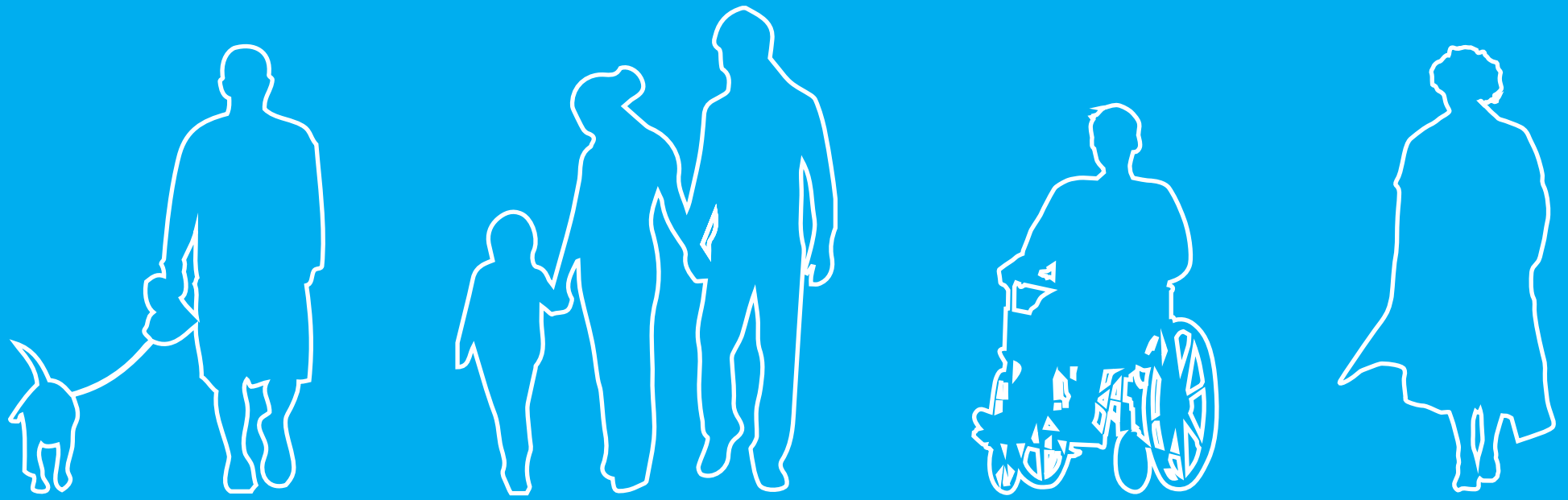
Bayside Walking Strategy

Bayside City Council

June 2015



Contents

Executive Summary		**3**
A Vision for Walking in Bayside		**4**
Why Walk?		**5**
1.0	Introduction	**6**
2.0	The Local Context	**8**
3.0	Strategic Framework	**35**
4.0	Strategies & Actions	**39**
5.0	Site Specific Projects	**53**
6.0	Delivery	**60**
7.0	Evaluation	**67**

Executive Summary

The importance of walking

Walking is an important mode of transport and has a significant part to play in the quality of life in Bayside. It provides an accessible, clean, healthy and enjoyable way to travel short distances and is a great way to enjoy urban and open spaces.

Regardless of how people choose to travel, everyone is a pedestrian at some point in their journey. For many people, walking provides access to public transport or is their only transport option. Even the availability of a car does not mean that all members of a household have access to it, especially children and the elderly.

Walking offers transport, health, environmental sustainability, economic and social benefits across the whole community.

The current state of walking in Bayside

Walking is the most common form of recreation in Bayside. However, walking for transport is not as well utilised for travel to school, commuting, accessing community facilities and making local shopping trips. As a comparison, walking as a proportion of all trips, is currently half of the levels observed in Port Phillip.

The reasons for this relatively low level of walking for transport vary for different people. For some of the community, the physical environment is a barrier, whereas for others walking is simply not recognised as a convenient or practical form of transport.

Despite these challenges, there exists significant potential to increase walking for short local transport trips. For example, many trips within the municipality under two kilometres are undertaken by car that could be done on foot. Similarly, many children are driven to school whom live within two kilometres.

The Strategy aims to address the barriers to walking and build on these opportunities to establish a more walkable municipality.

A vision for walking in Bayside

The vision for walking in Bayside is one of inclusiveness. While the current walking environment is relatively supportive of able-bodied and confident adults; older people, those with disabilities and people with young children are less well catered for.

The new vision for walking in Bayside prioritises the needs of this section of the community, with the aim of creating safe, comfortable and inviting places to experience Bayside on foot. At the same time, walking will make a contribution to the health and wellbeing of the municipality and will assist Council in its efforts to ensure that Bayside becomes more environmentally sustainable.

How we will achieve this vision

Council will:

- Create a truly inclusive, people-orientated walking experience
- Prioritise walking in areas of high people activity
- Create streetscapes that invite people to walk
- Create a legible walking environment
- Maximise provisions for walking in new developments and streetscape upgrades
- Improve the shared path experience for the whole community
- Normalise walking in Bayside
- Create a desire for people, places and walking
- Support initiatives to help residents engage with walking through social participation
- Build shared path user's capacity for coexistence
- Build people's confidence and capacity for walking to school
- Build the confidence and capacity of people with mobility impairments

What we aim to achieve

The baselines for all participation targets were primarily based on the Victorian Integrated Survey of Travel and Activity (VISTA). The baselines for safety targets were based on Crash Stats and a Community Indcators Victoria telephone survey.

The targets are:

Participation

- Increase the proportion of all trips by walking from 15% in 2010 to 30% by 2025
- Increase the proportion of shopping trips by walking from 21.5% in 2010 to 40% by 2025
- Increase the proportion of education trips by walking from 5% in 2010 to 15% by 2025
- Increase the proportion of walking trips between 0-1 km from 70% in 2010 to 85% by 2025
- Increase the proportion of walking trips between 1-2 km from 21.5% in 2010 to 40% by 2025

Safety

- Reduce the number of pedestrian fatalities from three in 2013 to zero by 2025
- Reduce the number of pedestrian injuries by 50%, from 113 in 2013 to 65 by 2025
- Achieve a 95% confidence level that it is safe to walk in Bayside by 2025

The baseline sources will be used to monitor progress towards these targets.

A Vision for Walking in Bayside

To encourage more people to walk more often through the provision of inclusive, safe, comfortable and convenient facilities and the promotion of walking as a healthy and sustainable mode of transport.

Inclusive

Walking in Bayside will be inclusive for people of all ages, gender, and physical and mental abilities. The entire community will feel invited to walk and enjoy all that Bayside has to offer.

Safe

Walking in Bayside will be comfortable and safe for the whole community, with the safety of people given priority over motorised transport, particularly in areas of high people activity.

Convenient

Walking in Bayside will be an attractive and convenient way for residents to access a variety of important local destinations, including workplaces, schools, shops and leisure facilities.

Healthy

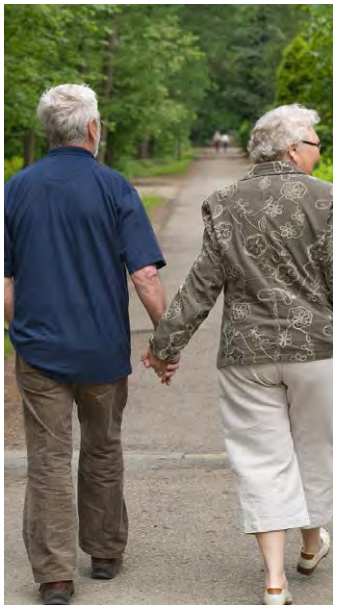
Walking in Bayside will help to improve the municipality's levels of physical activity to further reduce the risk of obesity and chronic heart diseases. Walking will also help to establish healthy habits among children by increasing their levels of physical activity.

Environmentally Sustainable

Walking in Bayside will make an important contribution to the environmental sustainability of the municipality, helping to reduce pollution, congestion and enhance the green quality of local streets by reducing vehicle use for short trips.








Why Walk?

Walking is the most accessible and low cost form of transport available, and has a significant role to play in Bayside's integrated transport system. Walking has many important benefits for individuals and the community as a whole, as outlined below.

"Walking is the first thing an infant wants to do and the last thing a person wants to give up."

John Butcher, Walk 21 Founder

Economic

Walking provides a myriad of societal and individual economic benefits:

- Physical inactivity costs the Australian economy approximately $13.8 billion per year (SA Department of Infrastructure and Transport, 2012)
- The net benefit for every dollar spent on walking is $2.12 (QLD Department of Transport and Main Roads, 2011)
- At an individual level, it was estimated in 2008 that owning one less car meant a household could spend an extra $110,000 on a new home and repay a $300,000 housing loan in 12 years instead of 25 years (Victorian Government, 2012)
- Research demonstrates that connected communities which are pedestrian friendly boost local businesses: People who walk to local shops are more likely stay longer, visit more often and spend more money (Heart Foundation, Good for Business, 2012)
- People who walk and cycle are more likely to shop in their local area, contributing to the local economy and supporting jobs and revenue



Environmental

The key environmental benefits of walking can be summarised as:

- Walking emits no greenhouse gases
- Switching to walking helps decrease noise and air pollution
- Walking uses land in a very efficient manner relative to motor vehicles, requiring less road space and parking
- Switching to walking helps to reduce the 'heat island' effect that is created by urban development
- Unlike motor vehicles, walking does not emit oil and petrol residue, which becomes a major source of water pollution once it enters the stormwater system
- Walking reduces air pollution. In Australia it is estimated that 900 to 2,000 early deaths are caused from vehicle based air pollution each year



Health & Wellbeing

The health and wellbeing benefits of walking can be summarised as:

- The public health benefits of walking infrastructure far outweigh the associated injury costs: The health benefit from walking 1 km is estimated at $1.68 whereas the cost is just $0.24 (QLD Department of Transport and Main Roads, 2011)
- Walking is a very effective way to increase daily physical activity
- Walking increases community safety by providing informal surveillance through greater numbers of people on the street
- Walking positively contributes to social and community capital: Residents on streets with lower traffic volumes and speeds are more likely to know their neighbours and show greater concern for their local environment (Appleyard, 1981)
- Walking is an equitable form of transport enabling non-drivers to access a reasonable distribution of public resources



1.0
Introduction

Background

The Bayside Walking Strategy ("the Strategy") sets out a new vision for enabling and motivating greater participation in walking for the entire Bayside community. The Strategy has been developed with careful consideration of existing Council strategies, particularly:

- Road Safety Strategy (2014)
- The Integrated Transport Strategy (2013)
- The Bicycle Strategy (2013)
- Beach Road Corridor Strategy (2011)
- Active by the Bay (Recreation Strategy, 2013)
- Well Being for All Ages and Abilities Strategy (2013)

Each of these strategies has been completed within the last four years and contain a number of important measures for improving walking in Bayside.

The Strategy should be read in conjunction with these other strategies for a more comprehensive understanding of providing for walking within the broader context of transportation, health and recreation, and safety across the municipality.

Appendix A outlines a number of other local strategies and policies that provide the policy context for a Walking Strategy for Bayside.

Aim & objectives

The Strategy seeks to better understand the current and likely future needs of the Bayside community with the aim of increasing the number of people who choose to walk more often for short local trips.

From a transport perspective, when referring to 'Walking' or 'Pedestrian', these terms are broadly defined to include not only people walking but also people using prams, wheelchairs, motorised mobility scooters and other mobility aids.

Key objectives of the Strategy include:

- Demonstrate leadership and support for walking as a preferred mode of transport for short trips
- Provide a clear and long-term vision for the development of an integrated pedestrian network for the municipality
- Improve the accessibility of streets for all residents and visitors regardless of age, gender or disability
- Improve pedestrian safety and security
- Ensure that provisions for pedestrians are integrated with land use development, public transport and other key services and amenities
- Influence travel behaviour to develop a culture of walking for short trips

The methodology

The development of the Strategy was based on a model of behavioural change, which first examines the factors that influence current participation in walking and then explores the conditions that need to be in place for participation to grow.

The rationale for this approach is based on the physical, social, personal and political factors that influence travel behaviour.

The model was developed using both primary and secondary research methods. Primary research methods comprised walkability audits undertaken across the entire municipality, and a web-based spatial mapping platform that enabled the community to map site-specific issues. Secondary research methods focused on available data from existing Council strategies.

The outcome of this process has identified a set of key strategies, actions and potential site-specific projects that will be delivered across a 10-year timeframe.

Format of this document

Following this introduction, this report is structured in six further chapters:

2.0 The Local Context

This chapter presents a review of the current state of walking in Bayside, including the physical, policy and regulatory, interpersonal and social factors that influence walking.

3.0 Strategic Framework

This chapter presents the strategic framework, including the model of behavioural change used to select appropriate strategies, actions and projects to enable and motivate walking in Bayside.

4.0 Strategies & Actions

This chapter presents the key strategies and actions to enable and motivate greater participation in walking across Bayside.

5.0 Site-Specific Projects

This chapter presents five sites taken directly from the outcomes of a community engagement process to identify existing significant barriers to walking in Bayside.

6.0 Delivery

This chapter presents a framework for delivering the proposed strategies and actions, including a prioritised implementation plan.

7.0 Evaluation

The final chapter of the document sets out a framework for monitoring, evaluating and reporting the impact of the Strategy.

2.0
The Local Context

Introduction

The following chapter presents an assessment of the key physical, policy and regulatory, interpersonal and social factors that influence participation in walking in Bayside.

In undertaking this assessment, the following aspects were examined:

- A review of Federal, State and Local Government policies
- A review of local demographics, including walking trends
- A review of existing and proposed land-uses
- A review of road safety data for walking in Bayside
- A review of recently available community consultation and other stakeholder feedback on walking in Bayside
- The results of a web-based spatial mapping process, which enabled local residents to identify and discuss site-specific issues for walking
- The results of a walkability audit undertaken across the municipality

The outcomes of this review are summarised in the following sections.



Policy Context

Federal Government policies highlight the social, environmental and economic benefits of walking. They specify a holistic approach comprising infrastructure and behaviour change to encourage greater participation in walking.

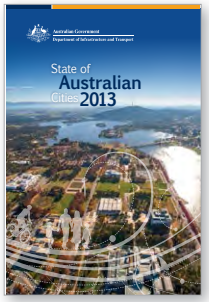
State Government policy proposes an integrated and sustainable transport system that meets the needs of population growth, health and wellbeing and is inclusive. State policy also acknowledges the need to combine infrastructure and behaviour change.

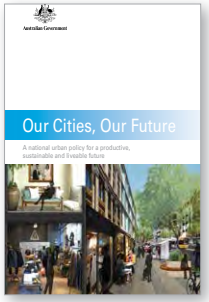
The role and importance of walking is a common theme across a number of Council's key strategies and policies for transport, recreation, health and land-use planning.

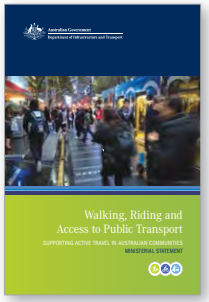
Policies at all levels of government acknowledge the many social, environmental and economic benefits of investment in walking. Critically, a holistic approach combining infrastructure and behaviour change is recommended across all policies.

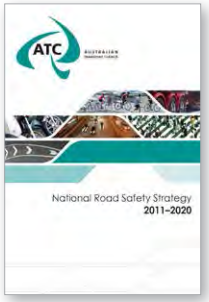
A summary of each of these documents is provided in Appendix A.

Federal Government Policies









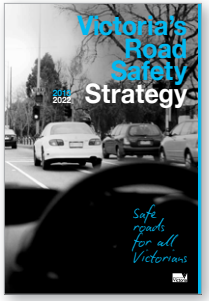
State Government Policies

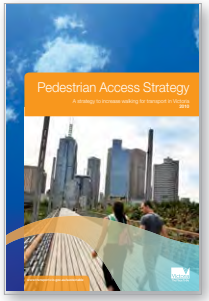


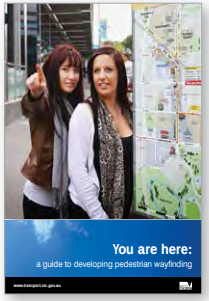






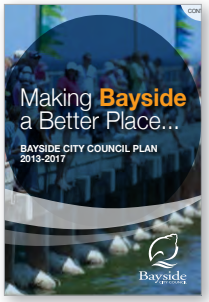






Local Government Policies



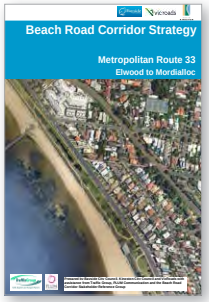




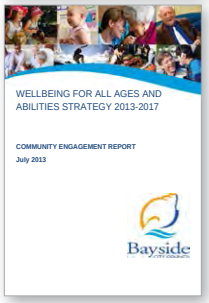




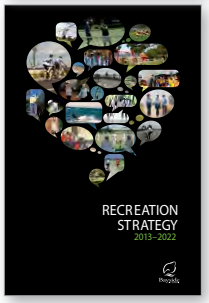


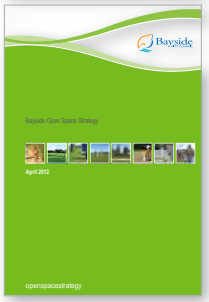












Demographics

Introduction

The following section presents a summary of the key demographics that can influence participation in walking for transport and recreation in Bayside. Where possible, a comparison has been made with Greater Melbourne.

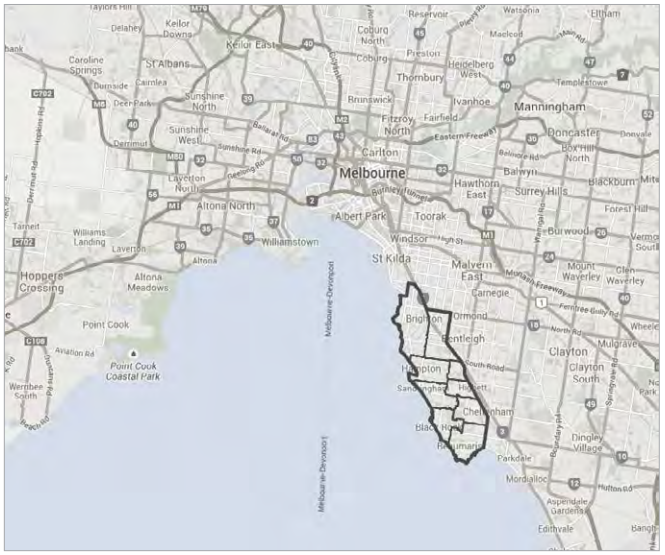
The data presented in this section is primarily based on the 2006 and 2011 Census (see http://profile.id.com.au/bayside/home). Additional information has been obtained from the following sources:

- City of Bayside Health and Wellbeing Profile 2013-2017 (2013)
- Integrated Transport Strategy Background Report (2013)
- Council Plan 2013-2017 (2013)
- City of Bayside website (September, 2014)
- Department of Health, Victorian Population Health Survey 2011-12

Location

The City of Bayside is located along the coastline of Port Phillip Bay between 8 kilometres (upper end) and 20 kilometres (lower end) south of the Melbourne CBD, as shown in Figure 1.

Figure 1: Map of Bayside in the context of Greater Melbourne



N.d., "Map of Bayside in the Context of Greater Melbourne" [image], atlas.id, viewed 16 June 2014, <http://atlas.id.com.au/bayside>.

The municipality's position on the bay provides residents with access to the foreshore's many amenities, including the Bay Trail shared path, beaches and cafes. The foreshore provides a range of attractions and activities for walking. However, Bayside shares a boundary with adjoining areas to the east by the Nepean Highway, which is a significant barrier for walking.

The municipality includes the suburbs of Beaumaris, Black Rock, Brighton, Brighton East (part), Cheltenham (part), Hampton, Hampton East, Highett (part) and Sandringham (see Figure 2 opposite). The northern suburbs offer opportunities for walking trips to activity centres while the southern suburbs have good proximity to green open space.

Figure 2: Map of Bayside's suburbs



N.d., "Map of Bayside's suburbs" [image], atlas.id, viewed 16 June 2014, <http://atlas.id.com.au/bayside>.

Road network

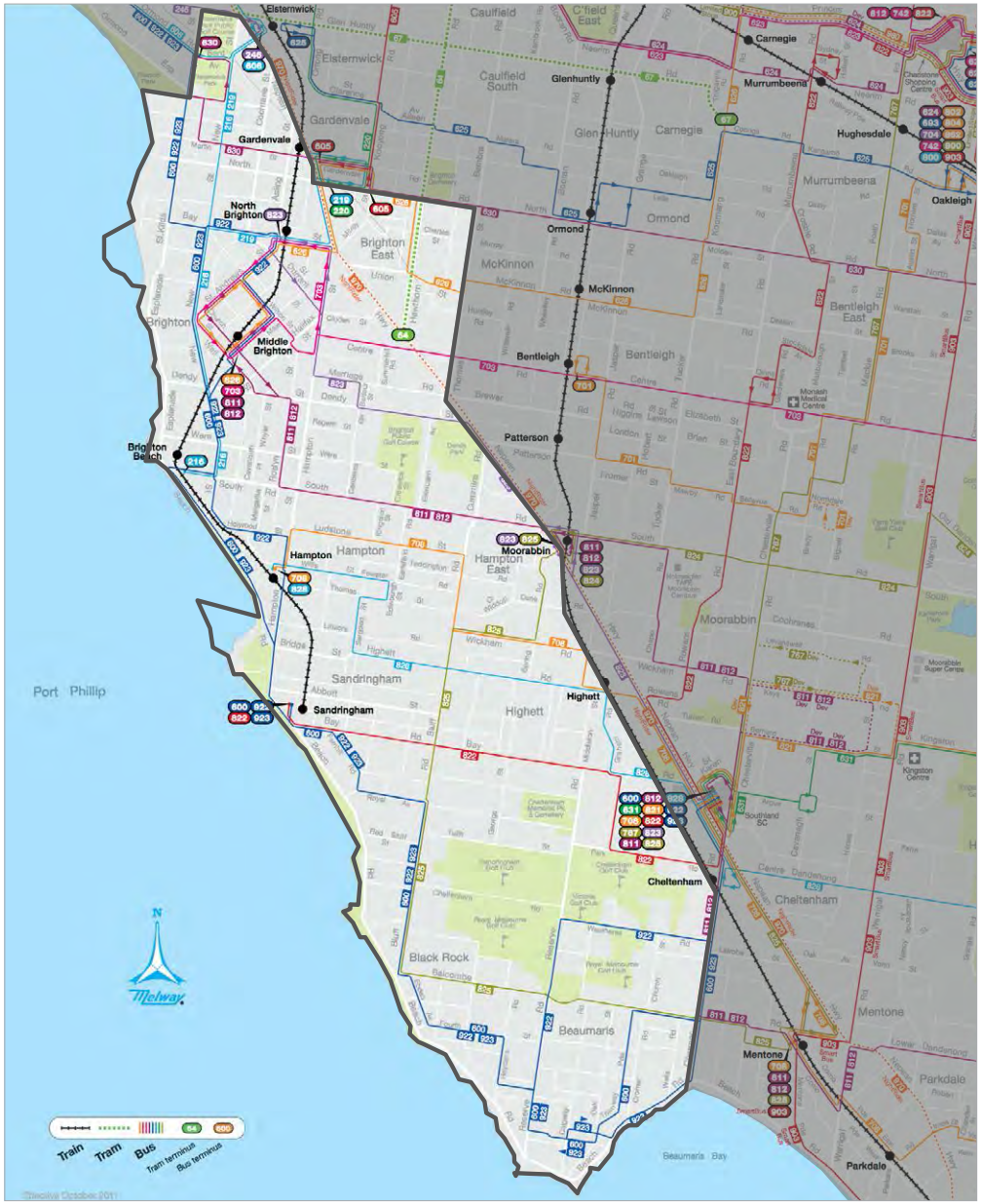
The local road network is generally laid out in a grid plan, catering for the needs of private and public transport, as well as freight. Truck movement in Bayside is generally limited to a relatively small number of arterial roads, such as the Nepean Highway, which carries the highest volume of trucks on Victoria's arterial road network.

