

# KEW JUNCTION WALKABILITY AND WAYFINDING STUDY

## Main Report

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“Making places more walkable, legible & liveable”



# WALKING IN THE KEW JUNCTION PRECINCT

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## **WALKING IN THE KEW JUNCTION PRECINCT**

### **EXECUTIVE SUMMARY AND STRATEGIC PLAN OVERVIEW.**

#### **Introduction.**

Improving the quality of the walking environment and enabling more people to walk safely and conveniently to more destinations has a large number of benefits. The economic benefits of better walking conditions can be substantial when more people find the environment safe and welcoming, and they browse, shop and spend money on goods and services. The benefits also include improved personal health, safety and fitness, reduced traffic (as people walk rather than drive), less pollution and decreased greenhouse gas emissions and climate change. The rising cost of fuel is also an important consideration.

An improved walking environment supports people with a disability, those who are too young or old to drive or cannot afford car running costs, and supports improvements to public transport, because all public transport trips begin or end with a walk trip. Most car trips also involve walking to the final destination. All of the parked cars in and around the Junction area represent at least one pedestrian on their way to work or purchase goods and services. Almost every resident and visitor to the area benefits in some way from an improved walking environment.

Over the past five years there has been a major shift in attitudes towards walking. State government policy now promotes walking as a preferred transport mode, and supports it with a number of funded programs and design guidance resources, making it easier to enable and encourage people to walk more. Numerous statewide organisations, such as VicHealth, promote and support walking initiatives. At the local level there is increasing recognition that improved safety, health, community building and other policies depend for their success on making places more walkable, while increasing numbers of individuals want to live in communities that are safe, convenient and clean – and therefore have a high quality walking environment.

There is already a surprisingly large amount of walking taking place in the Kew Junction area, but this is in spite of the generally poor quality of the walking environment. Traffic speeds are too high within the retail and education-focused core of the area – along High Street, Cotham Road and the adjoining streets. There are limited numbers of safe road crossings, the responsiveness of the pedestrian signals is slow, and the quality of the pram ramps is well below both “acceptable standards” and the DDA requirements that should apply. There is little or no assistance to pedestrians in terms of “wayfinding” and the level of amenity is poor.

Improving the walking environment and encouraging people to walk even more in this area will be relatively inexpensive, when compared with the costs of road and parking construction and maintenance. It does, however, require that the balance between the needs of car drivers and the needs of pedestrians is shifted towards the latter, so that

they are given higher priority than now exists on parts of the road system and in infrastructure development.

We have identified a vision for improving walkability in the Kew Junction area, with a focus on the “core” retail part east of Kew Junction.

**A Vision for improving walking in Kew Junction**

***Over the next 5 years the Kew Junction area will be transformed into a world-class walking environment where it is safe and enjoyable to walk.***

***People can walk into and around the area with ease, cross the roads safely and “wayfind” in comfort and with minimal delay. The many retail, service, educational and public transport destinations can be accessed and enjoyed by people of all abilities in a high quality pedestrian environment.***

***Over this period the amount of walking in the area will increase by at least 50%.***

**Achieving the Vision.**

A multi-component approach is needed to progressively achieve the Vision. The strategy requires the implementation of some new infrastructure, new on-road priorities and settings, as well as encouragement and promotional programs.

Given the already large amount of walking, and the backing this approach has already received during recently completed studies and their consultation exercises, it can be expected that improvements to walkability will be well accepted.

Based on our auditing, the evaluation of reports, questionnaire and pedestrian count analyses and consultations there are a number of complementary improvement programs that will need to be implemented to achieve the Vision. They are:

**A. Improving the quality of the walking environment.**

This involves changes to the priority over road use – and includes reduced traffic speed, improved road crossings for pedestrians (e.g. changing traffic light responsiveness, installing new crossings) and the installation of appropriate speed limit signage.

To complement the better on-road environment for pedestrians there is also a need to improve the off-road environment, with the refurbishment of almost all of the existing tram ramps, the removal of pedestrian barriers, as well as amenity improvements. There are a wide variety of types and colours of street furniture and footpath paving. Access to toilets is poor, and none have signage pointing to them.

**B. Implement a comprehensive pedestrian and wayfinding strategy.**

This will include:

1. The installation of map-based wayfinding signs at the key pedestrian decision points in the area.
2. The installation of street name signs at intersections throughout the area.
3. The production of an **accurate** hand-held, pedestrian-focused map of the area.

While the area is relatively compact it is not always easy for people to find their way between the two main retail spines (High Street and Cotham Road) and the shops on the side streets. Improved wayfinding will show people that most of the destinations within the area are within a short (5-10 minute) walk of each other, and that many are very much closer than that.

The implementation of attractive, clear, concise and easy-to-use map based signs and provision of an accurate hand-held map will show that Council is concerned with people's ability to wayfind within the area and with the broader issues and benefits of walkability.

**C. Implementation of support and advisory programs that encourage people to walk.**

Experience with the TravelSmart program and involvement in walking "events" shows that encouragement, information on the benefits of walking, and advice on the availability of alternative travel modes creates change in personal travel behaviour. Initiatives and involvement in events can be applied at the personal/community level and via workplaces and education institutions.

Concurrent with the above elements of this strategy Council should:

**Continue the collection of data on walking.**

Council has commenced the collection of data on the numbers of people walking along particular streets and between origins and destinations. These data have demonstrated that large numbers of people already walk in the study area – at much higher rates than may have been expected.

Continued monitoring will be needed after works and programs are implemented to demonstrate that the initiatives have had a growth effect. The majority (63 percent) of the pedestrians interviewed for this project indicated that they would walk more if the walking environment and amenity was improved.

**Support initiatives to improve public transport.**

Improved public transport will enable more people to access the area without using cars. This will reduce the volumes of traffic seeking car parking and thus improve safety and convenience for pedestrians. Improved public transport and a high-quality walking environment are mutually supportive.

## **Conclusions**

In brief, the strategy is designed to create support for improvements to the walkability of the Kew Junction area and the amount of walking that takes place there.

An improved walking environment and better wayfinding assistance will be complemented by the promotion of the benefits of walking.

Improved public transport, a better walk environment and the implementation of recommendations from other studies that have been conducted on the area recently will further improve the walk environment – leading to more walking and the capacity to justify ongoing improvements.

## CHAPTER 1. INTRODUCTION.

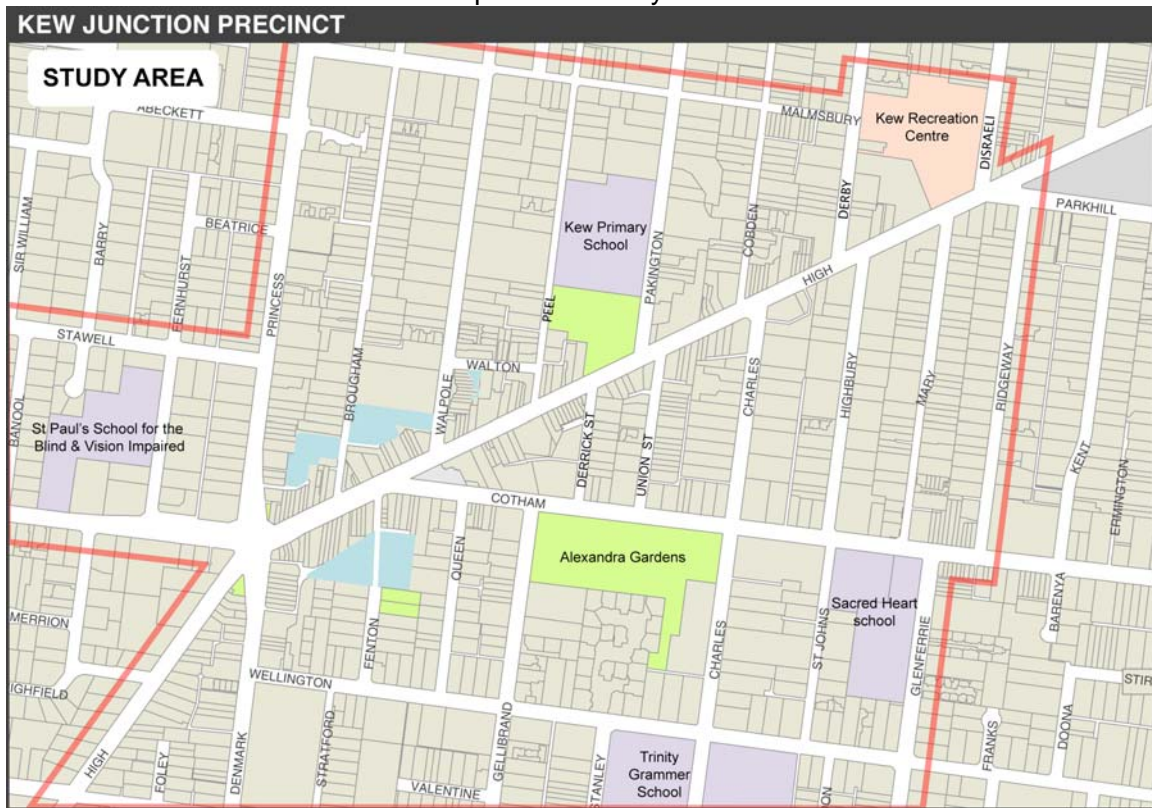
### 1.1. The Structure of this Report.

The City of Boroondara is committed to improving walkability throughout the city in line with its objectives defined in the Integrated Transport Strategy.

Boroondara, generally, has a comparatively good walking environment, as evidenced through the Victorian Activity Transport Study (VATS) data, showing the city has a very high percentage of trips already taken on foot (28 percent) compared with an MSD average of 16 percent. This is related to issues such as the physical structure of the area (relatively high development density and a grid road system), the availability of public transport, attractive local centres, an aging population and a high density of students at both private and government schools.

The City has commissioned a study of the “Walkability of the Kew Junction Precinct” to identify improvements needed to improve pedestrian accessibility, amenity, safety and linkages in this key Activity Centre

Map 1. The study area



The Report is divided into two main parts.

**Part 1** is the **Main Report** and contains the summary of background data, the results of the pedestrian environment audit and the issues arising, outcomes from the pedestrian questionnaires and counts, and the detailed recommendations for infrastructure improvements, signage and programs. It concludes with an indication of costs and a discussion of implementation issues. There are 4 Chapters in the **Main Report**.

Our Recommendations (Ch. 3) are based on the results of the audit, the analysis of questionnaires and the review of local census data, reports and staff consultation.

A mix of auditor observation, pedestrian counts, data from other studies and the questionnaires indicate that the main current walking routes are along the footpaths fronting the main shopping streets, near public transport interchanges and between the major “people” origins and destinations – along High Street and Cotham Road, near the Junction and the Cotham/Glenferrie tram intersection. These sites and areas are the focus of the recommended signage (Wayfinding) Strategy.

