IMPROVING WALKING AND WAYFINDING
IN THE Bairnsdale CBD
For the East Gippsland Shire Council and the
Bairnsdale CBD Reference Group

DRAFT REPORT
MAY 2011
Dr John Grant
www.jagrant.com.au
in conjunction with
Bruce Herbes
www.visualvoice.com.au
## CONTENTS

1. INTRODUCTION ........................................................................................................... 4
   1.1. Background ........................................................................................................ 4
   1.2. International Experience .................................................................................... 6

2. PROGRESS IN VICTORIA .......................................................................................... 9

3. PLANNING FOR WALKING IN EAST GIPPSLAND AND Bairnsdale .............. 13

4. LOCAL DATA ..................................................................................................................... 15

5. GOOD PRACTICE FOR INCREASING WALKING .................................................. 16
   5.1. Introduction ......................................................................................................... 16
   5.2. Behaviour change/encouragement Programs ...................................................... 16
   5.3. Pedestrian information ....................................................................................... 17
   5.4. Infrastructure ........................................................................................................ 18
   5.5. The Positive Spiral .............................................................................................. 20

6. AUDIT RESULTS AND RECOMMENDATIONS .................................................... 21
   6.1. The Audit Process .............................................................................................. 21
   6.2. Audit Results ....................................................................................................... 21
   6.3. Wayfinding Recommendations ............................................................................. 22
       Map-based Panel Signs (MBS) .............................................................................. 22
       Street Name Blades ............................................................................................... 28
       Independent Directional Pointer Signs (IDS) ......................................................... 29
       Preliminary Design Concepts for the Bairnsdale/East Gippsland Family of Signs .......................................................................................................................... 31
       Development of hand-held map(s) for Bairnsdale CBD ........................................... 34
       Rationalisation of existing signs ............................................................................. 35
   6.4. Walkability Improvements and Recommendations ............................................ 36
       Footpaths ................................................................................................................. 36
       Continuous Paths of Travel (CPT) ........................................................................ 38
Improving walking and wayfinding in the Bairnsdale CBD

7. CONCLUSIONS AND APPROXIMATE COST ESTIMATES

APPENDIX 1 – INTERNATIONAL EXAMPLES – IMPROVING WALKABILITY

1. Creating a safer street at low cost through community involvement: DIY Streets Project, UK

2. Supporting walking for health by mapping routes around Doctors’ surgeries - Walking Maps for Camden, London

3. Achieving change through demonstration projects - Times Square and Broadway, New York City

4. Achieving high quality streetscapes through innovative design and by questioning standard approaches: Kensington High Street, London

5. Reframing the relationships between people in cars and people on foot: Shared space in Bendigo, Victoria

6. Inter-agency partnership to increase levels of walking to school; Halton District School Board, Ontario Canada

7. Supporting retail activity through increasing space for people on foot: Acland Street, City of Port Phillip

8. Smarter Choices – Stimulating travel behaviour change mainly through information and marketing
1. INTRODUCTION

This Report was commissioned following the production of an initial ‘Overview Audit’ of the Bairnsdale CBD in April 2011. That report highlighted a number of issues, and concluded with the following comments:

Bairnsdale CBD is a relatively compact area with a wide range of attractions, with strip and mall shopping, historic buildings, tourist accommodation and restaurants and cafes.

A world-class wayfinding system will give tourists, visiting shoppers, new residents and others a better experience of the CBD, by making it more “legible” and showing that most destinations are within a few minutes walk of each other. The main requirements are new map-based signs, directional signs and a hand held map.

This overview report has identified the need for these elements. A more detailed Signage Strategy Study will be needed to identify the number and the location and orientation of each of the signs.

The walking environment in Bairnsdale has a number of shortcomings. Reduced speed limits, improved road crossability and higher footpath amenity levels are all possible parts of the equation.

This overview report has identified some of the main issues. A more detailed analysis of these issues in the context of plans for the CBD and the acquisition of more data is needed to identify some possible solutions to them.

1.1. Background

Walking was the “forgotten mode” during the last 2-3 decades of the Twentieth Century. Cities in most of the developed world were planned to accommodate the use of the private car, walking became more difficult and dangerous, and it declined almost everywhere. For example, the proportion of students walking to school in Melbourne declined from approximately 45% in 1974 to 15% in 2003. Walking to work declined from about 8% to 3% percent from 1971-2001.

However, during the first decade of the Twenty-First Century the growing recognition of the links between walking and issues such as health and obesity, the environment and climate change, car dependence and peak oil, congestion and amenity, walkability and property values, and equity issues for the young, old and people with a disability has resulted in a resurgence of interest in all aspects of walking.

The benefits of making places more pedestrian friendly and encouraging people to walk to more destinations more often are substantial. Improved walking environments benefit individuals, businesses, public transport systems and their users, students too young to drive and the elderly, as well as cyclists.
Improved walking environments specifically benefit people with a disability - including those using walking aids such as 'walkers' and electric scooters – and the interests of people with a disability are well served by improving the walking environment for all people needing or wanting to travel ‘on foot’ within Bairnsdale.

Supporting and encouraging people to walk more, both for transport and recreation is both necessary and affordable. Efforts to encourage and increase walking also involve improving the amenity of public space, making it easy and attractive to the very many who need or want to walk.

The recent release of the State Government’s “Pedestrian Access Strategy” (September 2010), as well as other related state initiatives and potential funding opportunities makes the Bairnsdale CBD walking and wayfinding report a very timely activity.

Bairnsdale is already active in the support of pedestrians and recreational walkers, and many of its strategic planning documents and current expenditures recognise the importance of walking, improved accessibility and a quality urban environment.

Figure 1.1.
Walking is relevant to many areas of Council's responsibilities

Based on the Victorian Integrated Survey of Travel and Activity (VISTA - data from the Department of Transport) it is estimated that 11% of trips are made by walking in regional Victorian cities. (This figure is consistent with the percentage of residents walking to work in Bairnsdale, as reported in the last census) However, this is lower
than the Metropolitan Melbourne average at 15% and well behind the cities of Melbourne (at 46%) and Yarra (at 40%).

The proposed “Vision” for the future of walking in Bairnsdale is:

To progressively make the Bairnsdale CBD an area where it is safe and convenient to walk between destinations, where people are actively encouraged and enabled to walk, and where key community stakeholder groups and the community at large support Council’s efforts to increase the amount of walking.

Bairnsdale should become Gippsland’s ‘Premier Walking City’

1.2. International Experience

Australia as a whole has a walking mode share of around 7-8%, placing it just above the United States but well below most European countries with walking mode shares of between 20-30% of all trips. Even in Melbourne, which is more walkable than most other Australian cities, the share is approximately 15-16%.

As part of the background research for this project we have identified a number of case studies of places where innovative infrastructure and behaviour change projects have produced significant improvements in the numbers of people walking. They are drawn from Australia, the USA, Canada and Western Europe and illustrate
what has and can be done to change places where people can walk (and sit, and spend time and money) and want to walk more.

The majority of the case studies are included as Appendix 1. They serve to show that cities and suburbs, big and small, have taken action to enable and encourage people to walk more, and succeeded in doing so. However, one of the major and most inspirational examples (the City of Copenhagen) is provided below.

**Supporting walking through the collection of data: Copenhagen, Denmark**

Copenhagen’s main street, The Strøget, was pedestrianised in 1962 amid widespread and strident opposition, particularly from city traders, who assumed that a permanently car-free Strøget would be their ruin. The fears proved unfounded – the Strøget soon boasted more shoppers, an explosion in café seating, and eventually a new kind of urban culture focused on outdoor public spaces. Building on the Strøget’s success, the network expanded piecemeal – another street and a few more squares were emptied of cars in 1968, and again in 1973 and 1980 and 1992. From those first 15,800 square metres of the Strøget, Copenhagen’s pedestrian network has expanded to about 100,000 square metres.

The city also developed a unique set of empirical data to chart the pedestrian network’s impact. Starting in the early 1970s, Jan Gehl and Lars Gemzøe showed the steep growth in “stationary activities” in central Copenhagen – people seated at outdoor cafes or around the rims of fountains, people window-shopping or watching buskers. From 1968 to 1995, the average number of people so engaged on a summer afternoon had shot up 330 percent, an increase in magnitude virtually identical to the growth in the pedestrian network’s size.

Gehl and Gemzøe also assembled overwhelming qualitative evidence of the success of Copenhagen’s pedestrian reconquest. Their 1996 study “Public Spaces Public Life”, for example, overflows with before-and-after photos of the city streets that look like they were shot in different universes. Each pair of pictures depicts the same radical transition: on the left, in black and white, a desultory 1950s-era parking lot; on the right, a modern full-colour scene of strolling shoppers and hustling foot-propelled commuters, market stalls and buskers and people seated in animated conversation. The document became a very powerful tool for shifting the mindset of very large political organisations.

Copenhagen continues to collect comprehensive data on walking which enables it to set detailed targets of a 20% increase in pedestrian traffic from 2008-15 and a 20% increase in the time spent in public space. It has signed the International Charter for Walking and is one of the first cities in the world to adopt the “Making Walking Count” benchmarking methodology.

Now Copenhagen routinely tops world surveys of quality of life in cities. Its per capita income is higher than every US city, and it achieves this with a modal split of around 50% on foot and bike (compared to less than 5% in most US cites). Americans in consequence, spend 20% of their income on health care compared to 8% in Denmark.
The City of Copenhagen is in the process of developing a pedestrian strategy. Its principles are outlined below.

“More people to walk more and more people to stay longer” – A strategy for pedestrian traffic in Copenhagen

Copenhagen has a vision. We have already been crowned the world’s most liveable city by the magazine Monocle. We will continue to be this - a sustainable city with urban space inviting people to a unique and varied urban life. We will become a metropolis for people.

Copenhagen will develop a pedestrian culture which will benefit urban life, the urban environment and health.

The International Charter for Walking

As the first step, the City of Copenhagen signed The International Charter for Walking in 2008. This political commitment to the Charter has paved the way for the development of a pedestrian strategy for Copenhagen, in which the charter’s proposal for action can be developed concretely. The strategic principles in the charter set the course for our work by creating safe and secure conditions in all city districts where ease of movement and accessibility are prioritised, as well as creating comfortable conditions in public areas.