Public transport

Figure 3 presents Bayside's public transport network, including train, tram, and bus. Bayside is served by two main metropolitan rail lines - Sandringham and Frankston - and nine stations. There are also 16 bus services and one NightRider service operating in Bayside, with many of these services connecting with local train stations. In addition, the north-east of the municipality is served by one tram route (Route 64). Although Route 67 which operates between the City of Glen Eira and the CBD also serves a small catchment of Bayside residents in the north-east of the municipality.

In general, the southern suburbs and some middle suburbs are less well served by public transport than northern suburbs. The rail lines run parallel to the fringes of the east and west of the municipality and the tram network coverage is limited. For many people, walking is the link connecting them with public transport. Limited access to public transport services will reduce the potential to increase walking and at the same time, may increase car dependency within the municipality.

Figure 3: The public transport system

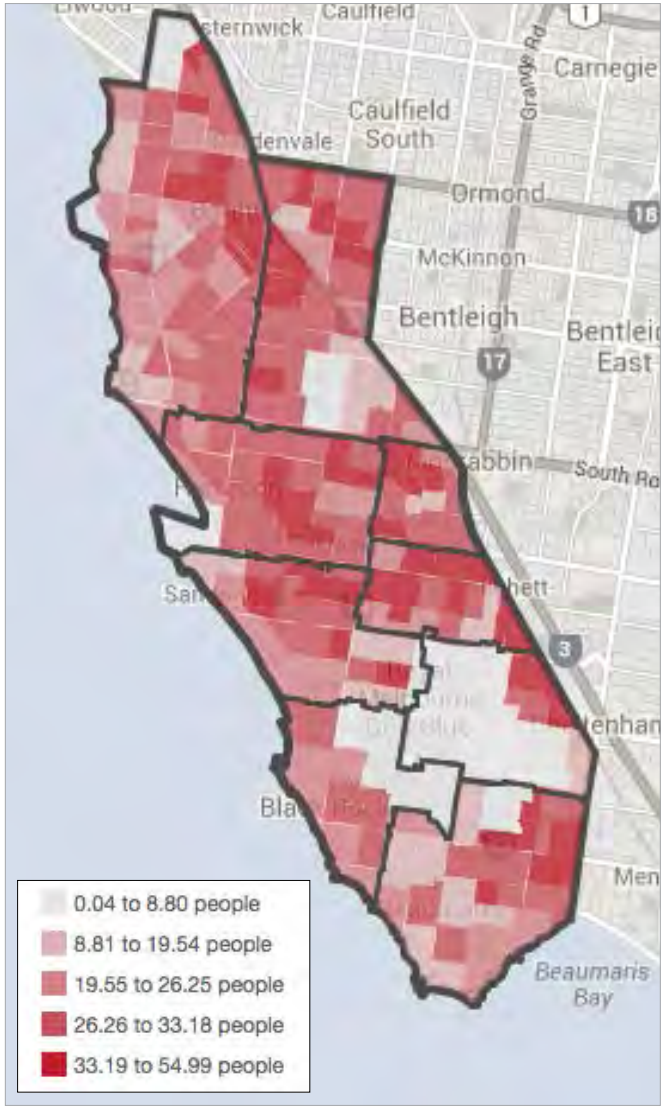


N.d., "Public transport network, City of Bayside" [image], Bayside City Council, viewed 17 June 2014, <http://www.bayside.vic.gov.au/documents/Bayside_PTV_map.pdf>

Population & density

Figure 4 below presents the neighbourhood population density across the municipality.

Figure 4: Population density in Bayside



N.d., "Population density in Bayside" [image], atlas.id, viewed 16 June 2014, <http://atlas.id.com.au/bayside>

Bayside is home to a population of 99,947 persons (2014 estimated residential population). In 2011, population density within the municipality ranged from a high of 32.12 persons per hectare in Hampton East to a low of 9.58 persons per hectare in Cheltenham. Higher densities are located around activity centres and rail stations, mainly in the northern and middle suburbs. Relatively lower densities can be found in the southern suburbs, particularly in the southwest where there are large areas of open space.

Housing structure

In 2011, there were 25,531 separate houses in the City of Bayside, as well as 11,030 medium density dwellings and 1,171 high density dwellings. In 2011, just over two thirds (67.4%) of all dwellings were separate houses, 29.1% were medium density dwellings and just 3.1% were high density dwellings. Higher levels of walking are typically associated with higher density development, where more destinations are accessible in closer proximity to one another.

Age

Figure 5 below shows the age structure of Bayside's residents.

Figure 5: Age structure

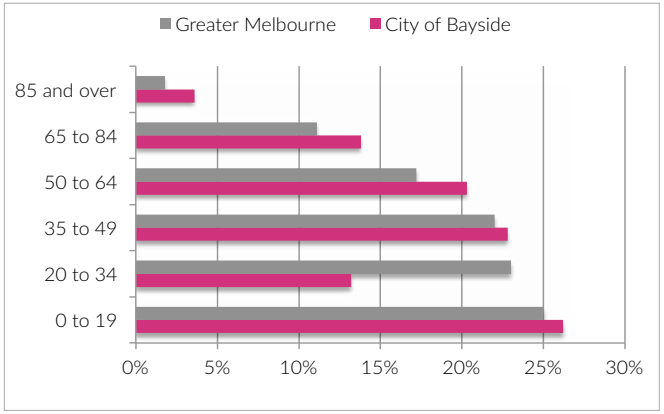


Figure 5 shows that there are a high proportion of people over 50 years of age in Bayside. The municipality faces a common challenge with an ageing population. Many older adults may face reduced mobility in the future as they are no longer able to drive and walking either as a mode on its own or to access public transport maybe a suitable alternative for some able bodied older persons.

Education

Figure 6 below shows the proportion of Bayside residents attending education institutions.

Figure 6: Bayside residents attending education institutions

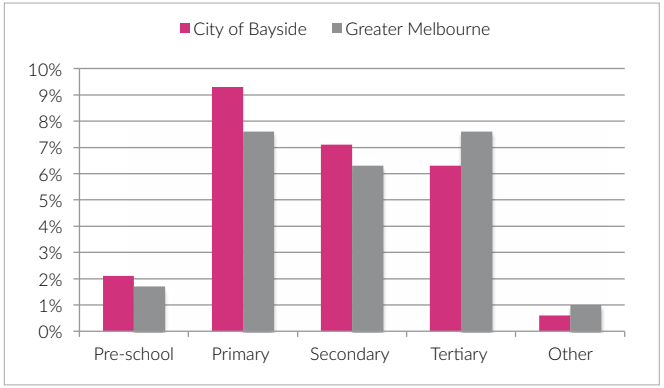


Figure 6 shows that in 2011, almost one in ten (9.3%) residents were attending a primary school, with 7.1% attending secondary school, and 6.3% in tertiary level education.

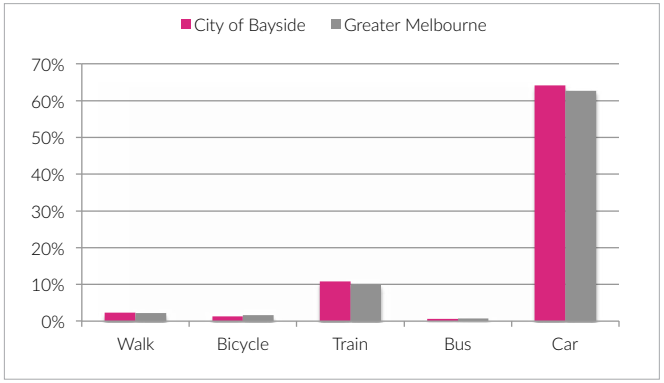
Schools should provide an excellent opportunity to develop walking habits from a young age. However, many children do not attend schools within a reasonable walking distance of their home.

Furthermore, many parents of primary school aged children often do not feel walking to school is a safe option. Notwithstanding any barriers to walking to school, many opportunities exist to increase the proportion of children using active healthy transport for school trips.

Method of travel to work

Figure 7 below shows the method of travel to work in comparison to Greater Melbourne. Almost two thirds of residents drive to work, with walking (as the only mode) accounting for just 2.2% of all commuting trips, which was slightly lower than the rate for Greater Melbourne (2.9%). As the number of employed people in Bayside increased by 2,075 between 2006 and 2011, the method of travel to work was affected as well.

Figure 7: Method of travel to work

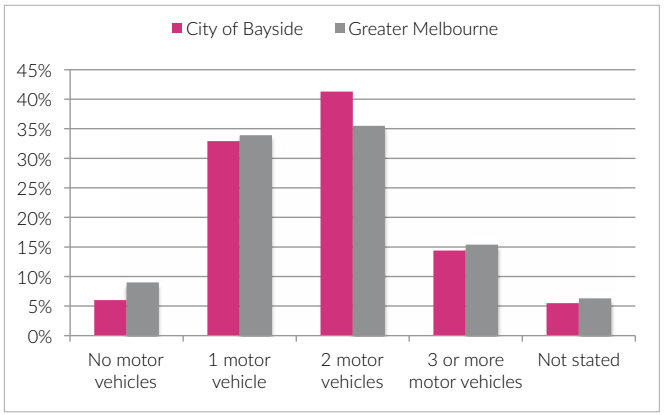


Although the majority of residents work outside Bayside (75.3%), there has been an increase in trips to work by public trains, which suggests an increase in walking. Furthermore, with almost one quarter (24.7%) of residents working in Bayside, there is potential to further increase walking to work.

Car ownership

Figure 8 shows car ownership in Bayside in comparison to Greater Melbourne. The data shows that almost nine out of ten households owned at least one car, with less than one in ten being car free, which is similar to the average across Greater Melbourne. While private vehicles continue to provide people with unmatched mobility, achieving a greater balance between cars and modes such as walking will provide significant economic, environmental and health and wellbeing benefits for the residents of Bayside.

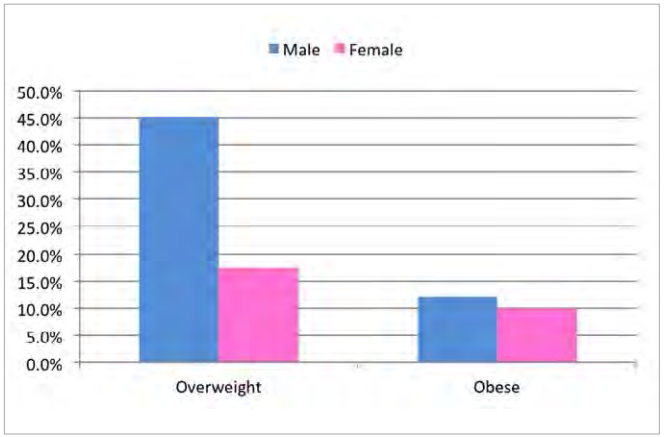
Figure 8: Car ownership



Health and wellbeing

Figure 9 below shows the body weight status of Bayside's female and male residents. More males are overweight (45.1% vs. 17.3% females) and obese (12.1% vs. 10.0%).

Figure 9: Body weight status by gender



Physical activity

A 2011-12 survey found that three quarters of Bayside males and females met the National Physical and Activity Guidelines. However, just 5.6% of Bayside students in years 7, 9 and 11 met the recommended amount of daily physical activity in 2009, compared with 11.3% in Greater Melbourne.

The three most popular recreational activities in terms of participation rates were walking for exercise, followed by beach swimming and cycling.

Ageing

Over the ten year period from 2001 to 2011, the proportion of elderly residents (85 years and older) in Bayside has increased by 38%. With the ageing of the baby boomer generation, it is anticipated that the proportion of persons aged 60 years and over in Bayside will also increase from 24% in 2011 to 26% in 2021 and then to 28% by 2031.

The proportion of Bayside persons with a disability, such as arthritis and osteoporosis, eye cataracts, dementia, hearing loss and heart disease is also expected to increase with ageing and many residents may find it increasingly challenging to get around on foot in future years.

Consideration of how transport and street environments are designed and maintained to meet these needs is important. Simple measures to reduce the existence of current physical barriers to provide access and the safe movement of these users will also benefit the wider Bayside community.

Heart diseases

In 2008, a total of 5.2% of Bayside adults suffered from heart disease (5.8% of males and 4.9% of females). Although Bayside has relatively low levels of obesity and high levels of physical activity, there are worrying trends among young and older people that could be significantly reduced through preventive actions, such as regular walking.

Walking Trends in Bayside

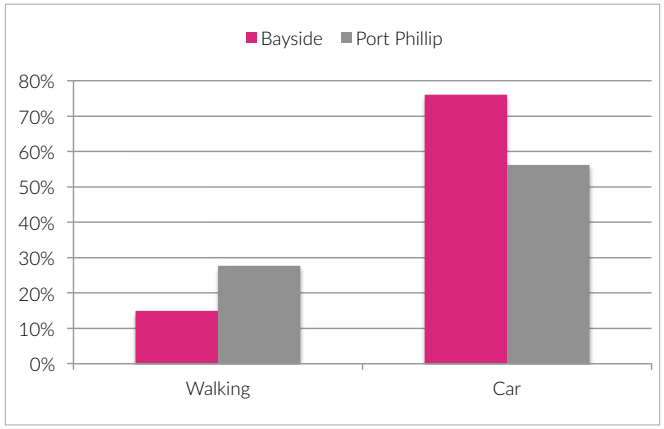
Introduction

The following section presents a summary of current participation in walking in Bayside. Where appropriate, walking trips were compared with car trips. The data in this section has been mainly based on: the 2007-2010 Victorian Integrated Survey of Travel and Activity (VISTA); the 2013 Bayside City Council Health and Wellbeing Profile; and the 2013 Integrated Transport Strategy Background Report. The latest available VISTA data was for the period 2007-2010.

Mode share of trips

Figure 10 below shows the mode share of trips in Bayside between car and walking compared with, for example, the adjoining municipality of Port Phillip.

Figure 10: Mode share of all trips



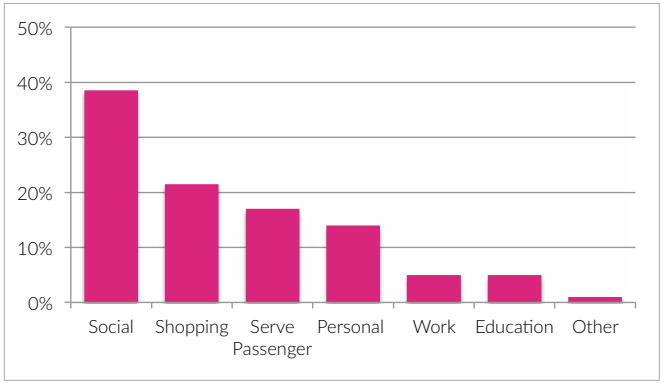
The mode share for walking was 15% of all trips, compared to 76.1% by car. Walking trips in Bayside are considerably lower than in the adjoining municipality of Port Philip, where almost 30% of all trips were by walking and just over half by car.

The most prominent age groups walking in Bayside were 30-34 year olds (15.6%), followed by 0-4 year olds (11.3%). It is assumed that the 0-4 year olds are accompanied by an adult. In Bayside, about two thirds of all walking trips are by females.

Trip purpose

Figure 11 below shows the purposes for walking trips undertaken in Bayside.

Figure 11: Purpose of walking trips



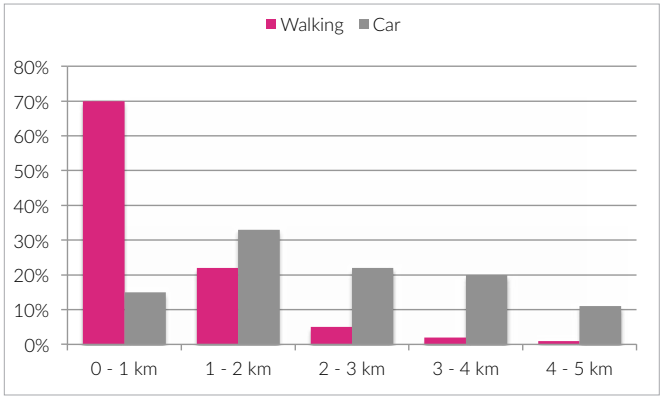
The most common trip purpose is social/recreational (38.4%), followed by shopping (21.5%), which were also the two most common journeys by car (either as a driver or a passenger).

The most prominent age groups walking for social/ recreational purposes were 30-34 year olds (20.4%), followed by 55-59 year olds (14.8%). The 30-34 year old age group are also most likely to walk for shopping trips (16.4%), followed by 65-69 year olds (11.9%).

Trip distances

Figure 12 shows the distances travelled on foot and by car in Bayside. According to VISTA, the vast majority (91.5%) of walking trips are under two kilometres. In comparison, 14.8% of car trips (either as a driver or a passenger) were less than one kilometre and a further 32.7% were between one and two kilometres.

Figure 12: Walking and car trip distances



The most prominent age groups undertaking walking trips between 0-2 kilometres were 30-34 year olds (15.8%), whereas 40-44 year olds (10.6%) and 50-54 year olds (10.3%) are more likely to drive these distances. Females are more likely than males to walk 0-2 kilometres (66.3% compared to 33.7%).

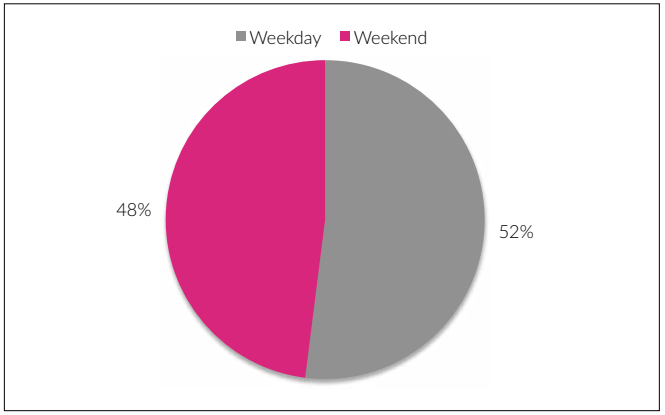
The most popular walking trip durations on both weekdays and weekends were 5-9 minutes (34.7%) and 10-14 minutes (24%). There is clearly potential for some car-based trips under two kilometres to be undertaken on foot among middle to older aged residents, and particularly among males.

Days and times of the day

Figure 13 shows when residents in Bayside prefer to walk. On average, just over half of walking trips took place on weekdays and the rest on weekends.

The most popular starting times for walking trips during the week were 3pm (12.4%), closely followed by 12pm (11.8%), as compared to 9am (22.9%) and 11am (13.3%) on the weekends.

Figure 13: When residents walk in Bayside



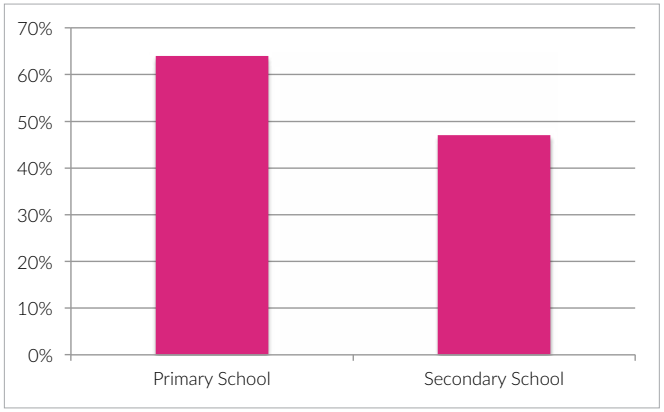
Travel to school

Figure 14 shows how many school children are driven to school in Bayside.

Almost two thirds (64%) of Bayside's primary school children are driven to school, even though a large proportion live within 1 kilometre of their school. Secondary schools in Bayside draw students from inside and outside of the municipality, with almost half (47%) driven to school.

For students living in Bayside, the average distance to the nearest primary school is 1.03 kilometres and the average distance to the nearest secondary school is 1.85 kilometres.

Figure 14: Percentage of school children who are driven to school



The most common concerns that stop parents from allowing their children to walk to school are the perception of stranger danger, traffic concerns and neighbourhood crime.

Notwithstanding the barriers that limit walking to school, there appears to be significant scope to increase participation in walking for school travel in Bayside.

Walking to activity centres

The majority of major activity centres in Bayside are accessible by foot and a significant opportunity exists to increase the number of walking trips to and from these centres, given the close proximity to nearby residential areas.