We also make a series of recommendations that cover issues such as:

- Improvements to the “off-road” pedestrian environment, covering issues such as pram ramps, seating and pedestrian amenity.
- Improvements to the “on-road” pedestrian environment. Pedestrians have a right to cross roads safely and conveniently, within an appropriate traffic speed environment. More crossings are needed and those that exist should be more responsive to pedestrians’ needs.
- The implementation of programs that encourage and support walking, including the involvement of the Council in the many “events’ that can be used to demonstrate the relative ease of travel behaviour change. The “Walktober” program for 2007 provides an early opportunity for commencing this initiative.

With improvements to the pedestrian environment and signage and the encouragement of walking through programs and events, more streets will become important walking routes.

The **Main Report** concludes with an indication of the costs of the recommendations and directions for an implementation plan.

**Part 2** contains a series of detailed appendices.

**Appendix 1** contains:

- An analysis of the Victorian policy context for improving the walking environment;
- A review of the benefits of walking; and.
- Reviews of the most recent design guidelines for improving walking in Victoria

**Appendix 1** demonstrates that the current emphasis on improving walking environments and in encouraging more people to walk to more destinations is derived from Government policy, as articulated through Melbourne 2030 and subsequent transport statements. Numerous assistance and encouragement programs are available, although financial support and implementation efforts need to be improved.

The principles of good planning to enable more sustainable, active and healthy transport are articulated through publications such as the Activity Centre Design Guidelines, the Safer Design Guidelines, the principles and objectives contained in the new Clause 56 to the Planning Scheme.

There is a growing and widespread recognition that improving the walking environment will have a very large number of local benefits. They include:

1. **Health outcomes** – Walking is the best-value form of exercise for the prevention (and cure) of many major health problems including obesity, diabetes, heart-conditions, mental health and others.
2. **Recreation** – walking is the most popular recreation activity in Melbourne and the rest of Victoria (Sport and Recreation Victoria Survey 2005) – and its potential for growth is significant.
3. **Social Inclusion** – walking is free and a mode available to all ages and groups in society, regardless of income.
4. **Social cohesiveness** – more walking, pedestrian filled streets and good pedestrian environments encourage social interaction and community development.
5. **Improved road/community safety** – good walking environments are safer for all users as drivers slow down in “people places” – and drivers are safer too.
6. **Reduced air pollution** – walking reduces short car trips, which are many more times polluting than longer car trips per km (until catalytic converters warm up).
7. **Reduced greenhouse gas emissions** – GHG emissions are based on fuel use. About 40% of all car trips are less than 3kms (VATS data), many of which can be substituted by walk trips.
8. **Reduced traffic congestion** – Cars making short trips during peak hours make up 20% of the total vehicles on the roads (VATS data). Walking can replace many of these.
9. **Improved public transport patronage** – more walking leads to more public transport use, especially when walk access to public transport stops is made safer and easier. Increased public transport use depends on a better walking environment
10. **Advantages for people with disabilities** – a good walking environment is better for people with disabilities – as well as all pedestrians
11. **Advantages for special age groups** – good walking environments make it safer and easier for children to access schools and the increasing aging population to reach local services, shops and friends
12. **Local economic development** – walking to local shops is good for the economy. In many Centres a surprisingly high percentage of retail and service turnover comes from local residents and workers. Walk access to and within activity centres is important.
13. **Future growth** – local population growth will increase the need for good walking access (and less local car use) to all destination types (schools, shops, public transport stops, etc)
14. **Cost** – providing good walking environments and programs that encourage walking are considerably less expensive to Council, the State Government and private providers than building/maintaining roads and car parking spaces.

Councils and developers have a number of design guidance documents available and they are reviewed within Appendices 1 & 2.

**Appendix 2** examines what we believe is best (or at least, very good) practice in improving walkability. It highlights the common “barriers” to walking and then examines the ways that these barriers can be overcome. It raises the issues of:

- the lack of good information about the local benefits of walking;
- the type and quality of walking infrastructure that is needed to support pedestrians; and,
- best practice planning for Activity Centres, including traffic calming and car parking issues.

**Appendix 3** is an overview of what is considered to be best practice in pedestrian wayfinding in urban areas. It shows that Information Panels containing maps are superior to other forms of information, but that the style, content and structures need to be of high and consistent quality to maximise the impact on rates of walking. This document forms the basis of the proposed signage system for the Junction Precinct.

**Appendix 4** contains the detailed analysis of the questionnaires administered for this study, pedestrian count data and the analysis of census data from the pedestrian perspective. The latter shows that a large proportion of the local area population (25-30%) does not have easy and affordable access to private vehicles.

The questionnaires showed that:

- Over 70% of the pedestrians interviewed walking in the Precinct came from Kew or adjacent postcodes.
- Most (75%+) came for shopping or services (Workers were not walking in the area during the day)
- Four out of ten people interviewed walked or caught public transport into the area.
- Most people walked because it was convenient, for health and fitness, and to avoid parking problems. Only two people had no other option than walking.
- Over 80% of the interviewees made recommendations for improvements to the area – focusing on the need: (a) to improve pedestrian crossings of High St and Cotham Road; (b) to reduce the detours to reach crossings; (c) to make pedestrian lights more responsive; (d) to reduce traffic speed and volume; and, (e) improve footpaths and signage.
- Approximately 2/3<sup>ds</sup> of the interviewees said they would walk more if the pedestrian environment was improved.

The counts of pedestrians undertaken by council showed that large numbers of people already walk within the area. The highlight results were:

- Glenferrie/Cotham intersection = 4500 pedestrian movements (people using crossings or passing count points) in 7 hrs (Of these, 50 percent were students). Full day (24hr) volumes count could be from 5-6000.
- Kew Junction crossings = 3800 in 7 hrs
- High Street nr Walpole 2900 in 7 hrs.
- High Street nr Junction 1800 in 7 hrs
- Cotham Rd nr War Memorial 1300 in 7 hrs.

**Appendix 5** contains the results of the detailed Audit of the Study Area from the pedestrian perspective. The Audit involves the auditors in identifying and walking the major pedestrian routes, observing pedestrian activity and behaviour, and photographing the important elements of the pedestrian environment. The “5C’s” auditing method forms the basis of this approach.

The “5C’s” is a checklist of questions to be asked (and answered) at all points along all routes throughout a study area and is based on the UK “Living Streets” approach.

The basic elements of the checklist are:

**1. Is the route Conspicuous?**

Is the route “signed” and easy to follow? This area incorporates the questions on information and signage

The audit showed there was very limited wayfinding signage in the study area and street name signage is poor. Improvement to wayfinding will be an important element in improving walkability.

**2. Is the route Connected?**

Are there good connections to public transport and other major destinations? This audit area incorporates the questions on footpath connectivity and obstructions.

There are a number of “weak links” in the connectivity between public transport modes and between them and the many destinations in the area. The Junction itself is one of a number of barriers to pedestrians. Connectivity can be improved.

**3. Is the route Comfortable?**

Are there good footpaths, lights, seats etc? This area includes the questions on footpath quality.

The footpaths are generally satisfactory, but narrow in some places. There are a number of areas needing improvement. There are numerous seating designs and colours and footpath finishes and the area needs to be “unified” in design and appearance.

**4. Is the route Convenient?**

Are there good and safe crossings? This area incorporates the questions on crossing quantity and quality.

There are a number of crossing places, at traffic lights, pedestrian signals and one zebra crossing. People want (and need) more crossings in a safe speed environment. Fast left turning vehicles present problems in some places. **All (but one) pram crossings need improvement.**

**5. Is the route Convivial?**

Are the routes interesting and free from threats? This area incorporates the questions on amenities, footpath aesthetics, as well as comments on footpath users.

While many people walk already walk in the area it could be improved with attention to detail, better signage to amenities and more maintenance. There are a lot of both young and old pedestrians using the area at different times of the day.

## 1.2. Background Information.

The Kew area is recognised as being the home of many independent schools. It has high quality heritage housing and proximity to both the City and the Yarra River. It is a very desirable residential and business area and land and house prices are well above metropolitan averages.

Nevertheless, the 2001 Census data show that:

- An aggregate of 42 percent of the households in Kew either have no car available (7.6 percent) or only 1 car (35 percent). If one member of the household needs a car for work, a large proportion of the households in Kew have no car available for most of the day.
- Over 32 percent of the Kew population is aged under 17 years or over 70. All in the former group are generally too young to drive a car, and many in the latter group too old. Travel options, such as walking, need to be provided for these groups.
- Approximately 20 percent of the households in Kew have a weekly income of less than \$600, and may well find that the costs of owning and running a car are beyond their financial means.

Thus, even in Kew there are significant equity considerations in improving the walking environment for those with limited travel and transport options.

Most of the Council strategies developed in the past 5 years have implications for the quality of the walking environment, for improved safety, health, the quality of the environment and other areas of Council's responsibilities.

The priority placed on pedestrian accessibility and safety issues in the Boroondara Integrated Transport Strategy, the Kew Junction Structure Plan Access and Infrastructure Report, and the Kew Junction "Emerging Directions Report" is strongly endorsed.

"The thrust of the ITS is articulated in six strategic objectives, as follows:

**SO 1. TO FACILITATE IMPROVEMENTS TO AND BETTER INTEGRATION OF ALL FORMS OF PUBLIC TRANSPORT.**

**SO 2. TO IMPROVE PROVISION FOR CYCLING AND WALKING, PARTICULARLY IN ACTIVITY NODES, STRIP SHOPPING CENTRES AND SCHOOLS AND IN ORDER TO IMPROVE ACCESS TO PUBLIC TRANSPORT.**

**SO 3. TO CREATE MORE PEDESTRIAN FRIENDLY STREET ENVIRONMENTS AND HIGH QUALITY URBAN CENTRES WHICH ARE LESS CAR-DOMINATED.**

**SO 4. TO INTRODUCE MEASURES TO BETTER MANAGE TRAFFIC, PUBLIC TRANSPORT, CYCLING AND WALKING ON CONGESTED ROADS AND PARTICULARLY IN URBAN CENTRES.**

**SO 5. TO PROMOTE SAFE AND SECURE ALTERNATIVE FORMS OF TRAVEL TO THE CAR AND TO INCREASE THE ATTRACTIVENESS OF THESE (THROUGH TRAVEL DEMAND MANAGEMENT).**

**SO 6. TO INTRODUCE MEASURES TO BETTER MANAGE THROUGH TRAFFIC IN BOROONDARA.**

As recommended in the Emerging Directions - Structure Plan (p. 41), the future challenge for Kew Junction will be to:

- Moderate private vehicle use;
- Enhance public transport services; and
- **Expand pedestrian and bicycle networks and facilities.**

In order to meet these challenges a number of directions need to be pursued. A principal direction is to:

***“Create a more pedestrian-friendly street environment leading to and within the shopping strip. This should include reduced exposure to vehicles, reduced waiting times at intersections, better control/regulation of street furniture, kerbside cafes and shop displays”***

Both the Access and Infrastructure Report and the Emerging Directions study have identified a number of both general and specific recommendations for improving the pedestrian environment. The Access and Infrastructure Study (p. 34) identifies the preferred approach to prioritising the needs of pedestrians and identifies some specific projects:

*A key element to stimulating pedestrian activity is to provide for walkers – expect people to walk instead of driving. Provision for pedestrians should be undertaken as cars have been provided for in the past, with excellent directional signage, wide footpaths in streets designed to stimulate pedestrian activity, and the provision of “trip facilities” such as shelter, seating, lighting and refreshment.*

*In order to achieve the improvements, there are a number of considerations relevant for the Kew Junction Activity Centre including the need to prepare design principles to maximise walking or cycling opportunities throughout the Activity Centre. The principles should cover a range of issues, including:*

- *The need to reduce street clutter (placement and rationalisation of poles, other street furniture, displays and kerbside cafes)*
- *Street lighting strategy*
- *Directional signage for pedestrians and cyclists*
- *Footpath maintenance standards and DDA requirements.*

*A range of implementation actions can be then developed, such as:*

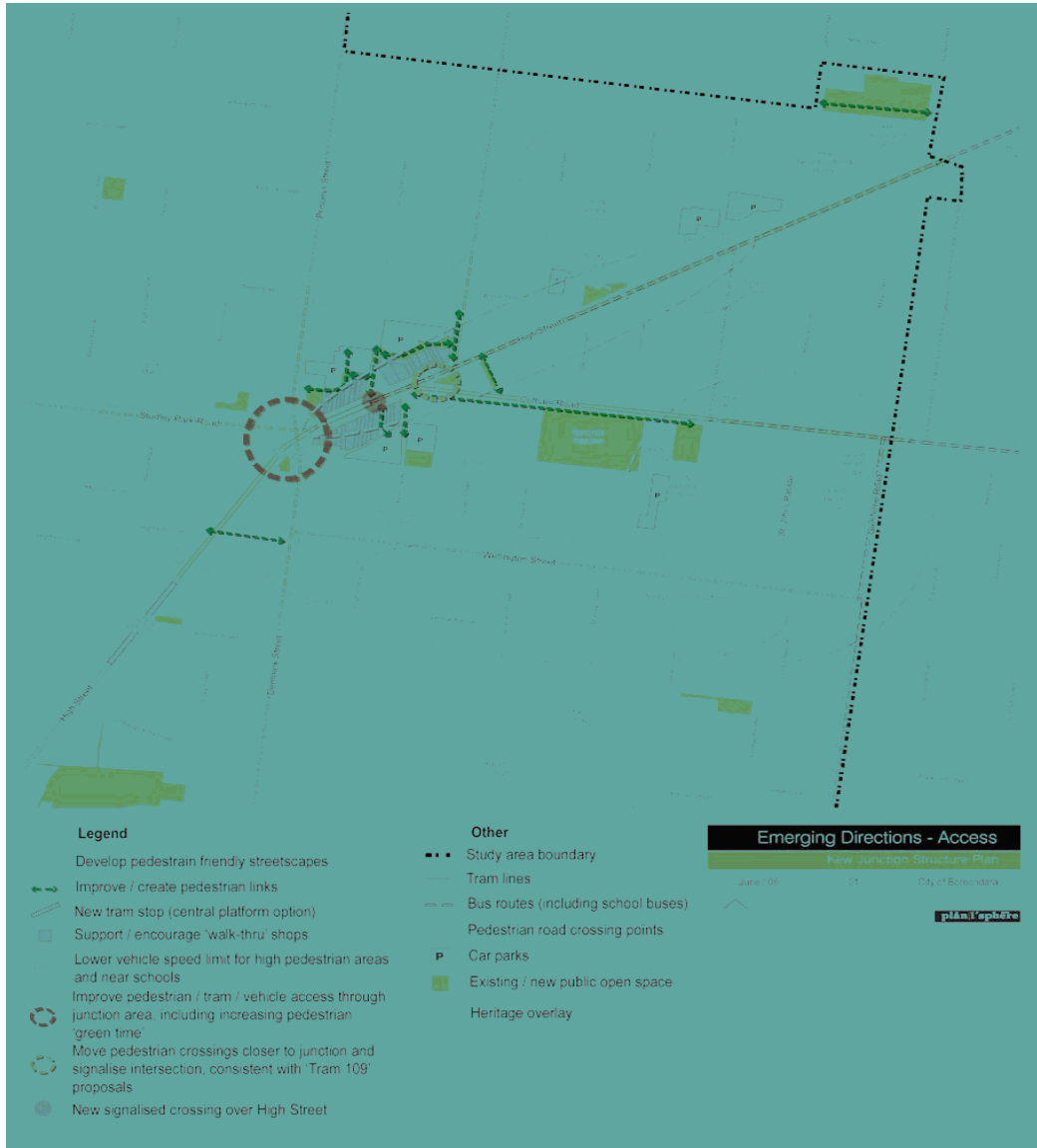
- *Enhance pedestrian links within the main shopping precinct and across arterial roads to the surrounding residential areas.*
- *Enable most trips of 1km or less to be taken on foot.*

- *Promote the majority of trips within the Activity Centre to be made on foot.*
- *Provide improved pedestrian crossing time at existing signals across Princess Street and High Street (at the Princess Street / High Street intersection) and across High Street near Cotham Road and Cotham Road, east of High Street.*
- *Pursue the establishment of new pedestrian operated signals in High Street just west of Brougham Street (consistent with Council's preferred "Tram 109" option).*
- *Pursue the establishment of a new fully signalised intersection at High Street / Cotham Road (consistent with Council's preferred "Tram 109" option)*
- *Establish appropriate directional signage for pedestrians throughout the Activity Centre.*

Many of these recommended approaches and specific projects are reiterated in the Emerging Directions Report (p.15).

- *Aim to reduce trips by private car, while enhancing pedestrian, cyclist and public transport networks and facilities.*
- *Promote walking as the principal means of circulation and street activity within Kew Junction, particularly for the streets within or connecting to the main shopping strip and the library.*
- *Adopt lower speed limits in areas of high pedestrian activity such as within the heart of the centre and around schools or community facilities.*
- *Provide improved pedestrian crossing opportunities across main arterial roads, with additional crossing points and increased crossing times at lights.*

Many of these recommendations are identified on the "Access" map from that report.



The Tram 109 proposals, if implemented, would change the nature of the Precinct substantially. However, our principal concern is to advise on what should be done to improve the pedestrian environment, as it now exists, and to provide recommendations to plan for future needs.

Other studies and plans also point to the need for improved walkability.

The Disability Access Plan notes the importance of access to buildings and public places for those with a disability. Environments that are “walkable” are much more able to be used by those with a disability.

The Greenhouse Strategy, the Environment Policy and the Biodiversity Strategy all recognise the importance of reducing greenhouse gas emissions. In the transport sector this can be achieved by reducing the need to drive cars and improving the more sustainable modes. The issue of climate change and the use of fossil fuels in our cars can no longer be ignored.

The Public Health Strategy explicitly recognises the importance of lifestyle and physical environment factors on public and personal health issues, while the Community Safety Plan lays a strong emphasis on traffic safety, community safety in public places and on the public's perceptions of the safety of the environment. Reduced traffic speed, high amenity levels and good maintenance, etc. make Activity Centres "people places" with high actual and perceived safety levels.

In addition, we have reviewed the TravelSmart research conducted for Xavier and Trinity schools. Both suggest that travel behavior change could be achieved with the implementation of comprehensive School Travel Plans, including:

- Curriculum, information, promotion and events;
- The development of programs, such as car-pooling and Walking School Bus;
- Implementation of a program of works to facilitate safe travel;
- Special school projects (e.g. School Travel Website); and,
- Cooperative projects with other schools.

While these suggestions are applauded, the fact remains that neither these two schools, nor any of the primary schools with the Precinct appear to have taken any substantive action to date. Given the number of students (approximately 2500) who travel into the precinct each day, action in this area is essential to reduce short car trips and improve walkability

Further, there is also no evidence that any of the major local employers are actively involved in "Green Travel Planning" and its implementation. The active involvement of the Precinct's largest employer, VicRoads, in this type of program would appear to be essential, both as a means of reducing "local" traffic, and as a demonstration of the commitment of one of the State Government's largest agencies to state policy and the strategy for Kew.

In order for infrastructure improvements to the local pedestrian environment (and the public transport system) to be successful, they need to be supported by progressive and active promotional programs which encourage and enable people to use the new walking facilities.

Finally, it is important that local traders appreciate the importance of local residents, workers, parents and students, and public transport users to their business interests. Creating a high quality pedestrian environment will attract people, who will stay and spend.

These issues have been canvassed during public consultations, but need to be reinforced as the time of implementation approaches.

### **1.3 Conclusions**

There is ample justification to improve the quality of the pedestrian environment. Government policy and programs exist to support these initiatives. There is a growing body of practical advice on what can be done to improve walkability and wayfinding signage to increase the amount of walking.

Many local residents do not have easy and affordable access to cars and the sample of interviewees was supportive of the idea of making it safer and easier to walk. There is already a lot of walking in Kew.

Local policy has a clear focus on improving the capacity and willingness of people to walk more, to improve their individual health and in so doing create a more connected and sustainable community.

The Kew Junction Precinct needs to be made more pedestrian friendly. There are sound equity, economic and transport reasons for doing so, and existing local support.

## CHAPTER 2. STRATEGIC ISSUES

The detailed pedestrian-focused audit (of the whole Precinct) conducted for this study, the analysis of questionnaires and pedestrian counts, the review of previous reports, and consultations undertaken for the study, have lead to the identification of a number of “Strategic Issues”.

### **Many are supportive of walking in the area and go some way to explaining the high pedestrian volumes counted at a many locations in the precinct.**

#### *A1. The Precinct is relatively compact.*

It is approximately 1km from the west side of Kew Junction to both the Kew Recreation Centre and to Cotham Village, and from Malmsbury Street south to Wellington Street and the schools in that area. However, most of the jobs, retail and other destinations which people may wish to walk to or between, are within 500-700m of each other.

People walk at approximately 60-70m per minute, so that within the study area most destinations can be within a 7-10 minute walk, while many walk trips are likely to be shorter than that. (However, crossing busy roads at traffic lights or slow response pedestrian crossings may well increase the actual walk time)

#### *A2. Most origins and destinations are accessible.*

Most of the pedestrian origins and destination are located on, or either side of the two straight main roads going through the precinct. Much of the study area has a grid network and this is valuable for pedestrians, as it generally provides the shortest routes between all origins and destinations. In addition, there are some short-cuts that link major origins and destinations, via car parks and pedestrian through-ways.