Public participation

We are developing the pedestrian strategy in a wide ranging dialogue with those who live in and those who use the ten city districts of Copenhagen. Here, Copenhageners will convert ideas into concrete improvements for pedestrians and contribute creatively to developing local city life as well as laying down a local network of pedestrian routes. Local committees in the individual city districts have an important role in arranging debates and activities including, city walks, events and public workshops.

Collaboration across sectors

The pedestrian strategy is being developed as a wide cooperative effort across the different sectors of the municipality. Thus, the strategy will be the common thread linking strategies covering for example, urban life, urban space, green areas, accessibility, safe pedestrian traffic, culture and leisure, health, children and young people as well as concrete projects across the administrations of the municipality.

Pedestrian Strategy

The pedestrian strategy “More people to walk more and more people to stay longer” is the framework for a number of simultaneous initiatives. It contains: 1) A pedestrian plan with goals, initiatives and pedestrian routes, including concrete actions in relation to The International Charter for Walking. 2) Indicators for measuring urban life and pedestrian traffic as well as counts of pedestrian traffic and analyses of citizens’ expectations and their satisfaction to be used as a systematic goal-related follow-up. 3) Pilot projects for pedestrian friendly layout and furnishing of the shopping thoroughfares and traffic junctions. Pilot projects for initiatives to get people to walk instead of taking the car for short trips. 4) Operational improvements of pedestrian areas to be carried out continuously.
2. PROGRESS IN VICTORIA

In September 2010 the State Government released the Victorian Pedestrian Access Strategy – a Strategy which identified the benefits of increasing walking in Victoria, what the State Government has done over the past decade to support walking, and what its priorities and plans are to increasingly develop walking for transport. The Pedestrian Access Strategy identifies five main objectives:

- Encourage people to walk by changing attitudes and behaviour. This aims to make walking the top-of-mind choice for Victorians, especially for short trips, by making walking for transport a visible and valued part of daily life;
- Collaborate to improve provision for walking. This aims to clarify the roles and responsibilities of both state and local governments in providing for walking. The Victorian Government will work with local governments to ensure they have the capacity and information they need to provide better pedestrian facilities;
- Create pedestrian-friendly built environments, streets and public spaces. This aims to ensure the built environments across Victoria facilitate easy and efficient pedestrian movements;
- Increase the safety of walking. This will identify and address risks to pedestrians across the transport system and give pedestrians the skills to negotiate road environments; and
- Continue integrating walking with public transport. This aims to ensure more Victorians walk in combination with public transport. Walkers need to find it easy to get to major public transport hubs across Victoria and easy walking access should be provided at public transport stops.

The Government is planning an Implementation Steering Group to turn the Strategy into action on the ground, and identify how it can be funded. One of the major priorities for the implementation of the Pedestrian Access Strategy is to prepare “shovel-ready” projects which have been strategically developed and evaluated against costs, and which can compete against requests for funding from other areas within the transport portfolio.

It also reviewed actions and expenditures on a range of programs to date.

In 2008, under The Victorian Transport Plan, the Victorian Government committed $115 million for bicycle lanes and shared walking and cycling paths.

The TravelSmart program was launched in Victoria in 2002 with a further $5.5 million committed in 2006 to expand the program. It encouraged people to choose sustainable transport modes by developing target travel behaviour change actions based on site specific data, or travel planning. Travel planning attempts to address concerns relating to health, congestion, safety and the environment, through locally devised and implemented initiatives. Travel planning projects are run across a wide variety of organisations including schools, workplaces, hospitals, tertiary institutions and community precincts.
The Victorian Government committed $16 million to the Local Area Access Program (LAAP), which supported local governments to develop and deliver small-scale infrastructure projects that improved access to local facilities and services and support the use of sustainable transport alternatives, particularly walking and cycling.

Since 2006, the TravelSmart and LAAP programs have helped local councils and organisations deliver more than 100 projects that support sustainable transport solutions.

VicRoads provides $3.5 million a year to improve walking networks through pedestrian facilities that help people cross arterial roads, paying particular attention to the needs of people with disabilities.

The Victorian Government has provided $350 million over 10 years to make public transport more accessible for pedestrians by upgrading train stations, bus stops and transport interchanges, and building more platform tram stops. There are now more than 300 platform stops built across the network and low-floor trams and buses continue to be introduced on the network to provide access for people using wheelchairs and mobility aids.

Speed reductions on roads provide a direct safety benefit to pedestrians. VicRoads and other road safety partners have delivered a number of speed reduction initiatives through the “arrive alive” 2008-2017 road safety strategy and ongoing programs, including:

• the Wipe Off 5 public education campaign and related campaigns;
• introduction and enforcement of 50 km/h speed limits in built up areas, regional centres, and rural town centres, 40km/h school speed zones and 40km/h speed limit zones in metropolitan shopping strips;
• annual advertising campaigns about school terms and applicable speed zones;
• programs to increase the safety of intoxicated pedestrians; and
• ‘ThingleToodle’ and other road safety initiatives aimed at teaching young pedestrians road safety skills.

Walktober is a program developed and administered by Kinect Australia to encourage a wide range of activities in the month of October each year aimed at motivating people to walk for transport and recreation. Since 2006, the Victorian Government has provided $580,000 for major activities including the Workplace Challenge, the Community Challenge, Walk to School, and Walking for Seniors. In 2008, 90,000 people participated in the programs and activities during October and around 700 activities were conducted under the Walktober umbrella in 2009.

Victoria Walks is a new, independent walking-for-transport health promotion body, supported by VicHealth with $1 million funding, and is increasing awareness of the benefits of walking and promoting walking for transport by:

• conducting campaigns, events and promotions;
• providing leadership through submissions, resource provision, policy, research, forums and social marketing; and,
supporting communities to change their neighbourhoods into walk-friendly environments.

*Streets Ahead* is another VicHealth initiative that supports children to get active in their neighbourhoods is a three-year program with a $1.7 million investment aimed at increasing children’s physical activity through active transport.

The *Pedestrian Access Strategy* complements the Victorian Government’s integrated transport and planning policies and legislation, such as:

- The Victorian Transport Plan
- Transport Integration Act 2010
- Public Transport Guidelines for Land Use and Development
- The *arrive alive* 2008-2017 Road Safety Strategy
- Melbourne 2030: a planning update – Melbourne @ 5 million
- Victorian Cycling Strategy
- SmartRoads: A Network Operating Plan for Melbourne
- Maintaining Mobility: The Transition from Driver to Non-Driver Policy Framework Report
- Safer Design Guidelines for Victoria 2006

Victoria is the most progressive state in Australia in terms of supporting and enabling walking. In large part this is due to the approach taken by the state government and VicRoads. Elsewhere in Australia the state road authorities are reluctant to accommodate the needs of pedestrians.

In Victoria speed limits have been reduced around all schools and in many shopping strips. VicRoads appreciates the role played by pedestrians in the local economy, and the fact that people on foot are recognised users of the road system – because they need to cross roads. This is part of the “safe systems” approach. In this approach the focus is one where speed limits and calming devices are used to encourage people to cross safely while reducing the danger from vehicles. *(See VicRoads Traffic Engineering Manual Chapter 7 Revised Nov 2006)*

Its priority actions for pedestrians are:

- To introduce more appropriate speed limits in shopping strips;
- Encourage through-traffic to avoid shopping strips and to use alternative routes where feasible;
- Improve the amenity of areas of intense pedestrian activity alongside arterial roads;
- Improve safety and provide more equitable access for pedestrians in high-use areas such as Transit Cities and multi-modal facilities via the Walk Safe Program and other innovative and cost-effective measures; and,
- Establish a program to provide greater priority for pedestrian access across busy arterial roads that sever community activities.
Under this approach pedestrian facilities are provided in different forms to manage the interaction between vehicular traffic and pedestrians. Examples of pedestrian facilities include:

- **Kerb extensions - Pedestrian refuges**;
- **Pedestrian crossings (zebra crossings)**;
- **Pedestrian crossings (without flashing lights)**;
- **Pedestrian operated signals**;
- **Pedestrian facilities integrated with intersection signals**;
- **Provision for pedestrians at roundabouts**;
- **Improved public lighting**; and
- **Lowering traffic speeds**.

In practical terms VicRoads supports pedestrian-focussed initiatives (as identified above, in italics)
3. PLANNING FOR WALKING IN EAST GIPPSLAND AND BAIRNSDALE

The issues of accessibility and access to services, as well as the quality of the walking environment, are a feature of many of the Shire’s strategic and local planning documents of recent years.

The East Gippsland Disability Action Plan 2007-2009 is heavily focussed on the issue of access of people to services and the word ‘access’ is cited on 64 occasions. Because most of the shops, public and community services, and the other destinations that people need to physically access are located in the CBD this is where equitable access for people with a disability needs to be focussed.

The East Gippsland Environmental Sustainability Strategy 2008-2013 and the 2009-2013 Wellbeing Plan both cite the vision for a shire that is sustainable and liveable and the concept of accessibility to services is a major theme of the latter strategy.

The Bairnsdale Growth Strategy 2009 makes a series of distinct recommendations about improving the local environment for pedestrians. We have selected a number of sections for quotation:

Improving the overall accessibility for walking, cycling and cars in Bairnsdale is another important focus of the Strategy, particularly in order to remedy the current barriers to accessibility in the CBD.

Generally, the core established part of town provides for ease of walkability to key services particularly in areas around the CBD, swimming pool and the BARC facility. While there is evidence of many people walking in these neighbourhoods, the lack of provision of footpaths in many parts of the core area may reduce the walkability for some residents, including the elderly, people with special needs, mothers with prams and children.

Improving pedestrian connections to the train station at the southern end of town is also a key element of this strategy.

Opportunities for greater ‘way finding’ through signage, lighting, and landscaping, will assist to improve legibility to the station from the core CBD area

The pedestrian and cycle network should provide an attractive alternative to the use of the car to move to and within the CBD.