It is noted that the Southland Principal Activity Centre is mainly accessed by car. However, the proposed new train station serving the shopping centre, once constructed and open, will provide an opportunity for residents to combine walking and public transport trips.

Walking to sporting clubs

The Integrated Transport Strategy Background Report revealed that not all Bayside residents are within walking distance of their local sporting club. The main reason cited in the report was the range of sporting interests within households and the variety of activities provided, such that many activities were not available locally.

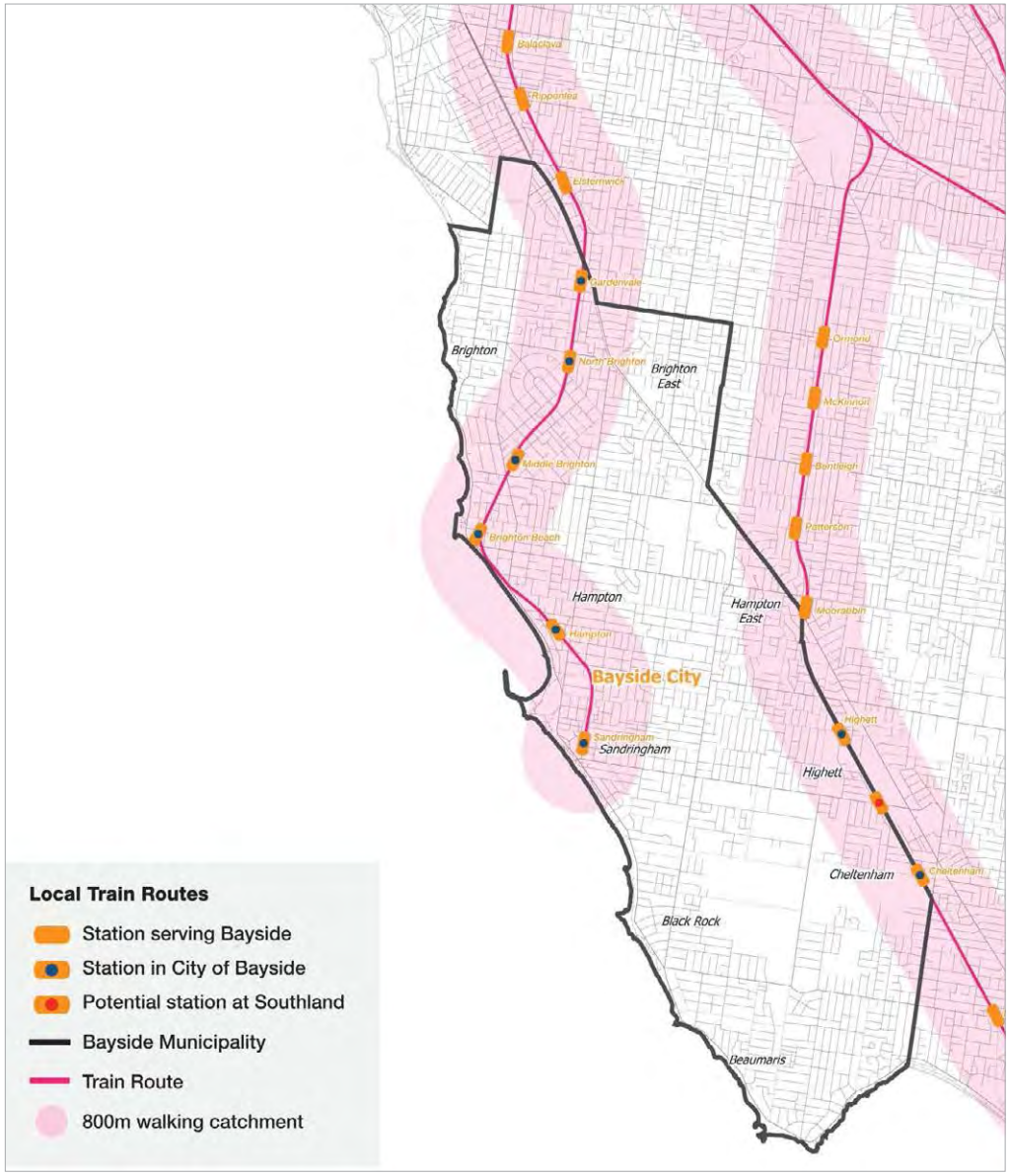
Walking for recreation and tourism

The Health and Wellbeing Profile revealed that walking for exercise is the most popular recreation activity (in terms of participation rates) in Bayside. Among the facilities that were rated highest by residents were walking paths, shared paths, foreshore parks and bush or coastal trails/ tracks. However, many residents live more than the recommended 400 metre walk from a large area of open space (greater than 0.9 hectare), and some residents live more than 400 metres from any open space. However, distance appears to be a secondary barrier, with private ownership and physical barriers such as railway lines noted as the main barriers.

Walking to train stations

Figure 15 overleaf shows the 800m walking catchment of train stations in Bayside. The Integrated Transport Strategy Background Report highlighted that residents in the central and southern suburbs of the municipality, together with parts of Brighton and Brighton East, do not currently reside within the recommended minimum walking distance of a train station. Although some of these areas are served by bus, options are limited and this reduces the potential for walking. Future opportunities are likely to focus on areas of development, particularly around existing rail stations and in activity centres.

Figure 15: Train lines within 800m walking distance



Bayside City Council 2013, ITS Background Report, p. 31

Current & Future Land Uses in Bayside

Introduction

The following section provides an overview of current and future land-uses in Bayside. The information presented in this section has been primarily based on the following sources: the 2012 Bayside Housing Strategy; the 2013 Integrated Transport Strategy Background Report; and the current Council website (at September 2014).

Growth areas

Figure 16 presents Bayside's key growth areas. The Bayside Housing Strategy noted that the municipality has been divided into housing growth areas and established residential areas, with the latter having limited capacity for change. Each of these areas have designated types of planned development. Growth areas are focused in the activity centres, which are well served by public transport.

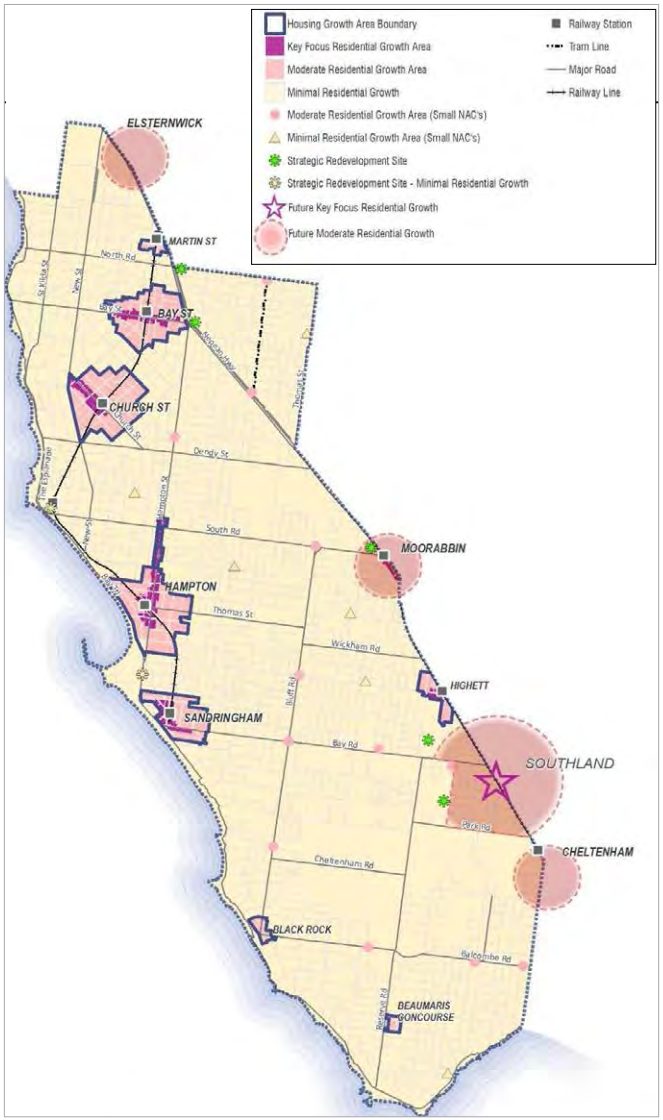
Activity centres

Figure 17 presents the walking catchments for activity centres across Bayside.

Principal activity centres (PAC)

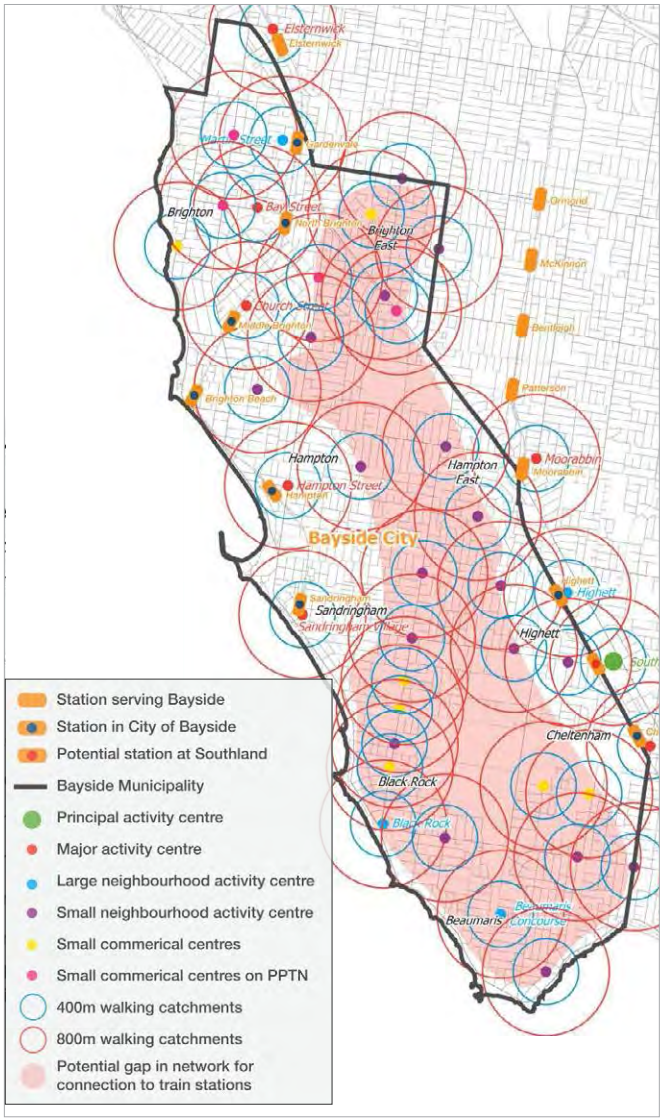
Southland is the only Principal Activity Centre in Bayside, and is located in Cheltenham on the boundary with the City of Kingston. Southland is the regional commercial centre and a key employment area. Southland can be accessed by bus from local stations but is mainly accessed by car. In April 2014, the State Government announced its commitment to constructing a new train station at Southland, which will provide an opportunity for walking and public transport trips to be combined.

Figure 16: Planned growth areas in Bayside



Bayside City Council 2012, Bayside Housing Strategy, p. 76

Figure 17: Activity centre walking catchments



Bayside City Council 2013, ITS Background Report, p. 71

Major activity centres (MAC)

The Major Activity Centres in Bayside are Church Street, Bay Street, Hampton Street and Sandringham Village. These centres are mainly retail based, with a mix of speciality stores, hospitality and personal and business services, such as health and fitness, finance, property, and public services. All centres have access to a train station along the Sandringham Line.

Large neighbourhood activity centres (LNAC)

There are four Large Neighbourhood Activity Centres in Bayside: Highett, Martin Street (Gardenvale), Beaumaris Concourse, and Black Rock. The latter is the primary LNAC, with a retail and hospitality base, including some speciality shops. Black Rock is not located on a train line and access to public transport is generally limited. Nevertheless, its proximity to the foreshore attracts many weekend visitors.

Small neighbourhood activity centres (SNAC)

The Housing Strategy identifies 18 Small Neighbourhood Activity Centres located throughout the municipality. These activity centres offer access to local convenience needs and transport services that link to the bigger activity centres. They are of particular importance for walking as they serve a small local area and are generally accessible by foot.

Bayside Business Employment Area

The Bayside Business Employment Area (BBEA) is located in the Bay Road/Reserve Road area of Sandringham, Highett and Cheltenham. One fifth of all jobs in Bayside are located in the BBEA, which is the largest concentration of employment in the municipality.

Schools and kindergartens

Figure 18 (overleaf) presents Bayside primary schools with a 1km walking catchment. There are 30 schools in Bayside with approximately 16,000 students based in 33 campuses. In addition, there are 34 kindergartens and early learning centres, which are private funded as well as community managed.

Community facilities and services

Figure 19 (overleaf) shows Bayside's community services and facilities, and their connection to public transport and bike routes.

There are four libraries in the municipality: Beaumaris Library, Brighton Library, Hampton Library and Sandringham Library. Three of them are located in multipurpose facilities.

Bayside has three senior citizen centres and six community/youth centres. In addition, there are 34 preschool/playgroup/maternal and child health care centres.

In general, the south of the municipality is not as well served than the north.

Foreshore

The Bayside to Port Phillip Bay foreshore is 17 kilometres long and encompasses 98 hectares of land. It contains structured and unstructured sports and activities, native bushland, beaches, picnic areas and barbecue facilities, playgrounds and cafes, car parks and a shared path ("The Bay Trail"). The foreshore is isolated from residential areas by Beach Road, which carries high volumes of motorised traffic everyday and is a major impediment to encouraging more people to walk to the foreshore, particularly for older adults, children and those people with reduced mobility.

Parks

The five large parks located across the municipality used for sports and family recreation include:

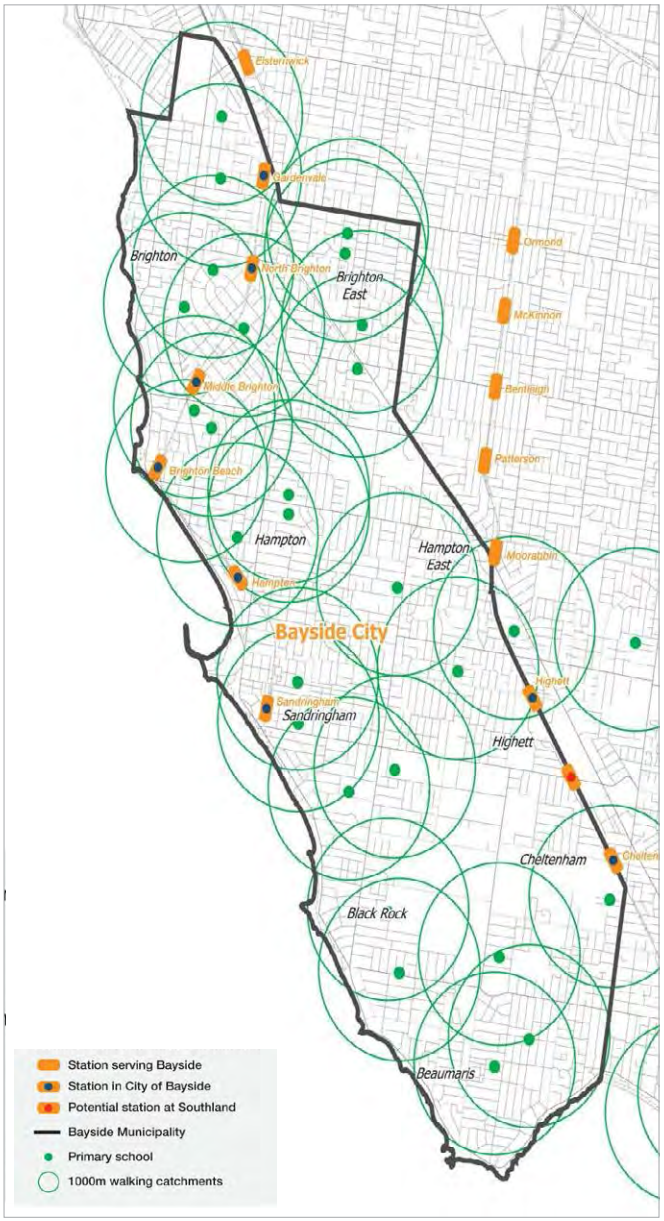
- Beaumaris Reserve
- Cheltenham Park
- Dendy Park
- Elsternwick Park
- Tjilatjirin Reserve

The remaining open spaces are mainly smaller parks spread across the municipality, providing for a range of structured and unstructured recreational activities and are predominantly used by Bayside residents.

Sports grounds and recreation facilities

There are two major recreation facilities within the municipality; the Sandringham Leisure Centre and Brighton Recreation Centre. Council also allocates the sports ground areas of a number of recognised schools and sports clubs to community organisations.

Figure 18: Bayside primary schools with 1km walking catchment



Bayside City Council 2013, ITS Background Report, p. 69

Figure 19: Community facilities and services and access to public transport and bike routes



Bayside City Council 2013, ITS Background Report, p. 67

Recreation

Figure 20 (opposite) shows the open space in Bayside, including the current provision of connections to public transport and bike routes.

There are approximately 443.7 hectares of public open space in Bayside, constituting 11.9% of the total area of the municipality.

Approximately 263.3 hectares of the open space is owned by Council, 179.2 hectares by the Crown and 1.2 hectares by other public authorities.

In 2006, there was 4.8 hectares of open space per 1000 people. This is forecasted to decrease to 4.6 hectares in 2016, and 4.3 hectares in 2026. The amount of public open space per capita in Bayside will steadily decline as the population increases.

Figure 20: Open space and access to public transport and bike routes



Bayside City Council 2013, ITS Background Report, p. 70

Summary

Walking for exercise is the most popular recreational activity in Bayside, with the foreshore being the most important destination for open space. However, Beach Road is a significant barrier to the foreshore for vulnerable pedestrians, including older adults, children and those people with reduced mobility.

Walking represents just 15% of all trips in the municipality, which is almost half of the level of walking in Port Phillip. Walking to work amounts to 2.2% of all commuting trips.

Many short walkable trips (between 0-2 kilometres) are currently undertaken by car. Furthermore, more than half of children are being driven to school, even though many schools are within two kilometres of where they live.

Although Bayside is served by train, tram and bus, the southern and some middle suburbs have limited access to the public transport network, which reduces the potential for combined walking and public transport trips.

While future growth will primarily occur around activity centres that are already served by train, there are opportunities for increasing walking to the many smaller neighbourhood activity centres. Additionally, it is important to recognise the need for increases in future trips to be undertaken by modes other than the private car.

Increases in walking will assist Council in its efforts to ensure that Bayside becomes more environmentally sustainable.

Walking safety review

Introduction

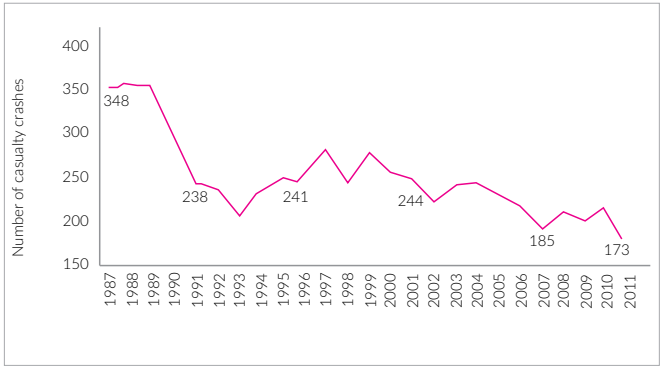
The following section presents a summary of walking-related crash and safety data for Bayside, based on the following sources:

- The 2014 City of Bayside Road Safety Strategy 2014-2019
- The 2013 City of Bayside Health and Wellbeing Profile 2013-2017
- The 2013 City of Bayside Integrated Transport Strategy Background Report
- A 2012 telephone survey on health and wellbeing undertaken by Bayside City Council
- The VicRoads' publicly available crash database, CrashStats
- The Transport Accident Commission (TAC) website
- The Community Indicators Victoria (CIV) website

Number of casualty crashes

Figure 21 below shows the total number of casualty crashes in Bayside between 1987 and 2011.

Figure 21: Number of casualty crashes



In the period 1987 to 2011, the number of casualty crashes in Bayside halved. Although the biggest decrease occurred between 1987 and 1993, significant gains were achieved through the introduction of a 50km/h default speed limit for most roads in built-up areas in 2001, as well as the introduction of a 40km/h speed limit in school zones in 2003.

Speed limit reductions to 40 km/h have recently been introduced on a number of roads within the municipality, including Bay Street, Church Street and Hampton Street.

An opportunity exists for Council to enhance safety, particularly for people with mobility impairments, people with prams and young children, and the elderly, by identifying other roads within the municipality that may benefit from speed limit reductions.

Severity

Figures 22 and 23 opposite, show the number of people killed or injured on roads in Bayside, by different user groups for the period 2009-2013.

Pedestrians are clearly the most vulnerable road user in terms of fatalities, as shown in Figure 22. However, although pedestrians appear to experience the lowest level of serious injuries, without exposure rates an accurate estimation of the degree of vulnerability cannot be made.