#### *A3. The precinct contains a broad mix of uses.*

There is a wide mix of retail (including 2 Supermarkets), cafes and restaurants, offices and services, schools and community facilities. The area is used by a large number and a wide variety of people throughout the day, and it is this mix of “people on the streets” that is part of the attractiveness of Kew.

#### *A4. The Centre is surrounded by residents.*

The “activity” part of the Activity Centre is surrounded by a mix of residential developments, including some 19<sup>th</sup> & 20<sup>th</sup> century medium density housing, resulting in a large catchment population within a relatively small area. People can walk into the Centre from almost all directions.

#### *A5. There are good public transport services*

The Precinct is well served by public transport – both buses and trams. Some students use the train services to get to school, and then walk/tram into the Centre. As a result

people can get to the Precinct by most modes, on foot, by car and by public transport. They then walk to make purchases or use services.

*A6. The footpath system is attractive*

The footpaths along the main streets are generally well maintained and sufficiently wide for the current pedestrian volumes. The side streets are narrow. However, this narrowness tends to keep traffic speed low and lends to the intimacy of the area – making it attractive to pedestrians.

*A7. The Precinct streetscapes are attractive.*

Shop fronts are occupied by a wide range of uses, there are a number of historic, landmark buildings and structures (including the War Memorial and Court House, etc.) and the area has an interesting mix of commercial/residential and old/new uses.

**It is not surprising that people walk into and around the Kew Junction Precinct.**

**However, more would do so if the quality of the pedestrian environment was improved. There are a number of issues that need to be addressed to improve the safety, amenity and attractiveness of the Kew Junction precinct for pedestrians.**

*B1. Traffic Speed is too high.*

Traffic speed on roads through Activity Centres and near people places (such as schools) is a major influence over whether people feel it is safe to walk and cross roads.

The traffic speed regime throughout most of the precinct is too high for its retail, services and educational functions. All major “through roads” in the precinct (i.e. High Street, Denmark Road/Princess Street, Studley Park Road and Cotham Road) are currently signed at 60km/h.

There are small sections of 40km/h local streets near schools but these are limited in extent.

The urban default speed in all other streets in the precinct is 50kph. Thus there are three different speed limits within the precinct, and this may be confusing to some drivers and dangerous to pedestrians.

There is no reason to deny the pedestrian users of Kew Junction the many benefits that have been achieved by reducing speed limits on retail streets in other Activity Centres throughout Melbourne.

There is a need to reduce both signed and actual traffic speed on all streets in the Junction. Reduced traffic speed is considered key to the achievement of many of the other recommendations contained in this report.

Further discussion of the importance of speed limits is included in Section 2a.

*B2. Most pram ramps in the precinct are in need of upgrade.*

The quality of pram ramps in the centre and surrounding streets is particularly poor. Some intersections have no pram ramps on some corners; most pram ramps are in a state of disrepair; and a large number are incorrectly oriented to the direction of travel, and “direct” people into the street rather than to the subsequent footpath.

Some pram ramps are partially blocked by street light and tram line poles and are incorrectly aligned with the pedestrian crossing lines marked on roads.

There is only one intersection with good quality pram ramps and tactile plates, over Gellibrand Street at Cotham Road.

Figure 1. The Pram ramps and tactile plates at Gellibrand Street.



*B3. The quantity and quality of crossing facilities is limited.*

There is only one at grade pedestrian crossing in the area that is not associated with traffic control lights – the zebra crossing between the shopping areas in Walpole Street.

Figure 2. The zebra crossing in Walpole Street.



There are pedestrian operated signals at the War Memorial and on High Street near Packington Street and east of the Recreation Centre.

Various reports to Council have recommended a number of new pedestrian crossings in the area, mainly in association with any new tram stop in High Street. We support these, if the Tram 109 proposals are implemented, and believe a small number of other new crossings should be installed.

However, where crossings already exist there are two major problems: (a) the responsiveness of the lights to pedestrian call buttons is slow – resulting in people

crossing illegally and unsafely; and, (b) the time available to cross the roads is insufficient for some people, especially the old and people using “walkers” or other aids.

The reduction of traffic speed complements improved crossings. Drivers will be travelling at slower speeds, crash risk is lowered, and the “environment” of the precinct is much more focused on the needs of pedestrians.

Further discussion of increasing the numbers and responsiveness of pedestrian crossings is included in Section 2b.

*B4. Wayfinding and signage in the Precinct is poor.*

There was very little pedestrian wayfinding signage, and this is likely to reduce people’s understanding of the compactness of the area and their willingness to walk. Improved signage can reduce congestion and the demand for parking spaces.

Good “wayfinding” depends on people being able to locate themselves on the pedestrian network – and answer the question “Where am I now?” Street name signage is thus important. In many locations there were insufficient street name signs, at readable height for pedestrians, oriented to the correct direction of the street.

The local public transport stops are poorly signed – and there was little or no information about passenger transfers between buses and trams. Map-based wayfinding can assist in rectifying this situation.

There is a need to significantly improve information, signage and wayfinding and this is further discussed in Section 2c.

*B5. Public Amenities are below acceptable standards.*

The precinct has poor levels of pedestrian amenity. While there are seats available there are at least five different designs. The seats, rubbish bins, tree containers, posts and banners are of a variety of colours and designs and this detracts from the overall amenity and design consistency of the precinct. Some seats need repair.

Figure 3. A variety of seat designs - some of which need repair.



There was little evidence of access to public toilets (especially important for the aging population). There are no signs to any of the four public toilets in the area. The toilet in the Baby Change Room in Walpole Street was unsigned and hard to find.

There is no public square, meeting or “market place” – although a number of small, inconspicuous seating areas exist they do not provide a community focus or the opportunity for community activity.

There are no drinking taps, there is little public art and maintenance of the area is not of a high standard.

*B6. Fast left turns for vehicles need better signage.*

Because High Street runs in a NE-SW direction the intersections with side streets are at a low angle and this allows fast left-hand turns into the side streets. If traffic is traveling at the current posted speed (60kph), and does not slow sufficiently, this can be dangerous for people crossing those street ends. Examples include the intersection of Charles Street with High Street, and the left turn from Studley Park Road into Princess Street.

Figure 4. The potentially fast left turn into Princess Street.



*B7. There is no encouragement for people to walk.*

People walk in the precinct in large numbers, in spite of the poor conditions. However, there was no encouragement for them to walk, in terms of programs such as Walking School Buses at any of the local schools, TravelSmart campaigns at any of the businesses, or literature promoting the benefits of walking to the local community. Encouragement programs are an important complement to any improvements that are made to the quality of the pedestrian environment.

**Conclusions**

A mix of initiatives is required to improve the actual and the perceived quality of the pedestrian environment in the Junction precinct. Many people already walk, but more will do so when traffic speed issues, road crossings and other elements are improved and the area becomes more focused on people rather than vehicles

**2a. Speed Limits.**

The speed of traffic on roads is a major influence on whether people are willing to walk, or are willing to let children walk (or cycle) to school or local shops. In built-up urban areas the posted speed limits should not just reflect driver expectation of the safe vehicle speed on the road, but should also reflect the expectations of other users (not in vehicles) to be able to share the road space and cross the roads safely. This is especially important where there are people-attractors either side of the road. In Kew the safe crossing of roads should be seen as a high priority.

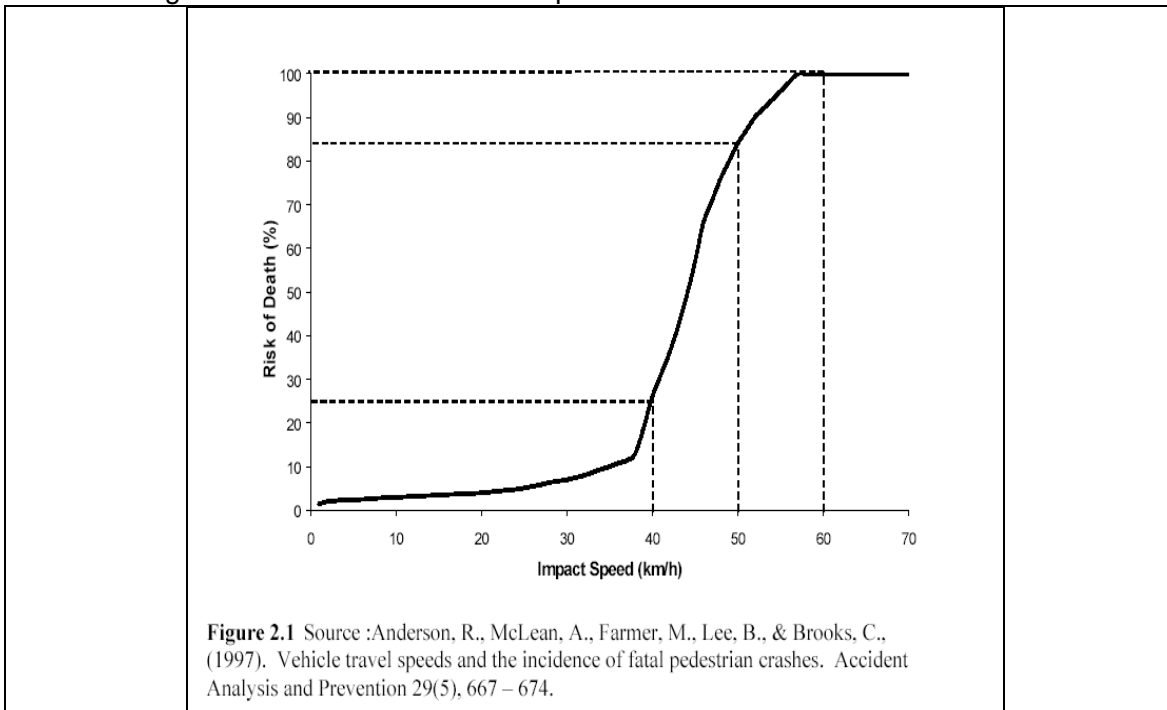
Significantly, the VicRoads Traffic Engineering Manual (TEM), Chapter 7, has been reviewed, and it now places a high emphasis on the importance of traffic speed as a determinant of safety.

*3a.1. The Pedestrian Perspective.*

In addition to the revision of the TEM there has also been a recent review of speed limits in Victoria. (Review of Victorian Speed Limits. Nov 2005).

Both of these reviews highlight the relationship between vehicle speed on impact with a pedestrian during a crash, and the “risk of death” to that pedestrian. The graph shows that at 60km/h the risk is high (up to 100%), that it diminishes to 85% at 50km/h but drops significantly, to 25% at 40km/h. This is the basis for the 50km/h default speed limit in built-up areas in Victoria and the 40km/h speed limits outside most schools and in some shopping areas.

Figure 5. The Effect of Vehicle Speed on the Incidence of fatal crashes.



