land uses in the neighbourhood at the time of the audits. It illustrates the height of completed buildings, and shows the location of vacant land. The different uses are described further in the sections below.



Map 5: Land uses in Victoria Park, as identified in the audit

- **Residential density and types of housing**

As noted, there is a mix of housing types in Victoria Park, including one, two and three bedroom low, mid and high-rise apartments and terraces. There are no detached dwellings. At the time of the audit, the dominant land use throughout the site was medium to high density residential, as much of the retail and commercial development was still to be constructed. The auditors noted that higher density buildings tended to be located on the periphery of the site, creating a sense of enclosure and providing a modicum of protection from noise, pollution and traffic emitting along major roads surrounding the neighbourhood. The images below show the different types of residential development in the neighbourhood.



Apartment blocks on Grandstand Parade (images taken 20.10.11)



Residential buildings on Leyland Grove (L) and the corner of Gadigal Avenue and Grandstand Parade (R) (images taken 21.10.11)



Mixed use building on Gadigal Avenue (L); residential buildings on Ascot Avenue, overlooking Nuffield Park (R) (images taken 21.10.11)



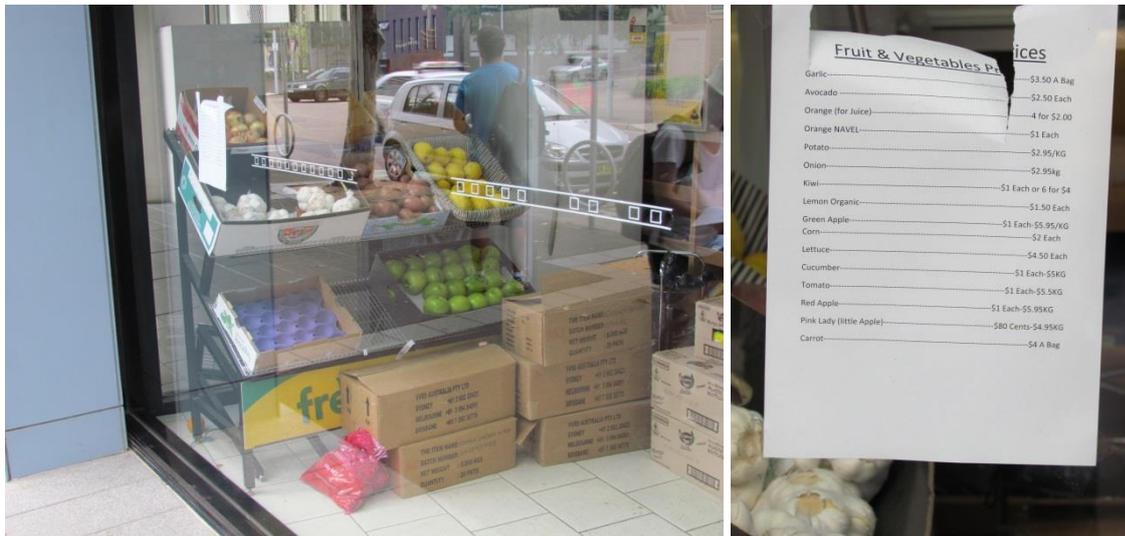
Residential building on Wolseley Grove (L); mixed use building on the corner of Gadigal Avenue and Defries Avenue (R) (images taken 21.10.11)



Residential buildings on Morris Grove (images taken 21.10.11)

- **Retail and commercial development**

At the time of the audits, there was a lack of retail and commercial outlets in the immediate neighbourhood, namely, one small supermarket and a convenience store for grocery items; some restaurants and cafes (described further below); several real estate shopfronts; an orthodontist; a dentist; and a medical centre (described below). Residents would have needed to travel outside the site to complete a typical weekly grocery shop, and as such, the auditors determined that retail facilities were not sufficient.



Victoria Park supermarket, Gadigal Avenue (images taken 20.01.12)

However, the area is now served by the East Village shopping centre, located on Defries Avenue, construction of which was completed in 2014. This is described in more detail below in Section 9, *Commercial and Food Access*.

- **Recreational facilities and spaces**

There are four parks in Victoria Park – Joynton Park, Tote Park, Nuffield Park and Woolwash Park. In addition to this, many of the apartment blocks have private internal courtyards and gardens, and the swales in the roadways provide additional green space.

Joynton Park is the biggest of the recreational spaces, and could be seen as the heart of the neighbourhood. It is located in the centre of the site, bounded by Gadigal Avenue, Victoria Park Parade and Wolseley Grove. The park includes seating, BBQ facilities with shading, bicycle racks, public toilets, a community garden, a water feature, a significant number of trees, and a large green open space. There is also a community noticeboard located near the community garden and BBQ facilities, on which community groups, the City of Sydney Council and others post information for residents. The images below illustrate the key features of the park, and also show how it is used by residents and visitors.



Seating and residents with dogs in Joynton Park (images taken 30.09.11)



Seating, public toilets, community noticeboard and bicycle parking in Joynton Park (images taken 23.01.12)



Different elements of Joynton Park (images taken 21.10.11)

Tote Park is located in the north-west corner of the site, and is bounded by Wolseley Grove, Grandstand Parade, Austin Grove and Joynton Avenue. The park includes landscaping, children’s play equipment, seating, public toilets and bubblers, bicycle racks and a large green open space. The Tote building, a heritage building now used as a community centre and library, is located at the westernmost point of the park, facing Joynton Avenue.



Tote Park (images taken 30.09.11)

Nuffield Park is located in the south-east corner of the site, and is bounded by Hutchison Walk, Ascot Avenue, Kirby Walk and George Julius Avenue. It includes a basketball court, a squash court, public toilets, bubblers, seating and green open space.



The different elements of Nuffield Park, including the squash court and basketball court (images taken 16.02.12)

Woolwash Park is located in the south-west corner of the site, at the corner of Gadigal Avenue and Joynton Avenue. It is a small passive green space, with a pond and wooden walkway, and a significant number of trees and landscaping.



Woolwash Park (images taken 16.02.12; 21.10.11)

The auditors found all of the parks to be well maintained, with high quality amenities, and observed a high level of activity in the parks during each site visit. This will be described more fully in Sections 8 (Use of Public Space) and 12 (Social Interaction). The exception to this was Woolwash Park – the auditors did not observe any people using this space during their visits.

- **Institutional/services**

At the time of the audits, the only services the auditors observed within the site were the Green Square Medical Practice; a dentist (both pictured below) and an orthodontist.



Green Square Medical Practice and D-Zire Dental, located on Defries Avenue (images taken 21.10.11)

Since the opening of the East Village shopping centre, residents also now have access to a Montessori Academy preschool, and the MyHealth medical centre, which provides dental care, pathology services, psychology services and an audiology clinic in addition to traditional medical services. East Village also has a chemist, Optus, Westpac and massage and acupuncture facility.

There are three schools in close proximity to the site – Our Lady of Mt Carmel Catholic Primary School in Waterloo (<https://sites.google.com/a/syd.catholic.edu.au/olmcwaterloo/home>); Green Square School in Waterloo (for students with behavioural issues - <http://www.greensq-s.schools.nsw.edu.au/home>); and Our Lady of the Sacred Heart Catholic Secondary College (<http://www.olshkensington.catholic.edu.au/>). There are a number of other schools in the surrounding suburbs that are also easily accessible for residents in the neighbourhood.

- **Community facilities and uses**

The Tote Building, located in Tote Park and facing onto Joynton Avenue, houses the Green Square Library and Community Centre. Information on the library and community centre is available on the City of Sydney website (<http://www.cityofsydney.nsw.gov.au/explore/libraries/branches/green-square-library>; <http://www.cityofsydney.nsw.gov.au/explore/facilities/venues-for-hire/tote-building>).



The Tote Building (images taken 30.09.11)

There are several community groups operating in Victoria Park, one of which was initially funded by Landcom. The core group, Friends of Victoria Park, has a website (see: <http://friendsofvictoriapark.flavors.me/>) and is very active on social media (see: <https://www.facebook.com/FriendsOfVictoriaPark>). They describe themselves as such:

'We are community members with a broad range of interests and needs, united by a desire to see Victoria Park flourish and evolve into a vibrant, sustainable, connected and creative community. We seek to achieve this through planting the seeds for present and future generations. We'd love to see the community be given even more opportunities to engage with one another and grow. We will also seek to provide the area with reliable, relevant and up-to-date information and hope to promote small business in the area.'

The Green Square Community Hub (<http://greensquarehub.com/>) and Green Square Growers (<https://www.facebook.com/GreenSquareGrowers>) also operate in the neighbourhood (and the wider Green Square Development Area). Green Square Growers were responsible for providing the community garden in Joynton Park (described in Section 10 below). The Community Development Coordinator from City of Sydney (at the time of the audits, this was a woman named Cara Levinson) interacts with the community groups and is responsible for organising events, providing information on future development (via the Green Square Infohub, held regularly in Joynton Park <https://whatson.cityofsydney.nsw.gov.au/events/green-square-infohub>) and facilitating ongoing programs.



Information posted on the Community Noticeboard in Joynton Park (image taken 13.07.15)

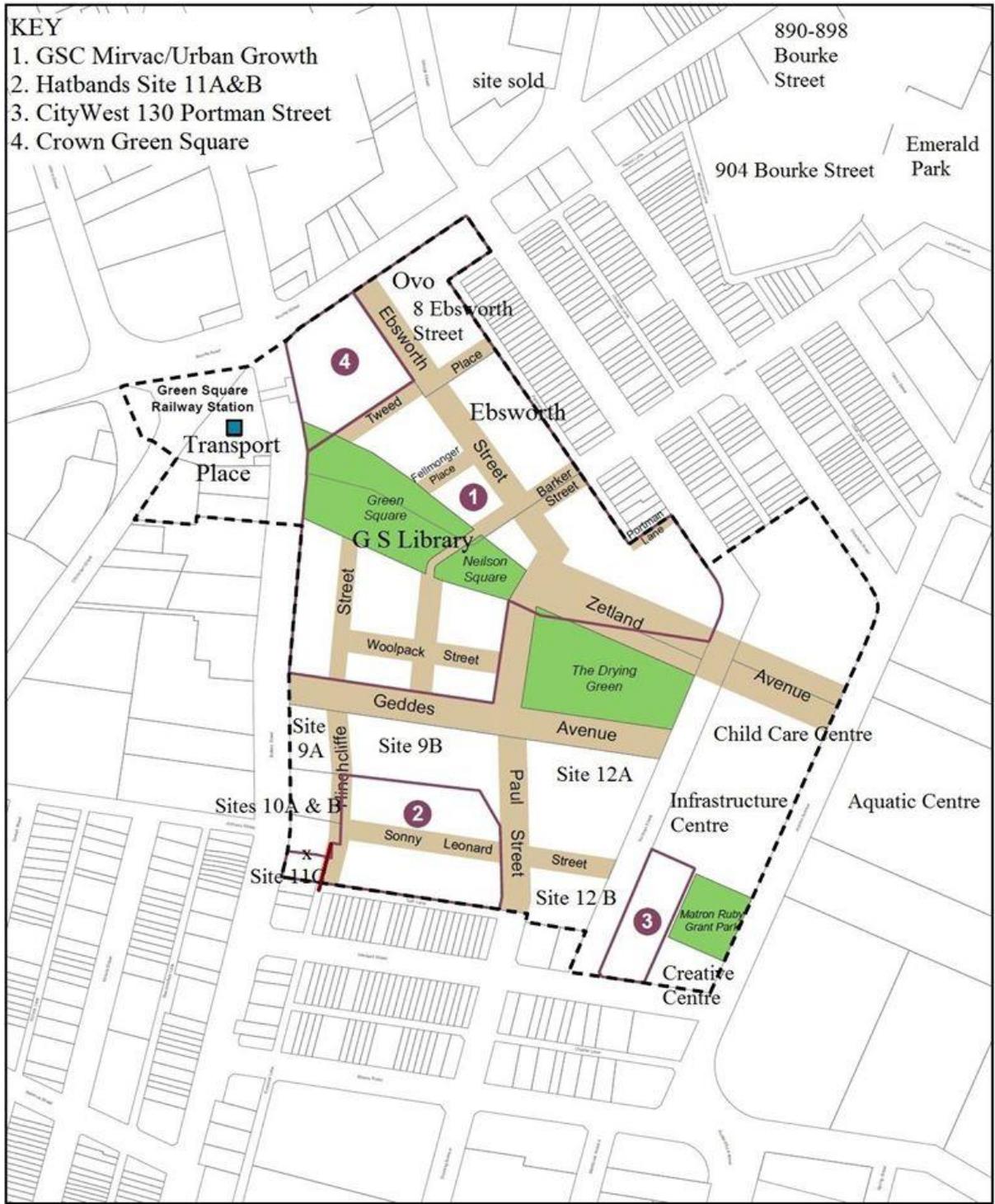
- **Future development**

At the time of the audits, as shown on the land use map above, the majority of commercial development in the site was still to be undertaken, including the East Village shopping centre. There were also a number of apartment and mixed use buildings still under construction, particularly on Defries Avenue (as shown in the images below).