As Bairnsdale’s population ages, there will be a greater proportion of non-drivers living within Bairnsdale and nearby towns, such as Paynesville, Lakes Entrance and Metung. In addition, with the future focus on sustainability and providing healthy, safe and well-connected communities, the importance of adequate walking, cycling and public transport infrastructure is essential.
Council is already in the process of improving the crossability at intersections within the CBD and a number have been recently completed.

These represent an excellent start to the process of improving walkability in the CBD.
4. LOCAL DATA

1. A high percentage of Bairnsdale’s population are either too young to drive, or may be too old to do so. A total of almost 40% of the population was aged 17yrs and under or 70yrs and older at the last census. As people age their rates of disability tend to increase.

2. A significant proportion of the population may not be able to afford to buy and run a car. Approximately one quarter of all households in Bairnsdale had an income of below $500 per week at the last census.

3. One in ten households did not have access to a car and 40% had 1 car. In the latter cases if the household car is used for one person to get to work the remaining members of the household do not have a car available for most of the day.

   Points 1-3 above suggest there is a large ‘latent demand’ for an improved walking environment in Bairnsdale.

4. The population of Bairnsdale is relatively ‘mobile’ – 36% moved into Bairnsdale from elsewhere between 2001 & 2006. The assumption that everyone knows the best and easiest ways to travel is not correct. Good and ongoing information is important, even in smaller cities.

5. Since the reintroduction of the train services in 2004 patronage on the East Gippsland line has grown from 850,000 to 1.91m in 2009-10. There are increasing numbers of people using the train to Bairnsdale and some of these are first-time visitors needing good information and guidance to destinations in the CBD.

6. In December 2006 the Information Centre recorded a total of 6250 visitors to Bairnsdale. The total number of visitors per annum over recent years is likely to be in the order of 40,000-50,000. The amount of ‘local’ information about Bairnsdale available to them is limited.

7. Bairnsdale is the major regional shopping and services centre for most of East Gippsland, attracting large numbers of people on a weekly basis.

   Points 4-7 above suggest there is the need for better wayfinding information for residents and both regular and other visitors to Bairnsdale
5. GOOD PRACTICE FOR INCREASING WALKING

5.1. Introduction

There are a wide range of activities that Councils can undertake to increase the rates of walking in an area. (See Figure 5.1. for a summary of these measures). There are three major groups of activities including behavioural change programs (“soft” elements such as information, leadership, events and programs), the provision of signage and information, and infrastructure improvements.

Figure 5.1.

5.2. Behaviour change/encouragement Programs

New and improved infrastructure for pedestrians is important. However, even the existence of a good physical environment may not be sufficient to make people walk more. Usually it needs to be complemented by a range of “encouragement programs” aimed at getting more people to use existing and new pedestrian infrastructure, and to embrace the culture of walking. This means persuading occasional walkers to become regular walkers, people who push prams to become walkers for transport, and car users (drivers and passengers) to reduce their share of car trips and make more trips wholly or partly on foot. Many people want to walk more and know they should, for a range of personal and social reasons, and this desire needs to be encouraged.

There are three basic types of activities and programs known to result in travel behaviour change:

1. Leadership. This includes actions such as the development and promotion of walking and identifying what a Council will do to support and promote walking. The public declaration that Bairnsdale will be a leader in the push to enable and encourage walking will be important.
2. **The provision of quality information.** There is already a large body of information about the personal, community and business benefits of increased walking. Of particular relevance is the reasonably large amount of retail expenditure that is derived from local residents, many of whom already do, or would like to walk to local shops. Retailer groups are more likely to support walking initiatives after exposure to relevant data of this type. Information, research outcomes and advice is available from a range of sources, including Victoria Walks, Kinect Australia, the Heart Foundation and many others available on-line from within Australia and overseas.

3. **Active involvement in events and programs.** Events introduce people to new behaviours, as do programs such as Streets Ahead, the development of Victoria Walks’ walking action groups, ‘Walktober’ – the Kinect Australia initiative – encourages organisations to develop walks for a wide range of different purposes and groups, including Seniors Month walks, Pram Walks or walks to raise funds for causes. Corporate Challenge walks are aimed at larger businesses. Walk to School day, Walk to Work day and others are all part of this campaign.

The experience of the ‘Smarter Choices’ program in the UK shows that these soft initiatives can have a significant effect on people’s travel behaviour.

5.3. **Pedestrian information.**

Can people find their way? Wayfinding signage, preferably map-based, including walk-time estimates, is already installed in many suburbs in Melbourne and in regional cities (Bendigo, Ballarat). Map based signs are complemented by directional signs along major walking routes and street name signs at all corners. Map-based signs illustrating the proximity of local destinations are being installed in the car parks in Bunbury, to encourage and enable drivers to park-and-walk within the Bunbury CBD, rather than drive between car parks. See Fig 5.3 below.

On-street signage can be complemented with hand-held or on-line maps (or mobile phone apps) Transport Access Guides and other information that gives people the confidence to embark on a walk from their origin to a given destination.

Figure 5.2. The Mandurah hand-held map
5.4. **Infrastructure.**

Good practice in the development of walking infrastructure can be identified from a number of different sources. They include the experience gained from cities and centres which already have high rates of walking, from research and experience in Australia and elsewhere, and from on-street interviews and observation of people walking in activity centres.

An excellent source for identifying good practice in the provision of infrastructure for walking in western-european, car-focussed urban environments is the ‘Pedestrian Planning Design Guide (New Zealand Land Transport Dept. Dec 2007). This comprehensive manual is based on a review of good practice infrastructure development from throughout the world, with an emphasis on what can be done to improve conditions for pedestrians in cities and suburbs that were developed during the Twentieth Century, typically found in Australia, New Zealand, the UK, Canada and the USA. These countries generally have a low mode share for walking. The NZ Design Guide is complemented by the audit notes contained on the Victoria Walks website (see: [www.victoriawalks.org.au](http://www.victoriawalks.org.au) – walking in your neighbourhood – do a walking audit)

Infrastructure improvements can be divided into two major groups – those needed ‘off-road’ (footpaths, etc.) and those needed ‘on-road’ (crossings, etc.). Each of these major groups can be further subdivided into a series of more specific groups.

Off-road infrastructure consists of two basic types:
1. **Footpaths (and shared paths).** Can people actually walk? Do footpaths exist where they are needed? Are there gaps in the system? Are they direct or do they require a detour? Are they wide enough for the volume of pedestrians and people using walking aids? Are they blocked by café seats, poles, pooled water or other obstructions? Are they even, in good condition with no trips and slips? Are there too many crossovers for cars? Is the gradient and crossfall low enough for pedestrians of all ages? Are there good quality pram-ramps at all corners and crossings? Are tactile pavers installed where needed? The footpath system should be comprehensive and in good condition.

2. **Amenity elements.** Is the pedestrian environment as safe, functional and attractive as it can be? The elements consist of seating, safety and related items. Is there sufficient seating for the volume of people? Are seats in good condition, with arms and backs? Other amenity elements include: shade and protection from the weather; the availability of water bubblers; appropriate lighting in night-time use areas; quality landscaping; cleanliness; the absence of graffiti and other signs of vandalism; good sight-lines and overlooking by windows (rather than blank walls). The most important safety element is ‘people’ who provide movement, interest and mutual security.

On-road infrastructure designed to assist pedestrians consists of six basic types:

1. **Road crossings with traffic lights.** Can people safely cross roads where they need to? There are a number of different types of these pedestrian crossings, including where there are traffic lights (at intersections or on straight stretches of road) and signalised zebra crossings. Are there sufficient numbers of crossings, where people need them, linking origins and destinations? Are the lights sufficiently responsive to call buttons? Is there enough time to cross the roads? Are ‘Green Light’ treatments installed – e.g. Automatic Green Man, Advanced Green Man? Are Walksafe treatments installed? Is the road pavement surface and road marking in good condition?

2. **Road crossings without traffic lights.** These consist of unsignalised zebra crossings, crossings at road intersections or at roundabouts, mid-block speed hump/raised crossings of roads and other marked crossings often between kerb outstands, or between road medians. Are sufficient numbers installed linking origins to popular destinations? Is the road pavement and marking in good condition? Is it of sufficient width? Do the marked lines match the pram ramp entry? A recent innovation in Melbourne has been the installation of zebra crossings at roundabouts. Without these, vehicles have right-of-way. Roundabouts without zebras on local streets are particularly difficult for both the old and the young to navigate, and deter walkers.

3. **Part-time crossings.** These exist when and where school crossing supervisors are on duty. Do schools have sufficient crossings with supervisors?

4. **Traffic management treatments.** These include treatments such as raised pedestrian islands, coloured centre of road medians, kerb outstands and road narrowing designed to make it safer and easier to cross a road by reducing
both traffic speed and volume. Within this group are the ‘Continuous Path of Travel’ (CPT) raised crossings linking the footpaths across side streets along main roads.

5. **Speed limit signage.** Is the marked speed limit appropriate for the amount of pedestrian traffic, especially near schools, shops, public transport stops and stations and other people destinations? Are speed limit signs easily visible? Is the road treated to restrain traffic speed to the speed limit? Are the speed limits sufficiently low to give people the feeling of safety and the confidence to walk?

6. **Other signage for drivers.** These signs include items like yellow legs warning signs for drivers, as well as other signage for schools, public transport stops and parks, playgrounds and the like. Are they installed and in good condition?

5.5. **The Positive Spiral**

Creating better walking environments combined with the promotion and encouragement of walking will generate a positive spiral, which builds on itself and strengthens over time.

Figure 5.4.

![THE POSITIVE SPIRAL](image)

Council will need to be the major catalyst in this process, but the extent of behaviour change will depend largely on the willingness of residents, visitors and major stakeholders to embrace and support the need for change and develop the capacity to bring about change. Council and the CBD Reference Group engagement with and the generation of the support of those groups is vitally important.
6. AUDIT RESULTS AND RECOMMENDATIONS.

6.1. The Audit Process

The audit of the CBD follows the ‘Living Streets’ 5C’s process – where questions are posed and answered when reviewing the local walking environment. The fuller list of questions is identified in the good practice guide in Chapter 5, above.

Is the route Connected? How well is walking integrated with public transport? Are parking areas well connected to the retail and other destinations?