Figure 22: Road user category of fatalities

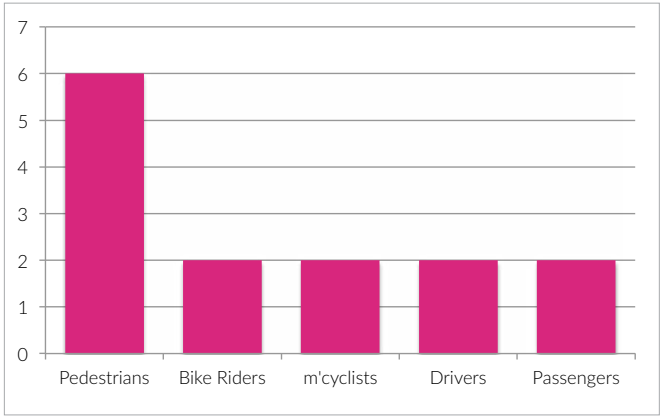
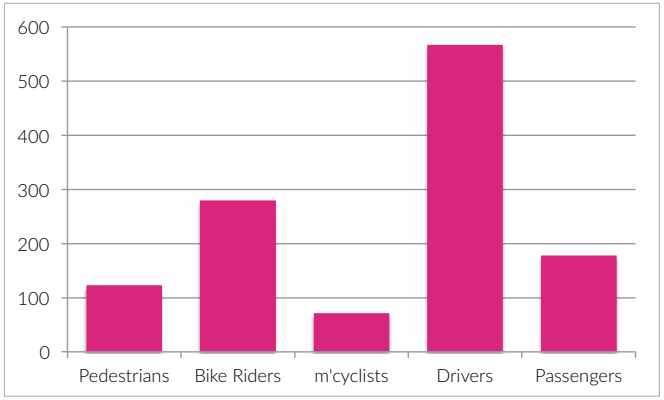


Figure 23: Road user category of people injured

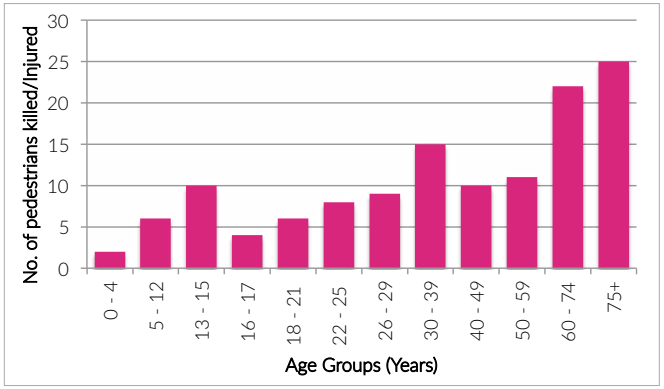


During the period 2009-2013, there have been a total of 14 fatal crashes in Bayside, in which six pedestrians were killed. During this period, a total of 123 pedestrians were injured in crashes, compared to 567 drivers and 280 bike riders.

Age and gender

Figure 24 below shows the age groups of pedestrians that were killed or injured in Bayside for the period 2009-2013.

Figure 24: Number of pedestrians injured or killed by age group



Pedestrians aged 60-74 years and 75 years and over, are the most vulnerable age groups for pedestrian crashes in Bayside. During the period 2009-2013, more than one third of all pedestrians killed were over 60 years old. Female pedestrians aged 50-59 and 60-74 were the most dominant age group among pedestrians injured in that same period, followed by older men aged 75+ and young males aged 13–15 years. In general, older pedestrians appear more vulnerable and more likely to be killed or seriously injured in Bayside.

Pedestrian crash locations

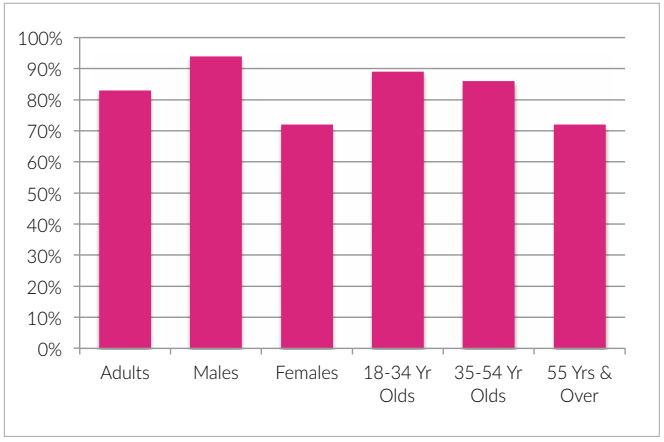
The 2014 Road Safety Strategy revealed that more than half (58%) of pedestrian crashes between 2007 and 2011 occurred on roads managed by VicRoads, with the rest (42%) occurring on Council managed roads. Approximately 15% of pedestrian crashes occurred on the Nepean Highway, with 13% on Bluff Road and 12% on Beach Road. All of which have speed limits of 60 km/h or above.

The crash data also revealed that most pedestrian injuries (42.6%) occurred on roads with a 60 km/h speed limit, followed by roads with a 50 km/h speed limit (39.7%). On Council managed roads, the intersection of Asling Street and Martin Street and Charman Road near Blagdon Street had the most pedestrian crashes. Just under half (44%) of all pedestrian crashes on Council managed roads occurred at intersections and just over half (56%) at midblock locations.

Perceived safety

Figures 25 below shows the percentage of adults in Bayside who feel safe walking alone in their local area, for the period 2007-2011.

Figure 25: Perceived safety walking in Bayside

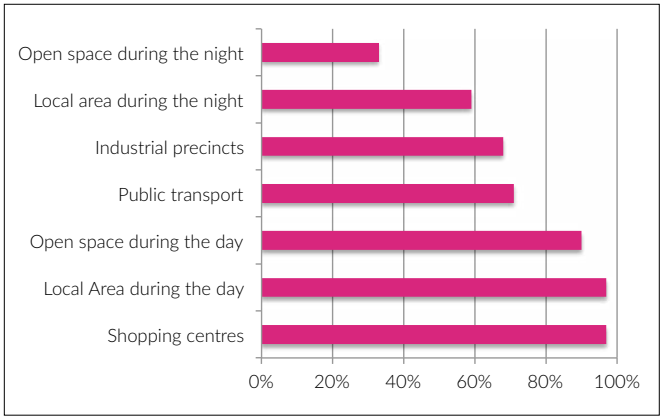


A Community Indicators Victoria (CIV) telephone survey undertaken in 2011 revealed that, in general, a high proportion (82.8%) of adults in Bayside feel safe walking. Perceived safety is generally lower among females and older people.

Overall, Bayside residents perceive their areas to be safer to walk in at night than the average across Greater Melbourne.

Figure 26 shows the percentage of adults who feel safe when walking in specific locations in Bayside (in 2012).

Figure 26: Percentage of adults who feel safe walking in specific locations (CIV)



Summary

Since 1987, the number of casualty crashes involving pedestrians has almost halved. Although the rate of decrease has since slowed, there has still been a reduction of 14% over the four-year period 2007-2011. Despite these gains and a relatively high perception of safety, pedestrians remain particularly vulnerable road users, especially older people. Speed appears to be the main cause of pedestrian casualties with over 80% of injuries occurring on roads with 50 or 60 km/h speed limits. The locations of particular concern include the Nepean Highway, Bluff Road, Beach Road, the Asling Street/Martin Street intersection, and Charman Road near Blagdon Street.

Bayside Community & External Stakeholder Feedback

Introduction

The following section presents a summary of community and other key stakeholder feedback. The information provided in this chapter represents the main issues raised during consultation processes undertaken during the development of recent Council strategies and plans, including the 2013 Integrated Transport Strategy and the 2011 Our City's Future project. Not all comments are relevant to this Strategy and are addressed in other Council strategies and activities.

In addition, site-specific feedback on barriers to walking within the municipality was obtained in 2014 through a web-based spatial mapping platform (www.crowdspot.com.au), which enabled residents to map, describe, discuss and share specific issues that affect their walking experience in the municipality.

General feedback

Actions to encourage walking

- Facilitate a change in behaviour toward a culture of sustainable transport
- Undertake more targeted and deeper research about walking in Bayside
- Make walking equally as convenient as using a car by improving infrastructure
- Facilitate local living by providing more jobs locally
- Emphasise the economic benefits of walking for communities and businesses
- Decrease, not increase, parking to encourage people to walk more often
- In collaboration with local clubs, offer guided walks within the municipality

Priority areas

- Adopt VicRoads SmartRoads approach to establish pedestrian priority areas in and around activity centres

Conflicts between road users

- Most conflict occurs between cyclists and pedestrians
- Shared paths are perceived as dangerous
- The Nepean Highway is considered dangerous for pedestrians, with poor sightlines that lead to conflict with cyclists
- There is concern about some road users not following road rules, which results in conflict, including cycling on footpaths, dogs without leashes and pedestrians on bike paths
- Motorised scooters for people with a disability are considered a hazard on the footpath
- Locations of conflicts between road users include:
  - Beach Road
  - Bluff Road
  - Nepean Highway
  - New Street

Speed limits

- Speed limit reductions are suggested for:
  - Hampton Street
  - Cochrane Street
  - Park Road
  - Arleigh Grove
  - Ludstone Street
- Speed limit reductions will increase road safety, in particular for the elderly, disabled, and children
- There is a lack of compliance with speed limits, particularly on Beach Road at night
- Consider speed limits for bikes on shared paths
- Excessive speed reductions could make drivers less patient, whereas traffic calming measures might be more effective

Accessibility of key destinations

- Accessing friends, larger parks, the Southland shopping centre, employment and social activities are reliant on public transport or a private vehicle
- The focus of pedestrian facilities appears to be on linking people to shopping centres but not necessarily to link people to leisure activities or other services

Public transport

- Lack of appropriate seating and shelter at bus stops - there are often no seats or shelters, or the shelters provided do not protect sufficiently from heat, wind and rain
- Bus stops are unattractive environments to wait at, as they are often a target for vandals, and feel unsafe, particularly when with children
- Improve pedestrian movement around transport nodes
- The narrow walkway towards Middle Brighton Station was of particular concern as there is a lack of passive surveillance

Walking to school

- Many children have to travel longer distances and are therefore being driven to school
- Most parents who walk their children to school indicated that they are reluctant to let them walk independently because of fear of strangers, the lack of school crossing supervisors, and children's lack of sense of road safety
- Establish a walking school bus
- Offer more road safety training in schools
- Install CCTV cameras around schools

- Reduce speed limits and police drivers' behaviour in school areas

Dog walking

- Older people and children do not like to walk alone and prefer to walk with a dog, and increased dog-walking makes community streets safer, but there are few facilities for dog walkers
- There is conflict between cyclists and dogs off the leash

Supporting infrastructure

- The elderly would like more seating in shopping centres and along pedestrian routes (e.g. the Bay Trail)
- The use of seats near Beaumaris library are restricted because people tie their dogs to them
- More water bubblers and toilet facilities are required along walking routes
- Too many trees have been removed where new developments have been constructed, so that footpaths don't have enough shelter from sun and rain and also become less inviting to walk along

Wayfinding and signage

- Lack of a coherent wayfinding strategy for pedestrians, as well as the poor visibility of street signs
- New signage should provide information about how to get to key destinations, including public transport
- Distances in metres should be indicated, to help people make informed travel choices
- Warning signs are required along the foreshore paths to inform cyclists to be aware of pedestrians and to give way to them

Lighting

- Bayside's roads, especially Beach Road, are not well lit at night

Street frontages

- Increasing number of high fences on property boundaries make walking less pleasant and inviting, and negatively affect the perception of safety

Upgrade of footpaths

- The unsealed path in Little Brighton Reserve should be levelled and formal road crossings installed: the path ends at Hawthorn Road and safe and easy access is required for the elderly located in the adjacent retirement village and aged-care facilities
- Footpaths are required along Cheltenham Park
- Footpaths should be wider across the municipality

Maintenance of facilities

- Overhanging plants and trees make it difficult to walk on certain paths
- Pavement conditions are often uneven, with bumps and potholes
- The Bay Trail is in need of better maintenance
- Upgrade the footpath along parts of Charman Road, as stormwater had damaged the pavement
- A clear policy is required for who is responsible for the maintenance of footpaths

Obstructions on foot/shared paths

- More ramps are required for mobility impaired people to access footpaths and shared paths
- Traders in activity centres obstruct footpaths with signs, cafe tables, and goods making it difficult to walk - see Hampton Street, particularly south of Safeway, and Church Street, west of the cinema
- Smoking at outdoor cafes should be prohibited as it is unpleasant and unhealthy to walk through
- Cars often park on the footpath on Highett Road near the border of Sandringham and Hampton, which makes it impossible for mobility impaired people to pass

Intersections, crossing & facilities

Pedestrian crossings

- Limited or inappropriate pedestrian crossing points
- The elderly and people with children feel unsafe crossing roads in Bayside
- Pedestrian crossings are not always in convenient locations forcing people to cross the road randomly - specific locations include: South Road; Ludstone Street; Wall Street; Hampton Street, between South Road and Small Street; North Road, at the corner of Cochrane Street, and where it meets the foreshore (pedestrian crossing across the cycle path needed); Park Road, at Cheltenham Railway Station; Beach Road, particularly at Sandybeach Centre, at the corner of Central Avenue, and at the corner of New Street; and Shopping strips, particularly along Bay Road and Church Street

Overpasses and underpasses

Overpasses and underpasses were requested for:

- Cheltenham Station, at the Charman Road and Park Road railway crossings (to avoid long waiting periods)
- Brighton Beach Station (re-opening the historical tunnel)
- Hampton Station, underpass near the bus stop (remove overpass, as it is unsuitable for mobility impaired people)
- Hampton Street shopping strip

Pedestrian lights

Pedestrian lights were requested for:

- Ivy Street, at the corner of Glencairn Avenue
- Between Normanby Street and Chelsea Street

Signal phases

Waiting times at pedestrian crossings are too long at:

- New Street, at the corner of Bay Street (green phase too short)
- Nepean Highway (green phase too short)
- Highett shopping strip (pedestrian crossing needs to be set to demand operation, not timer operation)

Roundabouts

Two of the roundabouts on Carpenter Street are considered inappropriate for pedestrians needs:

- The intersection with Well Street was described as dangerous for mobility impaired people (now resolved)
- It was noted that it is unclear who has priority at the Carpenter Street and Church Street roundabout

Events on Beach Road

- There are too many events on Beach Road that make it difficult to cross the road

Positive feedback

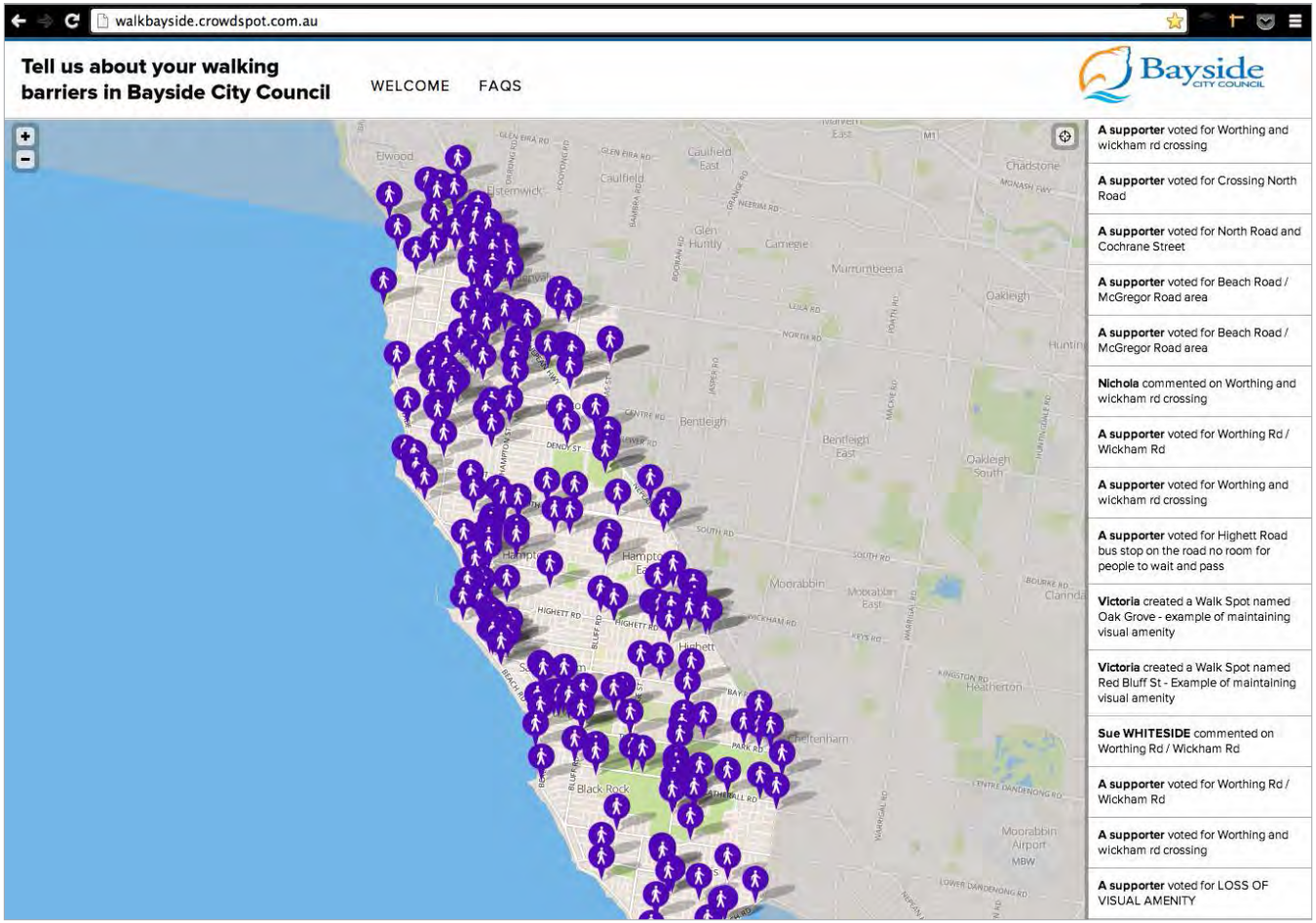
- Bayside's relatively short streets, good footpaths and shade make walking a pleasant experience under most weather conditions
- Bayside has clean streets, clean parks and good services and facilities
- The footpath in front of the Beaumaris library was described as an excellent model of design - "the interesting form, its width and vegetation would encourage walking"
- Street art, furniture, landscaping and pedestrian crossings are appreciated

Site-specific issue mapping

In May 2014 the community was provided with an opportunity to spatially map barriers they have experienced when walking in Bayside, using a web-based interactive mapping tool (www.crowdspot.com.au), as shown in Figure 27 below.

Participants could identify very specific locations on a map and add barriers, either by selecting one from a menu of common issues or adding their own. Participants could also upload photos and support and/or comment on other people's issues. The outcome of this process was the identification of key locations that restrict walking in Bayside. These locations have informed proposed short-term actions to be addressed in this Strategy. A summary of the outcomes are presented in the following sections.

Figure 27: Screen shot from Crowdspot platform



Overall results

A total of 224 locations were mapped by participants, which are spread relatively evenly across the municipality. Figure 28 and Table 1 present the frequency of each walking barrier mapped and supported by participants. 'Limited or no crossing facilities' was the most commonly mapped barrier, with many participants noting that they often have no option but to cross the road at random locations. Participants also commented that this was a particular issue when walking with children or for the journey to school. Many participants noted that is was nearly impossible to cross some roads safely, mainly because of fast and high volumes of motorised traffic. The most commonly noted barriers in the 'Other' category were lack of clear sightlines, lack of lighting, and roundabouts, where it was unclear if pedestrians or motorists have priority.

Table 1: Frequency and supports of key barriers to walking in Bayside

Type of barrier	Freq.	Supports	Total	%
Limited or no crossing facilities	102	207	309	54.7%
Other	26	27	53	9.4%
Poorly maintained footpaths	19	24	43	7.6%
Limited or no footpaths	22	16	38	6.7%
Negative behaviour of other road users	18	13	31	5.5%
Unattractive walking route	16	13	29	5.1%
Limited time to cross at traffic signals	5	20	25	4.4%
Limited or no provision for people with disabilities	6	10	16	2.8%
Limited or no wayfinding signage	5	7	12	2.1%
Footpath blocked	5	4	9	1.6%
Total	**224**	**341**	**565**	**100%**

Figure 28: Main barriers to walking in Bayside

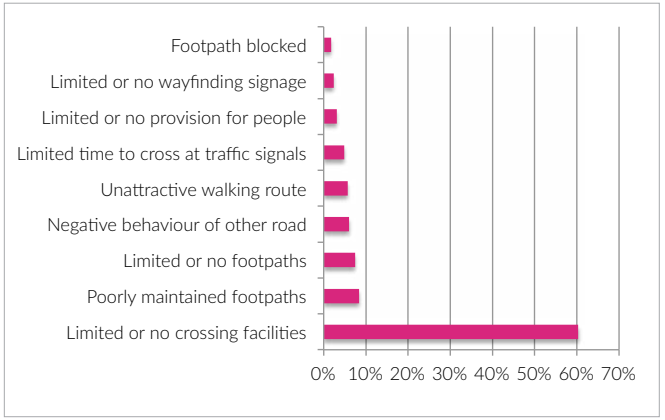
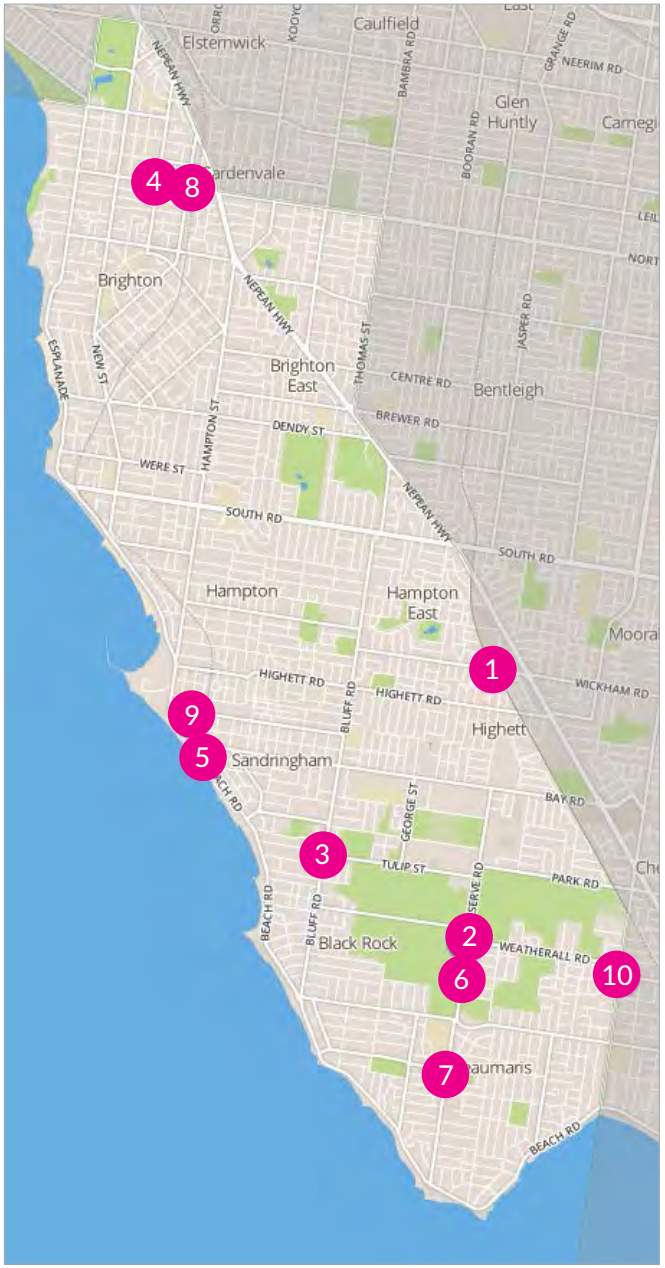


Figure 29 opposite, shows those locations that were mapped, supported and commented on most frequently by participants.