Construction activities and vacant land for future development (images taken 30.09.11; 16.02.12; 21.10.11)

As mentioned, there are a number of proposed facilities in the Green Square Development Area that will serve the Victoria Park population in the future. This includes an aquatic centre, which is earmarked for construction in 2017 and completion in 2019 (see: <http://sydneyyoursay.com.au/green-square> for information on the aquatic centre and other future developments at Green Square). The plans shown below provide an indication of the location of the aquatic centre in relation to Victoria Park, as well as facilities to be included in the Green Square Town Centre.



Map 7: Plan of the Green Square Town Centre (Source: Friends of Victoria Park Facebook page)

8. USE OF PUBLIC SPACE.

The auditors were asked to take note of the number of people present in the locality at the time of the audit, and pay particular attention to specific spaces that seemed to be popular for different demographics. They were also asked to consider the form and style of residential, institutional and commercial buildings in the neighbourhood, and particularly note if the built form provides opportunities for passive surveillance, through allowing people to overlook the street; encourages pedestrian activity; and relates to the human scale.

In some sections of the neighbourhood, buildings have balconies with low privacy screens to allow people to overlook the street - particularly for the apartment blocks facing onto parks (as shown in the images below). Others have high privacy screens and these buildings may provide passive surveillance, but the auditors felt that the perception of the passing pedestrian would be that the building was more closed off. This is particularly the case for buildings facing on to the busy O’Dea Avenue, where screens would be highly necessary to block noise and pollution.



Apartment buildings overlooking Tote Park, Woolwash Park and Nuffield Park (images taken 30.09.11; 21.10.11)

From the experience of the auditors as they walked around the site, the terrace houses in particular and buildings with staggered levels related well to the human scale and the mixed use buildings seemed to encourage a small amount of activity at ground level (and it is assumed that this will increase as more commercial development is completed).

The auditors found that most of the buildings in the neighbourhood were easily identifiable as residential. However, due to a certain uniformity in some of the building facades, it was sometimes

difficult to discern whether a building was residential, commercial or mixed use. Buildings with visible balconies were often easier to identify because of the presence of personal touches (i.e. pot plants, bicycles, chairs, washing). Retail uses were always easy to identify due to the application of signage.

During the weekday site visits, the auditors observed a number of people walking around the open space areas (especially Joynton Park) with dogs, and a scattering (five to ten) of people (largely adults) were seen sitting in the open spaces sunbathing or eating, and even in one case cooling off in the water feature in Joynton Park. Several pre-school age children with adults were observed using the playground at Tote Park. Construction work and commercial uses in the neighbourhood generated a medium level of consistent pedestrian traffic (predominantly construction workers and professionals) throughout the day. Around three people were observed sitting on their balconies, looking out on to the street/park. The Thai restaurant was very popular at lunch – it was at full capacity at 1pm. The cafes were also occupied with a number of people. Towards the end of the audit on 21.10.11, professionals from the real estate office near Joynton Park were seen setting up a party in the BBQ area.



People gathering outside the Thai restaurant; eating at a cafe (both on Gadigal Avenue) (images taken 20.01.12; 21.10.11)

At night, there was a high level of activity in Joynton Park, with residents gathering and socialising with their dogs, and purchasing dinner from a food truck (as shown in the images below).





People gathering in Joynton Park to socialise with their dogs, and purchase food from an Eat Art food truck (images taken 06.12.12)

On the weekend audit (on 13.07.13), the auditors found that Joynton Park was a hub of activity particularly for people with dogs. This is when the highest level of activity was observed. The auditors also found that Gadigal Avenue was an extremely busy street, with consistently high vehicular and pedestrian traffic. Overall, activity was generally centred in the three parks. Many people were seen walking around the footpaths, playing with or watching their dogs running around on the grass, or sitting with their dogs and friends on benches. A group of young men and women (about five men and one woman) were observed using the BBQ facilities in Joynton Park. Another group of young men and women were seen using the basketball courts to play a friendly game at Nuffield Park. Additionally, a grandfather and young child were seen using the green space at Nuffield Park, and there was a group of people having a party at Tote Park. This party seemed to be connected to a residence on Austin Grove (due to the fact that balloons were tied to the front gate). At the same time, a number of adults unconnected to the party were observed supervising children on the play equipment at Tote Park. Many people were also seen walking around the footpaths generally – for exercise and recreation, as well as utility. Some people were observed carrying bags of groceries.



People using the BBQ facilities in Joynton Park (images taken 13.07.13)



People walking along the streets for utility and recreation (images taken 13.07.13)



People using the basketball court at Nuffield Park (images taken 13.07.13)



A birthday party at Tote Park (images taken 13.07.13)



People relaxing and playing with dogs in Joynton Park; walking home with groceries (images taken 13.07.13)

9. FOOD ACCESS.

- **Commercial shops**

As noted previously, at the time of the audits, food options within Victoria Park itself were very limited. The auditors found that the available options were priced on a scale of average to expensive. At the supermarket, for example, a kilo of carrots was \$4; a clove of garlic was \$3.50; and a small juice cost \$4.40 (as at 21.10.11). A sandwich at the café cost around \$7, while a main meal cost \$14, and beverages were around \$4. A lunch meal at the Thai restaurant cost between \$8 and \$10. The Little Piazza restaurant advertised main meals for around \$20 (as at 21.10.11).

The East Village shopping centre was opened after the audits were completed, in 2014. A list of the stores at the centre is provided in Table 2 below. The centre has a Coles supermarket, Asian supermarket, butcher, seafood store, fruit and vegetable market, and two bakeries – providing a vast improvement in availability of fresh food items for residents.

| STORES IN THE EAST VILLAGE SHOPPING CENTRE | |
|---|------------------------------|
| <i>Commercial/Retail Stores</i> | <i>Food Stores</i> |
| Beaute' Haus (beauty supplies) | Bowan Island Bakery |
| Chemmart | Coles Supermarket |
| Clever Ain't Wise (clothing) | Colins Butchery |
| Cut Plus | E-Dragon Dumpling Bar |
| DMA Hair Design | Lucio Pizzeria |
| Eye District | Mad Mex |
| Fine Shine Automotive Wash & Detailing | Olive & Bean café |
| Flight Centre | Oliver Brown |
| Laser Clinics Australia | Poseidon's Harvest |
| Leah's Wax Works | Sushi Square |
| Lorna Jane | Taste Baguette |
| Malkonyan Hair | Taste Growers Market |
| Natural Care Massage & Acupuncture | The Village Crow restaurant |
| Optus | Top Juice |
| Silver Service Dry Cleaners & Tailors | Vintage Cellars |
| Sorrento Urban (gift store) | Wok On Inn |
| SP Mobile | Wu-Gu (Taiwanese restaurant) |
| The Supplement Shack | Zetciti Asian Supermarket |
| Venus Nails | East Phoenix |
| Village News | |
| Westpac | |
| MyHealth Medical Centre | |
| Audi Centre | |
| MAS Accountants | |
| Virgin Active gym | |
| Link Marketing | |
| Montessori Academy | |

Table 2: List of stores at the East Village Shopping Centre

In addition to the Healthy Neighbourhood Audit, a separate study led by project partner South Western Sydney Local Health District was undertaken in order to investigate access to - as well as availability, quality and diversity of - healthy food in the case study sites, and the 20 highest and lowest socioeconomic areas in NSW (according to the Index of Relative Socioeconomic Disadvantage for postal areas). Overall, 100 supermarkets and 20 farmers' markets were assessed across NSW. A description of the methodology and results for the assessment of supermarkets is provided in this section, while the outcomes of the farmers' markets element of the study are detailed further below.

The supermarket tool was a market basket survey (provided at Appendix A). This involved collecting information on the cost of 44 staple food items, together with availability of 30 fresh fruits and vegetables, and the quality and cleanliness of 10 varieties of fresh fruit and vegetables. Food costs were recorded using the Victorian Healthy Food Basket Survey (Palermo and Wilson, 2007), while the availability and quality of fresh fruit and vegetables was assessed using the Queensland Healthy Food Access Basket (Queensland Health, 2002). The two major Australian supermarket chain stores, a large discount supermarket chain and independent grocery stores were included in the survey. Boutique grocery stores, butchers, greengrocers and online supermarkets were excluded from the study.

The food assessment tools were pilot tested and data collectors underwent training to ensure accurate and consistent ratings. The market basket survey was completed within a two week period during October 2012. This minimised the potential for seasonal variation in the price and quality of foods, especially fruits and vegetables.

Data was analysed using SAS Enterprise Guide 5.1. Significance testing of the differences between basket costs, quality and quantity were conducted using non parametric methods.

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

*Includes supermarkets in Alexandria, Eastlakes and Waterloo

Table 3: Supermarket prices, and quality and variety of produce – areas surrounding Victoria Park

As shown in Table 3 above, on average a healthy food basket was more expensive in high SES Sydney suburbs than in low SES Sydney suburbs, with a difference of \$17, while the average variety of produce was higher in high SES suburbs. The mean quality of produce was lower by only one point in low SES suburbs. At the time of the Community Food Assessment, there were no supermarkets within the Victoria Park site, and so market basket surveys were undertaken in the surrounding areas of Alexandria, Eastlakes and Waterloo. The mean cost of a healthy food basket in these

surrounding areas was significantly lower (by \$22) than in high SES suburbs, and also slightly lower (by \$5) than the average for low SES suburbs. The mean cost of a fruit and vegetable basket was \$3 less than the average for high SES suburbs, and only \$1 more expensive than the average in low SES suburbs. The variety of produce was less than the average for high SES suburbs, and only one point higher than the average for low SES suburbs. However, the mean produce quality score was higher than both scores for high SES and low SES suburbs.

▪ **Community Gardens**

When the audits were being undertaken, there was no community garden in Victoria Park. The auditors noted that there was potential for some sections of the open spaces - especially in Tote Park next to the library and community centre, and alongside the BBQ and benches in Joynton Park - to be used for a small community garden. The auditors particularly believed that Tote Park would be an appropriate site for the garden, given its more passive nature, in comparison to Joynton Park and Nuffield Park, which host more active recreational activities.

At the time of the interviews and focus groups, a small garden had been established in Joynton Park (shown in the images below).



Community garden in Joynton Park (images taken 06.12.12)

▪ **Farmers' Markets**

At the time of the Community Food Assessment, there was no farmers' market in Victoria Park. The Green Square Markets are now held every Saturday from 9.00am to 3.00pm in Joynton Park (see: <http://greensquaremarkets.org.au/greensquaremarkets/>). At the time of writing, the markets did not consistently stock fruits and vegetables, but rather featured takeaway foods, coffee, homewares and clothing.

There are three farmers' markets located in close proximity to Victoria Park. The details of these markets are provided below.

Eveleigh Farmers' Market (now known as Carriageworks Farmers' Market)

Carriageworks, 245 Wilson Street, Eveleigh, every Saturday, 8.00am-1.00pm

Stocks: seasonal fruits and vegetables, organic produce, lamb, beef, nuts, fresh pasta, artisan cheese, free range pork, dairy, sweet and savoury treats, olive oil, artisan breads

Distance from the site: around 3km, approximately 40 minute walk, 10 minute drive, 40 minutes by bus (e.g. from Joynton Ave bus stop via M20 route to city, 423 bus to Darlington)

Entertainment Quarter (EQ) Village Markets

The Entertainment Quarter, Moore Park Showground, Moore Park, every Wednesday and Saturday, 9.00am – 2.00pm

Stocks: fruits and vegetables, exotic Asian fruits and vegetables, takeaway foods, plants, sweet and savoury treats, breads, flowers, lamb, beef, poultry, nuts, olive oil, ethical and environmentally friendly household products, mushrooms

Distance from the site: around 2.7km, approximately 30 minute walk, 10 minute drive, 30 minutes by bus (e.g. from Joynton Avenue bus stop via M20 or 301 route to city)

Sydney Sustainable Markets

Taylor Square, Oxford Street, Darlinghurst, every Saturday 8.00am – 1.00pm

Stocks: bread, honey, free range eggs, coffee, takaway foods, flowers, organic rice, olive oil, jams and condiments, meat and smallgoods, organic fruits and vegetables

Distance from the site: around 3.2km, approximately 40 minute walk, 10 minute drive, 25 minutes by bus (e.g. from Joynton Avenue bus stop via M20 or 301 route to city)

The farmers' market survey tool focused on assessing available produce and the factors that motivate customers and stallholders to attend the markets. The research team developed a checklist to assess the cost, availability and visual quality of fresh fruit and vegetables (see Appendix A). Diversity of produce, availability of gourmet items, and the presence of locally grown and/or organic

food were also recorded. A short questionnaire was undertaken to assess customer and stallholder perceptions of the farmers' markets, including the importance of buying local, fresh, high quality and/or organic produce, as well as building relationships and supporting a community event (see Appendix A). Overall, 20 farmers' markets across Sydney were assessed, including Eveleigh Farmers' Market, EQ Village Market at Moore Park, and the Sydney Sustainable Market at Taylor Square in the Sydney CBD.