Is the route Comfortable? Are route design standards adequate, such as footway width, good quality walking surfaces and provision for people with a disability? Are there pram ramps, and are they compliant with disability standards?

Is the route Convenient? Have important routes been given sufficiently high priority, for example short waiting times at signalised crossings.

Is the route Convivial? Is urban design to a high standard? Is it as attractive as it could be? Are there areas or places that are unattractive or perceived to be dangerous?

Is the route Conspicuous? Are walking routes clearly signposted? Is it obvious how to get to the shops, leisure facilities or bus or train stops? What signage is needed for pedestrians? Are all street names visible and pointing in the right directions?

The audit process involves walking every street and photographing every ‘issue’ raised through the audit questions, as well as tabulating comments on a schedule of every intersection, street and major destination in the study area – the Bairnsdale CBD

6.2. Audit Results

The results of the initial, preliminary audit have been reported in the ‘Bairnsdale Walking and Wayfinding Overview Audit – April 2011’ submitted to Council and the CBD Reference Group.

This much more detailed audit builds on the results of that earlier audit and is designed to clearly identify a series of recommendations on:

1. How to significantly improve the wayfinding resources of the Bairnsdale CBD at least cost;
2. How to significantly improve the walkability of the Bairnsdale CBD, also at least cost;
3. Other issues that should be considered as part of the improvements to wayfinding and walking in the CBD – including amenity issues; and
4. Approaches that could be adopted to encourage people to walk more generally in Bairnsdale and specifically in the CBD.
All of the recommendations are considered to be part of an overall ‘package’ which will have more effect if implemented in entirety rather than in piecemeal. It is anticipated that the package could be fully implemented over the next 3-5 financial years, depending on the allocation of resources to this project’s components.

6.3. **Wayfinding Recommendations**

Based on the results of both the overview and the detailed audit we believe that the optimum wayfinding solution for the CBD is outlined below in Recommendation 1 and discussed in detail in the following paragraphs.

<table>
<thead>
<tr>
<th>RECOMMENDATION 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop a complete new ‘Bairnsdale/East Gippsland Family of Signs’ consisting of Map-based Panel Signs (MBS) ‘Independent Directional Pointer Signs’ (IDS) and a new street name blade;</td>
</tr>
<tr>
<td>2. Develop a new hand-held map of central Bairnsdale, covering all of the CBD but also including the links from the CBD to the Mitchell River walks and the Rail Trail;</td>
</tr>
<tr>
<td>3. Rationalise existing signage in the CBD so that the new system is not compromised by the old and incorrect signage is removed, relocated or amended.</td>
</tr>
</tbody>
</table>

**DISCUSSION**

**Map-based Panel Signs (MBS)**

The existing map-based signs in the CBD are in the form of the ‘Civic Guides’. These have a number of shortcomings, including their scale (covering all of Bairnsdale and limited detail of the CBD), their locations (often not easily accessible to pedestrians or motorists) and the fact that some do not have a ‘you-are-here’ pointer. They only locate on them the businesses that advertise and major civic or community destinations.

The recommended new MBS signs are flat panels. Much of the body of the panel can be painted in the corporate colour, but its main purpose is to clearly display the walking map of the CBD and items such as the ‘walking man’ icon, and include the words ‘Walk Bairnsdale’. At this stage we do not wish to pre-empt the final design solution. However, the content will focus on the needs of the pedestrian and will contain the following types of information:

- **Pedestrian zones**: Footpaths & kerbs clearly show safe pedestrian access
- **Streets, lanes, alleys**: Labelled & numbered for easy identification
- **Pedestrian crossings**: Safe pedestrian crossing locations
- **Pictorial icons**: Visual representation of major attractions and landmark buildings
- **Building foot prints**: Significant buildings identified for reference
- **Through routes**: Pedestrian access through retail centres
- **Public transport**: Tram, Tram stops with wheelchair, Train stations, and Taxi ranks & bus stops
Improving walking and wayfinding in the Bairnsdale CBD

Public facilities: Toilets, including wheelchair accessible Post offices & Information centres
Walking routes: With walking time from sign location
General: Shared paths (pedestrian & cyclist) Motorcycle and bike parking
Public facilities: Seating, private toilets, baby change facilities ATM’s, Public telephones Picnic areas, skate areas, drinking fountains, playgrounds
Disability access: Building access ramps, street/footpath gradients, lifts
Index & grid: Index of destinations & grid references
Legend: Key to symbols & colour coding

Signs recently installed in Heidelberg are an example of the type that may be appropriate for installation in Bairnsdale. They cover an area of similar shape and size.

Fig 6.1.
It is our view that the ‘signage area’ for the CBD panel map should extend to the east of the CBD to include the parks and the Mitchell River to give people the knowledge that within a few minutes walk (or cycle) they have easy access to the River Walks and the Rail Trail. Currently the indication of those links and attractions are conspicuous by their absence. In addition we believe that the Bairnsdale Oval and the pedestrian overpass of the rail line (at Dalmahoy/Macarthur/McCulloch Streets) should also be included on the map, showing the pedestrian link from the station and the CBD to this destination for (mainly) young people.

The CBD (and the extension of the signage area to include the Mitchell River) is approximately 700m from north-south (Pearson Street to Rupert Street at its widest extent) and 2000m from west-east (Grant Street to the east side of the river). This is a long, thin shape – three times longer than its width. As a result we also recommend that all the MBS signs should be sited so that they are seen from either the east (with west at the top of the map) or the west (with east at the top – i.e. the river and the links to the walks/rail trail).

We have reached this conclusion for 3 major reasons;

(a) If the panel signs contain maps of this shape they can be relatively narrow tall structures, and thus easier to locate. The alternative would be to have wide squat structures which are more difficult to place where they are needed;
(b) Having all the maps with the same orientation reduces design costs. The only variation on the maps is in the location of the ‘you-are-here’ icon; and,
(c) The major direction of travel is along the major streets such as Main, Nicholson and Macleod Streets.

The following destinations in Bairnsdale will be included on the map-panels:

**Transport:** Bairnsdale Railway Station; Taxi Rank; Bus Stop
**Attractions:** St Mary’s Church; The Court House; Mitchell River Port; Rotunda; Nicholson Street Mall; East Gippsland Art Gallery; East Gippsland Rail Trail; Krowathunkooloong Keeping Place; East Gippsland Aboriginal Arts Corporation; Bairnsdale Skate Park / Davidson Oval; East Gippsland Institute of TAFE; Community College East Gippsland; East Gippsland Shire Library; Howitt Park.
**Information:** Bairnsdale Visitor Information Centre; Toilets (VIC and Main Street Gardens)
**Parking:** VIC/St Mary’s; Kmart/Aldi; Safeway/Spotlight; Coles; Bailey Street; Rail Reserve

We recommend the installation of 7 MBS at the following locations. The list is numbered in priority order. This is because each MBS will cost in the order of $3000-$3500 installed (total of approx. $25,000 + map design costs) and Council may wish to phase the installation of the MBS signs over a number of years.
1. Outside the Information Centre. This is a key location attracting large numbers of visitors. The sign should be installed in the middle of the brick circle. We also recommend installing seating around the circle so that people can sit, and rest, and view the MBS (this type of seating available – near the Main Street toilets). It may also be useful to install an MBS on a wall inside the Information Centre, if possible, and we would expect that the hand-held map would be distributed from there.

Fig 6.2

2. Near the Toilet block in Main Street. This is a well patronised location, with the pedestrian operated signals either side of this site. There are seats and a wind-break, and it is a prime site for an MBS.

Fig 6.3
3. At the Train Station. This is a major arrival/transfer point. The site selected is adjacent to a pillar at the south end of the pedestrian way, and the sign will be seen by those walking either from the main station entrance or using the gates nearby. It may be necessary to obtain permission from Vline to install the MBS here.

Fig 6.4

It may also be useful to install a map on a wall inside the station waiting area, as well as provide hand-held maps for distribution.

4. At the west end of the Mall. Here people who have parked nearby or walked along Nicholson Street will see the MBS. There is room on the footpath for a sign.

Fig 6.5
5. On the corner of Bailey/Macleod Streets. There are a range of social, community and health services in this area, and ample room for an MBS.

Fig 6.6

6. Outside the Post Office. This is a busy part of the CBD and merits a sign. It may be necessary to pave a part of the landscaped area to fit the sign in here and give people room to view both sides of it.

Fig 6.7
7. Outside the Corporate Centre. This site merits a sign, so it can be seen by all visitors to the Centre, from all parts of East Gippsland. Care must be taken about the exact site of the sign so as to not disturb the symmetry of the design here. It may be possible to place it where one of the bike stands is located, and relocate the stand to elsewhere nearby.

Fig 6.8

(We are unsure about the value of installing an MBS in the information bay 5kms west of the city centre. While it is an option, we do not know how many people stop there and if they do, how many would remember the CBD map once they arrived. As a result we have not included it in our list of MBS sites)

Street Name Blades

These are vitally important when using a map-based system, so that people can easily locate themselves on the maps and follow a route to their chosen destination.

The detailed audit of the CBD showed that at most street intersections there were rarely sufficient street name blades. At some street intersections there were 1 or 2 blades, but a few had none. As a result we recommend that new street name blades should to be installed in pairs on the opposite corners of ALL the intersecting streets in the CBD, at a height and in a location that can easily be read by pedestrians (i.e. as close to the street corner as possible). We believe that most street corners have either existing street name poles onto which the new blades can be fixed or there are light/power/other poles that can be utilised in most cases. Some new poles may be required.

The cost of installing a complete new set of street name blades (an estimate of approximately 120 at the 30 CBD intersections i.e. 4 per intersection) is not much more than installing all the ‘missing’ blades, (approximately 60-70) given the cost of approximately $125/blade installed. The cost difference is probably less than $8000-
9000. However, the total cost to install a complete new set of blades could be $15000, but a local manufacturer may provide/install them for less than this. This task can be completed over a number of years, by firstly installing the missing blades using the new design and then replacing the older signs with the new.

In addition we identified two roads/laneways which do not appear on existing maps and which appear to have no name – one alongside the Cinema building and another off Main Street near Coles. It is recommended they are given names, or if they already have names, then a street name blade is installed.