1. Worthing Road/Wickham Road

- The intersection was mapped individually by five participants; supported by a further 35 participants; with 49 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - The intersection was described as particularly dangerous for children, due to its proximity to schools and kindergartens
  - There is a high volume of motorised and pedestrian traffic, which will be further increased through new residential developments nearby
  - Observed speeding cars, often trying to cross the railway lines before the boom gates come down
  - Observed near misses
  - The lack of clear sightlines, creating blind spots for both pedestrians and motorists

Figure 29: Map of main barriers to walking in Bayside



2. Weatherall Road/Reserve Road

- The intersection was mapped individually by 2 participants; supported by a further 14 participants; with 23 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - High traffic volumes during school peak hours and golf events - particular concern for school children given its proximity to Beaumaris Primary School, making it difficult to cross the Weatherall Road
  - The right turn from Weatherall Road into Reserve Road was identified as dangerous
  - Observed crashes and near misses
  - Cars performing illegal u-turns

3. Tulip Street/Bluff Road

- The intersection was mapped individually by 4 participants; supported by a further 10 participants; with 11 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - High volumes of pedestrian and motorised traffic due to its proximity to a number of local destinations (e.g. the hospital, shopping district, sporting facilities, a park and an aged care centre)
  - The lack of clear sightlines, particularly near the bus stop

4. North Road/Cochrane Street

- The intersection was mapped individually by 2 participants; supported by a further 11 participants; with 3 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - The proximity to schools and kindergartens
  - The intersection is only designed for cars

5. Beach Road (opposite Sims Street)

- The location was mapped individually by 2 participants; supported by a further 11 participants; with 5 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - Large numbers of pedestrians crossing the road to get to the beach or from Sandybeach Centre to the carpark, including many elderly people and mothers with children

6. Reserve Road (Beaumaris North Primary School)

- The location was individually mapped by 3 participants; supported by a further 10 participants; with 11 comments
- The main barriers identified for this location were the lack of crossing facilities and negative behaviour of other road users. The issues associated with these barriers included:
  - Proximity to Beaumaris North Primary School, with high volumes of pedestrian and motorised traffic during school peak hours
  - Speeding cars and the lack of signage for motorists indicating that the area is a school zone

7. Reserve Road (Beaumaris Reserve)

- The location was mapped individually by 3 participants; supported by a further 9 participants; with 9 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - It is difficult to access the Beaumaris Reserve facilities
  - High volumes of pedestrian and motorised traffic, within close proximity to a number of public facilities
  - The high speed of motorists

8. North Road/Asling Street

- The intersection was mapped by 2 participants; supported by a further 9 participants; with 6 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - High volumes of pedestrian traffic, including many parents with children/prams crossing the intersection to access local schools

9. Chalmers Avenue/Waltham Street

- The intersection was mapped individually by 2 participants; supported by a further 9 participants; with 4 comments
- The main barriers identified for this location were poorly maintained footpaths and the lack of crossing facilities. The issues associated with these barriers was the use of uneven brickstone paving, which is particularly dangerous for the elderly and children

10. Latrobe Street/Charman Road

- This location is partially in the City of Bayside and partially in the City of Kingston
- The location was mapped by 1 participant; supported by a further 6 participants; with 5 comments
- The main barrier identified for this location was the lack of crossing facilities. The issues associated with this barrier included:
  - Its proximity to a school and a kindergarten, with many children crossing the road
  - High volume of motorised peak hour traffic
  - To get to school their children have to walk to the intersection of Charman Road and Balcombe Road (700m away) to cross the road safely

Walkability Audit Results

Introduction

The following chapter presents the key findings from a walkability audit undertaken across the municipality to assess the current walking experience.

The audit was completed over a four-day period by two teams of two auditors. The municipality was divided into five different zones, as shown in Figure 30 below.

Figure 30: Walkability audit zones



The audits focused on 10-minute walking catchments of the following key land-uses:

- Schools
- Public transport
- Council services and facilities
- Recreation
- Activity centres

The audits were carried out during the day and after dark. They covered both weekdays and the weekend.

Audit design

The audit was based on guidelines developed by the Heart Foundation and the Green Building Council of Australia's Green Star Communities rating tool. It comprised a checklist and scoring system that examined provision and quality, covering the following seven categories:

Pedestrian safety

To what degree contact between cars and pedestrians is minimised, speed limits are reduced and motorists appear to give priority to pedestrians.

Inclusion

To what degree the pedestrian environment caters for the needs of people with a disability (e.g. are tactile paving, dropped kerbs, an adequate width of paths and public transport stops with a seat and a covered shelter provided; and steep inclines, crossfalls, shiny, slippery and rough surfaces avoided).

Navigation

To what degree navigation can be achieved through local landmarks and a wayfinding strategy, as well as the indication of walking times and distances and to what degree motivational signage is provided to encourage walking.

Aesthetics

To what degree walking routes are attractive and points of interest are provided along those routes.

Connectivity

To what degree different local destinations and residential areas are connected through clear, safe and accessible walking paths and crossing facilities.

Personal security

To what degree it is safe to walk in Bayside during the day and after dark; passive surveillance is provided; pedestrian routes are well maintained; and sightlines are not obscured.

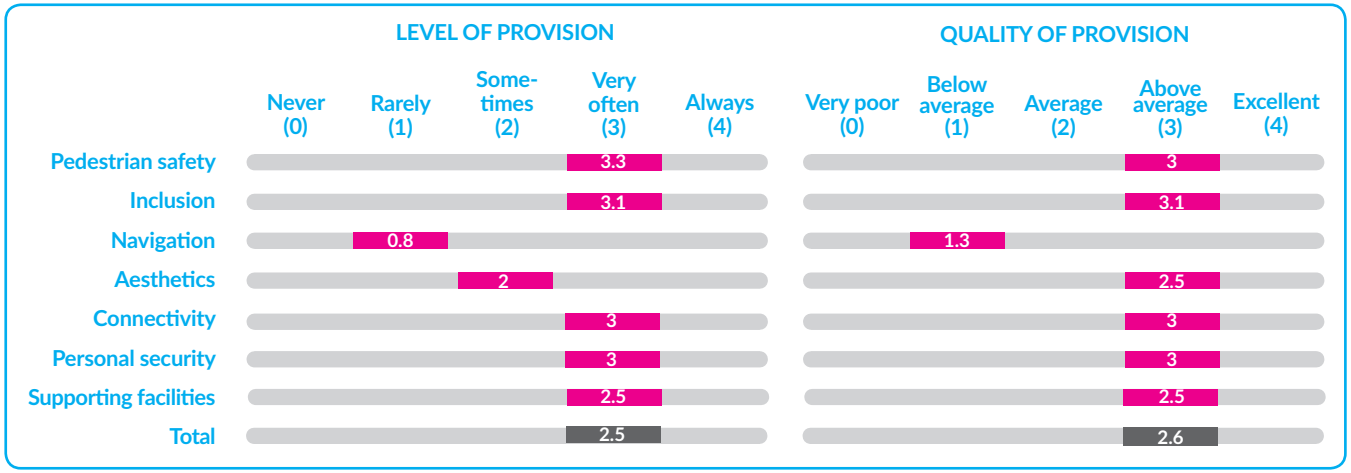
Supporting facilities

To what degree supporting facilities, such as water bubbler, toilets, rest areas and weather protection, at appropriate locations is provided.

Zone 1 - Northern suburbs

- The area is generally well-maintained and clean
- There are a number of public transport stops with a covered shelter and the area is relatively well-serviced by different modes of public transport compared with other zones
- There are many street trees making the area an attractive environment for walking, although there are not many points of interest and supporting facilities provided along these routes
- There are many no-through roads that limit access for pedestrians, creating circuitous walking routes
- There is limited provision of wayfinding / navigation

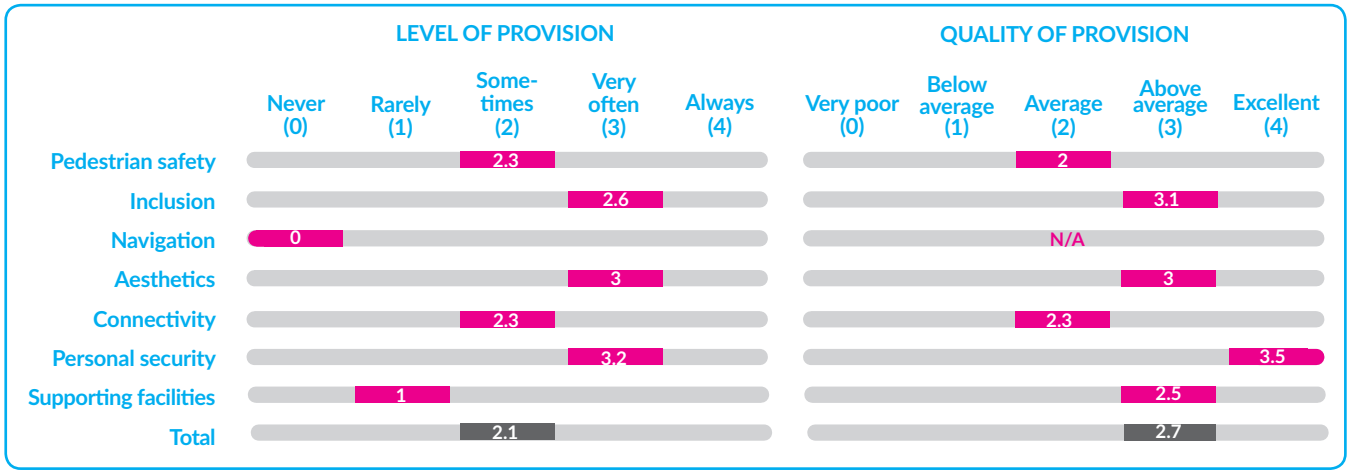
Figure 31: Walkability scores for Zone 1 - Northern suburbs



Zone 2 - Middle west suburbs

- There is good provision of seating, albeit sometimes placed in inappropriate locations
- Apart from the nicely landscaped and well-maintained parks, there are not many points of interest provided along walking routes
- The pavement in shopping areas is generally better than in residential areas, particularly in smaller streets where tree root damage is frequent
- There is not much pedestrian activity in the area
- There are few shelters and seating provided at bus stops
- There is limited provision of wayfinding / navigation

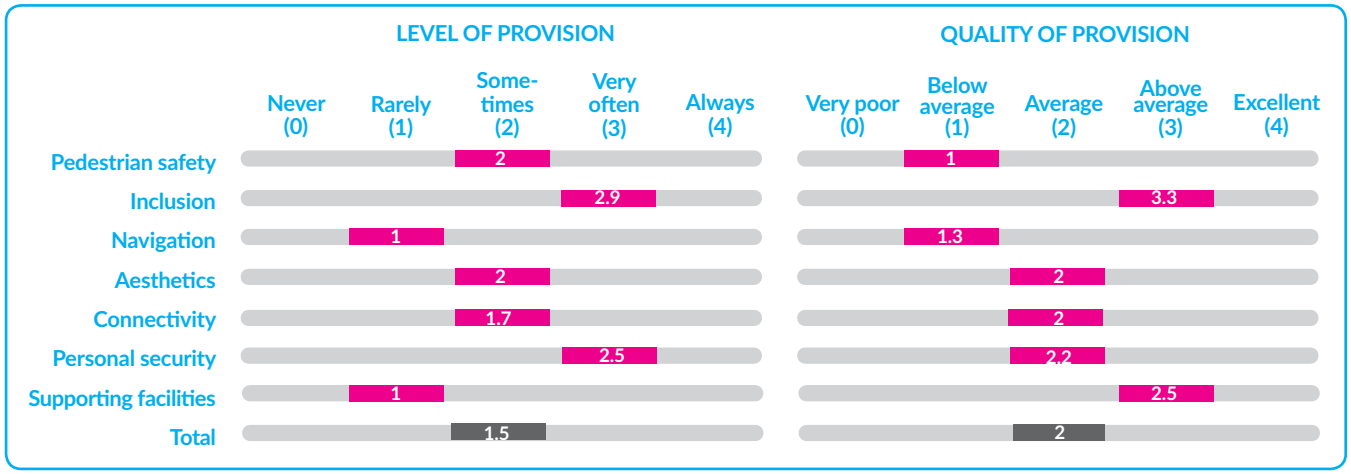
Figure 32: Walkability scores for Zone 2 - Middle west suburbs



Zone 3 - Middle east suburbs

- The area is generally well-maintained and clean, except in certain locations where overgrown vegetation obstructs some footpaths
- Walking routes are not very attractive, being quite monotonous and having few points of interest, in particular in the industrial area along Bay Road
- There is little pedestrian activity and few people were observed at all during the audits
- Some bus stops along Reserve Road are difficult to access as they are located on the side of the street without a footpath

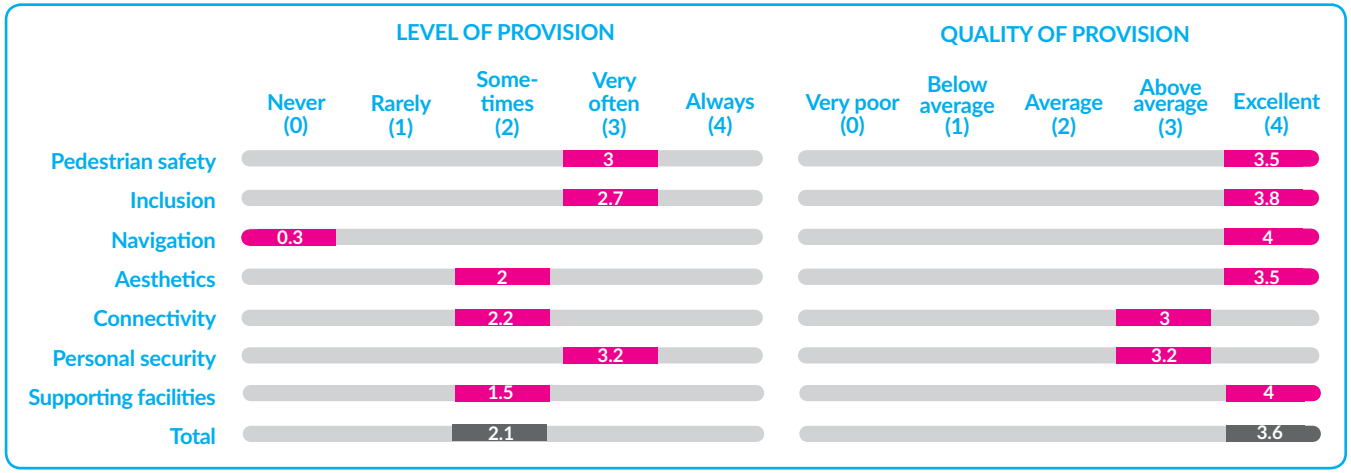
Figure 33: Walkability scores for Zone 3 - Middle east suburbs



Zone 4 - South west suburbs

- The overall quality of provision is better than in other zones
- Walking routes in the area are generally attractive having good landscaping and varied architecture
- There are just a few pedestrian crossings
- There is a general lack of pedestrian activity in the area

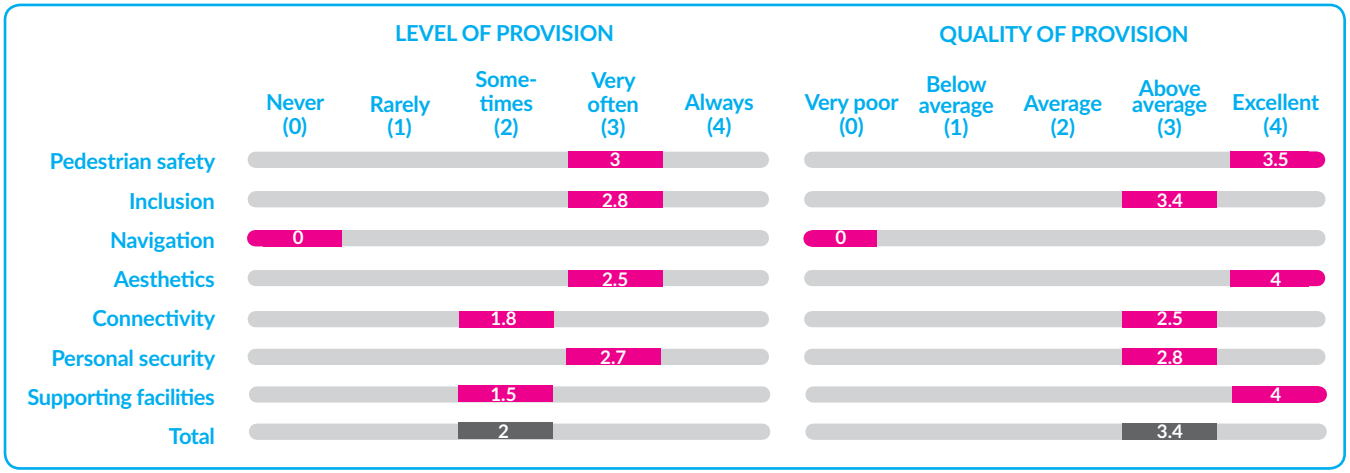
Figure 34: Walkability scores for Zone 4 - South east suburbs



Zone 5 - South east suburbs

- The overall quality of provision is relatively good
- There are several attractive parks but limited points of interest along many walking routes
- The walking routes in a number of residential areas are appear to be better maintained than in some activity centres, which might reflect their level of use
- There is a lack of seating
- Residential streets are poorly lit after dark

Figure 35: Walkability scores for Zone 5 - South east suburbs



Characteristics of the local walking environment

The overall quality of the walking environment in Bayside is relatively high. However, there are also some examples where the provision and quality of walking facilities do not meet best practice. The images below present a selection of issues identified in the audit and where they have been addressed to a high standard in Bayside.

Permeability of the street network



Crossing facilities



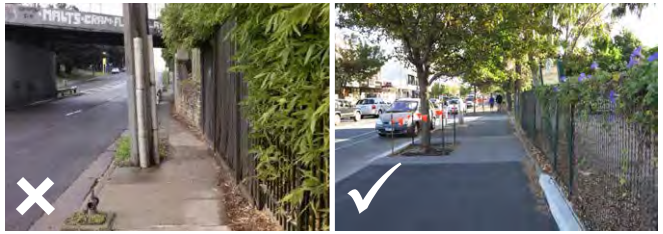
Priority in activity centres



Mid block crossings



Footpath widths



Accessibility of the street network



Bus stop facilities



Desire lines



Shared path widths



Street furniture



Provisions for mobility impaired



Footpath links



Summary

The walkability audit revealed that the current provision and quality of the walking environment in Bayside is relatively high. However, facilities are generally better in the northern suburbs, particularly in activity centres.

The audit revealed that for most issues where access was below standard, an example of best practice existed elsewhere in the municipality.

The results of the audit indicated that many of Bayside's suburban streets are relatively inactive in terms of the level of people walking. Some of the issues associated with this lack of activity include the prevalence of high fences in residential areas that reduce passive surveillance and ambient light after dark.

Although many of Bayside's streets and roads are relatively well landscaped, there is a high degree of repetitiveness in appearance, which reduces the attractiveness of walking. However, there are also many high quality recreational amenities available to most residents.

One of the key issues identified during the audit was the limited provision for people with mobility impairments, the elderly and people with prams. Although there are examples of best practice in providing for these groups, improvements in pedestrian priority are required to create a truly inclusive and safe walking environment for the whole community.

The audit confirmed the relatively poor level of access to the foreshore for pedestrians across Beach Road, which is heavily trafficked with fast moving vehicles. Safe crossing opportunities are limited, which reduces the ability of the community to access one of Bayside's premier amenities on foot.

3.0
Strategic Framework

Introduction

The following chapter presents a strategic framework for identifying appropriate actions to enable and motivate walking in Bayside.

At the heart of this framework is a model of behavioural change, which comprises the key enabling and motivating conditions that need to be in place for greater participation in walking to occur. These conditions are based on the extensive analysis and synthesis of the existing local context for walking in Bayside.

The enabling conditions will be delivered through a range of strategies, actions and projects based on a set of key design parameters.

These parameters include:

- An overarching strategic approach to increasing participation in walking
- Delivering the model of behavioural change
- Building on best practice

These parameters are discussed in more detail in the following sections.

Design Principles

The following principles, from the Australian Urban Design Protocol, provide a holistic approach for designing environments that support walking:

It prioritises people walking before vehicles:

- Are pedestrians given first priority on the streets, followed by cycling and public transport, then the movement of goods, and finally cars?
- Is it convenient for pedestrians to use and cross roads safely and with ease?
- Are there direct and continuous walking routes between key local places?

It is easy to get around on foot, wheelchair, pushing a pram or wheeling luggage:

- Is it easy to find your way around the neighbourhood when walking?
- Are footpaths and crossovers suitable for a range of people and abilities?

Buildings and streets feel like they're the right size and type for that place:

- Are street networks designed to encourage walking between places?
- Are building types and uses appropriate for their location?
- Are the building scales appropriate for that location?

It encourages physical activity and social interaction, and promotes a healthy lifestyle:

- Is it convenient to walk to local facilities and public transport, reducing the need to drive?
- Are facilities provided for outdoor activity?
- Is there a variety of outdoor recreation areas within walking distance (500m) of homes and work places?
- Are trees and plants located along streets and paths, to provide shade, comfort and visual interest?
- Are there scenic walking routes through parks and bushland or along rivers, lakes and sea shores?