The food assessment tools were pilot tested and data collectors underwent training to ensure accurate and consistent ratings. The farmers' market research was undertaken from February to April 2013. Data was analysed using SAS Enterprise Guide 5.1. Significance testing of the differences between costs, quality and quantity were conducted using non parametric methods.

| Produce | Eveleigh Farmers' Market | | Entertainment Quarter Village Markets | | Sydney Sustainable Markets | | All farmers' markets | |
|-----------------|--------------------------|-------------|---------------------------------------|-------------|----------------------------|-------------|----------------------|-------------|
| | Mean no. per stall | \$ (per kg) | Mean no. per stall | \$ (per kg) | Mean no. per stall | \$ (per kg) | Mean no. per stall | \$ (per kg) |
| Apples | 2.0 | 5.50 | 2.3 | 6.30 | 2.0 | 5.50 | 2.5 | 5.65 |
| Pears | 1.0 | 6.00 | 1.0 | 7.90 | 0 | 0 | 1.6 | 5.48 |
| Oranges | 1.0 | 2.50 | 1.0 | 3.50 | 1.0 | 3.15 | 1.1 | 3.46 |
| Peaches | 1.0 | 7.00 | 1.0 | 7.50 | 1.0 | 7.00 | 1.3 | 6.36 |
| Plums | 0 | 0 | 1.5 | 7.60 | 1.0 | 3.80 | 1.3 | 6.01 |
| Beans | 1.5 | 5.25 | 1.0 | 11.90 | 0 | 0 | 1.0 | 6.52 |
| Broccoli | 1.0 | 4.50 | 1.0 | 9.00 | 1.0 | 5.00 | 1.0 | 5.62 |
| Cabbage | 1.0 | 4.30 each | 2.0 | 5.50 each | 1.0 | 5.00 each | 1.9 | 3.92 each |
| Cucumber | 1.3 | 9.38 | 1.5 | 8.20 | 1.8 | 7.88 | 1.3 | 5.76 |
| Lettuce | 1.0 | 2.50 each | 1.7 | 2.50 each | 1.0 | 2.50 each | 1.7 | 1.08 each |
| Onion | 2.0 | 4.45 | 2.0 | 3.80 | 1.5 | 5.50 | 2.0 | 3.57 |
| Potato | 5.0 | 4.10 | 3.5 | 4.00 | 2.7 | 4.27 | 3.9 | 3.84 |
| Pumpkin | 2.3 | 2.63 | 2.0 | 2.80 | 0 | 0 | 2.4 | 3.05 |
| Tomatoes | 3.3 | 6.91 | 2.8 | 12.10 | 1.3 | 6.60 | 2.3 | 6.27 |

Table 4: Farmers' market produce prices, Victoria Park

Table 4 details the cost and variety of fruit and vegetables by item for the Eveleigh Farmers' Market, Marrickville Organic Food Market and Sydney Sustainable Markets (held in Taylor Square in the Sydney CBD), as well as the mean cost and variety from all farmers' markets included in the study.

Results of the customer surveys from EQ Village Markets, Eveleigh Farmers' Market and Sydney Sustainable Market are shown, along with the combined results from all surveyed farmers' markets, in Table 5 below.

| Characteristics | EQ Village Markets | Eveleigh Farmers' Market | Sydney Sustainable Market | Total Farmers' Markets |
|--|--------------------|--------------------------|---------------------------|------------------------|
| Age (years) | | | | |
| Mean | 51 | 45 | 48 | 50 |
| Range | 19 - 85 | 21 - 73 | 22 - 77 | 18-89 |
| Gender | | | | |
| Female | 34 (79%) | 37 (61%) | 16 (47%) | 397 (63%) |
| Male | 14 (29%) | 24 (39%) | 18 (53%) | 236 (37%) |
| Country of Birth | | | | |
| Australia | 30 (63%) | 39 (64%) | 22 (65%) | 403 (64%) |
| Other | 18 (38%) | 22 (36%) | 12 (35%) | 230 (36%) |
| Language spoken at home | | | | |
| English | 46 (96%) | 57 (93%) | 34 (100%) | 600 (95%) |
| Other | 2 (4%) | 4 (7%) | 0 (0%) | 32 (5%) |
| Distance travelled (km) | | | | |
| Mean | 8.9 | 6.1 | 2.2 | 10.0 |
| Range | 2 - 32 | 0.1 - 80.0 | 0.2 – 8.0 | 0.1 - 192 |
| Method of travel | | | | |
| Drove | 42 (88%) | 41 (67%) | 4 (12%) | 498 (79%) |
| Walked | 4 (8%) | 13 (21%) | 23 (68%) | 99 (16%) |
| Caught public transport | 2 (4%) | 6 (10%) | 2 (6%) | 26 (4%) |
| Cycled | - | - | 5 (15%) | 7 (1%) |
| Other | - | 1 (2%) | - | 2 (0%) |
| Frequency of shopping for food | | | | |
| Very frequently (>1/week) | 33 (69%) | 42 (69%) | 20 (59%) | 411 (65%) |
| Frequently (1/week) | 14 (29%) | 14 (23%) | 11 (32%) | 182 (29%) |
| Occasionally (1-2/month) | - | 2 (3%) | 2 (6%) | 31 (5%) |
| Never | 1 (2%) | 3 (5%) | 1 (3%) | 8 (1%) |
| Frequency of shopping at farmers' markets | | | | |
| Weekly | 22 (46%) | 29 (48%) | 16 (47%) | 237 (38%) |
| Fortnightly | 12 (25%) | 13 (21%) | 6 (18%) | 164 (26%) |
| Monthly | 10 (21%) | 9 (15%) | 6 (18%) | 188 (30%) |
| Never/First visit | 4 (8%) | 10 (16%) | 6 (18%) | 43 (7%) |
| Amount spent per visit at farmers' markets | | | | |
| Less than \$50 | 12 (25%) | 18 (30%) | 17 (50%) | 221 (35%) |
| Between \$50 and \$99 | 16 (33%) | 18 (30%) | 10 (29%) | 223 (36%) |
| Between \$100 and \$149 | 9 (19%) | 13 (21%) | 1 (3%) | 94 (15%) |
| More than \$150 | 7 (15%) | 1 (2%) | - | 47 (7%) |
| Unknown | 4 (8%) | 11 (18%) | 6 (18%) | 48 (7%) |
| Total | 48 | 61 | 34 | 633 |

Table 5: Demographic characteristics and shopping behaviours of customers at EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market

Forty-eight people at the EQ Village market, 61 people at the Eveleigh Farmers' Market and 34 people at the Sydney Sustainable Market participated in the customer survey. The mean age of participants at the markets was 51, 45 and 48 respectively, and while the majority were women at the EQ and Eveleigh Markets, at the Sydney Sustainable Markets, the majority of participants were male. The mean distance travelled to EQ was 8.9 km, 6.1km for Eveleigh, and 2.2km for Sydney Sustainable Markets. For EQ and Eveleigh, the majority of participants drove to the markets;

however, only 4% of participants drove to the Sydney Sustainable Markets, with the vast majority (67%) walking. 15% of participants cycled to Sydney Sustainable Markets, and the remainder (6%) caught public transport. A majority of participants at all markets shopped on a weekly or fortnightly basis.

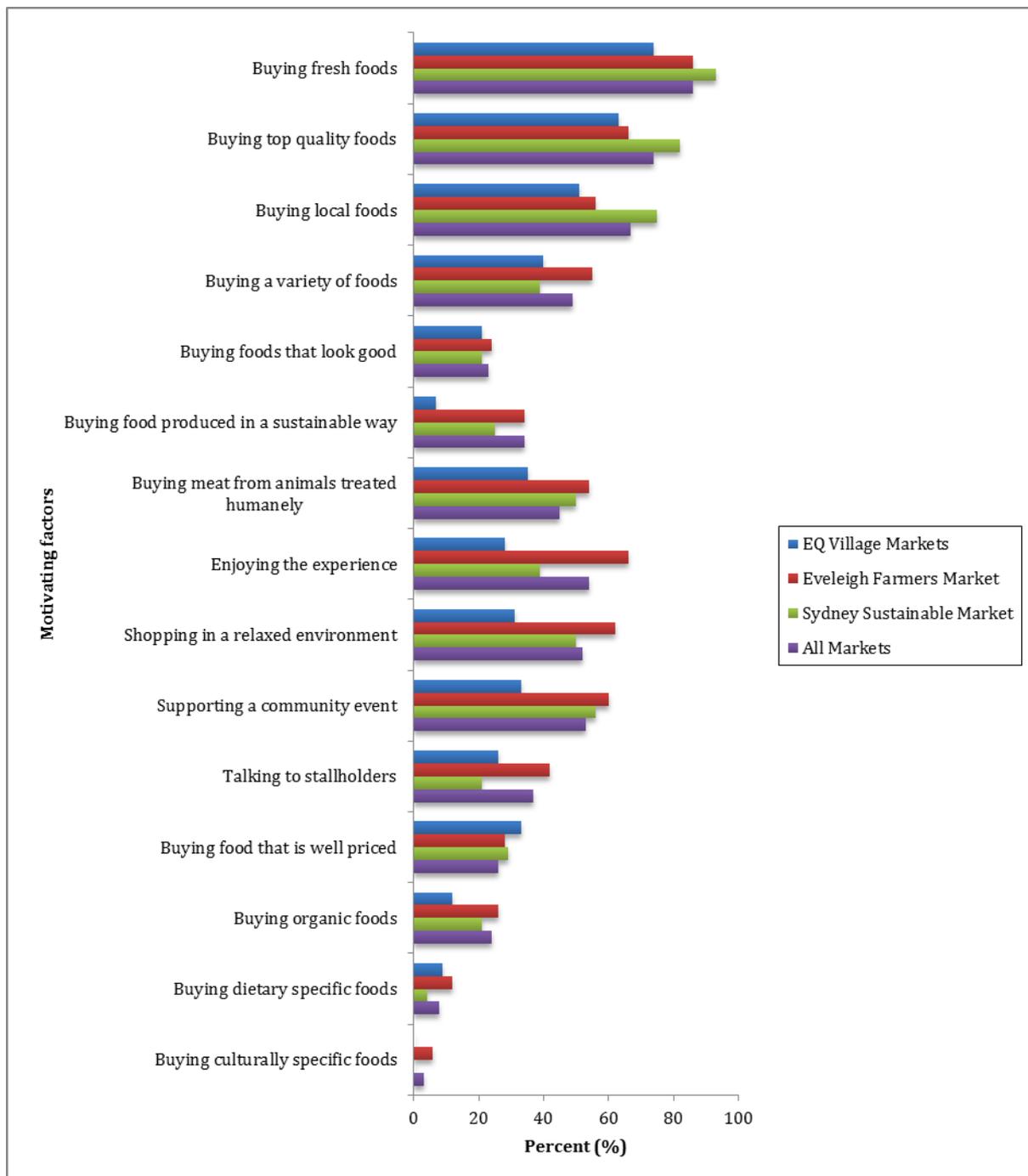


Figure 1: Motivating factors for customers from EQ Village Markets, Eveleigh Farmers’ Market and Sydney Sustainable Market

Figure 1 above illustrates the motivating factors for customers in attending the farmers’ market. ‘Buying fresh foods’ was the most important factor, followed closely by ‘buying top quality foods’ and ‘buying local foods’. ‘Enjoying the experience’ was also important for patrons at Eveleigh Farmers’ Market. ‘Buying food produced in a sustainable way’ was not important for patrons at EQ Village Markets, and customers at all three markets did not rate ‘Buying culturally specific foods’ or