**Independent Directional Pointer Signs (IDS)**

The audit showed that there were quite large numbers of existing IDS signs, found almost exclusively in the middle of Main Street, provided there mainly for the benefit of drivers. On one intersection there are a total of 16 directional signs, in at least 4 different colours and fonts, some with distances marked and others without.

Figs 6.9 & 10

Figs 6.11 & 12
A number of issues are raised by these (and other) signs on Main Street: 1) they are of a range of shapes, sizes and colours and have no consistency; 2) many of them are on the ‘far side’ and the ‘off side’ of the relevant intersection, so that drivers would find it difficult to make the required left-hand turn to follow the direction of the sign by the time they reach it; 3) the distances indicated are often incorrect.

Each of the CBD blocks is approximately 100x200m. As a result the distance from the intersection of Bailey and Main Streets (where the sign to the Post Office is sited) to Bailey and Nicholson (the Post Office) is approximately 100-120m not 220m as indicated. The sign to the ‘Trains’ located on the corner of Main and Pyke Streets indicates it is 300m, whereas the actual distance is approximately 125m.

Directional signs lose their value if they are not followed up by additional signs at the next intersection indicating a change in direction, if required. In most cases there is no follow up sign.

The proposed new IDS signs will have a similar design to the street name blades. They will identify a destination, provide the estimated walk-time in minutes and include the logo.

Generally the IDS are used to point from the periphery of a signage area to a major destination or to fill in the gaps between MBS signs within a signage area. They can also be used to sign to destinations on the periphery of a signage area when there is no nearby MBS to refer to. However, the numbers if IDS signs need not be large if there are also numbers of locations where the proposed hand-held map of the CBD is available to the public and there will be seven map-based signs to refer to.

The schedule of the locations and contents of each IDS is included in Table 1.
TABLE 1 - Number, location, direction and content of IDS signs.

<table>
<thead>
<tr>
<th>IDS No.</th>
<th>LOCATION</th>
<th>Direction(s) Pointed</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (with 2 pointers)</td>
<td>SE corner of Dalmahoy and Macarthur</td>
<td>N (over footbridge)</td>
<td>Station &gt; 4mins walk Town Centre/Mall &gt; 10mins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E</td>
<td>Cultural facilities/services &gt; 3mins (it will be necessary to use the correct terminology/titles on this sign)</td>
</tr>
<tr>
<td>2 (with 2 pointers)</td>
<td>SE corner of Macleod and McCulloch</td>
<td>S (over footbridge)</td>
<td>Bairnsdale Oval &gt; 3mins walk Cultural facilities/services &gt; 5mins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E</td>
<td>Station &gt; 3mins Town Centre/Mall &gt; 9mins</td>
</tr>
<tr>
<td>3 (with 2 pointers)</td>
<td>NW corner of Dalmahoy and Service</td>
<td>N</td>
<td>Town Centre/Mall &gt; 6mins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>W</td>
<td>Cultural facilities/services &gt; 2mins</td>
</tr>
<tr>
<td>4a</td>
<td>Close to river on S side of Highway</td>
<td>W</td>
<td>Town Centre/Mall &gt; 12 mins Information Centre &gt; 12 mins Station &gt; 15mins</td>
</tr>
<tr>
<td>4b</td>
<td>Close to river on N side of Highway</td>
<td>W</td>
<td>Town Centre/Mall &gt; 12 mins Information Centre &gt; 12 mins Station &gt; 15mins</td>
</tr>
<tr>
<td>5</td>
<td>On footpath at TAFE</td>
<td>W</td>
<td>Town Centre/Mall &gt; 8 mins Information Centre &gt; 8 mins Station &gt; 10mins</td>
</tr>
<tr>
<td>6</td>
<td>NE corner of Bailey and Main</td>
<td>N</td>
<td>Mall &amp; Post Office &gt;3 mins</td>
</tr>
<tr>
<td>7</td>
<td>NW corner of Service and Main</td>
<td>N</td>
<td>Mall &gt; 2 mins</td>
</tr>
<tr>
<td>8 (with 2 pointers)</td>
<td>SE corner of Nicholson and Pyke</td>
<td>E</td>
<td>Mall/Post Office &gt; 5mins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>Station &gt;5mins</td>
</tr>
</tbody>
</table>

Preliminary Design Concepts for the Bairnsdale/East Gippsland Family of Signs

The Family of Signs and each individual member are illustrated below. These are only preliminary concepts and colours and designs can be determined at the detailed design stage.
Fig 6a. Preliminary design for the Family of Signs.

6b Map-based Signs
6c & 6d. IDS and Street Name Blades

Directional sign

Street name signage

Improving walking and wayfinding in the Bairnsdale CBD
Development of hand-held map(s) for Bairnsdale CBD

A hand-held map is a ‘by product’ of the production of the detailed pedestrian focussed map needed for the MBS. They are usually produced on a tear-off A4 pad of maps. However, because of its smaller size it has reduced capacity to include all the information in the larger MBS maps.

Fig 6.14

It provides a very good guide to getting around the CBD on foot and where the major destinations are to be found. It is not possible, nor desirable, to attempt to use it as a business directory.

However, it may be possible for trade or other groups within the CBD to be given access to the base map and modify it for their own group – and produce a map that identifies the locations of ‘Accommodation, Hotels, Restaurants and Cafes’ or ‘Health, Education, Civic, Religious and Cultural Activities’ or other major groupings of destinations that Council or the CBD Reference Group believe should be enabled to produce their own modified map. Once designed these map are inexpensive to print on medium quality paper in tear-off pads,

The hand-held map can be distributed at a wide range of outlets – especially at those where people frequently ask ‘How do I find ……?’ Our suggestions for these outlets include: the information Centre; East Gippsland Corporate Centre; Train station; Library; Education facilities – TAFE, Community College, Neighbourhood
Improving walking and wayfinding in the Bairnsdale CBD

Rationalisation of existing signs

This can sometimes be a contentious issue, mainly because the existing commercial or other ‘destinations’ that are signed may believe they will be disadvantaged if the sign to them is removed, even if the existing sign serves little purpose. However, we recommend that as many as possible of the existing signs are eventually removed.

The installation of the MBS signs, the IDS signs and the production and distribution of the hand-held maps may help to overcome these problems and that the existing mix of signs in Main Street can be reduced quite significantly.

In the short-term we recommend the following actions:

1. Relocate the sign to the Disabled Toilets in Main Street to its correct location – at the pedestrian operated signals, from where people with a disability can actually access the toilets.
2. Correct the distance measure to ‘Trains’ sign – 125m not 300m
3. Remove any signs that are incorrect – such as the one to ‘Shire Office’ (now Corporate Centre) and the duplicate sign to the Post Office with the wrong distance on it.

In addition there are a number of signs such as ‘Motel’ which do not say which one, where it is or how far away it is. These indiscriminate signs serve little purpose.

In the longer term and after the implementation of the new signage system we believe that there will need to be the removal of as much signage ‘clutter’ as possible. By that time most of the sites which are currently signed will have a better system in place and opposition to the removal of existing signs will diminish.
6.4. **Walkability Improvements and Recommendations**

Walkability improvements are intended to achieve two related aims – to make walking within the CBD as safe, convenient and enjoyable as possible and to encourage people to walk more, explore the CBD on foot and visit more shops. A good environment for pedestrians is a good economic environment. Fast through traffic is of little or no benefit to the local economy and generally the slower people travel the more they spend.

However, there needs to be an appropriate balance struck between the needs of drivers and the needs of people on foot.

Our recommendations on improving walkability are in two major groups – dealing with the off-road environment (mainly footpaths and amenity elements, such as seating etc.) and the on-road environment (road crossings, traffic management devices, speed limits, etc.) Both sets of issues can be related, especially where a new crossing over a road needs to be complemented by both appropriate speed limits and new pram ramps, for example. Car parks are a ‘hybrid’ of the two groups. They are used equally by drivers/passengers in cars who then all become pedestrians in the car park to access the nearby shops and services. If car parks are also used as short cuts by other pedestrians then the pedestrian function of a car park is of more importance than its vehicle function.

**RECOMMENDATION 2**

Maintain all existing footpaths so they are flat and even. Repair sections of footpath where needed. Install new footpath sections where required. Extend footpaths as ‘continuous paths of travel’ (CPT) over some roads to improve safety and access.

**DISCUSSION**

**Footpaths**

The footpath system in Bairnsdale CBD is generally of a good standard. Much of it is formed by large concrete slabs and there are a range of other finishes, including brick paving, tarmac, concrete pavers and concrete etched to look like pavers. While this mix of finishes is not ideal it would be expensive to repave large areas and this is not a good or necessary investment.

Many edges of the slabs have been ground back, especially near trees, and there is obviously constant surveillance of this ‘raised edge’ issue.

There are a number of sections of footpath in need of repair in the CBD. Figs 6.16 & 17 are on Service Street, Figs 6.18 & 19 are on Macleod Street and Fig 6.20 is on Dalmahoy Street. These sections of poor quality footpath should be repaired, as they are in quite busy parts of the CBD.
There are parts of the CBD where footpaths do not exist on one side of a street and a few places where there are no footpaths on either side, such as on Wood Street south of Macleod and the far eastern parts of Dalmahoy Street. Elsewhere people can walk on footpaths either on one side or both sides of all other streets.

The highest priority ‘missing link’ is on the south side of Macleod Street, from the station to McCulloch Street. A new section of footpath here would provide the link to the pedestrian bridge and access to/from the station from people wishing to use
Bairnsdale Oval and all of the community and the Aboriginal cultural and other activities south and west of the station. This is approximately 200m of new footpath.

However, in the longer term (10+ yrs), all streets in the CBD should have footpaths installed on both sides as the demand for walking increases.

**Continuous Paths of Travel (CPT)**

Most of the ‘crossovers’ (where vehicles cross the footpaths) in the CBD are constructed so that the pedestrian remains walking on the flat and the vehicles cross over the footpath – a continuous path of travel (CPT) for pedestrians. However, some of the places with the highest potential levels of conflict between vehicles and pedestrians are at the entrances/exits to car parks where pedestrians need to walk over roads, and this is where we believe new CPTs would be justified.