These principles have been used to guide the selection of appropriate strategies and actions to enable greater participation in walking in Bayside.

Behavioural Change Model

The strategic approach

The overarching approach in the development of this Strategy includes the development of actions that should:

- Prioritise the needs of the young, the elderly, parents with young children, and people with disabilities: the Strategy aims to, first and foremost, support the creation of an inclusive walking environment
- Support incremental change, on the principle: small changes, times many, equals big change: the Strategy aims to deliver significant increases in participation in walking across the entire municipality through scaling up small changes that everyone can make relatively easily
- Support local people to make short local trips by walking, replacing where possible, unnecessary car travel: the Strategy focuses on supporting people to walk reasonable distances for everyday trips

The enabling & motivating conditions

A model of behavioural change comprises the key conditions that need to be in place for a behaviour to occur, or occur more often - in this case, walking.

A model of behavioural change should comprise strategies that can be translated into meaningful actions. The most practical model to emerge in recent years within the field of behavioural science, has been the COM-B model[1].

Michie et al (2011) developed this model using a principle of US criminal law that identified three prerequisites for the performance of a specified volitional behaviour: the skills necessary to perform the behaviour, a strong intention to perform the behaviour, and no environmental constraints that make it impossible to perform the behaviour. Non-volitional mechanisms involved in motivation (e.g. habits) and conceptualising causal associations between the components in an interacting system, were then added to create a model of behavioural change – as described in Table 2 opposite.

1 Michie, S, et al (2011) The behaviour change wheel: A new method for characterising and designing behaviour change interventions, Implementation Science 2011, 6:42 doi:10.1186/1748-5908-6-42

It is through the combination of these conditions that change occurs, as opposed to an oversimplified approach focused on, for example, only delivering walking infrastructure.

Table 2: Definitions Of Enabling Conditions

Enabling Conditions	Description
Opportunity	Physical and social environment that enables the behaviour.
Motivation	Reflective and automatic mechanisms that activate or inhibit behaviour.
Capability	Psychological or physical ability to enact the behaviour.

The key enabling and motivating conditions for the Strategy are presented on the following page (p53). They have been based on the extensive review of the current context for walking in Bayside - as detailed in Chapter 2.0.

1. Opportunity

The provision of a physical and social environment that enables everyone in the community to walk.

Strategy 1: Create a truly inclusive, people-orientated walking experience

Create an inclusive walking experience by, as a minimum, meeting the Disability Discrimination Act - starting with areas of high people activity.

Strategy 2: Prioritise walking in areas of high people activity

Prioritise people in activity centres, around schools and in residential and recreational areas, through speed reductions, streetscape design and policing.

Strategy 3: Create streetscapes that invite people to walk

Use placemaking techniques to add diversity and context to residential streets.

Strategy 4: Create a legible walking environment

Develop and deliver wayfinding strategy to create a walking environment that is legible for everyone.

Strategy 5: Maximise provisions for walking in new developments & streetscape upgrades

Leverage all opportunities to enhance existing facilities and build new ones to best practice standards.

Strategy 6: Improve the shared path experience for the whole community

Design shared paths based on function and the human condition.

Strategy 7: Normalise walking in Bayside

Develop a social norming program that promotes walking as a normal everyday activity in Bayside.

2. Motivation

The reflective and automatic mechanisms that activate walking or inhibit driving for short trips.

Strategy 8: Create a desire for people places & walking

Facilitate local communities to experience their streets and areas.

Strategy 9: Support initiatives to help residents engage with walking through social participation

Undertake a range of social activities that enable local residents to engage with walking as a shared experience.

3. Capability

The psychological and physical ability of everyone in the community to walk for a variety of trip purposes.

Strategy 10: Build shared path user's capacity for coexistence

Give all users of shared path facilities the knowledge and skills to coexist, enabling everyone to experience a safe, comfortable and enjoyable environment.

Strategy 11: Build confidence and capacity for walking to school

Support schools to develop a program to improve school children's road safety knowledge and skills to walk to school.

Strategy 12: Build the confidence and capacity of people with mobility impairments

Deliver existing available programs to improve the capacity of people with mobility impairments to walk in Bayside.

4.0
Strategies & Actions

Strategy 1: Create a truly inclusive, people-orientated walking experience

Actions

1.1 Develop a Principal Pedestrian Network (PPN)

The intention of planning, developing and designating a PPN of route is to support walking trips into and around activity centres. The intention of planning, developing and designating a PPN's is to identify and prioritise investment for existing parts of the street network and public spaces. A route forming part of the PPN will provide the highest level of priority for pedestrians and would include characteristics such as high quality footpaths, regular shade and weather protection, seating and priority over other modes at intersections.

1.2 Establish a rolling program of audits

Audit walking routes that will form part of the PPN to identify improvements that will enhance the walking experience.

The implementation of any upgrades will be prioritised as part of the capital works program.

1.3 Addressing important missing links in the footpath network

People are much less likely to walk if there are no formal footpaths, particularly if they have limited mobility or are pushing a pram. There are a number of streets within the municipality where no footpath currently exists. A policy will be developed to guide and prioritise a strategic footpath connectivity map. Demographic data, community departure points and local destinations will be examined as part of the strategic footpath connectivity map to ensure that those sites identified for treatment provide the best return on investment.

1.4 Provide midblock crossings

Provide regular formal crossing opportunities, particularly on roads with high traffic volumes and speeds in proximity of local schools and activity centres. Provide kerb build outs with refuge islands at midblock crossings to minimise walking on roads.

1.5 Provide pedestrian operated signals

Specific locations for pedestrian operated signals crossings, identified in the Beach Road Corridor Study, include:

- Between Bodley St and Key St, Beaumaris
- Between Chelsea St and Normanby St, Brighton
- North of Abbott Street and south of Canterbury Place

Council will advocate to VicRoads - who control arterial roads - for the introduction of pedestrian operated signals at:

- Dendy Village, between Dendy St and Marriage Rd
- Bluff Rd, near Eliza St
- Highett Rd, near Spring St

1.6 Provide ramps and tactile paving

Provide ramps and tactile paving at all intersections and crossings.

1.7 Create permeability for walking

Where possible, find opportunities to create permeability for pedestrians, particularly where it will improve access between residential and important destinations such as schools, activity centres and recreational facilities.

1.8 Prioritise movement of pedestrians across side streets

Maximise the use of courtesy crossings to maintain the continuity of the walking experience and provide a visible level of priority for people walking over motorised traffic on side streets. In activity centres, combine at-grade crossings with stop lines set back from the main street.

1.9 Develop a Street Space Management Plan

This plan will identify the function of each road within the municipality on a case-by-case basis, to determine where priority should be given to sustainable modes of transport, such as walking.



Tactile paving and ramps for inclusive access



Midblock crossing on Beach Rd, Bayside, VIC



Continuous footpath in Port Phillip, VIC

Actions

1.10 Develop a Place Design Manual

This manual will be used as a repository of information to aid the development of comfortable and welcoming public spaces. It will provide guidance on how the public realms of Bayside are managed and developed.

1.11 Improve priority at intersections

Advocate to VicRoads to increase the green phase for pedestrians at key intersections, particularly on multi-lane roads that require staged crossings. the main focus will be on routes to activity centres and schools.

Provide audible notification for people with visual impairments.

Where possible, provide loop detectors at the rear of kerb ramps to detect the presence of wheelchairs or metal framed prams

1.12 Improve pedestrian priority at roundabouts on key walking routes

The design of roundabouts and the road rules governing their use, currently prioritise the flow of traffic over pedestrian safety.

For roundabouts on lower trafficked roads and streets, the use of landscaping, road markings and lane narrowing to slow traffic, and the provision of refuge islands with ramps and tactile paving will be investigated.

For larger roundabouts, the provision of zebra crossings will be explored.

1.13 Improve the provision of supporting facilities

Provide seating/rest areas and drinking fountains, particularly on routes to key local destinations (e.g. activity centres and communities facilities).

1.14 Improve access to bus stops

Identify and address missing links in the footpath network where access to bus stops does not meet the needs of people with disabilities.

1.15 Improve facilities at bus stops

Work with Public Transport Victoria to ensure that all bus stops meet the minimum requirements of the Disability Discrimination Act.

1.16 Apply Third Generation Crime Prevention Through Environmental Design

Third generation Crime Prevention Through Environmental Design is the cutting edge approach for addressing crime problems. It goes beyond defensive measures and community building, to include ecologically sustainable interventions, modern technologies and social networking.

1.17 Police illegal parking on footpaths

Work with the local police to target areas of high pedestrian activity where illegal parking on footpaths is prevalent, particularly in proximity of retirement villages and aged-care facilities.

1.18 Regulate street clutter

Enforce regulations for managing street signage and furniture to maintain the effective width of footpaths in activity centres for people in wheelchairs, mobility scooter users and parents with prams.

1.19 Promote responsible dog walking

Deliver a behaviour change program to motivate more responsible dog walking behaviour on footpaths in areas of high pedestrian activity and on shared paths.

1.20 Ensure regular cleaning and maintenance

Continue to deliver a program of ongoing cleaning and maintenance to provide a walking environment that is attractive for the whole community - particularly for the needs of the elderly, parents with prams and young children and people with disabilities.



Street furniture with lighting, Melbourne, VIC



Drinking fountains, Bayside, VIC



Accessible bus stops, Bayside, VIC

Strategy 2: Prioritise walking in areas of high people activity

Actions

2.1 Explore opportunities to provide priority crossings for pedestrians

Investigate opportunities to provide priority crossings for pedestrians in activity centres, where possible, with pedestrian operated signals, kerb build outs, pedestrian refuges and zebra crossings.

2.2 Investigate opportunities for shared spaces in activity centres

Explore the potential for shared spaces in activity centres to increase space for people, increase space for retail uses, and promote lower speed environments where people feel safer and more comfortable.

2.3 Police driving behaviour

Work with the local police to regularly enforce road rules that protect people walking, including speeding, illegal parking, and failing to giveway.

2.4 Reduce traffic speeds

Aim to reduce speed limits to 40 km/h in all areas of high people activity:

Specific locations include:

- Station St, Bay Rd & Abbott St (Sandringham)
- Bluff Rd and Balcombe Rd (Black Rock)
- Hampton St, at Dendy Village, between Dendy St and Marriage Rd
- Highett Rd, between Graham Rd and the Nepean Highway

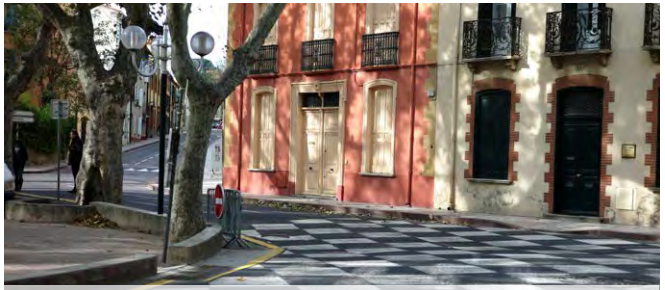
Maximise opportunities to create environments that enforce low speeds through urban design treatments.



Shared space implemented on busy shopping street in Brighton, UK



Low cost traffic calming and street greening in Copenhagen, Denmark



Innovative traffic calming technique in the town of Collioure, South of France

Strategy 3: Create streetscapes that invite people to walk

Actions

3.1 Identify walking routes around local landmarks and points of interest

Maximise the use of locality (e.g. landmarks and points of interest) to develop walking routes that will attract people to explore their communities by walking.

Promote these routes in maps and other materials available through Council.

3.2 Use landscaping to mitigate the impact of motor traffic

Landscaping can be effective in reducing the negative impacts of high volumes of motorised traffic. Lining walking routes and rest areas with trees will provide beauty and shade.

3.3 Use art and signage to tell the history of local people and place

Maximise the sense of place, known and unknown, to create informative walking experiences and strengthen the bond between residents and their communities.

Identify opportunities to commission new public art on key routes and enable local community placemaking as quick, low cost ways to improve the look and feel of local streets and roads.

3.4 Explore the impact of high fencing

Explore high fencing as a barrier to walking, particularly for perceived safety, and examine potential changes to local planning laws for new development.



Street reclaiming by local residents in Toowoomba, QLD



Yarn bombing



Using landscaping treatments to mitigate the impact of traffic in Surrey Hills, NSW

Strategy 4: Create a legible walking environment

Actions

4.1 Audit current wayfinding and signage
Undertake an audit of the location, provision and quality of existing wayfinding and signage for walking across the municipality.

4.2 Develop a wayfinding strategy
Develop a strategy for wayfinding and signage across Bayside, focused on the Principal Pedestrian Network, comprising:

Destination Signage:
Visual markers that identify specific places of interest, expressing their function, character and personality.

Directional Signage:
Signs to support navigation located at key decision-making points.

Orientation Signage:
Signage that supports directional signage in areas where there are many choices in terms of routes to, from and between key destinations. These signs provide more detail than directional signage, such as place information.

Landmarks:
Integrate key local landmarks, such as important buildings and public art, into the strategy as navigational markers.

4.3 Develop digital and print maps to complement wayfinding strategy
Develop digital (web and mobile) and print mapping, based on the wayfinding strategy, to support navigation and journey planning for recreation, education, public transport and shopping trips.



Orientation signage at Brighton Beach Station, Bayside, VIC



Destination signage for library in Castle Hill, NSW



Coastal wayfinding in Moreton Bay, QLD

Strategy 5: Maximise provisions for walking in new developments & streetscape upgrades

Actions

5.1 Identify and examine the most appropriate mechanism to require Integrated Transport Plans at the planning permit stage

Prepare requirements and local guidelines for Integrated Transport Plans (ITPs) to accompany relevant planning permit applications within Bayside. This should also include relevant planning permit requirements for end user facilities such as showers and bike storage. Council should encourage ITPs for all developments where future car use is potentially high.

5.2 Require minimum design standards

Require the minimum design standards for walking infrastructure in new developments, as set out in Clause 56 of the Planning Scheme

5.3 Integrate new footpath provision with existing network

Footpath provision in new development should fully integrate with the existing fabric of the local area. Particular attention should be given to connecting new development with local public transport services.

5.4 Encourage permeable fencing on private and commercial development

Permeable fencing on street frontages will increase passive surveillance, and ambient light on streets after dark.

5.5 Ensure that priority is given to pedestrian access for new developments

This will include minimising vehicle travel speeds and travel gradients, providing adequate space and appropriate treatments and facilities within development sites to facilitate people walking.

5.6 Leverage proposed streetscape works for walking upgrades

Utilise proposed road works, traffic management projects and other streetscape upgrades to improve provisions for walking.

5.7 Investigate the feasibility of preparing a Development Contributions Plan to support active travel

Development contributions are payments or works in kind provided by developers towards the provision of infrastructure, such as roads, storm water run-off management systems, open space and community facilities required to meet the future needs of local residents. This can also cover aspects related to active travel.

5.8 Encourage higher density development in activity centres

Higher density development in activity centres would provide enhanced access by walking to many key shopping, recreation, education and social destinations.



Permeable fencing in Carindale, QLD



Green streets in Chippendale, NSW



Streetscape upgrade in the City of Wodonga, VIC, that supports active travel, while enhancing local retail

Strategy 6: Improve the shared path experience for the whole community

Actions

6.1 Regularly audit shared paths

Undertake a rolling program of shared path audits for provision, standards, quality and experience.

Engage with local users to establish the level of perceived safety and comfort, particularly with older residents and people with disabilities.

6.2 Improve shared path lighting

Explore the use of LED lights along the edges of shared paths in areas of low light, to delineate path edges after dark.

6.3 Upgrade shared path network

Shared path upgrades include:

- Improve existing sections of the Nepean Highway shared path
- Provide a separated path adjacent to the Bay Trail, between Bay Street and Brighton Baths
- Complete the missing section of the Nepean Highway shared path between Rose Street and Gardenvale Station

6.4 Explore the feasibility of providing new shared paths

Possible locations include:

- Union Street, along Little Brighton Reserve
- St Kilda Street, between Bent Avenue and Spray Street
- Nepean Highway, through Moorabbin Activity Centre
- Cheltenham Road, between Bluff Road and Reserve Road
- Part of New Street, linking Bayside with Glen Huntly Road and the City of Port Phillip
- Link the CSIRO site with BBEA, Highett activity centre, Lyle Anderson Reserve, Sir William Fry Reserve, Southland activity centre and the proposed Southland Station
- Reserve Road
- Sandringham rail corridor
- Frankston rail corridor



Shared path designed to manage speed and interaction using surface treatments on the Glebe Foreshore in Sydney, NSW



Environmental graphics on shared paths in Brisbane, QLD create a more effective method of communication compared to standard regulatory signage

Strategy 7: Normalise walking in Bayside

Actions

7.1 Sign and promote the International Charter for Walking

Signing and promoting the charter signals Council's support for walking and its importance in establishing Bayside as one of Melbourne's most liveable cities. The signing of the charter will be promoted to the community.

7.2 Promote walking to local events

Utilise local events, such as the 'Bright n Sandy Festival, 'Carols in the Park', and the 'Farmers Market' to promote walking.

7.3 Create social proof of walking in Bayside

Develop a social norming campaign to create social proof that all types of people in the community already walk for a range of trips, particularly to school, to public transport, for shopping, and for recreation.

Collate the stories of local people - all ages, gender and ethnicity - who already walk for all kinds of trips.

Stories will be used to maximise content to communicate to the community and establish walking as a common and easy activity for everyone.

The stories will also be communicated in articles in Council newsletters and local papers; on Council's website; and for potentially for outdoor advertising.

Promote walking on the 'small times many' principle, i.e. people can achieve big change by making many small changes (e.g. swapping some local trips they normally do by car with walking).



'Made for Walking' Campaign by Yarra Ranges

Strategy 8: Create a desire for people places & walking

Actions

8.1 Use demonstration projects to promote alternative use of space

Investigate and support temporary projects, such as parklets, to showcase the value of reallocating space to people in activity centres. Work with local traders to identify locations that will also benefit local retail.

8.2 Market existing trail booklets & App

Increase awareness of the availability of these booklets, and the Bayside Walks and Trails smartphone app, as walks of interest and to promote the variation of the walking environment.

8.3 Explore the creation of new maps for short local walking routes

Develop a series of maps promoting short (10-20min) walking routes aimed at people with lower levels of physical ability (e.g. the elderly). The routes should highlight key destinations within the proposed walking distance.

8.4 Create a walking section on Councils website

Create a reference point for all walking related activities, programs and projects in Bayside.



Parklets are now a global urban placemaking tool to reclaim space for people and improve the local retail offering - image from Adelaide, SA



Bayside Walks and Trails App is an example of an excellent tool to support people in the community.



Street parties offer residents the opportunity to experience their streets - Baltimore, Maryland, USA

Strategy 9: Support initiatives to help residents engage with walking through social participation

Actions

9.1 Create a walking program

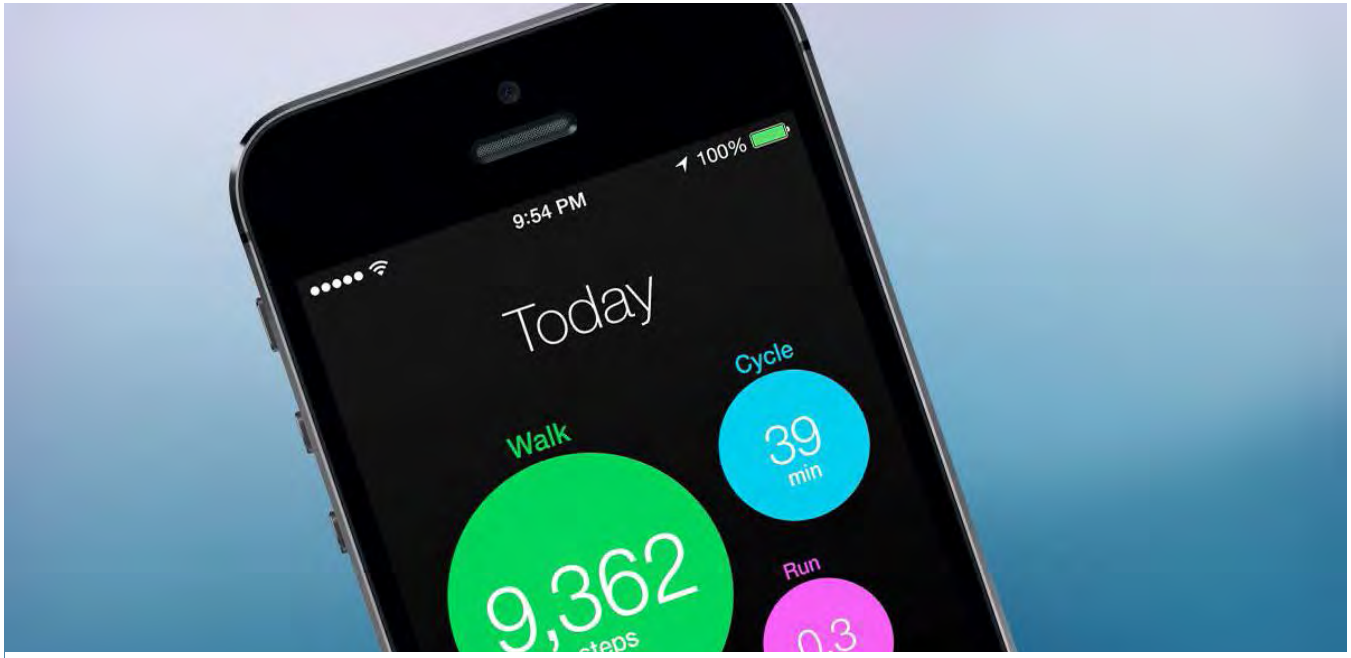
Develop a behaviour change program to engage residents in walking, such as the 10,000 steps per day challenge, and combine with freely available Smartphone Apps, such 'Moves', to track daily activity and share results. Liaise with local traders to explore ways to integrate incentives for shopping on foot.

9.2 Support and promote local walking groups

Promote local walking groups on Council's website with a dedicated page, including important contact details. Liaise with existing groups to establish which sectors of the community they cater for and the kind of activities they organise. Detail this information on the website to help residents find the right group for their needs.