Clearly, from the pedestrian perspective, 40km/h is preferable to 50km/h

With lower traffic speeds it is likely that there will be fewer crashes and drivers will be able to slow their vehicles more quickly and easily prior to a crash taking place. As a result slower speed limits result in dramatically reduced speeds on impact and, therefore, the severity of crashes for pedestrians.

The default 50km/h speed limit in built up areas was introduced by the State Government in Jan 2001, and the effects were reviewed by Monash University Accident Research Centre in March 2002 (Evaluation of 50km/h speed limits in Victoria. MUARC. 2002). The results were:

- crashes involving pedestrians that resulted in fatal and serious injury reduced by 46% compared with roads remaining at 60km/h.
- all casualty crashes reduced by 13% compared with roads that remained at 60km/h
- crashes involving pedestrians reduced by 22% compared with roads remaining at 60km/h

There were fewer crashes between vehicles, and a 46% reduction in deaths and injury to pedestrians – everyone became safer.

Pedestrians' perceptions of vehicle speed and resultant levels of danger are important and this is the major reason why they are unwilling to walk or let others (older or younger members of their family) walk to shops, friends, services or schools. From a pedestrian perspective, the slower the speed limit, the better.

### 3a.2 *The driver perspective*

There is sometimes reluctance by drivers to reduce their travel speed from 60km/h to 50km/h or below. In a review of the likely effect of implementing a 50km/h across all of Australia it was noted that *“the major factor determining the effect of a reduction in the speed limit is the size of the actual reduction in travel speed. (National Transport Commission Report No. 69. 2001). It noted that travel time increases are likely to be overestimated because they do not take into account route substitution, destination substitution or trip suppression effects of the speed limits (i.e. changed driver behaviour).*

*“Implementing the lower urban speed limit on local streets, collectors and arterial roads currently zoned 60 km/h, was predicted to result in an average increase in travel time per head of population in Australia of about **nine seconds per trip**. If Australians were to accept travel time impacts of this order, it is estimated that about 2,900 casualty crashes would be prevented each year”.*

A vehicle will travel 1 km in 60 seconds at 60km/h. A reduction of the speed limit to 50km/h will increase travel time over a kilometre by 12 seconds, while the reduction to 40km/h will increase travel time by 24 seconds. Over a 10 minute journey a speed reduction from 60km/h to 50km/h for 1 of the kilometres traveled during that time will result in an approximate 1 percent increase in total trip travel time and a reduction to 40km/h will result in an approximate 2 percent increase total trip travel time.

These increases in total trip travel times are negligible, not noticeable by drivers and of no economic value to any individual driver. The increased total trip travel time would not be sufficient to reduce the number of trips that could be taken by a commercial vehicle in one day.

Driver and other groups' objections to reduced speed limits are often based on misconceptions about the actual amount of delay and cost. In most busy retail Centres actual travel speeds are already quite low, due to congestion at peak periods. The main benefits of reduced posted speeds come (a) when traffic is lighter and higher speeds are possible, and (b) because pedestrians perceive streets to be safer, they walk more and drivers slow down in "people places"

## **2b. Installation of new pedestrian crossings.**

The ability for people to safely cross roads in urban areas is a fundamental right, and a necessity for people of all ages and walking capabilities. Kew has large numbers of people aged under 17 and over 70 years (see Appendix 4)

The VicRoads Traffic Engineering Manual Chapter 4 deals with Pedestrian Facilities and identifies the "warrants" needed to justify the installation of different categories of crossings. There are a number of locations in the Kew Junction area where the warrants for zebra and signalised crossings appear to be met but no crossings are provided.

In addition, some councils are now accepting that in some locations there is suppressed "latent demand" for road crossings, which, if built, would be used by people wishing to get to destinations currently not safely accessible on foot, and that in other locations pedestrian facilities are justifiable on safety grounds alone, regardless of the current low level of demand.

The basis for this lack of provision in some areas appears to be that giving people priority to cross roads and requiring drivers to stop for them would create additional vehicle "congestion" resulting in driver delay and resultant costs. This raises a range of issues:

1. It is necessary to achieve the correct balance between driver delay and pedestrian delay. Pedestrians are delayed by vehicles, which have right of way on all roads and at all roundabouts. Increasingly, however, councils throughout Victoria are deciding that pedestrian delay is a significant problem and that "people" should have priority over "vehicles". This reduces pedestrian delay, improves pedestrian safety and increases pedestrian amenity because time spent waiting while exposed to the elements is reduced.
2. There are large numbers of people who cannot drive or afford to operate a private vehicle. There is a major equity argument for enabling them to have safe and efficient access to and within town centres and nearby "people" destinations.
3. All drivers become pedestrians when they park to shop or access services. The delay they experience as drivers is compensated by the reduced delay and improved safety and amenity they experience as pedestrians
4. Improved pedestrian environments have been shown to increase pedestrian activity. Increased "footfall" has been achieved in most centres where traffic

- problems are reduced (and especially in all “pedestrianised” streets). Because it is pedestrians who spend money in shops and on services, increased pedestrian activity is economically valuable.
5. If driver delay in centres increases, driver behaviour will change – leading to route substitution, travel time shift or trip reduction. Local drivers/shoppers will tend to park and walk more within centres because of the improved pedestrian conditions.
  6. Through traffic will seek alternate routes or times of travel, as they do in all other towns and cities where congestion exists. Drivers will adapt to the new environment, especially at peak periods, when congestion tends to be worst.
  7. Through traffic is of little benefit to local traders and it is difficult to justify a poor local pedestrian environment for the benefit of non-local/through traffic.
  8. As noted in the discussion of speed limits above, drivers tend to overestimate the impact of reduced traffic speed, and delays may have little (or negligible) effect on the total trip time for longer trips.
  9. Population growth will tend to produce growth in the numbers of drivers using the roads. Attempts to cater for that growth by increasing road capacity and traffic speed are unlikely to succeed but will have the effect of reducing pedestrian amenity and safety. This could further exacerbate congestion, rather than reduce it.

Increased numbers of pedestrian crossings and improvements to existing pedestrian crossings are both warranted and justifiable in a number of locations within the Kew Junction area.

### **2c. Improved Wayfinding Signage.**

Good “wayfinding” signage, pedestrian focused maps and improved public transport information are recognised to be excellent value for money – they are relatively low cost and provide people with the capacity to use the existing assets, such as the footpath system, road crossings, public transport services, amenities and commercial/retail services more fully. (See Appendix 3 for a review of “Best Practice in pedestrian wayfinding”)

However, they do need to be able to locate themselves accurately on the footpath network – hence the importance of street name signs.

The main questions to be asked, and answered, by a good wayfinding system are: “Where am I now? How do I get safely to where I want to go? How long will it take me?”

A Signage Strategy for the Kew Junction precinct will identify the appropriate locations (decision points) for different types of information panel and other wayfinding signs. Bristol, in the UK, pioneered the use of “Heads-Up” Information Panels, which incorporate directional finger signs, as well as the use of Independent Directional Signs.

In order to produce a set of Information Panel Maps it is usually necessary to develop a comprehensive “Pedestrian Map” of an area, which can then be used as a hand-held map, to aid visitors, residents, school children, workers and others to easily wayfind in the area.

However, it is also valuable to use Information Panels which contain maps of the whole of a precinct or Centre, presented in a heads-up way – with the viewer being located at, or close to the bottom of the map, and with most of the precinct which lies ahead of them visible “above them” on the map. These “Full Area Maps” are derived from the production of the pedestrian map.

Wayfinding maps will also assist in people linking between public transport stops, as these will be indicated on the panel maps.

Figure 6. Example of a pedestrian wayfinding system recently installed in Bendigo CBD



## **CHAPTER 3. RECOMMENDATIONS.**

Based on the audit and all of the other inputs to this study we have produced a number of recommendations.

They focus on the Strategic Issues identified in Chapter 2.

### **3.1. Reduce speed limits.**

The speed limits in the Junction have been recognised in most recent reports (reviewed in Chapter 1), as being too high, especially in the parts of High Street and Cotham Road within the retail/services core of the Junction precinct.

Normally this could result in the introduction of “part-time” flashing 40kph signs on the roads that are now signed at 60kph, between the two peak/clearway periods, and leaving all other speeds as they are now. However, this would not resolve the multi-speed limit issue (40/50/60) nor reduce weekend or early evening speed.

As a result we recommend that the bulk of the precinct, to the east of Kew junction, has a 40kph speed limit, and that 40kph “flashing” signs are installed at appropriate locations. The signs should “flash” from 7am-11pm, 7 days per week, to reinforce the speed limit message during the times when people are arriving at work and school, shopping, travelling home again, and using the cafes, restaurants and hotel.

#### **RECOMMENDATION 1**

- 1a. The speed limit from Kew Junction to the east ends of retail/services area (the Rec. Centre on High, and Cotham Village on Cotham) be reduced to 40kph, including all adjoining side streets.**
- 1b. To reinforce this message “flashing” 40kph signs should be installed at entry points to the Precinct (as illustrated in Map 1) on all major roads currently signed at 60kph, and should flash from 7am-11pm. (At other times they will be standard illuminated 40kph signs)**
- 1c. All 60kph signs on roads in the precinct should be removed**

Most of the north-south streets in this area are too narrow for speeds above 40kph.

A number already have either full or part-time 40kph limits (near the schools) or an advisory 40kph limit (as on Ridgeway Street). There is also an existing 40kph limit on part of Wellington Street. Malmsbury Street is narrow, with roundabouts, and the streets near the two supermarkets are clearly areas where speeds over 40kph are dangerous to pedestrians.

On Cotham Road at Cotham Village there is a very busy pedestrian/tram intersection, followed by civic uses, a park, retail activity and tram stops. On High Street there are

tram stops, the Recreation Centre and a bus stop, retail activity and schools in side streets. The case for a precinct-wide 40kph speed limit is strong.

Map 2. Recommended speed limit sign locations



We do not believe this will create “back-up” congestion to the east, or west, of the area. The Clearways will remain in place at peak hours. During peak hours the stopping trams, turning vehicles and traffic volumes means that traffic is already flowing slowly. The main benefit of slower limits occurs at off-peak periods when it is sometimes possible for vehicles to travel at 60kph, and when many pedestrians are shopping and crossing roads. For most drivers the slower limits will have little or no effect on their through-journey time. However, the benefits to pedestrians using the centre will be significant.

We do not believe it would be justifiable to install reduced speed limits over the Junction itself, or the other roads intersecting there.

### 3.2. Improve Pram Crossings.

The quality of the pram crossings is probably the least pedestrian friendly aspect of the precinct.

Only ONE pram crossing (at Gellibrand/Cotham) had tactile plates and the correct alignment with the path of travel, but there was a “trip” (a depression around a raised service plate) in the middle of that crossing area.

In ALL other places the ramps were uneven, cracked/broken, were too steep or had high lips, or the crossing lines did not match the pram ramp boundaries. Some were blocked by poles, etc. and none compared with the quality of ramps at Camberwell Junction, which have been installed since 2000.