The prime example is on Nicholson Street west of the Mall, at the southern exit to the car park. A CPT here would slow drivers and give pedestrians right of way. A number of these CPTs have been installed in Kew, following our recommendations.

The other potential site for a CPT is the northern exit to this (Spotlight) car park.
RECOMMENDATION 3

Improve the capacity of pedestrians to cross roads; (a) at traffic lights and pedestrian operated signals; (b) at roundabouts; and, (c) at locations where it is difficult to do so – outside the station and at Wood/Macleod Streets.

Reduce the signed traffic speed in the most densely used shopping areas.

DISCUSSION

Crossing at traffic lights and the pedestrian signals in Main Street

Currently the sets of traffic lights in the CBD respond to pedestrians when they press the call button, and a ‘green man’ appears to signal it is safe to cross the road. It can be frustrating if people either forget to press the button or arrive a second or 2 too late, and no green man appears. The recommended solution is to adjust the light settings to provide an ‘automatic green man’ that appears whether the button is pressed or not. We recommend this adjustment is made at all traffic lights, in all directions, in the CBD.

The pedestrian operated signals linking people to the public toilets and both sides of Main Street is set to respond to people pressing the call button in approximately 40+ seconds. While this is not a long time, it can seem like a long time for someone desperate to use the toilet or standing in the heat, cold or rain.

A common scenario is that people wait until there is a gap in the traffic and cross illegally and possibly unsafely, and then the lights change and vehicles stop and there is no-one using the crossing. Both drivers and pedestrians lose out.

The recommended solution is to significantly shorten the pedestrian wait-time and adjust the POS lights to respond to the call button in 20 seconds or less. We do not believe this will cause ‘traffic build up’ back to the preceding set of traffic lights (except perhaps on the very heaviest traffic days during school holidays). If this does occur the lights can be set to respond to the call button at longer intervals for the very busy holiday periods. This need not be an expensive or difficult task.

Crossing at Roundabouts

Roundabouts are good for keeping traffic flowing and reduce traffic crashes. However, they are notoriously bad for pedestrians, as vehicles can come from 4 different directions – straight on, those turning left or right, and those doing a U-turn.

“One study undertaken in Western Australia found that of the pedestrians interviewed, 54% found the rules associated with roundabouts confusing and 72% found it harder to cross at a roundabout than at a conventional crossing, further exacerbating pedestrian safety issues at roundabouts”. (Browning, 2001 – cited in the MUARC Report -
As a result it is now possible to install pedestrian (zebra) crossings on slightly raised platforms at roundabouts in Victoria, combined with ‘yellow legs’ warning signs. This is now common practice and some examples have been illustrated below. The first is installed in a relatively busy shopping street (Martin Street) in Gardenvale. The crosswalk is slightly raised and well lit. There is excellent driver compliance. Drivers stop on the approach to the crossing and in the exit to the roundabout when pedestrians are on a crossing or waiting to cross. This design has been in place for four years and there have been no reported pedestrian or vehicle accidents. In the near future Bayside Council will be reducing the speed limit here to 40kph to further emphasise the level of pedestrian priority in this street.

Fig 6.24 – Zebra crossings at a roundabout in Martin Street, Gardenvale

The second example was installed in 2005 adjacent to South Melbourne Market – a very busy area, especially on market days. Here the crossings were upgraded significantly. The zebra crosswalk was raised to footpath level.

Fig 6.25 – Before and After at a roundabout in South Melbourne

The new treatment in South Melbourne was assessed by a team of researchers from MUARC (Monash University Accident Research Centre) and was found to have significantly reduced traffic speed (most drivers drove at less than 30kph)
approaching the roundabout), improved pedestrian compliance at the crossing and a much improved safety situation for pedestrians. The occasional blocking of the roundabout by vehicles stopping for pedestrians was not considered to be a problem of any concern.

It is recommended that Council install these treatments at the two roundabouts on Nicholson Street either side of the Mall – at Nicholson/Service and Nicholson/Bailey Streets. In both cases these are places where the area is dominated by ‘people destinations’ – shops and services, where quite large numbers of people already cross the roads and where there is probably a large latent demand for improved and safer crossability.

Figs 6.26 & 27

In both cases there is sufficient space for cars to stop as they are exiting the roundabout to allow pedestrians to cross the road without cars blocking the roundabout for others. Currently pedestrians have no ‘right-of-way’ to make a crossing, although we did observe a number of cars that stopped to let people cross.

The design for these crossings needs to include a zebra crossing (to indicate to drivers they are crossing a pedestrian space), yellow legs warning signs on all corners and possibly a small sign for pedestrians - ‘cross with care’ on the crossing pram ramps. The slight raising of the crossing could be costly and its implementation should be considered optional.

Experience from other places where these have been installed suggests that drivers soon adjust to the new environment. Indeed, almost all drivers become pedestrians to shop and browse, so they get the safety and convenience benefits of these crossings themselves. Any small amount of time they may lose by having to stop is usually regained when they begin to walk. If ‘through traffic’ drivers dislike the new environment there are alternative routes they can take. These intersections are not appropriate for volumes of through traffic.

In addition we recommend that the introduction of these two pedestrian priority roundabouts is complemented and reinforced by the introduction of a 40kph zone to cover the following area – Bailey Street from Riverine/Francis to Main, Service Street from Francis to Main, and Nicholson Street from Riverine to the mid-block between
Improving walking and wayfinding in the Bairnsdale CBD

Service and Pyke. This will emphasise the pedestrian function of this core retail and services area and serve to strengthen its attractiveness to shoppers.

At some stage in the future Council may wish to consider applying the same roundabout treatment at the intersection of Bailey and Macleod Streets.

Other crossings of concern

Crossing to the Station.
The Bairnsdale Growth Strategy noted that ‘Improving pedestrian connections to the train station at the southern end of town is also a key element of this strategy’. Currently there is a pedestrian walkway from the Station entrance to the footpath on the south side of Macleod Street, a vague set of markings on the very wide road, and a pram ramp on the north side of Macleod Street and the east side of Pyke Street. These two elements need to be linked.

Figs 6.28 & 29

A median island with safety barriers is needed in the middle of the road, allowing pedestrians to cross Macleod Street in 2 safe stages. The median may need to be ‘dog-legged’ because the new pram ramp on the south-side (station side) would need to be located some metres west of the exit road, but the crossing to the north side needs to align with the pram ramp on Pyke Street.

Crossing at the junction of Wood and Macleod Streets

At this intersection it is almost impossible to cross at any of the 4 corners. The lack of crossability here is likely to impede people wishing to access the parks, river and rail trail from the station, and any others walking between the TAFE, the station and other destinations in the south-east of the CBD. Presumably few people attempt to cross the roads here and take detours to avoid the intersection. Shops and businesses in the area may be disadvantaged.

The situation is complicated by two factors; (a) the only footpath on Macleod Street east of Wood Street is on the south side of Wood Street, which then leads to the park; and, (b) there is a steep slope down from the footpath to the road on the NW corner of the intersection. For these two reasons we recommend that the major
focus of attention is on the ‘least-cost’ solution – improving crossability on two sides of the intersection only.

This involves making it easy to cross Wood Street on the south side of Macleod, where there are already footpaths and pram ramps but no cutting in the grass median.

![Fig 6.30](image)

It also involves installing pram ramps on both sides of Macleod Street east of Wood Street (one at the end of the footpath on the north side and another opposite it on the south side) and creating a linking pedestrian cutting in that grass median between the two new pram ramps.

![Fig 6.31](image)

This approach enables most people to use the existing footpaths at minimal expense.

Finally on the north side of Macleod Street at both Grant and McCulloch Streets we noted that the median islands had not been cut through to allow a CPT for pedestrians. While this is not a problem for some people, those with a disability would find it difficult to cross the south end of both of these streets, (or have to detour around the medians).
RECOMMENDATION 4
Improve the general level of amenity on streets and public places.
Improve public safety and amenity in car parks

DISCUSSION

Public amenity issues
During the audit we noted a total of 9 different types of seating in the CBD, including those on footpaths, in the Main Street gardens, in the Mall, at the station and elsewhere. Most were in the East Gippsland corporate colour, but some were green. We recommend that as seats come up for replacement they are replaced by the type found in many places – similar to this pair outside the Community Health offices.
We also noted that public seating is quite limited. There are many public spaces, such as wide footpath areas, street corners and other ‘empty spaces’ where there is ample room for a seat but none to be found. Examples include the footpath on the south (sunny) side of Main Street, on the corner of Macleod and Bailey Streets, and outside the Information Centre. Good seating is essential for a city with a large older population, with visitors wanting to rest on their walk around town, and is sign that people are welcomed by the city they are in. Over time (3-5 years) it would be possible to significantly increase the amount of public seating in the CBD.

There are two colours of rubbish bins (red in most of the CBD and green in the Mall). This may be adopted policy, but it is recommended that all should be of the same colour, if possible. A few bins had been vandalised. Prompt maintenance of public property is a sign the council cares for the public environment.

There were few other signs of vandalism or graffiti and this is excellent.

There are two public toilets in the CBD, but as in other centres, people also have access to ‘private’ toilets in places such a McDonalds, the station, some of the bigger shops, Hotels, etc. so that there does not appear to be a need for additional toilets in the CBD.

The Main Street garden has some attractive artwork, (and the roundabout at Nicholson/Service Street is also an artwork in itself). However, with the closure of the minor roads through the Main Street garden there may be the opportunity to activate it with more ‘attractions’, including additional artwork.

Following our work at Kew Junction Boroondara Council has completely ‘revamped’ the area, using a consistent colour on all street furniture, installed new signage and upgraded all the crossings.

Some ‘after’ photos illustrate the positive visual impact of the results and the way that it makes for an attractive public environment.
Improving the amenity of car parks

Car parks are used by many pedestrians, either to walk from their cars to the shops and services or as short cuts between CBD destinations. In some places the delineation between what is a car park and a road can be vague, as in the section of Francis Street from Service to Riverine Streets.