9.3 Support external walking initiatives

Support existing external walking programs, such as Walktober, Walk2Work Day, and Walk2School Month. Collaborate with key advocacy organisations, such as Victoria Walks and the Heart Foundation, on their local and statewide walking programs and initiatives.



Smart Apps, such as 'Moves', are freely available and enable users to track and share their physical activity and help motivate greater participation



National Walk to Work Day



Active in Parks - Heart Foundation walking groups program

Strategy 10: Improve shared path's capacity for coexistence

Actions

10.1 Deliver a shared path behaviour change program

Design and deliver a behaviour change program to be delivered across the network of shared paths in Bayside.

The program should seek to improve coexistence among all users by targeting negative behaviours and highlighting positive behaviour.

The program should be delivered with the understanding that behaviour is the product of people's interaction with the environment around them. Often it is the environment that is the cause of undesirable behaviours.

10.2 Explore conflict between users at the Middle Brighton Sea Baths Precinct

Examine the relationship between the physical and regulatory environment at the Middle Brighton Sea Baths, and the behaviour of all current users.

Identify aspects of the physical design that contribute to negative behaviours.

Identify aspects of current rules and regulations that may impact on the management of the precinct, resulting in negative interactions between users.



The Share Our Streets Campaign by the City of Melbourne: Shared space behaviour change program designed to engage users of shared spaces in a conversation about making the space work for everyone



Shared path program run by the City of Sydney to engage users in conversation



The successful 'Two Tings' shared path program in London, UK

Strategy 11: Build confidence and capacity for walking to school

Actions

11.1 Provide resources for schools to engage with walking

Provide access to key resources to enable schools to explore, plan and engage with walking to school.

Resources will include; guidelines for developing an active travel to school plan; information on road safety for children; information for parents on the benefits of walking to school and the role they can play; and key contacts for Council and other important external stakeholders.

These resources will be collated from existing available sources - www.roadsafetyeducation.vic.gov.au - rather than being developed as new material.

Support the Ride2School program.

11.2 Encourage and support schools to develop 'Park and Stride' initiatives

It is acknowledged that some families do not live within walking distance from school. 'Park and Stride' simply means driving some of the way to school, parking up and walking the rest of the way to school.

It is a good way for families that live a long way from school to be able to walk as part of their journey to school and enables children to become more active whilst exploring and learning more about the area around school.

11.3 Support local schools with issues outside of school grounds

Provide technical advice to schools on issues associated with traffic management outside the school gate, and issues identified on routes between local residential areas and schools.

11.4 Support road safety education in schools

Support the delivery of road safety education in schools across Bayside, including the delivery of programs such as *Kids on the Move* and *Starting out Safely*.

Liaise with external stakeholders, including the Department of Education and Early Childhood Development, Traffic Safety Officers, the TAC, VicRoads, RACV, The Amy Gillett Foundation and Bicycle Network (the latter for safety on shared paths).



Brisbane's Active Travel to School Program has achieved close to a 20% increase in walking to school

Strategy 12. Build the confidence and capacity of people with mobility impairments

Actions

12.1 Deliver 'Safer Scooter & Wiser Wheelchair' program

Work with an external provider to deliver the 'Safer Scooter and Wiser Wheelchair' education programs.

This course supports existing motorised scooter and electric wheelchair users, their families and carers, giving them the capability to minimise the risks associated with using these devices.

The program includes information about safety, legal and liability issues, safe travel on public transport, trip planning and support services available to increase confidence and improve safety for users and the general public.

12.1 Deliver 'Wiser Walker Wiser Traveller' program

Work with an external provider to deliver the Wiser Walker Wiser Traveller.

This course builds capacity for a wide range of travelling and transport options and to promote the health benefits of continued exercise and social interaction through participation in local walking. It introduces participants to support services, explains public transport and other travel options including: myki, taxi fare estimator, PTV journey planner, free or discount travel cards and assist them to develop travel plans and the skills to enable them to travel confidently and safely.



The Safer Scooter Program is currently delivered in the City of Boroondara in partnership with Hawthorn Community Education Centre



The Wiser Walker Wiser Traveller Program is currently delivered in the City of Boroondara in partnership with Hawthorn Community Education Centre

5.0
Site-Specific Projects

Introduction

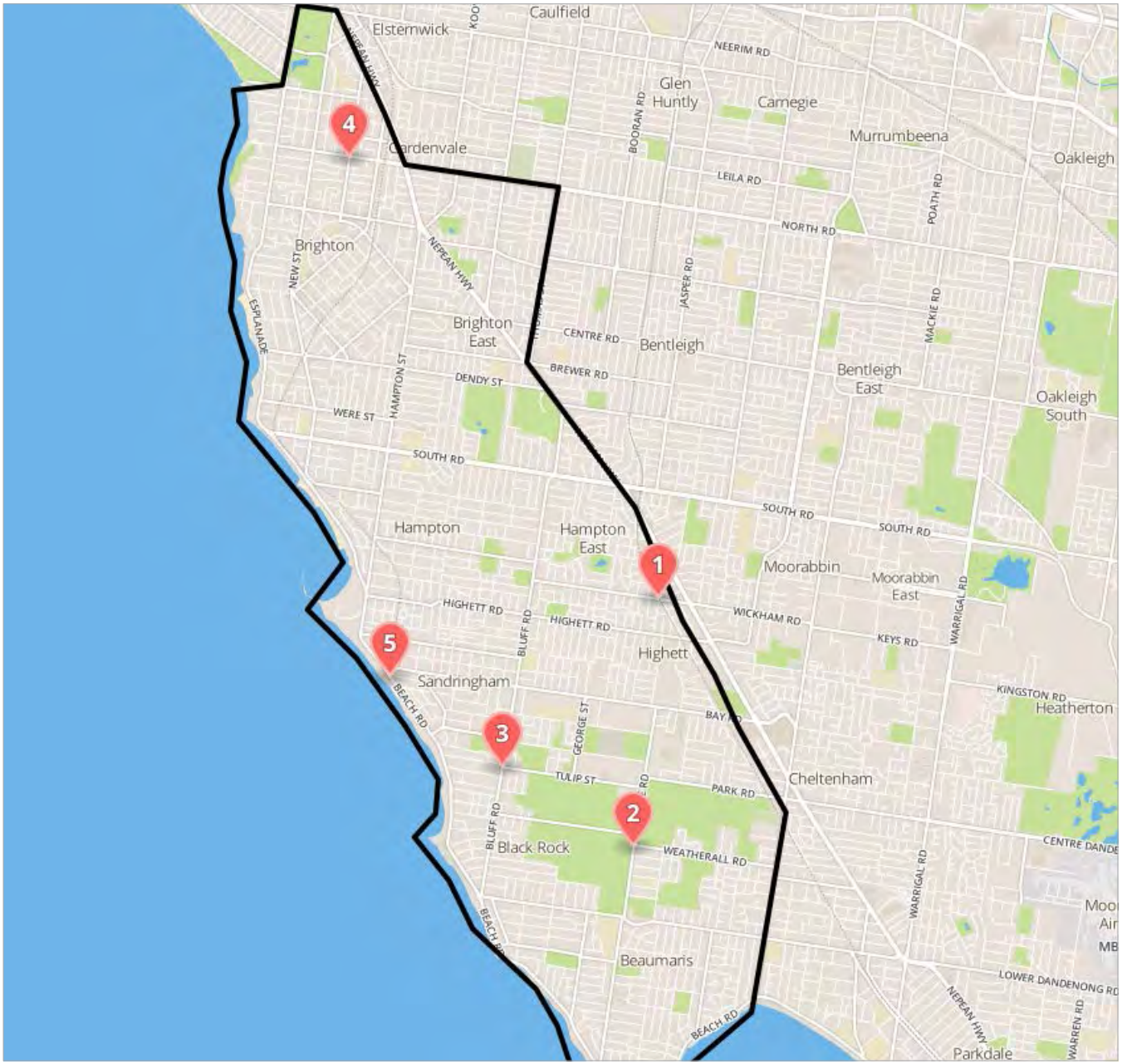
The following chapter presents five sites taken directly from the outcomes of a community engagement process which enabled site-specific barriers for walking across Bayside to be identified through the use of a spatial mapping platform.

The specific sites are shown in Figure 37 opposite, and are listed below:

1. The Worthing Road-Wickham Road Intersection
2. The Weatherall Road-Reserve Road Intersection
3. The Tulip Street-Bluff Road Intersection
4. The North Road-Cochrane Street Intersection
5. Beach Road (opposite Sims Street)

Potential measures that would improve the existing conditions for pedestrians have been identified for each site. The feasibility of implementing these measures will be explored as part of the delivery of the Strategy. However, it should be noted that VicRoads approval will be required to progress a number of the measures.

Figure 37: Location of the five sites with barriers for walking



Project 1: The Worthing Road-Wickham Road Intersection

Issues

- A lack of crossing facilities
- Close proximity to schools, kindergartens and new residential development
- High volumes of motorised and pedestrian traffic
- Cars trying to cross the railway lines before the boom gates come down
- A lack of clear sightlines

Potential measures

Short term upgrades

- Provide ramps and tactile paving to the recommended standards on all arms of the intersection
- Realign ramps with desire lines on all arms of the intersection
- Amend line markings for clarity and to reduce perceived width of the carriageway
- Consider the use of rumble strips on all approaches to the intersection to slow traffic
- Investigate the feasibility of introducing zebra crossings and appropriate signage on all arms of the intersection to protect the elderly, children, people with prams, and people with disabilities
- Audit the provision and quality of lighting and upgrade where required
- Liaise with the local police to enforce speed limits, pedestrian safety and general driver behaviour

Longer term upgrades

- Explore the removal of the level crossing with relevant state government agencies
- Re-design the intersection, replacing the roundabout with full signalisation, including a high level of provision and priority for pedestrians

Before



After



Project 2: The Weatherall Road-Reserve Road Intersection

Issues

- A lack of crossing facilities
- Difficult right turn from Weatherall Road
- High traffic volumes during school peak hours and golf events
- Close proximity to Beaumaris North Primary School
- Observed crashes and near misses
- Vehicles turning left from Weatherall Road and performing illegal u-turns on Reserve Road

Potential measures

- Provide tactile paving on all ramps
- Police illegal parking on nature strip along Weatherall Road
- Reline road markings on Weatherall Road
- Explore the feasibility of signalising the intersection with appropriate provision for pedestrians
- Narrow the distance to cross Reserve Road
- Traffic signals will be funded at this location in the 2015-2016 budget

Before



After



Project 3: The Tulip Street-Bluff Road Intersection

Issues

- A lack of crossing facilities
- High volumes of pedestrian and motorised traffic
- Close proximity to the hospital, shopping district, sporting facilities, a park and an aged-care centre
- A lack of clear sightlines, particularly near the bus stop
- Bluff Road is an arterial road managed by VicRoads - who are responsible for the implementation, operation and maintenance of all traffic and pedestrian signals on arterial roads

Potential measures

- Provide tactile paving on all ramps on all arms of the intersection
- Investigate the feasibility of providing kerb build outs on the western side of Bluff Road, together with pedestrian refuges on all arms, to provide crossing facilities on Bluff Road and to enhance crossing on Tulip Street
- Explore the feasibility of installing pedestrian crossing facilities to enhance pedestrian safety and accessibility
- Advocate to VicRoads for the lowering of the speed limit to 40 kmph through the activity centre
- Police speed limits and driver behaviour

Before



After



Project 4: The North Road-Cochrane Street Intersection

Issues

- A lack of crossing facilities
- Proximity to schools and kindergartens
- Lack of consideration for pedestrians
- Speeding of motorised traffic
- North Road is an arterial road managed by VicRoads - who are responsible for the implementation, operation and maintenance of all traffic and pedestrian signals on arterial roads

Potential measures

- Explore the feasibility of providing zebra crossings on the Cochrane Street arms of the intersection to improve the provision and safety for pedestrians
- Provide tactile paving on all arms and crossings
- Ensure pedestrian provision on the intersection is compliant with the Disability Discrimination Act
- Liaise with the Police to enforce speed limits, pedestrian safety and general driver behaviour
- Upgrade the footpath on the southern side of North Road, particularly at the corner with Cochrane Street

Before



After



Project 5: Beach Road (opposite Sims Street)

Issues

- A lack of crossing facilities
- Large numbers of pedestrians crossing the road to get to the beach or from Sandybeach Centre to the carpark, including many elderly people and parents with children
- The death of a pedestrian occurred in this location
- Difficulty crossing the road with a mobility aid or a pram
- Beach Road is an arterial road managed by VicRoads - who are responsible for the implementation, operation and maintenance of all traffic and pedestrian signals on arterial roads

Potential measures

- Advocate to VicRoads to explore the feasibility of providing a pedestrian actuated signalised crossing at this location

Before



After



6.0
Delivery

Introduction

The following chapter presents a framework for delivering the Strategy over the proposed 10-year timeframe. This framework seeks to maximise existing mechanisms and resources to embed the delivery of the Strategy within Council's day-to-day operations.

The efficiency and effectiveness of the delivery of the Strategy will be reviewed on an annual basis, drawing on the outcomes of the ongoing monitoring and evaluation (as discussed in Chapter 5.0). As such, this framework is expected to evolve, adjusting to the needs of Council, the realities of implementation and the availability of funding.

Management

The delivery of the Strategy will be led by Council's Transport Planner with support from a number of different teams across Council.

Action 1: Collaboration with key stakeholders

Collaborate with key stakeholders including:

- Victoria Police Vulnerable Road User Committee
- Roadsafe South East
- VicRoads
- Victoria Walks and the Heart Foundation

Identify opportunities to improve the physical and social environment to facilitate an increase in the number of people who choose to walk more often for short local trips.

Action 2: Collaborate on best practice

Liaise closely with other municipalities across Melbourne, to identify walking infrastructure designs and behaviour change programs that might be adopted for Bayside.

Action 3: Take a 'Safe Systems' approach

The Safe Systems approach to road safety is based on international best practice and has been adopted at both Federal and State Government levels in Australia. This approach prioritises the needs of the most vulnerable road users, with pedestrians the most vulnerable of all. Adopting this approach means that no actions should be taken that will put pedestrians at risk of serious injury or death.

Action 4: Take a 'place-based' approach

Explore the development of a 'Place-based' approach to providing for walking, where infrastructure and associated facilities are considered in the wider context of the public realm.

Action 5: Build capacity for walking

Explore training for Council officers to build capacity for planning and designing for walking, particularly for the needs of the elderly, people with disabilities, the young and people with children.

Action 6: Amend the Municipal Strategic Statement

Prepare a planning scheme amendment to incorporate the guiding principles of the Strategy.

Maintenance

The systematic monitoring and maintenance of the condition of infrastructure and associated facilities will be an important factor in creating and maintaining safe and attractive environments for walking.

Action 7: Explore the development of an online reporting system

Explore an online system to enable members of the public to report maintenance issues – consider an ongoing Crowdspot platform or an annual engagement program.

Action 8: Undertake a rolling program of audits

Commission independent audits every three years:

- Audits will cover both the footpath and shared path network
- Audits will consider the breadth of scope covered by the Heart Foundation walkability audits or the Green Star Communities scheme
- The outcomes of the audits will be used to continually update the capital works and maintenance programs, in liaison with the relevant officers

Action 9: Undertake a rolling program of route maintenance

Develop a program of cleaning and vegetation pruning for walking routes, prioritising the Principle Pedestrian Network.

Funding

A number of options exist to source funding for the proposed actions through a range of grants and funding programs:

Action 10: Deliver within proposed capital works programs

Council's capital works program will contribute annual funding to a range of maintenance, upgrade and new infrastructure projects to assist pedestrians.

Action 11: Create business case for state funding

Utilise the Strategy and the eventual development of the Principal Pedestrian Network to apply for funding from State Government.

Action 12: Deliver within proposed infrastructure works

Maximise opportunities to implement new facilities when other road construction projects are being delivered to reduce costs and increase the reach of each annual budget.

Implementation

The action implementation plan (presented overleaf) comprises the full list of strategies, actions and projects, including:

- A high, medium or low priority
- A short, medium or long term delivery timeframe
- Nominated lead agency and partners
- An indicative resource requirement (based on 2014 $ value)

Sixteen actions have been identified as a high priority during the first 3 years of the Strategy. It is estimated that these actions will require up to $2 million in funding to be sourced from Council and our road safety partners at VicRoads and the Transport Accident Commission.

Each of the proposed actions will be subject to further scope and prioritisation throughout the life-span of the strategy and where required will be the subject of future capital budget considerations.

Implementing key strategies

OT Officer Time

Table 3: Action plan for implementing the key strategies

Strategies	Actions	Priority	Short Term (Yrs 1-3)	Medium Term (Yrs 4-6)	Long Term (Yrs 7-10)	Estimated Resources***	Lead Agency	Partners
1.0 Create a truly inclusive, people-orientated walking experience	1.1 Develop a Principal Pedestrian Network (PPN)	High	●			OT	Council	VicRoads
	1.2 Establish a rolling program of audits	Low	●	●	●	OT	Council	
	1.3 Address missing links in the walking network	High	●	●	●	$1m	Council	
	1.4 Provide midblock crossings	High	●	●	●	$0.7m	Council	VicRoads
	1.5 Provide pedestrian operated signals*	Medium	●	●	●	$1m	Council	VicRoads
	1.6 Provide ramps and tactile paving	High	●	●	●	$0.6m	Council	
	1.7 Create permeability for walking	Low		●	●	$0.1m	Council	
	1.8 Prioritise movement of pedestrians across side streets	Medium		●	●	$0.7m	Council	
	1.9 Develop a Street Space Management Plan	High	●			$20k	Council	VicRoads
	1.10 Develop a Place Design Manual	Completed				OT	Council	
	1.11 Improve priority at intersections	High	●	●	●	OT	Council	VicRoads
	1.12 Improve pedestrian priority at roundabouts on key routes	Medium		●	●	$0.8m	Council	VicRoads
	1.13 Improve the provision of supporting facilities	Medium	●	●	●	$1.5m	Council	
	1.14 Improve access to bus stops	High	●	●		OT	Council	
	1.15 Improve facilities at bus stops	Medium	●	●	●	OT	PTV	Council
	1.16 Apply Third Generation CPTED	Low	●	●	●	OT	Council	Police
	1.17 Police illegal parking on footpaths	Medium	●	●	●	OT	Police	Council
	1.18 Regulate street clutter	Medium	●	●	●	OT	Council	
	1.19 Promote responsible dog walking	Low	●	●	●	OT	Council	
	1.20 Ensure regular cleaning and maintenance	Medium	●	●	●	**	Council	

* The funding of pedestrian operated signals on the arterial road network would be the responsibility of VicRoads
** Existing ongoing budget
***Indicative costs are subject to further scoping

OT Officer Time

Strategies	Actions	Priority	Short Term (Yrs 1-3)	Medium Term (Yrs 4-6)	Long Term (Yrs 7-10)	Estimated Resources***	Lead Agency	Partners
2.0 Prioritise walking in areas of high people activity	2.1 Explore opportunities to provide priority crossings for pedestrians	High	●	●	●	$0.8m	Council	
	2.2 Investigate opportunities for shared spaces in activity centres	Medium		●	●	OT	Council	
	2.3 Police driving behaviour	Medium	●	●	●	OT	Police	Council
	2.4 Reduce traffic speeds	High	●	●	●	$0.2m	Council	VicRoads, Police
3.0 Create streetscapes that invite people to walk	3.1 Identify walking routes around local landmarks	Medium		●	●	OT	Council	
	3.2 Use landscaping to mitigate the impact of motor traffic	Medium		●	●	$0.15m	Council	
	3.3 Use art and signage to tell the local history	Medium		●	●	$0.1m	Council	
	3.4 Explore the impact of high fencing	Low		●		OT	Council	
4.0 Create a legible walking environment	4.1 Audit current wayfinding and signage	Medium	●			OT	Council	
	4.2 Develop a wayfinding strategy	Medium	●			OT	Council	
	4.3 Develop maps to complement wayfinding strategy	Medium	●			$20k	Council	
5.0 Maximise provisions for walking in new developments & streetscape upgrades	5.1 Identify and examine mechanism for Integrated Transport Plans	Medium	●			OT	Council	
	5.2 Require minimum design standards	High	●	●	●	OT	Council	VicRoads
	5.3 Integrate new footpath provision with existing network	Medium	●	●	●	OT	Council	
	5.4 Encourage permeable fencing on new development	Medium	●	●	●	OT	Council	
	5.5 Ensure pedestrian priority for new development	Medium	●	●	●	OT	Council	
	5.6 Leverage streetscape works for walking improvements	Medium	●	●	●	OT	Council	
	5.7 Investigate preparation of Development Contributions Plan	High	●			OT	Council	
	5.8 Encourage higher density development in activity centres	Medium	●	●	●	OT	Council	
6.0 Improve the shared path experience for the whole community	6.1 Regularly audit shared paths	Medium	●	●	●	$50k	Council	VicRoads
	6.2 Improve shared path lighting	Low	●			$50k	Council	
	6.3 Upgrade shared path network	High	●	●	●	$2.1m	Council	VicRoads
	6.4 Explore the feasibility of providing new shared paths	Medium		●	●	$0.15m	Council	VicRoads

***Indicative costs are subject to further scoping

OT Officer Time

Strategies	Actions	Priority	Short Term (Yrs 1-3)	Medium Term (Yrs 4-6)	Long Term (Yrs 7-10)	Estimated Resources***	Lead Agency	Partners
7.0 Normalise walking in Bayside	7.1 Sign and promote the International Charter for Walking	High	●			OT	Council	
	7.2 Promote walking to local events	Medium	●	●	●	$25k	Council	
	7.3 Create social proof of walking in Bayside	Medium		●	●	$25k	Council	
8.0 Create a desire for people places & walking	8.1 Use demonstration projects for alternative use of space	Medium		●	●	$25k	Council	
	8.2 Market existing walking trail booklets & app	Medium	●	●	●	OT	Council	
	8.3 Explore the creation of new maps for short local routes	Medium		●		$20k	Council	
	8.4 Create a walking section on Councils website	Medium	●			OT	Council	
9.0 Support initiatives to help residents engage with walking through social participation	9.1 Create a walking program	Medium	●			OT	Council	Victoria Walks, Heart Foundation
	9.2 Support and promote local walking groups	Medium	●	●	●	OT		
	9.3 Support external walking initiatives	Medium	●	●	●	OT		
10.0 Improve shared path's capacity for coexistence	10.1 Deliver a shared path behaviour change program	High	●	●	●	$20k	Council	
	10.2 Explore conflict between users at Brighton Middle Sea Baths	High	●			OT	Council	
11.0 Build confidence and capacity for walking to school	11.1 Provide resources for schools to engage with walking	Medium	●	●	●	OT	DEECD*	Council
	11.2 Encourage and support 'Park and Stride' initiatives	Medium	●	●	●	OT	DEECD*	Council
	11.3 Support local schools with issues outside of schools	Medium	●	●	●	OT	DEECD*	Council
	11.4 Support road safety education in schools	Medium	●	●	●	OT	DEECD*	Council
12.0 Build the confidence and capacity of people with mobility impairments	12.1 Deliver 'Safer Scooter & Wiser Wheelchair' program	Medium	●	●	●	$25k	Council	Hawthorn Community Education Centre
	12.2 Deliver 'Wiser Walker Wiser Traveller' program	Medium	●	●	●	$25k	Council	Hawthorn Community Education Centre

*Victorian Department of Education and Early Childhood Development

***Indicative costs are subject to further scoping

Implementing delivery actions

Table 4: Action plan for implementing the delivery framework actions

No.	Delivery Actions	Priority	Short Term (Yrs 1-3)	Medium Term (Yrs 4-6)	Long Term (Yrs 7-10)
Action 1	Collaboration with key stakeholders	High	●		
Action 2	Collaborate on best practice	Low	●	●	●
Action 3	Take a 'safe systems' approach	High	●	●	●
Action 4	Take a 'place-based' approach	Medium	●	●	●
Action 5	Build capacity for walking	Medium	●	●	●
Action 6	Amend the Municipal Strategic Statement	High	●		
Action 7	Explore the development of an online reporting system	Medium		●	
Action 8	Undertake a rolling program of audits	Medium	●	●	●
Action 9	Undertake a rolling program of route maintenance	Medium	●	●	●
Action 10	Deliver within proposed capital works programs	Medium	●	●	●
Action 11	Create business case for state funding	Medium		●	●
Action 12	Deliver within proposed infrastructure works	High	●	●	●

7.0
Evaluation

Introduction

The following chapter presents a framework for monitoring and evaluating the Strategy. The purpose of the framework is to demonstrate the contribution of the Strategy to changes in participation in walking across Bayside.