‘Buying dietary specific foods’ as important. This figure shows that the motivating factors deemed to be most important for customers of these markets are largely consistent with those rated as most important at all of the assessed markets. The core reasons for market attendance are summarised in Table 6 below, with quotes from customers relating to each reason.

| Reason for Market Attendance | Customer Quotes |
|--|---|
| To buy fresh fruit and vegetables, picked on or the day prior to the market | <p>“I love the fresh produce. I’m sick of buying bad produce from the supermarket” (Female customer, EQ Village Market)</p> <p>“I like to come to the markets and buy fresh food. I enjoy walking around” (Female customer, Eveleigh Farmers’ Market)</p> <p>‘I buy fresh fruit and vegetables. I like to know where my food comes from” (Female customer, Eveleigh Farmers’ Market)</p> <p>“I hate supermarkets. I like buying products that are in season – not things that have been stored” (Female customer, Eveleigh Farmers’ Market)</p> <p>“I came here to buy cheaper and nicer fruit and vegetables” (Female customer, Sydney Sustainable Market)</p> |
| To buy fresh bread, dairy products, meat, poultry, fish, eggs and gourmet products | <p>‘I came to the market to buy specific products that are only available here” (Male customer, EQ Village Market)</p> <p>“I came for special products – goats yoghurt, special salad, mushrooms, Saltbush lamb, trout and fruit” (Female customer, Eveleigh Farmers’ Market)</p> <p>‘I came here to buy goats milk that hasn’t been homogenized. Also to buy organic rye bread” (Female customer, Eveleigh Farmers’ Market)</p> |
| To buy high quality produce | <p>“It is about quality and freshness” (Female customer, Eveleigh Farmers’ Market)</p> |
| To buy seedlings, plants and flowers | <p>“I came here to buy fresh flowers” (Female customer, Sydney Sustainable Market)</p> <p>“I came to buy fresh flowers and gifts for people” (Female customer, EQ Village Market)</p> |
| To buy takeaway food and coffee | <p>“I came here to have coffee with a friend” (Female customer, EQ Village Market)</p> |
| To support local farmers and producers | <p>“I know a lot of the stallholders. It’s about supporting them” (Female customer, Eveleigh Farmers’ Market)</p> <p>“Supporting the producers. Here they aren’t ripped off by supermarket chains” (Male customer, Eveleigh Farmers’ Market)</p> <p>“Shopping here has become a vital part of my healthy lifestyle. The stallholders have become an important part of my life” (Male customer, Sydney Sustainable Market)</p> <p>“I have a loyalty to the stallholders” (Male customer, Sydney Sustainable Market)</p> |
| To support a community event | <p>“The market is local and fun. You can build relationships. It has a good sense of community (Customer, Eveleigh Farmers’ Market)</p> |

Table 6: Main reasons that customers attended EQ Village Market, Eveleigh Farmers’ Market and Sydney Sustainable Market

The results from the stallholder surveys are summarised below. Responses from stallholders at the EQ Village Market, Eveleigh Farmers’ Market and Sydney Sustainable Market are detailed, as well as the combined responses from all of the surveyed farmers’ markets.

| Characteristics | EQ Village Market | Eveleigh Farmers' Market | Sydney Sustainable Market | All Markets |
|--|-------------------|--------------------------|---------------------------|-------------|
| Age (years) | | | | |
| Mean | 51 | 38 | 40 | 45 |
| Range | 35-68 | 25 – 57 | 19 – 66 | 18 – 76 |
| Gender | | | | |
| Female | 5 (63%) | 4 (57%) | 1 (12%) | 68 (52%) |
| Male | 3 (37%) | 3 (43%) | 7 (88%) | 63 (48%) |
| Distance travelled (km) | | | | |
| Mean | 155.4 | 95 | 90 | 82.0 |
| Range | 5 – 406 | 0.5 – 480 | 0.2 – 250 | 0.2 – 550 |
| Number of markets attended (per fortnight) | | | | |
| Mean | 5 | 3 | 4 | 5 |
| Range | 2 - 12 | 2 – 8 | 1 - 14 | 0 – 60 |
| Length of time trading at farmers' markets (years) | | | | |
| Mean | 5.5 | 3.0 | 2.8 | 4.0 |
| Range | 1.5 – 14 | 0.8 – 4.0 | 0.1 – 4.0 | 0.1 - 15 |
| Type of Stall* | | | | |
| Fruit and vegetables | 3 (38%) | 1 (14%) | 3 (38%) | 35 (21%) |
| Poultry, meat and alternatives | 3 (38%) | 2 (29%) | - | 26 (16%) |
| Dairy products | - | 1 (14%) | - | 11 (7%) |
| Breads and cereals | 1 (13%) | 3 (43%) | 1 (13%) | 26 (16%) |
| Gourmet produce items | 2 (25%) | - | - | 24 (15%) |
| Nuts and legumes | 1 (13%) | 2 (29%) | 3 (38%) | 18 (11%) |
| Takeaway food and drinks | - | 0 (0%) | 1 (13%) | 14 (9%) |
| Special dietary items | - | 2 (29%) | - | 9 (6%) |
| Source of produce* | | | | |
| Own farm or property | 3 (38%) | 3 (43%) | 4 (50%) | 55 (26%) |
| Within local area | 2 (25%) | 1 (14%) | 1 (13%) | 41 (20%) |
| Within state | - | 3 (43%) | 2 (25%) | 57 (27%) |
| Interstate | 3 (38%) | 3 (43%) | - | 31 (15%) |
| Overseas | 2 (25%) | 2 (29%) | 1 (13%) | 25 (12%) |
| Number of people employed in business | | | | |
| Mean | 6 | 35 | 6 | 7 |
| Range | 2 - 20 | 2 -200 | 0 – 20 | 0 - 200 |
| Sales figures per farmers' market | | | | |
| Less than \$300 | 1 (13%) | 1 (14%) | 3 (38%) | 16 (13%) |
| Between \$300 and \$699 | 2 (25%) | 1 (14%) | 2 (25%) | 31 (24%) |
| Between \$700 and \$1000 | - | - | 2 (25%) | 12 (9%) |
| More than \$1000 | 4 (50%) | 3 (43%) | 1 (13%) | 44 (35%) |
| Unknown | 1 (13%) | 3 (43%) | - | 24 (19%) |
| Total | 8 | 7 | 8 | 127 |

*Some respondents provided more than one category of response. For consistency, all figures are presented as a percentage of the total number of responses given.

Table 7: Demographic characteristics and business practices of stallholders from EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market

Figure 2 below shows how important various factors are in motivating stallholders at the EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market to sell their products at farmers' markets. 'Providing customers with information', 'Building relationships with customers' and 'Selling foods directly to customers' were the most important reasons. Also seen as important was 'Marketing the business', 'Selling foods produced in a sustainable way', 'Selling local foods' and 'Relaxed, friendly environment'. Conversely, 'Selling foods for different cultural groups' was not seen as an important factor.

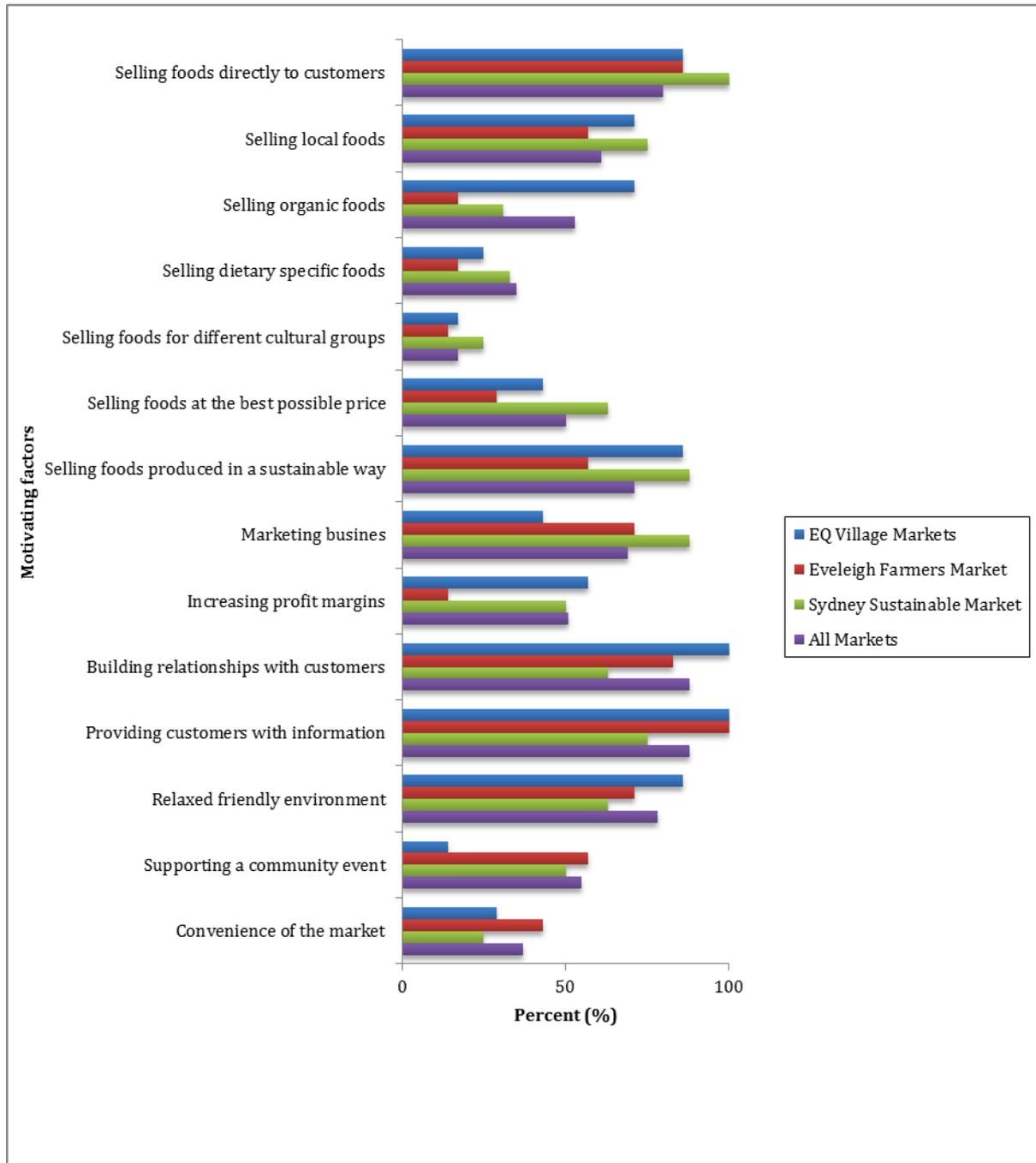


Figure 2: Motivating factors for stallholders from EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market

Table 8 provides a summary of the key motivating factors for stallholders at the EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market, with supporting quotes.

| Motivating Factor | Quote |
|---|---|
| Building relationships with customers and selling local foods | <p>"I enjoy it [having a stall at the market]. It is good to interact directly with customers" (Female stallholder, EQ Village Market)</p> <p>"I want to have direct contact with customers" (Female stallholder, Eveleigh Farmers' Market)</p> <p>"We began selling our product at farmers' markets with the intention to sell directly to customers allowing us to educate people about our product and company as well as to gain valuable feedback about what people want. Whilst making money was of high importance at the beginning, it is now less so and the focus is on education and getting consumer feedback on new flavours and products" (Female stallholder, Eveleigh Farmers' Market)</p> <p>"I come here to communicate and build relationships with customers (Male stallholder, Sydney Sustainable Market)</p> <p>"We want to give fresh produce to customers" Male stallholder, Sydney Sustainable Market)</p> |
| Marketing business and generating profits | <p>"It's about marketing. I want to increase people's awareness of fresh and healthy food" (Female stallholder, EQ Village Market)</p> <p>"I come here to promote the business directly to people. I want to avoid Flemington [wholesale market]" (Female stallholder, EQ Village Market)</p> <p>"I want to sell my produce and get the best price. Make money. I also want to have control over how my produce is sold" (Male stallholder, EQ Village Market)</p> <p>"It's about marketing. We want to get our name out there" (Female stallholder, Eveleigh Farmers' Market)</p> |
| Support community event / social event | <p>"I like the social aspect of the markets" (Male stallholder, Sydney Sustainable Market)</p> |

Table 8: Main reasons that stallholders attended EQ Village Market, Eveleigh Farmers' Market and Sydney Sustainable Market

10. STREET NETWORK.

The auditors were asked to assess:

- How the streets throughout the entire site area balance the needs of all users, and determine if one user is privileged over others;
- What the amenity of the street is like (e.g. in relation to air quality/pollution, noise pollution, quality of drainage, odours, pools of still water etc.); and
- How well the street network connects with residential, recreational, commercial and institutional areas and the modes of transport accommodated in the neighbourhood.