It is recommended that Council clearly define the entrances/exits to all major public car parks, give each major car park a ‘name’, sign the name at all entrances, and then install signage which designates the area as a ‘shared zone’ with a speed limit of 5kph.
RECOMMENDATION 5
Support the local public transport system and encourage its expansion and development. Promote walking for transport in Bairnsdale, through involvement in programs and events.

DISCUSSION

Promotion of Walking and Active Transport
A good walking environment supports public transport and a good public transport system supports walking. The aging of the local population, the cost of fuel, and all the issues that support walking also support the increased use of public transport.

The main bus service in Bairnsdale operates 3-4 services a day to east and west Bairnsdale and to Wy Yung. During our audit we found the bus stop in Main Street outside of Coles. However, there was no information available about the services, and none available from the Information Centre or elsewhere.

We recommend that Council begin to promote the availability of the bus services in the context of supporting walking and ‘active transport’ for those who need or want to use buses and walking as a means of transport.

Events and programs are a good way to encourage people to walk. Frequently it is recreational and event walkers who convert to ‘functional’ walking for transport, once they realise its benefits and how walkable much of the CBD really is.

People walk at about 5kms per hour (1km in 12minutes). This means that the walk from the station to the Mall (approx 500m) is around 6 mins while even one of the longest walks – from the Corporate Centre to the TAFE is approximately 1km or 12-15mins. Most of the major CBD destinations are within 5-10mins walk of each other. Given the overestimate of distances on the existing signs in the CBD containing
distance measures it is likely people have been reluctant to walk because distances seemed longer than they actually are. It is also likely that those putting in the signs did not undertake the walk (or measure the real walking distance).

Walking events can be staged for a wide range of purposes – for health and recreation, for fund raising, to raise awareness of an issue, etc. The Kinect Australia ‘Walktober’ website (see; www.walktober.com.au) lists links to community events, walk to school and other initiatives and contains information on a range of events in all states of Australia. Events in Bairnsdale need not be part of Walktober as people can walk any time for any reason.

VicHealth has a site that advises people and groups on how to 'audit' their own areas to improve walkability (see: www.victoriawalks.org.au). Part of the frontpage is attached below.
Victoria Walks

Walking is a great way to meet your neighbours, get healthy, save money and save the planet. Encouraging walking can help make your neighbourhood better for walking. Take a stroll around the site and get inspired.

- Subscribe to our e-news
- What's your council doing about walking?
- Watch our hilarious films
- Find a Walkability Action Group

Walking Stories

reclaiming the streets

Do fewer children play in the street because the traffic more dangerous, or is the traffic more dangerous because fewer children play in the street?

News

- Americans prefer smart growth communities
  21 April 2011 Research shows preference for walkable neighborhoods and good public transport.
- Too much TV can give kids heart disease
  21 April 2011 ‘Parents need to get their children up and moving and off the couch.’
- WA government push for children to walk to school
  11 April 2011 Push for more children to walk and cycle to reduce childhood obesity and traffic congestion.
- Moving beyond the automobile: traffic calming
  6 April 2011 Great new YouTube video explaining traffic calming.
- Going walkabout
  4 April 2011 Local walking groups are reclaiming the streets.
7. CONCLUSIONS AND APPROXIMATE COST ESTIMATES

RECOMMENDATION 1

1. Develop a complete new ‘Bairnsdale/East Gippsland Family of Signs’ consisting of Map-based Panel Signs (MBS) ‘Independent Directional Pointer Signs’ (IDS) and a new street name blade;
2. Develop a new hand-held map of central Bairnsdale, covering all of the CBD but also including the links from the CBD to the Mitchell River walks and the Rail Trail;
3. Rationalise existing signage in the CBD so that the new system is not compromised by the old and incorrect signage is removed, relocated or amended.

Revitalising the look of the Bairnsdale CBD with the installation of a family of new signs significantly improving its ‘legibility’ for both visitors and residents, and the provision of a wayfinding map of the main visitor destination area is likely to have the following costs; (All elements should go out to either public or selected tender, and include local suppliers where possible. Some tasks can be performed ‘in-house’ and may be included in a numbers of different departmental budgets)

1. Design costs. These should go out to tender to graphic designers. The likely cost range for the design of the map to go on the panels and the hand-held map to be printed for distribution is $15-20,000.
2. Manufacture and installation of 7 MBS panels @ $3500/item c. $25,000+.
3. Manufacture and installation of approximately 120-130 new street name blades and IDS @ $125/item average (including some poles) approx. $15,000-17,000.
4. Printing of hand-held maps, allow $2,000

It is more difficult to estimate the costs of the civic works, such as footpath repair and extension, the installation of CPTs, the works required at roundabouts and the other associated improvements identified above. It will be essential to get local information/experience from East Gippsland engineers/contractors on these likely costs. For some works (crossing to the Station) much will depend on the detailed design adopted.

However, based on past experience we have provided some indicative, broad estimates of costs. They are presented in the order of the recommendations.

RECOMMENDATION 2

Maintain all existing footpaths so they are flat and even. Repair sections of footpath where needed. Install new footpath sections where required. Extend footpaths as ‘continuous paths of travel’ (CPT) over some roads to improve safety and access.

2.1. Footpath repair – 4 locations at $3-400/section $1500

Improving walking and wayfinding in the Bairnsdale CBD
2.2. New Footpath section 200mx1.5m width at $50/m2= $15,000
2.3. CPT’s at both ends of Spotlight car park. Dependant on design, engineering and drainage issues etc.

RECOMMENDATION 3
Improve the capacity of pedestrians to cross roads; (a) at traffic lights and pedestrian operated signals; (b) at roundabouts; and, (c) at locations where it is difficult to do so – outside the station and at Wood/Macleod Streets. Reduce the signed traffic speed in the most densely used shopping areas.

3.1. Install ‘Automatic green man’ at all traffic lights on Main Street $?
3.2. Reduce wait time at POS on Main Street $? 
3.3. Install zebra crossings, yellow legs signs and ‘walk with care’ signs at 2 roundabouts – paint and signage est. $5000-7000/roundabout
3.4. Signage for 40kph zone in central CBD area. 8-10 signs at $300=$3000
3.5. Install zebra crossing and median to station. Cost dependant on design.

RECOMMENDATION 4
Improve the general level of amenity on streets and public places. Improve public safety and amenity in car parks

4.1. Additional and replacement seating – 10/annum at $1000/seat installed.
4.2. Improving the amenity of car parks. Mainly signage costs. Depends on number of car parks and number and size of signs, etc

RECOMMENDATION 5
Support the local public transport system and encourage its expansion and development. Promote walking for transport in Bairnsdale, through involvement in programs and events.

This could be built into relevant departmental activities.
APPENDIX 1 – INTERNATIONAL EXAMPLES – IMPROVING WALKABILITY

1. Creating a safer street at low cost through community involvement: DIY Streets Project, UK

DIY Streets is now a UK-wide project that helps residents to re-design their own streets affordably, putting people at their heart, and making them safer and more attractive places to live. The project has twin aims: to further embed robust community involvement into transport and highways practice and to pilot low-cost capital solutions to the most common local traffic problems including speeding, nuisance parking and rat-running.

The first DIY street was in the Ashley Vale area of Bristol (see Figures 2.2. and 2.3.). Residents were encouraged from the outset to participate in all aspects of the research, design and even physical implementation of the schemes, with some important consequences in terms of the project’s outcomes.

The scheme was completed for about £17,500, (very significantly less than the sums required for typical home zones). The whole process from the first residents’ survey to completion in June 2004 took only 18 months, and 8 months from agreement of the design. The costs were kept low by:

- maintaining existing drainage and levels,
- building the planters on top of the original tarmac,
- plantings being carried out and maintained by residents,
- using local recycled materials where possible,
- residents agreeing the design quickly, and
- minimising signage.

Figures A.1. & 2.
2. **Supporting walking for health by mapping routes around Doctors’ surgeries - Walking Maps for Camden, London**

Walk England and National Health Service (NHS) Camden have worked together to develop a series of accessible, safe and attractive 30 minute walks around doctors’ surgeries to encourage sedentary patients to walk more. Colourful maps have been designed to be legible and easy to follow and are distributed by health staff at the surgeries. The maps have also been made available at libraries and community centres and are used by health trainers to encourage physical activity with their clients.

Walk England consulted and involved sedentary people, older people’s groups, ethnic minority groups and people with pre-existing health conditions to help choose and audit the best walking routes and ensure the maps were practical and easy to use. Routes were chosen to reflect desires to be more socially connected and set personal health challenges. A selection of interconnecting walks from each surgery reflected these experience themes over measured distances to allow walkers to benchmark their walking ability by measuring the time they took for each route and giving the opportunity to progress their health over time by walking faster and for longer.

In partnership with the local transport authority the accessibility, character and management commitment was audited for each path. The audit included a review of steps, gradients, cross slopes, crossings, surfaces, widths, obstructions, signs, waymarking and other route characteristics. The local highway authority identified a number of works to be included on their maintenance lists.

Simple, uncluttered maps that make it easy to see where you are and give confidence to know where to go were created using a three dimensional illustrative style. Informed by the opinions of health centre staff the maps are available from an A4 tear off pad which typically sits on a doctor’s desk or at the surgery reception.

The project is still being evaluated for longer term impacts, but initial feedback from surgeries has been very positive. The idea is now being rolled out across England under the ‘Walk4Life’ brand, with 2012 audited, mapped and signed routes to be created by 2012, potentially the largest walking programme in the world.

3. **Achieving change through demonstration projects - Times Square and Broadway, New York City**

Mid-town Manhattan is deficient in public space. Times Square is a world famous square, but it was filled with traffic, with nowhere for people to sit or linger. A demonstration project created a pedestrian plaza almost overnight in late 2009, using cheap materials, moveable seating and paint. Many sceptics predicted that traffic gridlock would result.
After an eight month trial, Mayor Bloomberg confirmed that the plaza would be made permanent and that Broadway from 47th to 42nd Streets and 33rd to 35th Streets would remain closed to traffic. The change was ostensibly made to increase safety, reduce pollution, and improve traffic flow at choke points where Broadway meets the avenues.

Pedestrian injuries are down 35%, drivers /passenger injuries down 63% and traffic is moving about seven percent faster in Midtown as a result of the new configuration.