The primary aim of this framework is to provide a template for the systematic collection and analysis of information in timeframes that allow for a responsive, adaptive management approach to achieving the targets of the Strategy.

This framework will enable the delivery team to assess effectiveness, demonstrate value, defend investment and capture key lessons.

Evaluation questions

The key evaluation questions are the foundation of a monitoring and evaluation framework:

Central evaluation questions

- To what degree did the Strategy contribute to changes in the level of participation in walking across Bayside?
- To what degree did the Strategy contribute to changes in the perception of safety when walking in Bayside?

Additional evaluation questions

- To what degree did the Strategy engage a broad spectrum of the Bayside community?

Targets

It is acknowledged that the Strategy alone is unlikely to achieve these targets, but nonetheless will make a significant contribution to their achievement:

Participation

- Target 1: Increase the proportion of all trips by walking from 15% in 2010 to 30% by 2025
- Target 2: Increase the proportion of shopping trips by walking from 21.5% in 2010 to 40% by 2025
- Target 3: Increase the proportion of education trips by walking from 5% in 2010 to 15% by 2025
- Target 4: Increase the proportion of walking trips between 0-1 km in 2010 from 70% to 85% by 2025
- Target 5: Increase the proportion of walking trips between 1-2 km in 2010 from 21.5% to 40% by 2025

Safety

- Target 6: Reduce the number of pedestrian fatalities from three to zero in 2013 by 2025
- Target 7: Reduce the number of pedestrian injuries by 50%, from 113 in 2013 to 65 by 2025
- Target 8: Achieve a 95% confidence level that it is safe to walk in Bayside by 2025

Monitoring Methods

The following primary methods of data collection will be used to monitor the delivery and impact of the Strategy:

VISTA

VISTA is the only database to provide detailed information on walking for all trips, compared to the Census data which reports only on travel to work. VISTA should be the main source for monitoring changes in walking participation.

Walkability Audits

Regular audits of the walking network will be undertaken to provide regular updates on condition, utilisation and provision. The audits will be supplemented with information collated from officers with responsibility for asset management and capital works.

Intercept surveys

Intercept surveys will be used to supplement walkability audits, and to monitor the impact of newly delivered facilities or to assess a specific issue.

Observational surveys

For selected routes or locations (e.g. where a specific behavioural issue is commonplace) observational surveys will be undertaken to gather quantitative and qualitative data. Observational surveys will quantify the frequency of the behaviour(s) and also attempt to contextualise these observations by examining the impact of the physical environment, and interviewing users of the facility.

Three levels of evaluation are proposed for the Strategy:

Evaluation Methods

Self-evaluation

Self-evaluation is proposed for small projects (e.g. the delivery of a capacity building program) that are delivered over a short timeframe (e.g. one day to one week). Such evaluations will focus on engagement levels.

Participatory evaluation

This is a form of internal evaluation, with the intention to involve as many people with a direct stake in the Strategy as possible. This may mean Council officers, external stakeholders and the community working together on the evaluation.

Annual program reflection workshop

To ensure that learnings from the monitoring and evaluation are reflected on and actioned, a reflection workshop will be undertaken. During this workshop the extent to which outcomes have been met will be examined (and if not, why not) with reflection on the appropriateness of the targets of the Strategy.

The following system is proposed to capture information relevant to all stakeholders.

Reporting

Strategy-level reporting

The Strategy will be evaluated on an annual basis. The results of the project-level evaluations will be combined with the strategy-level evaluation to create a whole of strategy performance report, which will be incorporated within the Integrated Transport Strategy progress report, which is presented to Council annually.

Data management

A central database will be created for the systematic storage of all data and information relating to the monitoring and evaluation of all actions and the Strategy. This database will be maintained by the Walking Champion within Council.

Appendix A

Policy Context for Walking

Federal Policies

State of Australian Cities (2013)

This report provides a review of the development of Australian cities, including demographics, productivity, liveability, sustainability and governance. The report highlights the role and importance of safe urban environments and the need to support walking, bike riding, and public transport. Walking and bike riding have been identified as sustainable alternatives to cars and mass transit for everyday journeys, particularly short trips to and from shops, schools, universities, workplaces and mass transit.

Walking, Riding and Access to Public Transport Statement (2013)

This statement, developed by the Major Cities Unit, explores the role of an integrated urban transport system based on walking, bike riding and public transport. The document provides a strong business case for investment in active transport, highlighting the various social, environmental and economic benefits of walking and bike riding. A range of measures are proposed covering the broad categories of planning, building and encouragement. The statement recognises the need to create safe environments for pedestrians and bicycle riders through:

- Separating pedestrians and bicycles from vehicles, particularly on high-speed and high-volume traffic routes
- Allocating or sharing road space, with appropriate speeds, in lower-traffic environments

Additionally the statement identifies that creating a comfortable and welcoming environment is important for encouraging more people to walk, ride, participate in social and recreational activities, and engage in the public space. Barriers to greater uptake include personal safety, comfort and convenience. The statement notes that a combination of education and promotional activities have been shown to change travel behaviour when coupled with appropriate infrastructure for sustainable transport.

National Road Safety Plan 2011-2020 (2011)

The plan is a 10-year framework, based on the Safe System approach, with the aim that "no person should be killed or seriously injured on Australia's roads". The plan proposed a target of a 30% reduction in the annual numbers of both deaths and serious injuries. Alternative transport options such as active transport are encouraged though safety interventions in metropolitan areas, such as:

- Safer roads programs targeting intersections and roadside clashed and protecting vulnerable road users
- Reduce speed limits at intersections
- More speed limits of 40 kmph or lower in pedestrian and bicycle areas
- Improved intersection crash avoidance, walker and bicycle rider protections

National Urban Policy (2011)

This policy provides the framework for improving the productivity, liveability and sustainability of Australian cities. The policy aims to improve "accessibility and reduce dependence on private motor vehicles", noting the negative role of cars on road safety. To achieve this, the policy proposes stronger support for walking, bike riding and public transport. This policy notes the lack of connectivity and safety of pedestrian networks are key barriers to the uptake of active transport, and that safe and well-connected pedestrian networks are important to cater for the increasing use of mobility vehicles by the elderly.

State policies

Plan Melbourne - Metropolitan Planning Strategy (2013)

This strategy aims to direct Greater Melbourne's industrial, commercial and housing developments between 2013 and 2050. It proposes to integrate transport planning, infrastructure and long-term land use to meet the employment and housing needs of a growing population, while protecting environment and cultural heritage.

The strategy notes that Melbourne will invest in new programs that "improve road efficiency, expand and harmonise public transport services and improve cycling and walking paths". The key goals in regards to walking are:

- To encourage active forms of transport in order to become a more sustainable and healthy city
- To make neighbourhoods pedestrian friendly by providing quality pedestrian links and short cuts that are safe, convenient and integrated with public transport
- To create a city of "20-minute neighbourhoods" where residents have access to local shops, schools, parks, jobs, public transport and a range of community services within a 20-minute trip by foot

Victorian Public Health and Wellbeing Plan 2011-2015 (2011)

This plan aims to improve health and wellbeing in Victoria through preventive healthcare, strong health protection systems and health promotion. The plan identifies active transport as an opportunity for connected communities as an important element of a holistic view of health and wellbeing. The plan proposes to support state and local government in the development and implementation of physical activity initiatives, including walking, and help them coordinating the available resources.

Victorian State Disability Plan 2013-2016 (2012)

This plan proposes to improve access to buildings and places by outlining strategies to both increase the application of accessible design standards in the built

environment and make community facilities and public spaces more accessible and safer. Inaccessible buildings, houses, places, transport, communication and technology are among the key barriers affecting people with a disability. The plan aims to improve accessibility issues through:

- More transport options
- Improved access to buildings and places
- More accessible government information

Victorian Transport Integration Act (2010)

This Act is intended to guide the development of an integrated sustainable transport network in Victoria to support an "inclusive, prosperous and environmentally responsible state". The Act proposed a transport system that is safe and reliable and provides access to employment and social activities. The Act also proposes that a transport system should be effectively integrated with current and future land use, in order to improve transport efficiency, accessibility, and to avoid conflict.

The Act aims to facilitate active modes of transport, including walking by:

- Increasing the share of walking, cycling and public transport trips
- Ensuring the Victorian rail network enables access to walking related infrastructure
- Ensuring that any road transport project in Victoria provides infrastructure for walking

Victoria's Road Safety Strategy 2013-2022 (2012)

This strategy aims to reduce deaths and serious injuries on Victorian roads by 30% over ten years. The strategy proposes to provide pedestrians with improved infrastructure and safer vehicle speeds to reduce their risk and support the uptake of sustainable travel modes. To achieve the outlined target the strategy proposes:

- Developing a new pedestrian "black area" program
- A new grants program providing safer walking infrastructure
- Developing guidelines to enable greater use of 40 kmph zones where and when the risks of pedestrian crashes are high
- Providing a less complex road environment that will better serve the safety needs of older drivers and pedestrians

Victorian Pedestrian Access Strategy (2010)

The aim of this strategy is to encourage more walking, especially for short trips. The strategy proposes broad policy principles for investment in walking over the next 10 years – including infrastructure, planning and design, safety and behaviour change programs. The strategy identifies a number of key factors that deter people from walking such as an inadequate number of crossing points, poor connectivity of paths, insufficient wayfinding infrastructure, safety issues, low street activation, long distances to major destinations, lack of protection form the elements and perceptions of extended travel times. The strategy proposes five key directions:

- Encourage walking by changing attitudes and behaviours
- Collaborate to improve provision for walking
- Create pedestrian friendly built environments, streets and public spaces
- Increase safety of walking
- Continue integrating walking with public transport

Victorian Pedestrian Wayfinding Guide (2011)

This guide has been developed to support state and local government to provide better navigational signage for pedestrians. A coherent and holistic wayfinding system is proposed to "improve access for pedestrians living in, or visiting, an area". The guide notes that wayfinding helps to identify points of interests, create a sense of place in an area and make public spaces safer as they are frequented more. The guide not only assists the planning of wayfinding projects, but also their implementation and evaluation.

Local policies

Our City our Future - Bayside 2020 Community Plan (2011)

The vision outlined in the plan is to be a "truly interconnected community with support for people of all ages and stages in their life and to create a positive environment for future generations". Among the key priority areas is planning, infrastructure and transport, with the aim of becoming an inclusive, safe and environmentally sustainable community. The plan notes the following objectives:

- Providing infrastructure that is accessible for everyone, including mobility impaired persons
- Reviewing international best practice to improve traffic management, including shared paths and footpaths
- Designing streets, gardens and paths in a way that encourages walking over driving

Bayside City Council Plan 2013-2017 (2013)

This plan was informed by the Bayside 2020 Community Plan and it's vision to become a "truly interconnected community with support for people of all ages and stages in their life". The plan directs Council decisions for its time in office, including its organisational priorities, provision of services and the allocation of resources. The plan proposes to make Bayside a liveable city with accessible transport options. This includes providing infrastructure and transport options that meet current and future needs of the Bayside community. The priority is to create an integrated transport network and to improve community satisfaction in regards to transport. The Walking Strategy will assist in enhancing the transport options available to the community.

Municipal Strategic Statement

The Municipal Strategic Statement (MSS) provides the vision for land use planning and development within the City of Bayside. The MSS is embedded in Bayside's

Planning Scheme, which outlines Council's directives and statutory powers for land use. The MSS provides principles and strategies that are relevant to the development of the Walking Strategy.

Wellbeing for all Ages and Abilities Strategy 2013-2017 (2013)

The strategy notes that transport is one of the key barriers to the wellbeing of Bayside's residents, and that convenient transport options are difficult to access, which prevents many residents from actively participating in the community.

Key objectives which relate to the Walking Strategy include:

- Support opportunities for physical activity that are inclusive
- Increasing Bayside residents utilising active transport
- Support Bayside infrastructure that supports physical activity
- Decrease road accidents and injuries in Bayside

Integrated Transport Strategy (2013)

This strategy guides Council's decision-making in regards to the planning and provision of transport within the municipality through to 2023. The strategy aims at building a sustainable, safe, well connected and integrated transport system that meets all resident's needs. The strategy notes that the transport system should support the health and wellbeing of the community, decrease the carbon footprint and contribute to the local economy.

The strategy notes several specific challenges:

- A high proportion of older persons and persons with disabilities
- A high proportion of short trips undertaken by car
- A shortage of public transport services in the south of the municipality
- Growth in the use of traffic corridors due to, amongst other reasons, a high number of visitors
- Conflicts between different road user groups

The strategy contains five guiding principles to address these challenges:

Improved local accessibility

- Enable more people to meet their needs locally and prioritise walking and cycling as the preferred transport modes for short trips

Better public transport connections

- Improve public transport integration and accessibility within and from Bayside

User friendly streets

- Improve accessibility of streets for people of all ages and abilities and treat them as "places where people live, work and play"

Integrated transport and land use

- Ensure that sustainable transport is integrated in land use and new developments

Improved perception

- Promote and support sustainable transport and raise awareness of its benefits

To achieve these guiding principles, a range of actions are proposed:

Plans and strategies

- Prepare a Walking Strategy
- Sign the International Charter for Walking
- Develop a Street Space Management Plan
- Develop a Place Design Manual and finalise Structure Plans for activity centres
- Develop travel plans for large employers and schools
- Require Integrated Transport Plans at planning permit stage and investigate the practicability of a Development Contributions Plan to facilitate active forms of transport

Paths and roads

- Improve the network of shared paths
- Assess the accessibility of footpaths
- Install pram ramps at crossings
- Complete missing section of Bay Trail between Cromer Road and Charman Road in Beaumaris and continue maintenance (completed)
- Upgrade shared paths along Elster Creek and Nepean Highway
- Improve walking and cycling access to and travel through Elsternwick Park
- Advocate for speed limit reductions to 40 kmph on selected roads
- Implement short term actions along Beach Road and develop a long term vision for the corridor

Education and promotion

- Develop a Travel Behaviour Change Program for the municipality
- Promote and support sustainable transport options and initiatives
- Promote safety on streets and shared paths
- Provide a Bayside TravelSmart map online

Sustainable transport

- Install wayfinding signage directing to public transport hubs
- Assess connections to public transport interchanges
- Consider access to sustainable transport in funding and location of community facilities
- Consider the needs of pedestrians in the development of new transport projects, as well as street maintenance projects

Road Safety Strategy 2014-2019 (2014)

This strategy aims to reduce the number of fatalities and injuries on paths and roads in Bayside and to inclusively allow everyone to travel safely, confidently and easily in the municipality. The strategy proposes to minimise

conflict between different road and path user groups by facilitating greater sharing through a re-oriented road and path management. The strategy takes account of the different needs of the variety of community members and proposes specific goals for different road user groups, including:

- Providing road safety education programs at schools and support students to travel to school safely
- Encouraging parents to protect young children from traffic hazards
- Reducing the percentage of older and mobility impaired people involved in road accidents

The strategy also proposes to promote walking to school and work by encouraging schools and businesses to develop healthy transport plans, and by continuing to support the Ride2School program.

Other strategies include developing a behaviour change program to address coexistence issues on shared paths, and a range of shared path upgrades and new links.

Bicycle Strategy 2013-2017 (2013)

This strategy outlines Council's actions for the development of the bicycle network and to encourage and support residents to cycle more often. Although the primary focus of the strategy is cycling, many of the proposed actions are relevant for walking. For example, the strategy proposes to advocate to VicRoads for the reduction of speed limit to 40 kmph on the following roads:

- Bay Street, between New Street and Nepean Highway (complete)
- Church Street (between New Street and Male Street) (complete)
- Hampton Street (between Crisp Street and Ratho Street)
- Station Street, Bay Road and Melrose Street (complete)
- Bluff Road and Balcombe Road, Black Rock

The strategy aims to promote walking and cycling to work and school by encouraging larger companies and schools to develop sustainable and heathy transport plans. Council also proposes to promote and support Ride2School.

Furthermore, the strategy aims to develop and deliver education campaigns, including signage to raise awareness of shared path etiquette to avoid conflict between all users.

Recreation Strategy 2013-2022 (2013)

This strategy provides direction for the planning, provision and management of Bayside's recreation services and facilities through to 2022. Council's vision is to create an active and healthy community. The strategy notes that walking paths, together with cycling paths, are the most important facilities for recreation in Bayside, but are in need to be upgraded. The strategy identifies the management and provision of a connected and integrated network of shared paths and footpaths, and the management of conflicting foreshore activities as key priority areas. Specific actions include:

- Promote, plan and develop off-road paths
- Implement the Victorian Cycling Strategy, which includes shared paths
- Provide new paths and upgrade existing ones around parks, including Banksia Reserve, Basterfield Park, Beaumaris Reserve, Cheltenham Park, Royal Avenue, Tjilatjirrin Reserve and Peterson Street Reserve
- Develop a hierarchy for off-road paths, guiding design and management of those paths
- Develop an "Active Trails Plan" to facilitate walking
- Identify how to improve foreshore and bushland paths
- Provide off-road paths around public golf courses
- Review signage encouraging responsible recreational use of major parks and the foreshore
- Connect paths with the ones of adjoining municipalities

Bayside Housing Strategy (2012)

This strategy aims to guide how residential development in Bayside will be planned and managed over the next 20 years. The strategy looks at the location and type of residential development required to meet the changing needs of the Bayside community, whilst ensuring development is consistent with and enhances Bayside's valued urban character, manages any associated environmental risk and is appropriately serviced.

Open Space Strategy (2012)

The Open Space Strategy (OSS) provides policy and strategic direction to enable Council to make decisions about how open space is used, developed, managed and maintained across the municipality. The OSS is particularly relevant to the Walking Strategy, given the high proportion of people who utilise open space within the municipality. It is anticipated that improved access to open space will encourage more people to walk.

Bayside Climate Change Strategy (2012)

This strategy summarises the results of the climate change risk assessment and adaptation planning process for Council. The strategy does not explicitly identify walking as a form of transport in the community given its focus on Council operations. However, it does reference the City of Bayside's Health and Wellbeing Plan 2009-2013, noting an action within this plan to 'Develop a walkable city, designed to be attractive and safe with accessible, connected walking and cycling paths'.

SmartRoads Network Operating Plan for City of Bayside (2012)

SmartRoads was developed by VicRoads to identify which transport modes have priority on roads in Greater Melbourne. Bus and bicycle are the most prominent priority areas in the City of Bayside, followed by major vehicle traffic routes along Beach Road and Bluff/ Cummins Road. Pedestrian priority areas are mainly adjacent to the major activity areas. SmartRoads identified one principal activity area - Southland - which is shared with the City of Kingston.

Beach Road Corridor Strategy (2011)

This strategy defines actions to make Beach Road (Metropolitan Route 33) safer, particularly for pedestrians, cyclists and motorists. The strategy notes that pedestrians are among the main users of Beach Road. The strategy identifies a number of specific actions for walking:

- Provide more policing of driving behaviour
- Install pedestrian operated signals between Bodley Street and Keys Street, Chelsea Street and Normanby Street, north of Abbott Street and south of Canterbury Place
- Remove kerb outstands between Mundy Street and Deauville Street
- Advocate for the extension of truck ban to include Saturday mornings
- Advocate to VicRoads for the reduction of speed limit to 50 kmph (part-time or permanently)
- Introduce road safety education programs

Bayside Environmental Sustainability Framework (2007)

This framework articulates Councils' environmental sustainability agenda. It is designed to assist Council with "responding to the community and government about environmental sustainability issues". The framework notes the important role of sustainable transport in achieving its overall environmental sustainability objectives, and specifies 'walking school buses' as an initiative to support children travelling to and from school.

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