The street network is illustrated in Map 8 and the images below. The map shows the traffic load on each street, and the location of bus stops and traffic calming devices.



Map 8: Victoria Park street network

The major roads within the neighbourhood are Gadigal Avenue, O'Dea Avenue, Joynton Avenue and Wolseley Grove. These roads provide access and egress points for the site, and Gadigal Avenue in particular is used as a key through road for vehicular traffic.

Vegetated swales (ditches that have been designed to temporarily hold water and allow it to gradually permeate into the soil in line with the principles of Water Sensitive Urban Design) have been incorporated into the design of many of the roads throughout the neighbourhood, as shown in the images below.



Vegetated swale on Wolseley Grove (images taken 30.09.11)

From the experience of the auditors as they walked around the site, the streets balanced the needs of all users quite well. Pedestrians and cars are given priority. For pedestrians, although the inclusion of explicit traffic calming elements is limited, the width of the streets, design and landscaping reduces the speeds of cars driving around the majority of the site (Gadigal Avenue is an exception – this is discussed further in the section below on *Pedestrian Safety*). Footpaths are wide, and can accommodate both cyclists and pedestrians, and there is plenty of room for prams and people in wheelchairs. There are no dedicated cycleways provided on the roadways. The auditors also did not observe any buses travelling within the site, however, bus stops are spaced evenly around the perimeter, on O’Dea Avenue and Joynton Avenue (as shown on Map 8 above).





Examples of footpaths on Gadigal Avenue (at top), Grandstand Parade and Defries Avenue (images taken 16.02.12)

The amenity of the site was typically very good, with very little noise pollution (except for noise from construction work, which is temporary). The overall air quality was high, and there was no discomfort experienced when walking around. However, the auditors did experience some unpleasant odours around large concentrations of residential bins on the street.

Overall, the auditors determined that the street network is highly supportive of movement – residents would easily be able to drive, cycle or walk. Walking in particular is very easy in the site – it is well connected, and easy to walk to the bus stops located around the perimeter of the site.

The different elements of the street network, such as street furniture and amenities, walking and cycling infrastructure, safety features and public transport are described further below.

▪ Amenities and Shading

The auditors were asked to map and document street lights; benches and seating; shade structures and awnings; trees, gardens and plants; telephone booths; bubblers or drinking fountains; public toilets; rubbish bins; flagpoles or banners; community noticeboards; public art; dog litter bags and bins; post boxes; and any other amenities.

Map 9 below shows tree coverage across the site, as well as the location of street lights. Functional street lights are indicated by a yellow star, and disabled or damaged street lights are indicated by a red star. Street lights are discussed further in the *Safety at Night* section below, but as clearly shown on the map, the site is well lit and very few lights were out of order when assessed by the auditors.



Map 9: Tree coverage and street lights in Victoria Park

The presence of street trees and landscaping is consistent and abundant throughout the neighbourhood. While in some places the street trees were yet to reach the level of maturity required to provide shade, others had done so, and provide an indication of what is to come in the future. In some spaces, existing trees have been preserved and these provide excellent shading and amenity. This is shown in the images below.



Young trees along O’Dea Avenue; more mature trees providing shade along Wolseley Grove (images taken 30.09.11)



Preserved trees providing shade and amenity on Austin Grove and Gadigal Avenue (images taken 30.09.11; 16.02.12)

Map 10 below provides an illustration of the different street furniture and amenities provided across the site. It also shows the location of surveillance cameras, which will be discussed further below in the sections on *Pedestrian Safety* and *Safety at Night*.



Map 10: Street furniture and amenities in Victoria Park

As the map and images below show, amenities such as benches, bubblers, public toilets and rubbish bins have been provided in generous proportions in the parks and recreational spaces. The auditors found these amenities to be of generally high quality and well maintained. Public toilets have been provided in each of the parks. These toilets provide universal access, and are of a high standard in terms of cleanliness, maintenance and accessibility via flat, paved pathways.



Rubbish bins, public toilets, bubblers and benches in Joynton Park, Tote Park and Nuffield Park (images taken 30.09.11; 23.01.12; 16.02.12)

As previously noted, there are BBQ facilities in Joynton Park. These are shown in the images below. The auditors found the facilities to be well maintained, and observed them in use on several occasions.



BBQ facilities in Joynton Park (images taken 13.07.13; 21.10.11)

▪ The Walking Environment

The auditors were required to map footpaths and signalised and painted pedestrian crossings across the neighbourhood, as well as conduct an assessment of the quality of each footpath in terms of safety and accessibility. Pedestrian crossings are discussed further in the section on *Pedestrian Safety* below.

The maps and images below provide an illustration of this assessment of the walking environment. As each footpath in the case study site was mapped, it was given a qualitative assessment of 'Good', 'Average' or 'Poor'. The 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. An explanation of the scores accorded to each variable is provided at Appendix F. 'Good' footpaths are indicated in green; 'Average' footpaths are indicated in yellow; and 'Poor' footpaths are indicated in red.



Map 11: Footpath ratings in Victoria Park

As shown on Map 11 above, 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. (i.e. n=10 rated as average, n=65 rated as good; a little over 13% rated as average, almost 87% rated as good). It is worth noting that several of the footpaths receiving an 'average' rating were in construction zones, or areas for future development. Examples of footpaths rated as 'Good' and 'Average' are illustrated and described below.



Example of a 'good' footpath: Gadigal Avenue (images taken 16.02.12; 20.01.12)

As the images above show, the footpaths along Gadigal Avenue were of high quality in terms of material, gradient, connectivity and shading. The average width of the path was 5.2 metres, providing ample space for pedestrians and cyclists, and a high level of accessibility for people with prams and in wheelchairs. The path was paved in some areas, and concrete in others. Street trees, awnings and buildings provided shading, and the trees and the width of the path, as well as car parking in parts, acted as a buffer between the path and the street. At times visibility was impeded due to the curved nature of the street, however, there were no other obstructions to sightlines.



Example of an 'average' footpath: South Dowling Street (images taken 20.01.12; 16.02.12)

As shown above, while the footpath along South Dowling Street was good in terms of quality of material and maintenance, the buffer provided along parts of the path was insufficient for such a highly trafficked road, and absent in other parts; shading, when present, was of average quality; and the pathway ended abruptly.

Overall, the auditors determined that the footpaths in the case study site were of high quality. They were predominantly made of concrete or paved; well maintained; flat; free of obstructions; and continuous. When obstructions or poor quality materials existed, it was due to construction activities, or the fact that the footpath was yet to be constructed (as shown in the images below).



Lack of footpath due to stage of development on Cooper Place; dirt path along perimeter of vacant block on Gadigal Avenue (images taken 16.02.12)

In terms of overall walkability through the neighbourhood, as noted above, the built form provides some good opportunities for passive surveillance; however, in some areas (such as O’Dea Avenue) this needs to be improved. The site has many wide, generously landscaped, well connected footpaths, with adequate space for pedestrians and especially for people in wheelchairs, and people with prams – and the auditors believed that this would encourage walking among residents. In addition, the width of the majority of streets, in combination with landscaping elements (i.e. swales), seems to have the effect of reducing the speeds of cars driving around the majority of the internal street network (Gadigal Avenue being the exception). The higher density buildings located on the periphery of Victoria Park create a sense of enclosure, providing protection from noise and pollution caused by the heavy traffic along the major roads that surround the neighbourhood. The amenity of the streets and the green spaces within the neighbourhood is very high – the spaces are visually appealing, with a range of elements to support passive and active recreational activities. The auditors noted that the footpath network is highly supportive of walking for residents, but could be improved by additional infrastructure to support pedestrian safety along O’Dea Avenue, Joynton Avenue and Gadigal Avenue (to be discussed further below).

▪ The Cycling Environment

The Audit Instrument provided for the collection of data relating to cycling – including recreational cycling lanes, utilitarian cycling lanes, showers and changing facilities, bicycle storage and parking, types of obstructions along cycle lanes, and connectivity of cycle lanes.

As noted above, there are no dedicated cycle paths within the site; however, most footpaths are wide enough to accommodate both pedestrians and cyclists. In some areas there is signage indicating that the path is to be shared with cyclists, however, this is not applied consistently throughout the neighbourhood. Cycling is clearly a supported activity within Victoria Park, as evidenced by the ample bicycle parking provided in parks, near public transport stops, within apartment blocks, and outside commercial buildings (shown on Map 10 above and in the images below).



Bicycle parking at Tote Park, on Joynton Avenue, and Nuffield Park; signage for a shared pathway (images taken 30.09.11; 16.02.12; 21.10.11)



Bicycle parking in an apartment block; and outside a mixed use building on Wolseley Grove (images taken 23.01.12)

The images below show people riding their bicycles in and around Victoria Park.



A cyclist on O'Dea Avenue; people riding their bikes past Joynton Park (images taken 13.07.13)

Overall, the auditors found the infrastructure provided throughout the neighbourhood to be supportive of cycling activities, particularly for recreational purposes. However, it could be improved by additional signage to provide clarity around use of footpaths, and perhaps to enable wayfinding and connections to cycle paths outside the site.

Public Transport

Use of active transport modes and public transport services is facilitated through the walking and cycling infrastructure detailed in the sections above, and shown on Map 12 below.



Map 12: Walking, cycling and public transport infrastructure in Victoria Park

As the map shows, bus stops are located around the perimeter of the site, along Joynton Avenue and O’Dea Avenue. These buses provide a high level of access to the city and surrounding suburbs. Images of the bus stops are shown below.



Bus stop on O'Dea Avenue; bus stop on Joynton Avenue near Gadigal Avenue (images taken 30.09.11; 16.02.12)



Timetable information; graffiti on bus stop on Joynton Avenue near Gadigal Avenue (images taken 16.02.12)



Bus stop on Joynton Avenue near Wolseley Grove (images taken 21.10.11; 23.01.12)

As can be seen in the images, the bus stops were of high quality, providing shelter, seating and scheduling information. While one of the bus stops had some graffiti on it, overall, the shelters were clean and well maintained. Another bus stop, also on Joynton Avenue, opposite the site, is shown below. This bus stop has a lower level of amenity than the others; however, it does provide some seating and scheduling information.



Bus stop on Joynton Avenue, opposite the site (image taken 21.10.11)

The Victoria Park neighbourhood also accommodates use of the car sharing service, GoGet. Images of the car sharing spaces provided around the neighbourhood are shown below.



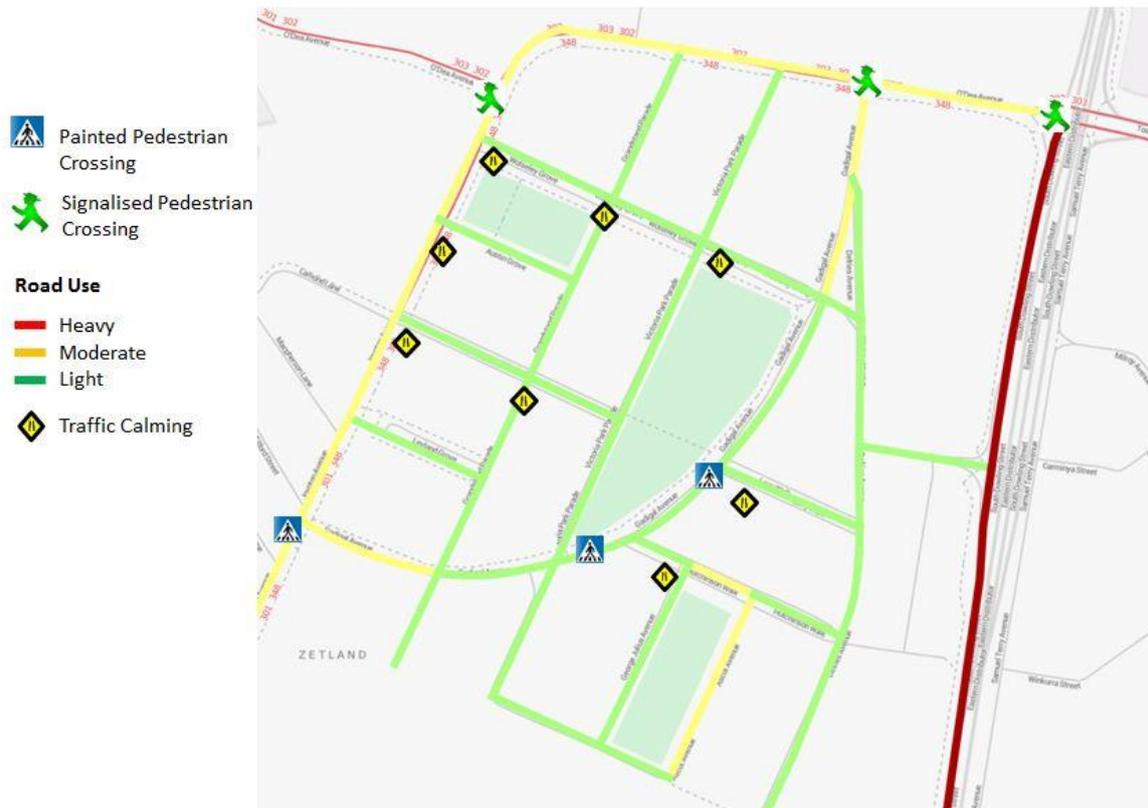


GoGet space on Gadigal Avenue; at Tote Park; on Victoria Park Parade; and at Joynton Park (images taken 16.02.12; 21.10.11)

Overall, the auditors found the public transport infrastructure in the neighbourhood to be of high quality and amenity, interacting well with the walking and cycling infrastructure. The GoGet car sharing service is a particularly important element for supporting reduced levels of dependence on automobiles, and higher rates of active transport.