However, the underlying philosophy was to improve the experience of Midtown for people on foot and in this it has been a striking success. The plazas have proven hugely popular with locals, visitors and tourists. Foot traffic is up by 11% and the satisfaction rating amongst residents and office workers is up from less than half in 2007 to 75% now. It has shifted the paradigm for what a street and sidewalk experience is supposed to be like in New York City.

Now that the success of the concept has been proven using an ‘overnight intervention’ method and cheap materials, there are plans now to re-design the space with new paving and seating to make it a world-class plaza.

4. Achieving high quality streetscapes through innovative design and by questioning standard approaches: Kensington High Street, London

Kensington High Street lies at the heart of the Royal Borough of Kensington and Chelsea and is not only a major east-west radial route to the centre of London, but also an important commercial/retail street flanked by highly desirable residential areas. In recognition of this the Borough Council initiated a programme of streetscape improvements in the mid-1990s to improve the quality of the public realm as an attractive place to live and work, and to sustain the vitality and viability of the High Street as a major shopping destination in the face of other competing retail developments.
Despite agreement that the new street should accommodate existing traffic flows, a forward thinking Councillor lead the Kensington High Street Working Party and the design objectives started to shift away from standard traffic engineering solutions to a more radical streetscape design. This redressed the balance from vehicles to pedestrians and created a coherent, legible and easily accessible street.

Completed in 2003 the revamped street has clearly achieved these aims by removing all unnecessary visual and physical clutter, coordinating the design and location of new street furniture, and coherently defining the footway/carriageway boundary. The use of a limited palette of high quality paving materials, implemented with excellent detailing and workmanship, creates a visually coherent floorscape which, combined with the clearly defined footway kerbline, adds to the simple elegance and legibility of the street.

Rearrangement and simplification of pedestrian crossings and the extension of the central reserve allows the road to be crossed easily and safely. The removal of barriers to movement, especially guardrails at staggered crossings, provides a sense of liberation to the pedestrian, trusting both pedestrians and drivers to use the street responsibly. The removal of guardrailing has been controversial, with traditional views holding that railing is essential to pedestrian safety.

However, the first three years of the scheme saw a 47% reduction in accidents in High Street compared with a 35% fall elsewhere in the Borough. The improvements have proved a tremendous success and show what can be achieved with the vision and will to push the boundaries of accepted practice.

Figures A.5 & 6.

5. **Reframing the relationships between people in cars and people on foot: Shared space in Bendigo, Victoria**

‘Shared space’ is a term used to describe an emerging approach to urban design, traffic engineering and road safety in Europe and, increasingly, in Australasia. Shared space is defined as:

> “a street or place accessible to both pedestrians and vehicles that is designed to enable pedestrians to move more freely by reducing traffic management
features that tend to encourage users of vehicles to assume priority” (MVA Consultancy, 2009)

A key element of shared space is the removal or reduction of traffic signs, markings and other instructions to drivers, so that the road no longer looks like a space designed for traffic. One variety of shared space is shared surface, which requires the removal of the separation between motorised vehicles and other road users, mainly through the removal of the traditional footpath, kerb and controlled crossing points, resulting in a shared surface streetscape.

Shared Space confounds traditional stances, which hold that separation of vehicles and pedestrians is a pre-requisite of safe co-existence. However, the operation of shared space schemes in Continental European countries has in no case resulted in casualty increases and given the increase in usage of such places by pedestrians and cyclists, this represents a reduction in risk. Moreover, shared space is not just a traffic management issue or a safety issue, though it does bring great benefits in these areas. Shared space also offers the opportunity to reorganise space in a city centre to make it more comfortable and attractive, using urban design rather than traffic management principles. This also allows the removal of many signs and other traffic-related clutter and the provision of attractive seating, lighting, public art and other aesthetic benefits.

Shared space areas can thus be both safe and beautiful. The city of Bendigo, Victoria, has, for example, turned a former traffic intersection in front of the Town Hall into a shared surface Town Square, winning greater safety and attractiveness in the process with a street layout that civilises retail streets for walkers and cyclists whilst still allowing slow vehicle access and parking.

The comprehensive and integrated approach taken in formulating the CBD Plan generated widespread interest and praise from other cities in Australia culminating in receiving the 2008 Australia Award for Urban Design.

Figures A 7 & 8.
6. **Inter-agency partnership to increase levels of walking to school; Halton District School Board, Ontario Canada**

This is a successful Canadian pilot project, which implemented the Active and Safe Routes to School program to influence and change student transport behaviours. With health promotion theory as the backbone of the strategy, project management its methodology, and multi-sector collaboration its matrix, the results allowed further expansion in one school board and adoption by another.

For the first time in Canada, a school board has taken the lead in addressing student active transportation (walking and biking) by hiring an in-house Active and Safe Routes to School (ASRTS) Project Manager. This new position has received recognition and praise from a variety of active transportation supporters from across North America.

In June of 2009, the Halton District School Board (HDSB), Ontario, Canada, recommended to their Board of Trustees the expansion of the active transportation program to 20 of their schools. This recommendation came on the heels of a final report submitted after a one-year pilot project between HDSB and the Halton Region Health Department.

During 2008 (January-December), eight schools from across the Region implemented the ASRTS program. It ran walking school buses and promoted student travel by foot/bike with the hope of reducing arrival by car.

The pilot project plan drew on the expertise and collaboration of a number of sectors. A Health Promoter worked with four municipalities, the Region, the School Board and the Regional Police Service to establish safe walking routes for students. In addition, the Health Promoter worked with a communication specialist to market the program/project and an epidemiologist to evaluate project outcomes. After only four months of implementation, 50% of schools increased their walking behaviour beyond baseline percentages and 62% maintained a trend over a two-month period. One school was able to maintain 98% of their walk-to-school population for the four-month period.

The evaluation data (student and parent surveys) provided credible information on parental barriers and enablers toward active transportation. In September 2009, the School Board adopted an active transport philosophy, expanding the program to 20 schools and seconding the Health Promoter.

A new project plan was written and currently 18 schools are participating with more schools to join in the next school year (2010/2011). Now, the project is set for creating permanent Regional change in the way children get to school.

7. **Supporting retail activity through increasing space for people on foot: Acland Street, City of Port Phillip**

Observations of pedestrian movements in 2003 showed that the main section of Acland Street was subject to chronic congestion, preventing the safe and
comfortable passage of pedestrians. This was brought about by the narrow footpath, high level of footpath trading and heavy ‘window shopping’ (cake shops). As a consequence, the Council proposed widening the footpath area by relocating existing footpath trading to the parking bay area for 85 metres and removing nine parking spaces.

This proposal was opposed by the Acland Street Traders Association. In response it commissioned its own market research study in June 2003. It found that:

- ‘Walking to the precinct is important and popular’ – Of locals interviewed, over 50% walked to the centre. All walk within the centre;
- Local residents comprise over 50% of all visitors;
- On average the local resident makes 184 visits to the Acland Street precinct each year;
- Local residents account for over 85% of the total expenditure;
- 57.2% of expenditure is ‘walked’ to the centre and a further 16% from cycling / public transport;
- Only 26% of total expenditure share emanates from those driving to the centre compared with 74% from those who did not drive; and
- 27% of visitors to the Acland Street precinct visit on a daily basis.

The traders realised that removing car spaces would only affect around a quarter of their customers (and at least some of those would return on other forms of transport, anyway). More importantly, they recognised that their largest and most loyal customer group was actually local. Improving the walking environment for them was likely to actually increase their loyalty and might help attract them back to the area more often – which would translate into a bonus for local business.

As a consequence, the Association withdrew its opposition to the Council proposals, which have since been carried out. Indeed, it actually transformed the traders association into one of the strongest supporters of the change. Acland Street is undoubtedly more walking-friendly than it ever was, and everyone has benefited.

This case study reaffirms research carried out in many other cities which shows that car parking is of less significance to local retail activity than is often thought, and that space for people on foot is a more significant attribute.

8. **Smarter Choices – Stimulating travel behaviour change mainly through information and marketing.**

In 2004 the UK Department of Transport launched the Sustainable Travel Towns (STT) Project. A competition was launched and Darlington, Peterborough and Worcester were chosen to receive funding from April 2004 April 2009 to implement large-scale “Smarter Choice” programmes.

The towns all developed a strong brand identity - "Local Motion" in Darlington, “Travelchoice” in Peterborough and “Choose How You Move” in Worcester. The towns implemented various measures, including the following:
- personal travel planning;
- travel-awareness campaigns;
- promotion of walking and cycling;
- public transport marketing and information; and
- workplace and school travel planning.

The towns also spent a limited amount of money on a variety of supporting measures, such as bus and cycle infrastructure and safe routes to school.

The results have been very positive, indicating, for the three towns taken together, the following outcomes (from 2004-2009):

- A reduction in car trips of 9% (there was an estimated fall of about 1% in other medium-sized towns over the same period);
- Bus trips per person increased by 10-22% (there was an estimated national fall of 0.5% in other medium-sized towns);
- Cycle trips per person increased by 26-30% (against other comparable towns seeing estimated cycling trips fall by 9%); and
- Walking trips per person increased by 10-13% (there was an estimated national decline in trips in similar towns of 9%).

The results suggest the programme was successful in reducing travel by car and going some way towards reducing congestion, and increasing the use of other modes of travel. It is possible to infer that there were also many other benefits:

- environmental benefits from the reduction of carbon and greenhouse gas emissions;
- environmental and health benefits from the reduction in pollution;
- benefits to the health of residents from increased active travel;
- benefits for the quality of life of residents from factors such as reduced congestion and better access to transport; and
- benefits for social inclusion and more equality of opportunity, because of better access to transport for residents.

When the above factors are taken into account, the programmes offered excellent value for money. Smarter Choices may also have the potential to enable growth (for example population growth occurred in Peterborough and employment growth occurred in Darlington) without increased congestion - which could have the resulting effect of enabling growth without deterioration in quality of the transport network or quality of life.

The results from these towns indicate that implementing a package of Smarter Choices - in other words encouraging more sustainable travel largely through high quality information and marketing - could make an important contribution towards delivering a sustainable transport system.