We have suggested two approaches to this problem based on an assessment of the importance of each road crossing.

The locations of each type of recommended treatment are illustrated in Map 3.

## RECOMMENDATION 2

- There are 2 types of solutions recommended.**
- 2a. Type1. Install raised footpaths at the ends of streets along High and Cotham in the retail core, to form a Continuous Path of Travel (CTP).**
  - 2b. Type2. Repair and upgrade pram ramps and install tactile plates at all other road crossing places in the Junction precinct, east of the Junction itself and at the Junction (where possible).  
See Map 2 for Type 1 & Type 2 locations**

Figure 7. A raised footpath – giving a CTP, in Toorak Road, South Yarra



Figure 8. Quality pram ramps in Camberwell

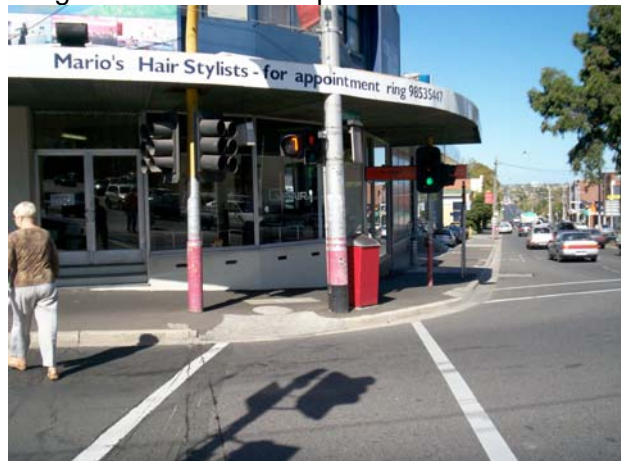


Map 3 – Improvements to pram ramps and road crossings



The installation of full DDA compliant pram ramps at the Junction crossings may not be possible in some cases, due to the locations of poles carrying overhead tram lines and lights.

Figure 9. A Pram Ramp at the Junction



**3.3. Install new road crossings, and improve crossing light responsiveness.**

The number of safe road crossings over the main roads in the precinct is generally inadequate. We recommend installing some new crossings and the improvement of light responsiveness and crossing time at existing crossings.

**RECOMMENDATION 3.1.**

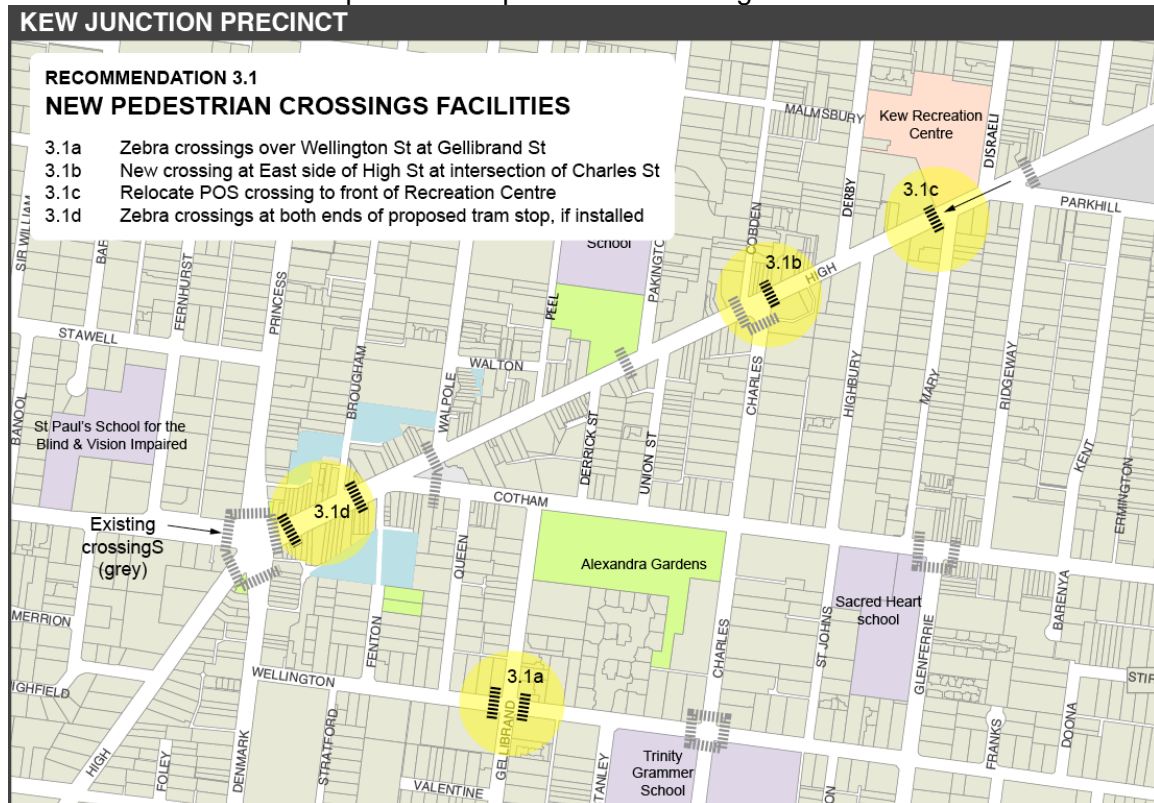
- 3.1a. Install north-south zebra crossings (at rear of Xavier) on the intersection of Wellington and Gellibrand Streets (over Wellington)**
- 3.1b. Install a new crossing associated with the traffic lights on the east side of the High Street/Charles Street intersection (over High Street)**
- 3.1c. Install new intersection traffic signals incorporating pedestrian crossing facilities over High Street outside the Recreation Centre and amalgamate the bus and tram stops at that location. (remove the existing POS crossing located 100m east of the Rec. Centre)**
- (3.1d. If the new tram stop for Tram 109 is installed in High Street, ensure high quality crossings are installed at both ends of the platform)  
See Map 3.**

Some students already use the Gellibrand Street route from the tram stops on High Street and Cotham Road to get to school. A successful TravelSmart program, a slower speed limit and this safety feature will increase use of this route.

Traffic currently can turn into and out of Charles Street at 60kph, without always needing to slow down. There is no crossing of High Street on the east side of this intersection, meaning a detour for pedestrians to cross High Street on the west side of the intersection. Students and others frequently use this intersection. This new crossing will increase safety and pedestrian convenience.

Currently there is a bus stop directly outside the Recreation Centre and a pair of Tram stops and a POS approximately 100m east of the Centre. It would be logical to amalgamate all three elements where they are most needed. A crossing here (at the Recreation Centre) would facilitate bus/tram interchange, improve public transport access to the Centre and enable people walking up Ridgeway or Mary Streets from Cotham Village to safely access the Centre over High Street.

Map 4A – New pedestrian crossing facilities



In relation to the responsiveness of pedestrian lights and the time available for crossing roads we recommend:

**RECOMMENDATION 3.2.**

- 3.2a. At all of the Pedestrian operated signal (POS) crossings (at the War Memorial and on High Street near Packington – and at the new Rec. Centre crossing) reduce the wait time for the “green man” to no more than 30 seconds.**
- 3.2b. At all of the pedestrian crossings associated with traffic lights install “automatic green man” response (the green man always lights up, whether the call button is pressed or not)**
- 3.2c. At all existing and future pedestrian crossing points ensure that the total amount of crossing time (both green and flashing red man) allows for a walk speed of 1m/second.**

All of the POS have a wait time that can frustrate people waiting to cross the roads. In practice many people do not wait, cross illegally and then the traffic stops when the lights change and the pedestrian is no longer at the crossing. This is a lose-lose situation that can be rectified by shorter wait times.

In order to prevent traffic being stopped every 30 seconds it is possible to program the lights to stay open for traffic for a minimum amount of time (e.g.1-2mins) after each pedestrian response (this has been done at the POS at the rear of Ringwood Station).

The “Greenlight” project (see Appendix 1.) highlighted the need to reduce the incidence of people having to wait for a full traffic light sequence because they forgot to press the crossing call button or did so a few seconds after the lights turn green for vehicles, even though there could be time for them to cross safely. The automatic green man reduces this problem and reinforces the pedestrian priority at crossings at traffic lights. Drivers become used to the fact that pedestrians have right-of-way at traffic light crossings.

The Greenlight project also recommended that where groups of students (in Walking School Buses) needed to cross at lights the time available for completing the crossing should be based on an assumed walk speed of 0.7m/second. Usually it is based on a walk speed of 1.2m/second. However, since no WSB’s currently operate in this area we recommend an assumed walk speed of 1m/second.

Map 4B – Improvements to pedestrian crossing facilities



**3.4. Implement a Wayfinding Signage Plan.**

Based on an evaluation of the precinct – including its size and shape (basically a 1km x 1km rectangle) and the locations of decision points and areas of pedestrian activity - we recommend the installation four Full Area Map Information Panels (FAMs) and a number of Independent Directional Signs.

The Full Area Maps will cover the bulk of the precinct, from the west of the Junction up to and including the Recreation Center and Cotham Village, and from Malmsbury Street to Wellington Street

The locations of the four FAMs are:

1. FAM 1. At the Junction, replacing the “precinct brand” sign on the corner of High Street. This will be a single-sided sign, oriented N-S, with east at the top of the map, because people will be facing east when they look at the map. The “you are here” icon will be close to the bottom right-hand side of the Map, showing people that the bulk of the precinct is in front of them as they stand facing the map;
2. FAM 2. In Walpole Street, possibly replacing the brand sign in the footpath. This will be a double-sided sign, oriented N-S. People looking at the FAM from the west side will be facing east and so east will be at the top of the map. The map will cover the same area as FAM 1 and the “you are here icon” will be close to the bottom of the map. People looking at the map from the east side will be facing west, so here the map has west at the top. It will show that the Junction is in front of them, but that much of the precinct is behind them as they stand there.
3. FAM 3. In High Street near the intersection with Charles Street. This will be a single-sided sign, oriented N-S, with west at the top and the “you are here” icon close to the bottom of the map, showing that most of the centre is in front of the viewer as they stand there, that the Recreation centre is behind them and Cotham Village to their left.
4. FAM 4. In Cotham Road, close to the tram interchange. This will be a single-sided map, oriented N-S, with west at the top and the “you are here icon” close to the bottom left hand corner of the map. It will show that Cotham Village is within a few minutes walk of the Recreation Centre, High Street and other destinations.

All maps will incorporate walk-time indicators (grids of approximately 4 mins walk time), public transport routes, 3-D graphic representations of iconic buildings and all of the other features identified as “best practice in pedestrian urban wayfinding” in Appendix 3.