- **Pedestrian Safety**

The auditors were asked to map and assess elements contributing to pedestrian safety, including pedestrian crossings; traffic calming infrastructure such as speed bumps, chicanes, landscaping and designated share zones; surveillance cameras; natural surveillance; street lighting; and sightlines. Surveillance cameras and lighting are addressed further below.



Map 13: Traffic calming and pedestrian crossings in Victoria Park

Map 13 above shows the location of painted and signalised pedestrian crossings across the neighbourhood, as well as some traffic calming elements and levels of traffic observed by the auditors on different roads. The traffic calming symbols on the map indicate the location of swales or landscaping elements that act as refuge islands in some cases, and have the effect of informally slowing traffic, through making the roads seem narrower and necessitating cautious turning in and out of streets due to obstruction of sightlines. It should be noted that the vegetation in the swales needs to be managed to ensure that obstruction of sightlines does not impinge on road safety. The only signalised pedestrian crossings are located on the perimeter of the site, allowing pedestrians to cross the busy O’Dea and Joynton Avenues. There are two painted pedestrian crossings on Gadigal Avenue.



Swale with bridge for crossing pedestrians on Wolseley Grove; pedestrian crossing on Gadigal Avenue (images taken 30.09.11; 21.10.11)

From the auditors' experience, the pedestrian environment across the neighbourhood has a generally high level of safety. Traffic levels across the majority of the site are quite low, and it was not difficult to cross the road during the audits. The exception to this is Gadigal Avenue, where cars passed through at higher speeds and with more regularity than on any of the other roads. This was particularly pronounced during peak hours of travel. The auditors believed that pedestrian safety on Gadigal Avenue needed to be improved – through additional traffic calming elements, and perhaps additional pedestrian crossings closer to the junctions with O'Dea Avenue and Joynton Avenue.

▪ Safety at Night

The audit instrument provided for the collection of data relating to surveillance and lighting. Map 14 illustrates the presence of street lights across the neighbourhood, as at 6 December 2012. Disabled or damaged street lights are represented by a red star. The map also shows the location of observable surveillance cameras.



Map 14: Street lights and surveillance cameras in Victoria Park

During the audit undertaken after dark on 6 December 2012, the auditors observed that the site was very well lit and very well populated, particularly in Joynton Park. The only areas that were less well-lit were the construction zones along Defries Avenue, and it was still possible to see clearly in those areas. The auditors observed several surveillance cameras on apartment and mixed use buildings across the site. These cameras are located in highly visible positions (as shown in the images below), and may act as a deterrent to undesirable behaviour, and contribute to feelings of safety among residents. The auditors did not observe any surveillance cameras in public spaces.



Surveillance cameras on O’Dea Avenue and Defries Avenue (images taken 30.09.11; 16.02.12)

Overall, the auditors perceived there to be a high level of safety in the neighbourhood at night. Apart from Defries Avenue, and perhaps the streets surrounding the site (O’Dea Avenue and Joynton Avenue), the neighbourhood was well lit. Opportunities for passive surveillance, as described earlier in this report, are quite good within the site, and particularly in the very popular Joynton Park and Nuffield Park, which the auditors believe would contribute to feelings of safety.

▪ Universal Access

The auditors were required to assess whether movement around the neighbourhood is accessible for all – for example, people with limited mobility or parents with prams – with particular consideration for 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.

As outlined in the section above on *Walkability*, in which footpaths were given a rating that was partially based on the accessibility of the pathway, the vast majority of paths in the neighbourhood were considered at the time of the audits to be of good quality and supportive of mobility impaired pedestrians, particularly in relation to the width of the paths. The paths were also found to be very well maintained and absent of trip hazards. The exceptions to this are the temporarily undeveloped pathways in construction zones.

The auditors noted that some of the vegetated swales may present difficulty for mobility impaired pedestrians. A number of these swales have wooden pathways to allow pedestrians to cross, but these are not linked to kerb ramps and are not flush with the roadway, which would prevent people in wheelchairs and people with prams from crossing easily. In addition, the concerns relating to safety on Gadigal Avenue particularly apply for people with limited mobility.

Overall, the auditors felt that parts of the neighbourhood had been designed with consideration for people of limited mobility, but not the entire neighbourhood. The footpaths are generally excellent examples of inclusive design, however, road crossings, particularly on the busy Gadigal Avenue, need improvement.

11. SOCIAL INTERACTION.

The auditors were asked to consider feelings of safety in each of the residential, recreational, institutional and commercial areas of the site. This included regard for safety for people of different genders, sexual orientations, cultures and religions. In addition, observations in relation to signs of social inclusion; physical manifestations of culture; and psychological, emotional and spiritual belonging were required.

The auditors observed that the neighbourhood feels very safe during the day, in the residential and recreational areas. There were always a number of people walking around, car speeds were generally low, the facilities were well maintained and any signs of physical disorder were minimal. Joynton Park is a hub of activity (and Gadigal Avenue is a very busy street with road and pedestrian traffic) particularly for people with dogs. This is where the auditors saw the most activity. Many people were seen walking around the footpaths, playing with or watching their dogs running around on the grass, sitting with their dogs or friends on benches. Several dog owners were observed socialising while playing with their dogs in Joynton Park. The congregation of dog owners appeared opportunistic, perhaps striking conversations and small talk from the shared interest in dog ownership. As mentioned, many young men and women were seen using the BBQ facilities in Joynton Park and the basketball courts in Nuffield Park.

The auditors felt very safe in most places at night – though there was a question mark about footpaths along the main roads (i.e. O’Dea Avenue and South Dowling Street) as there is heavy traffic and they are not as well populated with pedestrians. Across the rest of the site, there always seemed to be people around, it was well lit, and there were many opportunities for passive surveillance.

The auditors did not perceive a gendered presence in the neighbourhood during the audits. They felt that the factors noted above and particularly the atmosphere in the parks, contributed to a feeling of safety for women and men.

There were no overt/physical signs of religious diversity. The auditors noted that community noticeboards in Joynton Park advertised different groups and activities (including Chinese cultural groups), indicating a level of social and cultural inclusion. There were no indications that any cultural or religious group or people of different sexual orientations would feel more or less comfortable in the area. Several notices were posted in the community kiosk in Joynton Park, highlighting community groups, such as Green Square Growers and Friends of Victoria Park. More information about these community groups can be found on websites and through social media, such as Facebook.



Examples of social interaction in Victoria Park

The historical development of the neighbourhood is displayed on the pavement and benches in Tote and Nuffield Parks, which may contribute to feelings of belonging in the locality. In addition, the community centre and library provides a place for people to meet and learn together, and all of the parks provide an opportunity for people to interact. The entire site is pet friendly, and as noted, a large number of people were observed socialising with their dogs, indicating that this is a catalyst for social interaction and cohesion.

12. OVERALL ANALYSIS.

This section of the Audit Report provides a qualitative assessment of the overall availability and quality of distinct elements of the built environment in each neighbourhood. The purpose is to highlight the ways in which the built environment in each locality may or may not support healthy behaviours in everyday life.

The auditors found Victoria Park to be a pleasant, well-maintained, quiet and green neighbourhood. The area is very accessible and safe. It is very easy to walk in particular around this site - footpaths are wide, level, and well sheltered, and crossing streets is generally accessible for all pedestrians. Streets are narrow to reduce car speeds, which enhances feelings of pedestrian safety. Ample bicycle parking is provided, and low levels of traffic would encourage cycling, although no separate cycling lanes are provided. There is good connectivity from the site to the CBD and other desirable locations via public transport, and the car sharing infrastructure is an additional feature which enhances mobility. Parks are accessible and well maintained. At the time of the audits, there was a lack of retail destinations in the area, and it was not easy to access healthy foods in the immediate neighbourhood. It is assumed that the East Village Shopping Centre has ameliorated this issue. Overall there are many opportunities to incorporate physical activity in everyday life, and several elements of the neighbourhood, such as the pet friendly Joynton Park, seem to be highly successful in facilitating social interaction and cohesion. The auditors commented that they believed that Victoria Park was a healthy built environment, and they would live there because it is quiet and pleasant, well connected to the city, pet friendly, walkable and green.

13. RECOMMENDATIONS FOR IMPROVEMENT.

- Reduce traffic speeds along Gadigal Avenue and incorporate more pedestrian crossings.
- Improve accessibility for people with disabilities along busier roads like Gadigal Avenue.
- Improve signage relating to cycling, to enhance connections with the wider region.
- Improve passive surveillance along O’Dea Avenue.
- Expand on the community garden provided in Joynton Park, and encourage sale of fresh fruits and vegetables at the farmers’ market.
- Review management of waste disposal to eliminate foul odours from large congregations of household bins on footpaths.

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(1) Market basket survey (supermarkets).

INSTRUCTION GUIDE

PART A: COST SURVEY

Victorian Healthy Food Basket, Developed by Monash University, Department of Nutrition & Dietetics

Introduction

The Victorian Healthy Food Basket meets the nutritional requirements of the four family types described below for two weeks, providing greater than 80% of the nutrient reference values (NRVs) for nutrients and at least 95% of energy requirements.

The four family types include:

- i) Typical family – 2 adults and 2 children (44 year old male, 44 year old female, 18 year old female and 8 year old male).
- ii) Single parent family – 44 year old female, 18 year old female and 8 year old male.
- iii) Elderly pensioner – 71 year old female.
- iv) Single adult – Adult male > 31 years

The Victorian Healthy Food Basket is designed to collect information on the **cost, availability** and **accessibility** of a healthy basket of foods from a store that has all the food groups in the basket.

Collection of data from stores that have less than 40 of the 44 items in the basket is not recommended. This will allow accurate comparisons of data to be made.

Guidelines

Information for the healthy food basket survey must be collected during a period of time where prices will not be inflated. Avoid school holidays, public holidays, long weekends and other events may influence the price of food (for example, natural disasters such as the cyclones of north Queensland in 2006 that inflated banana prices).

Make sure to collect the data for your area within a **4-week period** to improve the reliability of the data. Record the date of your data collection.

Obtain a list of ALL the supermarkets in the Local Government Area (LGA). This can be obtained from the LGA (usually Environmental Health Team) or from the Yellow Pages.

Choose a large chain supermarket (e.g. Coles, Safeway, Bi-Lo, IGA) in your desired area as the benchmark store. This store should have ALL 44 items contained in the basket and be a store that is generally accessible and reasonably priced. You will also need to survey other smaller or independent stores (e.g. IGA, FoodWorks).

When collecting information abide by the following points.

- **Record the prices of all the food items in the healthy food basket using the 'Healthy Food Basket form'**. Choose the product in the stated size. The **cheapest brand price** in the specified size should be recorded.
- DO NOT include **generic brands** (e.g. Black and Gold, Homebrand etc) unless they are the only brand available for that particular product and it must be recorded that the brand was generic.
- DO NOT include **special prices**, only record regular prices of items. If the regular price is not listed and staff members cannot tell you, use the price of the item at your benchmark store.
- If the size of an item differs to what is specified in the form, choose the **next closest smaller size**. If the smaller size is not available choose the next larger size. **You MUST record both the size and price of the item if an alternative size for an item is chosen.**

- Where a **brand name** is specified, use only that brand of product. If the specified brand is not available, (eg. *Premium* biscuits or *Weet-Bix*) choose the closest alternative (eg. *Salada* biscuits or *Vita Brits*).
- If an item is not available, record the item as ‘missing’.