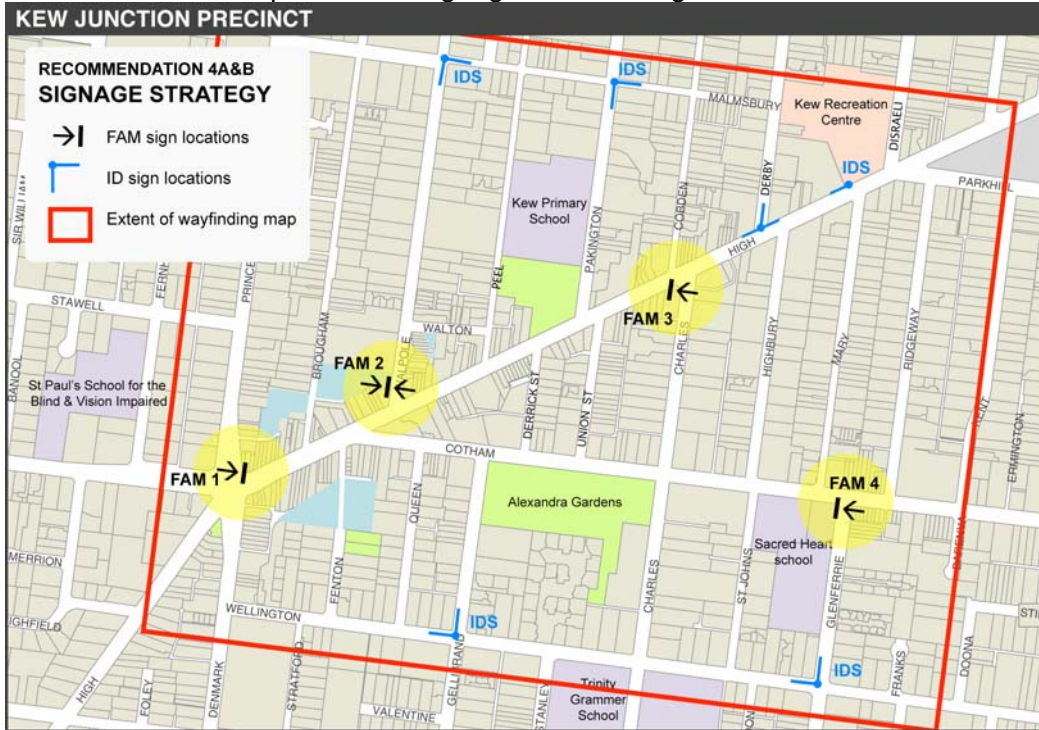
We also recommend implementing a Street Name Sign Convention, the installation of more “yellow legs” signs to improve safety and the removal/replacement of redundant signage. (See Map 5B)

#### **RECOMMENDATION 4.**

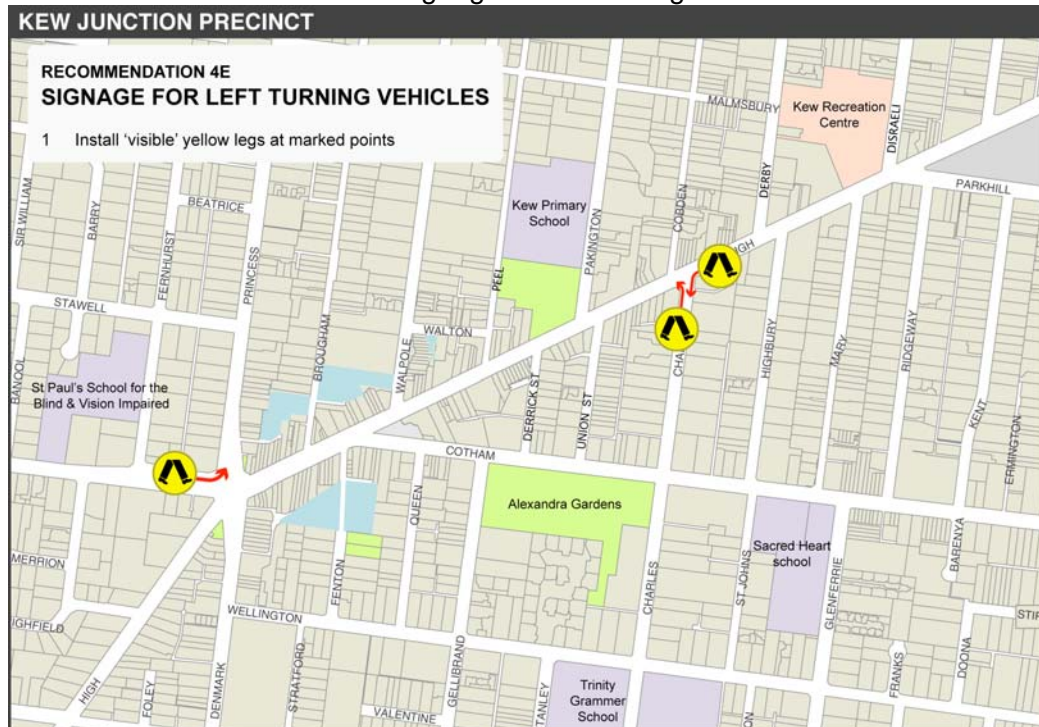
- |  |
|--|
| <ol style="list-style-type: none"><li><b>4a. Install 4 Full Area Maps at major decision points in the Precinct.</b></li><li><b>4b. Install Independent Direction Signs (IDS) on the periphery of the Precinct (See Map 4A)</b></li><li><b>4c. Produce and widely distribute a free hand-held Precinct map.</b></li><li><b>4d. Implement a “Street name sign convention” and install street name signs at all intersections in the Precinct</b></li></ol> |
|--|

4e. Install “Yellow legs” near left turn crossings (Studley Park Road and Charles Street) (See Map 4B)

Map 5A – The signage area and sign locations



MAP 5B – Signage for left turning vehicles



Many of the intersections in the Precinct do not have street name signs that are easily visible to pedestrians – most (where they exist) are too high and there are few “pairs” of street name signs allowing people to easily locate themselves. The recommended style is illustrated below. The signage blades should be approximately 3m high (to avoid vandalism), and installed so they cannot be swivelled.

Figure 10. – Readable street name signage



### **3.5. Improve amenity and install consistent styles of seats, rubbish bins and other furniture, and footpath treatments.**

There are numerous styles of seats and bins, inconsistent styles of footpath treatment (asphalt, brick paved, tile paved, concrete slabs) and some impassable footpaths.

There currently are at least five different styles of seats (both Council owned and privately installed), three types of rubbish bins, and a number of different colours of paint on the various poles in the precinct. There are also seats at the War Memorial in urgent need of repair or replacement. In some places there is persistent graffiti. Maintenance and repair of damaged furniture and infrastructure should be improved.

We recommend that all seats, rubbish bins, colours and footpath finishes are made consistent within the precinct. This may require the development of a “manual” that identifies the preferred designs and colours, to be implemented over time.

Derrick Street, a main link between High Street and Cotham Road shops, offices and transport services, is in need of improvement. It has a number of footpath finishes,

including uneven bricks, uneven bluestone crossovers and damaged asphalt areas, as well as a light pole in the middle of the narrow footpath on the west side of the street.

Figure 11 The footpath with a pole in the middle – Derrick Street



Figure 12. Graffiti in the laneway



We noted the persistent graffiti in the unnamed laneway leading to a car park (south of High Street, east of the Junction) on the bus stop on Studley Park Road (west of the Junction), areas of either damaged or poorly reinstated footpaths (Studley Park road at the Junction) and signage that needed repair (See Appendix 5).

While these latter issues are not major barriers to walking they may be social barriers to some people. Council should respond in a timely manner to maintenance issues, to ensure the community feels safe to walk.

#### RECOMMENDATION 5

- 5a. Council Identify preferred and consistent style and design of seats, rubbish bins, and footpath finishes and colours for the main retail areas.
- 5b. Improve the footpath in Derrick Street
- 5c. Ensure that damaged assets are repaired and maintenance issues are addressed as quickly as possible



source of information about walking, links to the events and a “clearing house” for advice on local event registration. The list of activities and events include:

<b>Community Safety Month</b> <a href="http://www.communitysafetymonth.com.au">www.communitysafetymonth.com.au</a>	<b>October</b>
<b>International Walk to School Month</b>	<b>October</b>
<b>Walk 21 international Conference (Canada)</b> <a href="http://www.toronto.ca/walk21">www.toronto.ca/walk21</a>	<b>October</b>
<b>National Walk to Work Day</b>	<b>5 October</b>
<b>Seniors Festival</b>	<b>7-14 October</b>
<b>Walk for Prostate Cancer</b>	<b>14 October</b>
<b>Walk for a Cure</b>	<b>14 October</b>
<b>Children's Week</b>	<b>21-28 October</b>
<b>Walktober Walk to School</b>	<b>24 October</b>
<b>World's greatest Pram Stroll (extended to other states in 2007)</b>	<b>28 October</b>

There are a wide range of settings for walking events - to school, to work, for families, seniors or carers with prams, for causes, as well as for safety, health and enjoyment.

**RECOMMENDATION 6.1.**

- 6.1a. Boroondara City Council take a lead role in promoting the participation of schools, workplaces and groups in Walktober events 2007.**
- 6.1b. Boroondara City Council participate in Walk to Work Day on 5<sup>th</sup> October 2007, to demonstrate a leadership role in this regard**

**TravelSmart Education and Travel Planning.**

The Department of Infrastructure funds the TravelSmart Program and the Local Area Access program (LAAP). Funding is available for TravelSmart information and promotion activities and LAAP infrastructure development demonstration projects.

DOI has recently announced that all of its TravelSmart projects should be based on the “Travel Planning” approach originally developed for schools. This generic approach is easily adaptable to most settings, such as workplaces and communities. The broad approach is to identify existing travel behaviour and modes, generate location and setting-specific approaches to travel behaviour change, create a Travel Plan, and then implement it.

**OUTLINE OF SCHOOL (or other setting) TRAVEL PLANNING PROCESS**

1. *SURVEY.* A survey is conducted to determine current travel modes and distances, identify key barriers to mode shift away from single occupancy car trips to and from school and seek suggestions from students, staff and parents.
2. *FOCUS GROUP(S).* Focus groups are conducted to ascertain specific local barriers, opportunities for change and improvements and appropriate marketing/promotional themes.
3. *DEVELOP SCHOOL/other TRAVEL PLAN.* A school travel plan is developed in the school, by students, teachers, other interested parties, etc. addressing the barriers identified in surveys and focus groups. The School Travel Plan usually includes a range of measures such as:
  - *Information/Promotion/Events* (maps, brochures, newsletters, walk/ride to school days/weeks or months, incentive and reward programs, School Policy to support sustainable and “Active” transport, etc.).
  - *Programs* (e.g. Walking School Bus, TravelSmart Curriculum, Bike Education, Public transport education and promotion, etc.)
  - *Infrastructure* (e.g. Bike shelters/parking racks, bicycle paths, road treatments).
  - *Site specific or innovative solutions* (e.g. early bell for walkers/cyclists, cycle and walk clubs, meeting places for walking/cycling, car pooling system assisted by the School and implemented by parents etc)
4. *IMPLEMENTATION.* Once a School Travel Plan and budget are agreed, the STP is implemented by the school (with assistance of local Council, VicHealth, TravelSmart Education, DOI Public Transport Team, and others as identified – possibly sponsors, parents/benefactors)
5. *REVIEW AND UPDATE/IMPROVE.* When the STP has been implemented and running for at least a school term, surveys and focus groups are conducted to determine mode shift and determine lessons from the process for ongoing improvement.