Meats:

- **Deli products** can be used if they are the cheapest product.
- **Meat prices should be recorded per kg** unless otherwise specified. Bulk meat prices per kg should not be recorded. If the type of meat specified is not available (eg. regular mince, lean) choose the closest type of meat to what is specified.
- Ham (in this survey) is a lean, pink meat which is able to be sliced or shaved. Canned ham and shaped luncheon meat is not an acceptable substitute. Ham can be obtained from the deli or packaged in the refrigerator section.

Fruit and vegetables:

- **Fruit and vegetables should be recorded per kg** unless otherwise specified. Bagged fruit or vegetables prices should not be used unless they are the only type available.

Non-core foods:

- Polyunsaturated margarines should not be confused with monounsaturated margarines such as those made from canola and olive oils. Polyunsaturated margarines include *Nuttelex*, *Eta*, *Meadow Lea*

PART B: AVAILABILITY SURVEY

The availability component of the survey has been adapted from the NSW Cancer Council Market Basket Survey Tool.

This section is a survey of the **availability of fruit and vegetables**. For this task, there is a list of 30 fruits and vegetables. In the “present” column, tick ✓ if the item is available, or cross ✗ if it is unavailable. In the “number of varieties” column, the number of available types of this food should be written.

For example, a supermarket has the following apples: Granny Smith, Fuji and Pink ladies.

| Fruit/Vegetable | Present | Number of varieties |
|-----------------|---------|---------------------|
| Apples | ✓ | 3 |

If broccoli is unavailable:

| | | |
|----------|---|--|
| Broccoli | ✗ | |
|----------|---|--|

PART C: QUALITY SURVEY

This quality assessment tool has been developed using the Queensland Healthy Food Basket (QFAB) and the NSW Cancer Council Market Basket Survey. This measure involves a **visual assessment of age, bruising and mouldiness** of **10 common fruit and vegetables** displayed. Additionally, whether the fruit is **clean** or not will be recorded.

The ten varieties of fruits and vegetables that will be assessed are:

Fruit: **Apples, oranges and bananas**

Vegetables: **Tomato, potato, pumpkin, cabbage, lettuce, carrots and onions**

Record the price of the **cheapest** fruit and vegetables and rate their quality in this section.

For fresh fruit and vegetables, price per kg. Use items sold individually \$/kg, if product is only available per unit price (i.e., lettuce \$1.20 each) weigh one, and write the price per unit and the weight

on the form. If there is no scale at the food outlet, describe whether it is a half or a whole item (i.e., half or whole lettuce). If items are not available, write "N/A" in the price/kg box.

Rate the quality of the fresh fruit and vegetable items on display based on the proportions of fruit and vegetables that are aged, bruised or mouldy. Record items (tick) as **'all good'** if no ageing, bruising or mouldiness is seen. If three quarters or more are free from ageing, bruising or mouldiness, then record **'most'**. Use the definitions to record if **'half'**, **'some'** or **'few'** are free from ageing, bruising or mould. If the item scores **'some'** or **'few'**, then identify the **next cheapest type of that item which is of a better quality** (i.e., a score of "all", "most" or "half").

Finally, look at how clean the fruit and vegetables are. Mark 'yes' (Y) if the produce appears free or dirt and dust or mark 'No' (N) if they appear dirty or dusty.

For example, if the cheapest apples are Granny Smith apples, however the apples on display are very aged, only "some" are good and they appear dirty or dusty:

| Product | Price per kg | Unit weight (if applicable) | Quality Assessment (tick box) Please give an overall rating on the quality of fruits and vegetables based on their age, bruising or mould. | | | | | Clean (tick box) Please give a rating of how clean the items are. | |
|---------------------|---------------|-----------------------------|---|------|------|------|-----|--|----|
| | | | All | Most | Half | Some | Few | Yes | No |
| Granny Smith Apples | \$3.49 | | | | | ✓ | | | ✓ |

Another column needs to be completed with the next cheapest type of apple until at least "half" of the displayed apples are good. For example, if the next cheapest apples were Fuji apples (priced at \$4.20 per kg), in which "half" were good and they were clean and free from dirt and dust:

| Product | Price per kg | Unit weight (if applicable) | Quality Assessment (tick box) Please give an overall rating on the quality of fruits and vegetables based on their age, bruising or mould. | | | | | Clean (tick box) Please give a rating of how clean the items are. | |
|---------------------|---------------|-----------------------------|---|------|------|------|-----|--|----|
| | | | All | Most | Half | Some | Few | Yes | No |
| Granny Smith Apples | \$3.49 | | | | | ✓ | | ✓ | |
| Fuji Apples | \$4.20 | | | | ✓ | | | ✓ | |

PART D: PRODUCT PLACEMENT AT CHECKOUT

This section is a survey of the number and types of products on display at the checkout, as a measure of the products available in the high-traffic, high-visibility areas of supermarkets. For this task, there is a list of common items. In the "present" column, tick ✓ if the item is available, or cross ✗ if it is unavailable. In the "number of varieties" column, the number of available types of this food/drink should be written. Please list any additional items in the section at the bottom of the table.

For example, if a supermarket has the following chocolate bars at the checkout: Mars Bar, Kit-Kat, Snickers Bar:

| Fruit/Vegetable | Present | Number of varieties | Name (as appropriate) |
|-----------------|---------|---------------------|------------------------------------|
| Chocolate | ✓ | 3 | Mars Bar, Kit-Kat and Snickers Bar |

If water is not available at the checkout:

| | | | |
|-------|---|--|--|
| Water | ✗ | | |
|-------|---|--|--|

Cover sheet: MARKET BASKET SURVEY DATA COLLECTION

Name of Supermarket:

Address:

Survey completed by:

Date:

PART A: COST SURVEY

| Basket item | Product size | Cost |
|-----------------------------------|--------------|-------------------------------|
| Cereal group | | |
| White bread | 650g | |
| Wholemeal bread | 650g | |
| Crumpets (rounds) | 300g | |
| Weet-bix | 750g | |
| Instant oats | 500g | |
| Pasta | 500g | |
| White rice | 1kg | |
| Instant noodles | 85g | |
| Premium biscuits | 250g | |
| Fruit | | |
| Tinned fruit salad, natural juice | 450g | |
| Sultanas | 375g | |
| Orange juice (100%) NAS | 2L | |
| Apples | per 1kg | * (as per Quality Assessment) |
| Oranges | per 1kg | * (as per Quality Assessment) |
| Bananas | per 1kg | * (as per Quality Assessment) |
| Vegetables, legumes | | |
| Frozen peas | per 1kg | |
| Tinned tomatoes | 400g | |
| Tinned beetroot | 450g | |
| Tinned corn kernels | 440g | |
| Tinned baked beans | 420g | |
| Tomatoes | per 1kg | * (as per Quality Assessment) |
| Potatoes | per 1kg | * (as per Quality Assessment) |
| Pumpkin | per 1kg | * (as per Quality Assessment) |
| Cabbage | half | * (as per Quality Assessment) |
| Lettuce | whole | * (as per Quality Assessment) |
| Carrots | per 1kg | * (as per Quality Assessment) |
| Onions | per 1kg | * (as per Quality Assessment) |
| Meat and alternatives | | |
| Fresh bacon, shortcut, rindless | per 1kg | |
| Fresh ham | per 1kg | |
| Beef mince, regular | per 1kg | |
| Lamb chops, forequarter | per 1kg | |
| Chicken fillets, skin off | per 1kg | |
| Sausages, thin beef | per 1kg | |
| Tinned tuna (unsat.oil) | 425g | |
| Tinned salmon, pink (water) | 210g | |
| Large eggs (min 50g, caged) | 700g dozen | |
| Dairy | | |
| Fresh full cream milk | 1L | |
| Fresh reduced fat milk | 2L | |
| Reduced fat flavoured yoghurt | 1kg tub | |
| Full fat long life milk | 1L | |
| Cheese, block | 500g | |
| Non-core foods | | |
| Polyunsaturated margarine | 500g | |
| White sugar | 1kg | |
| Canola oil | 750ml | |
| Unhealthy Items | | |
| Mars bar | 53g | |
| Coca Cola | 600ml | |

PART B: AVAILABILITY SURVEY

| Vegetable | Present | Number of varieties |
|------------------|----------------|----------------------------|
| Broccoli | | |
| Cabbage | | |
| Capsicum | | |
| Carrot | | |
| Cauliflower | | |
| Cucumber | | |
| Green beans | | |
| Lettuce | | |
| Mushroom | | |
| Onion | | |
| Potato | | |
| Pumpkin | | |
| Sweet corn | | |
| Sweet Potato | | |
| Tomato | | |
| Fruit | Present | Number of varieties |
| Apple | | |
| Banana | | |
| Grape | | |
| Kiwi fruit | | |
| Mango | | |
| Orange | | |
| Mandarin | | |
| Cherries | | |
| Pawpaw | | |
| Peach | | |
| Pear | | |
| Pineapple | | |
| Rock melon | | |
| Strawberry | | |
| Watermelon | | |

PART C: QUALITY SURVEY

| Cheapest Product | Price per kg | Unit weight (if applicable) | Quality Assessment (tick box) Please give an overall rating on the quality of fruits and vegetables based on their age, bruising or mould. | | | | | Clean (tick box) Please give a rating of how clean the items are. | |
|------------------|--------------|-----------------------------|---|------|------|------|-----|--|----|
| | | | All | Most | Half | Some | Few | Yes | No |
| Apples | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Oranges | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Bananas | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Tomatoes | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Potato | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Pumpkin | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Cabbage (half) | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Lettuce (whole) | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Carrots | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Onions | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Key (Quality)

Good: None of the characteristics listed below are present

Aged: Softness, discolouration, wilting, limpness, skin wrinkling (generally still edible)

Key (Clean)

Yes: Free from dirt or dust

No: Dirt or dust visible on skin

PART D: PRODUCT PLACEMENT at CHECKOUT.

| Products | Aisle 1 | Aisle 2 | Aisle 3 | Aisle 3 | Aisle 4 | Aisle 5 | Aisle 6 | Aisle 7 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Lollies | | | | | | | | |
| Chocolate | | | | | | | | |
| Chewing gum | | | | | | | | |
| Crisps and salty snacks | | | | | | | | |
| Sweet biscuits | | | | | | | | |
| Savoury biscuits | | | | | | | | |
| Cakes and pastries | | | | | | | | |
| Fruit | | | | | | | | |
| Vegetables | | | | | | | | |
| Breads and cereals | | | | | | | | |
| Dairy products | | | | | | | | |
| Lean meats, poultry, eggs | | | | | | | | |
| Nuts and seeds | | | | | | | | |
| Other (e.g., batteries, razers, magazines) | | | | | | | | |
| Drinks | | | | | | | | |
| Water | | | | | | | | |
| Juice | | | | | | | | |
| Soft drinks | | | | | | | | |
| Diet soft drinks | | | | | | | | |
| Energy drinks | | | | | | | | |
| Flavoured milk | | | | | | | | |
| Other: | | | | | | | | |

(2) **Farmers Market Produce Survey.**

Farmers Market Produce Survey: Cover Sheet

| |
|-------------------------------|
| Name of Farmers Market: _____ |
| Address: _____ |
| Survey completed by: _____ |
| Date: _____ |

FRUIT AND VEGETABLE STALLS: STANDARD ITEMS

Stall Name: _____
Suburbs produce sourced or grown: _____
Organic certification (if available): _____
Direct from farm or wholesale: _____

| Product | No. of varieties | Cheapest variety (loose items) | | Quality 1, 2, 3, 4 or 5 | Clean? Y or N | Comments |
|------------------------|------------------|--------------------------------|-------|----------------------------|------------------|----------|
| | | Name | Price | | | |
| Fruit | | | | | | |
| Apple | | | | | | |
| Apricot | | | | | | |
| Avocado | | | | | | |
| Banana | | | | | | |
| Blueberry | | | | | | |
| Cantaloupe (Rockmelon) | | | | | | |
| Grape | | | | | | |
| Honeydew melon | | | | | | |
| Lime | | | | | | |
| Mango | | | | | | |
| Nectarine | | | | | | |
| Orange | | | | | | |
| Papaya (PawPaw) | | | | | | |
| Peach | | | | | | |
| Pear | | | | | | |
| Plum | | | | | | |
| Pineapple | | | | | | |
| Strawberry | | | | | | |
| Watermelon | | | | | | |
| Other fruits: | | | | | | |
| Vegetable | | | | | | |
| Asparagus | | | | | | |
| Beans (green) | | | | | | |
| Broccoli | | | | | | |
| Cabbage | | | | | | |
| Capsicum | | | | | | |
| Carrot | | | | | | |
| Cauliflower | | | | | | |
| Celery | | | | | | |
| Corn | | | | | | |
| Cucumber | | | | | | |
| Eggplant / Aubergine | | | | | | |
| Lettuce (round) | | | | | | |
| Mushroom (button) | | | | | | |
| Onion | | | | | | |
| Potato | | | | | | |
| Pumpkin | | | | | | |
| Sweet Potato | | | | | | |
| Tomato | | | | | | |
| Zucchini | | | | | | |
| Other vegetables: | | | | | | |

Quality scores: very low / very poor = 1; low / poor = 2; medium / acceptable = 3; high / good = 4; very high/very good = 5

FRUIT AND VEGETABLE STALLS: STANDARD ITEMS

Stall Name: _____
Suburbs produce sourced or grown: _____
Organic certification (if available): _____
Direct from farm or wholesale: _____

| Product | No. of varieties | Cheapest variety (loose items) | | Quality 1, 2, 3, 4 or 5 | Clean? Y or N | Comments |
|------------------------|------------------|--------------------------------|-------|----------------------------|------------------|----------|
| | | Name | Price | | | |
| Fruit | | | | | | |
| Apple | | | | | | |
| Apricot | | | | | | |
| Avocado | | | | | | |
| Banana | | | | | | |
| Blueberry | | | | | | |
| Cantaloupe (Rockmelon) | | | | | | |
| Grape | | | | | | |
| Honeydew melon | | | | | | |
| Lime | | | | | | |
| Mango | | | | | | |
| Nectarine | | | | | | |
| Orange | | | | | | |
| Papaya (PawPaw) | | | | | | |
| Peach | | | | | | |
| Pear | | | | | | |
| Plum | | | | | | |
| Pineapple | | | | | | |
| Strawberry | | | | | | |
| Watermelon | | | | | | |
| Other fruits: | | | | | | |
| Vegetable | | | | | | |
| Asparagus | | | | | | |
| Beans (green) | | | | | | |
| Broccoli | | | | | | |
| Cabbage | | | | | | |
| Capsicum | | | | | | |
| Carrot | | | | | | |
| Cauliflower | | | | | | |
| Celery | | | | | | |
| Corn | | | | | | |
| Cucumber | | | | | | |
| Eggplant / Aubergine | | | | | | |
| Lettuce (round) | | | | | | |
| Mushroom (button) | | | | | | |
| Onion | | | | | | |
| Potato | | | | | | |
| Pumpkin | | | | | | |
| Sweet Potato | | | | | | |
| Tomato | | | | | | |
| Zucchini | | | | | | |
| Other vegetables: | | | | | | |

Quality scores: very low / very poor = 1; low / poor = 2; medium / acceptable = 3; high / good = 4; very high/very good =5

| Stall Information | Stall Name: | Stall Name: | Stall Name: |
|--|--------------------|--------------------|--------------------|
| Suburb product sourced or grown | | | |
| Organic certification visible | | | |
| Direct from farmer | | | |
| Wholesale | | | |
| Produce Items | | | |
| Meat, Seafood and Eggs | | | |
| Chicken | | | |
| Lamb | | | |
| Beef | | | |
| Pork | | | |
| Bacon / ham | | | |
| Mince | | | |
| Sausages | | | |
| Game meat | | | |
| Fresh fish | | | |
| Smoked fish | | | |
| Eggs | | | |
| Other: | | | |
| Dairy Products | | | |
| Milk | | | |
| Yoghurt | | | |
| Cheese | | | |
| Other: | | | |
| Bakery Items | | | |
| Bread | | | |
| Cakes / Muffins | | | |
| Other: | | | |
| Gourmet foods and special dietary items | | | |
| Pre-prepared food | | | |
| Gluten free / yeast free | | | |
| Sugar free | | | |
| Other : | | | |
| Other items | | | |
| Nuts | | | |
| Grains and pulses | | | |
| Oils | | | |
| Jam, honey, condiments | | | |
| Chocolates / confectionary | | | |
| Beverages | | | |
| Take away food, coffee or drinks | | | |
| Additional items: | | | |
| Other: | | | |

(3) Farmers Market Customer Survey.

FARMERS' MARKET SURVEY: QUESTIONNAIRE FOR CUSTOMERS

ADMINISTRATION

| | |
|----------------------------------|--|
| 1. Name of farmers' market | |
| 2. Date | |
| 3. Gender | |
| 4. How was the survey completed? | |

DEMOGRAPHICS

| | |
|---|---|
| 5. In which suburb do you live? | |
| 6. What language do you mainly speak at home? | <input type="checkbox"/> English <input type="checkbox"/> Other (Please specify) <input type="text"/> |
| 7. In which country were you born? | <input type="checkbox"/> Australia <input type="checkbox"/> Other (Please specify) <input type="text"/> |
| 8. How many people live with you? | Adults <input type="text"/> Children (<16 years old) <input type="text"/> |
| 9. How far did you travel to get to the market today? | <input type="text"/> |
| 10. How did you get to the market today? (Answer in km) | <input type="checkbox"/> I drove <input type="checkbox"/> I caught public transport <input type="checkbox"/> I rode my bicycle <input type="checkbox"/> I walked <input type="checkbox"/> Other (Please specify) <input type="text"/> |
| 11. In what year were you born? | <input type="text"/> |

SHOPPING BEHAVIOURS

| | |
|---|---|
| 12. In general, how frequently have you shopped for food over the past month? | <input type="checkbox"/> Very frequently (> 1 per week) <input type="checkbox"/> Frequently (every week) <input type="checkbox"/> Occasionally (1 or 2 per month) <input type="checkbox"/> Never |
| 13. In general, how many times have you shopped for food at farmers' markets over the past month? | <input type="checkbox"/> Very frequently (weekly) <input type="checkbox"/> Frequently (2 per month) <input type="checkbox"/> Occasionally (1 per month) <input type="checkbox"/> Never |

If "Never, go to Question 16. Otherwise, go to Question 14.

14. In general, how much do you spend at farmers' markets each time you visit?

- Less than \$50
- Between \$50 and \$99
- Between \$100 and \$149
- More than \$150

ATTITUDES AND PERCEPTIONS TOWARD FARMERS' MARKETS

15. How important are these factors in your decision to shop at farmers' markets?

| Factors | Very important | Important | Slightly important | Neutral | Not important |
|--|----------------|-----------|--------------------|---------|---------------|
| Buying 'top' quality fruit and vegetables | | | | | |
| Buying fruit and vegetables that are fresh | | | | | |
| Buying a variety of different types of fruit and vegetables | | | | | |
| Buying fruit and vegetables that look 'good' (i.e., clean, shiny) | | | | | |
| Buying food that is well priced | | | | | |
| Buying locally grown / made foods to support local people and producers | | | | | |
| Buying organic foods | | | | | |
| Buying foods specific to my culture | | | | | |
| Buying special dietary foods (i.e., gluten free foods) | | | | | |
| Buying food that has been grown or produced in a sustainable way | | | | | |
| Purchasing meat from animals treated humanely | | | | | |
| Talking to the stallholders to find out more about the food I buy | | | | | |
| Enjoying the experience of shopping at farmers' markets (i.e., building relationships with stallholders) | | | | | |
| Shopping in a relaxed and friendly environment | | | | | |
| Supporting a community event | | | | | |
| The convenience of the market (i.e., location and time) | | | | | |

Other factors (please specify)

16. What is your main reason for coming to the farmers' market today?

17. How do you think this market could be improved?

END OF SURVEY

(4) Farmers Market Stallholder Survey.

FARMERS' MARKET SURVEY: QUESTIONNAIRE FOR STALLHOLDERS

ADMINISTRATION

| | |
|---------------------------------|-----------|
| 1. Name of farmers' market | |
| 2. Date | |
| 3. Name of stall | |
| 4. Organic certification? | |
| 5. Gender | |
| 6. How was the survey completed | In person |

DEMOGRAPHICS

7. In which suburb is your farm or warehouse?

8. How many people are employed at your farm or warehouse?

9. What type of produce do you sell at the farmers' market?

- | | | |
|--|---|--|
| <input type="checkbox"/> Fruit or vegetables | <input type="checkbox"/> Meat, seafood or eggs | <input type="checkbox"/> Dairy products |
| <input type="checkbox"/> Bread, cereal or baked goods | <input type="checkbox"/> Nuts, dried fruit or confectionary | <input type="checkbox"/> Gourmet or pre-prepared foods |
| <input type="checkbox"/> Special dietary items (i.e., gluten free) | <input type="checkbox"/> Take away food and drinks | <input type="checkbox"/> Coffee and hot drinks |

10. From where are you products or ingredients sourced?

- | | | |
|---|---|---|
| <input type="checkbox"/> My own farm or property | <input type="checkbox"/> Sydney Basin | <input type="checkbox"/> Producers in NSW |
| <input type="checkbox"/> Imported from interstate | <input type="checkbox"/> Imported from overseas | |

11. Do you find it difficult to source local produce?

- | | | |
|---------------------------------|--|--------------------------------------|
| <input type="checkbox"/> Always | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Not usually |
| <input type="checkbox"/> Never | <input type="checkbox"/> N/A, as I grow my own produce | |

12. How long have you been trading at this market?

13. How many markets do you go to per fortnight?

14. How far do you travel to get to this market?

15. In general, what is your average sales figure per day?

- | | | |
|---|--|---|
| <input type="checkbox"/> Less than \$300 | <input type="checkbox"/> Between \$300 and \$699 | <input type="checkbox"/> Between \$700 and \$1000 |
| <input type="checkbox"/> More than \$1000 | | |

16. In which year were you born?

ATTITUDES AND PERCEPTIONS TOWARD FARMERS' MARKETS

17. How important are these factors in your decision to sell your produce at farmers' markets?

| Factors | Very important | Important | Slightly Important | Neutral | Not important |
|--|----------------|-----------|--------------------|---------|---------------|
| Selling my produce directly to consumers | | | | | |
| Selling local produce and reducing food miles | | | | | |
| Selling organic or produce free of chemicals | | | | | |
| Selling dietary specific foods (i.e., gluten free foods) | | | | | |
| Selling foods for different cultural groups | | | | | |
| Selling foods at the best possible price | | | | | |
| Selling food that has been grown or produced in a sustainable way | | | | | |
| Marketing my business | | | | | |
| Increasing my profit margins | | | | | |
| Building a relationship with customers | | | | | |
| Providing customers with information about the produce at my stall | | | | | |
| Selling my produce in a relaxed, friendly atmosphere | | | | | |
| Supporting a community event | | | | | |
| The convenience of the market (i.e., location and time) | | | | | |

Other factors (please specify)

18. Considering these factors, what is the main reason you sell your produce at farmers' markets?

19. How do you think this market could be improved?

END OF SURVEY

Appendix B: SCORING SYSTEM FOR GIS ANALYSIS OF WALKABILITY

| Category | Observed condition | Score ** |
|---------------------------------------|--------------------|----------|
| 1. Material of Footpath | Dirt | 1 |
| | Paving | 2 |
| | Concrete & Bitumen | 3 |
| 2. Quality of footpaths | Poor | 1 |
| | Average | 2 |
| | Good | 3 |
| 3. Gradient of footpaths | Steep | 1 |
| | Moderate | 2 |
| | Flat | 3 |
| 4. Buffer between footpath and street | Yes | 1 |
| | No buffer | 0 |
| 5. Visibility along footpath | Poor | 1 |
| | Average | 2 |
| | Good | 3 |
| 6. Connectivity | Continuous | 1 |
| | Abrupt end | 0 |
| 7. Quality of shading of footpaths | Poor | 1 |
| | Average | 2 |
| | Good | 3 |
| 8. Width* | Width ≤ 2 m | 1 |
| | 2m <Width< 4m | 2 |
| | Width ≥ 4m | 3 |

* Widths range from 1.2 m to 9.1 m. A method named “Natural Breaks (Jenks)” is used to divide the width into three categories. A brief description of Natural Breaks can be found here ([http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?topicname=natural_breaks_\(jenks\)](http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?topicname=natural_breaks_(jenks)))

** The minimum score for each footpath is: $(1+1+1+0+1+0+1+1)/8 = 6/8 = 0.75$
 The maximum score for each footpath is: $(3+3+3+1+3+1+3+3)/8 = 20/8 = 2.5$

| Score | Rate | Colour |
|------------|-------------|--------|
| 0.75 – 1.3 | 1 (poor) | RED |
| 1.3-1.9 | 2 (Average) | YELLOW |
| 1.9-2.5 | 3 (Good) | GREEN |