The TravelSmart planning process has begun at two of the schools adjacent to the Precinct (Xavier College and Trinity Grammar School).

Improving the quality and the actual and perceived safety of the walking environment will make it much easier to promote and develop sustainable travel to school by walking, cycling and public transport.

Recent projects across Victoria have shown that a well-planned and implemented School Travel Plan can reduce the chauffeuring of children to school, as more of them walk, cycle, use public transport or car-share.

This is especially important during the am peak period, when school-focused traffic combines with am peak period traffic and contributes to road congestion.

In some schools the shift away from parental chauffeuring has been dramatic.

**RECOMMENDATION 6.2.**

**Boroondara City Council accelerate the TravelSmart projects at the 2 schools already involved, and assist and encourage all other schools in the precinct to commence participation.**

**TravelSmart Workplace, Residential and Community Planning**

The implementation of Workplace TravelSmart planning is important for large employers in any Centre, especially if the travel-to-work mode is primarily by car. Within the Kew Junction Precinct VicRoads is the largest employer.

Developing a TravelSmart program to reduce the impact of the 600+ VicRoads staff on the roads in the Kew Junction area should be seen as a priority, for three reasons. Firstly, because of the scale of employment there could be significant benefits from a reduction in vehicle numbers and parking demand. Secondly, the involvement of VicRoads in such a program in Kew would be a very positive validation of the goal of making the Kew Junction precinct more walkable, legible and liveable. Finally, as a State Government agency and an integral part of DOI, VicRoads should be strongly encouraged to be seen to support declared state transport policy.

Residential Travel Planning is usually focused on outer-suburban areas. However, the principles can be easily applied to areas undergoing revitalisation and/or the development of new housing areas. A major new housing development is underway on Cotham Road, on the periphery of the precinct.

New residents can be supplied with information which encourages them to maximise their use of public transport, walking and cycling, which reinforces their knowledge of the many of active transport benefits and gives them knowledge of the many local destinations and services which can be reached without the use of their car. The pedestrian map, which will be developed as part of the Signage Strategy, will be useful part of this program.

In addition to the TravelSmart-type programs listed above, it is also valuable to more broadly promote walking within the community as a means of improving health, as an environmentally sustainable transport mode, or for other reasons. The back of the give-away map, derived from the production of the FAM would provide an opportunity to run such a campaign.

Other opportunities, such as newsletters, local press campaigns and the like are useful in explaining the benefits of and the logic behind what is happening to improve walkability in Kew.

There are growing resources available to assist understanding of the benefits, methodologies and successful practices in sustainable transport and the promotion of walking (and cycling, and public transport).

Some of these resources can be found within Victoria, and include TravelSmart News ([www.travelsmart.vic.gov.au](http://www.travelsmart.vic.gov.au)), Travel Demand News ([www.tdmcentral.net](http://www.tdmcentral.net)) and the Kinect Australia Physical Activity Bulletin ([physicalactivity.info@kinectaustralia.org](mailto:physicalactivity.info@kinectaustralia.org)).

Other valuable and free resources include the UK Travel Plan News ([transport@est.org.uk](mailto:transport@est.org.uk)) London's "Smart Moves" ([smartmoves@abcomm.co.uk](mailto:smartmoves@abcomm.co.uk)) and the Canadian Active & Safe Routes to School Bulletin ([www.saferoutestoschool.ca](http://www.saferoutestoschool.ca))

### **RECOMMENDATION 6.3.**

- 6.3a. Boroondara City Council develop and implement its own "Staff Travel Plan" to increase the use of active transport to work, and to demonstrate a leadership role in this area.**
- 6.3b. Boroondara City Council encourage VicRoads to develop and implement its own "Staff Travel Plan" to increase the use of active transport to work, and to demonstrate a leadership role in this area.**
- 6.3c. Boroondara City Council develop and implement a community campaign to encourage and increase the amount of walking and other active transport in Kew to demonstrate a leadership role in this area.**

### **3.7. Conclusions.**

The need to make the Kew Junction Precinct more walkable and pedestrian friendly has been firmly established in all recent studies of the area.

This report recommends what we believe are the actions needed to achieve an improved pedestrian environment, in terms of better infrastructure, a more appropriate traffic speed environment, and the programs and leadership needed to encourage people to take advantage of better walking conditions.

## **CHAPTER 4. IMPLEMENTATION AND COST INDICATIONS**

### **4.1. Introduction.**

The strategic approach to achieving the Vision for improving walkability and the amount of walking in the Kew Junction Precinct identified a number of complementary components:

- Improving the quality of the walking environment (both off and on-road).
- Implementing a comprehensive pedestrian wayfinding and signage strategy;
- Implementing programs that encourage and support walking.

These 3 components contain a “mix” of different types of initiatives, as demonstrated by the breadth of the recommendations made in Chapter 3.

It is, therefore, difficult to specify an exact schedule and identify precise costs for many of the recommendations, especially if approvals are required and all or some of the costs of implementation could be borne by others (i.e. changes to speed limits and other on-road recommendations will need to be approved by VicRoads), they could be funded by the state government (TravelSmart) or require the reallocation of priorities amongst existing staff.

In addition, making the Kew Junction Precinct more walkable, legible and liveable (and less car dependant) involves a shift in Council priorities consistent with the Integrated Transport Strategy and other recent reports on the precinct.

Increasing the amount of walking (and public transport use) by workers, shoppers, students and residents should, in the medium to long term, reduce the need for additional expenditure on roads and car parking, as well as achieve the other many economic, social and environmental benefits of a walkable community.

Whilst the Kew Junction Emerging Directions Report and others are based on consultation and community input, and they strongly advocate for improved walkability and pedestrian safety, the “on-the-ground” implementation of some of the resultant initiatives may still generate opposition from some sectors and groups.

When introducing innovative walkability initiatives we recommend the following general set of guidelines -:

1. Introduce the more visible, attractive elements first – e.g. the Signage Strategy, repair or upgrade of the pram ramps – and explain why it is being introduced;
2. Secondly, develop encouragement and advisory programs, including Walktober, TravelSmart, developing a Council Travel Plan, etc. to raise the profile of walking;
3. Generate community, trader and other support for the improvement of walkability through a broad community/information program;
4. Implement off-road improvements such as better pram ramps and amenity/maintenance improvements;
5. Implement the on-road improvements that do not require significant expenditure, such as speed limit modifications and pedestrian crossing responsiveness; and,

6. Finally, implement the more expensive on-road treatments

Given these general guidelines it is difficult to “schedule” the following recommendations into future financial years.

In addition, the costs of many of the recommendations are difficult to determine and will not be possible until detailed design work has been undertaken to identify the most cost-efficient solutions to some of the issues (e.g. the design of the CPT over the street ends on High Street and Cotham Road). This detailed design is not within our scope of work.

We have produced indicative cost approximations where possible.

However, all of the construction and other works will be subject to competitive quotes.

**4.2. Projects and cost approximations.**

The following table summarises our recommendations (See Ch. 3 above) with comments on implementation and indicative costs where available and appropriate.

**IMPLEMENTATION, ISSUES AND COSTS**

<b>Recommendation No. and Description</b>	<b>Timing Priority</b>	<b>Responsibility/ approval</b>	<b>Cost est/and or comments</b>
1a. Reduce speed limits to 40kph	High (year 1)	To be negotiated with VicRoads for approval	
1b. Install Flashing 40kph signs in 5 locations.	Medium (years 2-3)	Council and VicRoads	Base cost per unit=\$20,000 per electronic sign & \$200 per static sign
1c. Remove all 60kph signs in precinct	With 1b.	Council and VicRoads	\$150 per sign
2a. Install CPT raised platforms in 7 locations	High-	Council/LAAP support	\$35,000 per location
2b. Install DDA compliant pram ramps at the ends of 26 streets (approx. 60 ramps required)	High (years 1-2)	Council	Cost will vary with site. Base cost \$100 each
3.1a. Install zebra crossings at Gellibrand/Wellington	Medium.	Needs VR approval	Zebra Xing with road narrowing = \$30,000, without narrowing = \$5000
3.1b. Install pedestrian crossing on High at Charles	High-Medium	Needs VR approval	Posts and traffic lights in place. Install ped lights and buttons = \$40,000
3.1c. New intersection signals outside Recreation Centre	High-Medium	Needs VR approval	\$350,000
3.2b. Install “automatic green man” response	High	Needs VR approval	Adjust mechanism. \$3000 per site
3.2c. Allow sufficient crossing time at all light controlled crossings	High	Needs VR approval	Adjust mechanism. \$1000 per site
4a. Install 4 Full Area Maps	High	Council	Design. \$10,000 Manufacture. \$10,000 Install. \$3,000
4b. Install 7 Independent Direction Signs	High	Council	\$250/sign= \$1750
4c. Produce “Hand-held” map of	High	Council	Design \$4000

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Precinct			Produce 5000. \$2000
4d. Implement Street Name Convention	Medium-Long (3+yrs)	Council	\$200 per sign
4e. Install 3 sets of "Yellow Legs"	High	Needs VR approval	\$300/unit= \$900 installed
5a. Develop and implement consistent style and design for street furniture and footpaths	Medium-Long Spread over no.of yrs.	Council	Admin/internal decision.
5b. Improve Derrick street – footpaths, relocate pole	Long	Council	Subject to design and competitive quotes
5c. Improve maintenance and response to vandalism	High	Council	Internal admin process
6.1a. Promote Walktober 2007	High /immediate	Council	Limited – admin task
6.1b. Participate in Walk-to-work day 2007	High /immediate	Council	Limited – admin task
6.2. Increase involvement in TravelSmart Schools	High-Medium	Council	Limited – admin task
6.3a. Council develop and implement Staff Travel Plan	High	Council	Limited – admin task
6.3b. Involve VicRoads in Staff Travel Planning	High	Council	Limited – admin task
6.3c. Develop community campaign supporting walking/active transport	High-Medium	Council	Utilise existing media, Boroondara Bulletin, map, etc.

### **4.3. Conclusions.**

There are already a lot of people walking in the Kew Junction precinct and this Report has identified the actions and initiatives that can be undertaken to improve the level of walkability and the numbers of people that will walk there in the future.

Improving signage and infrastructure, placing a higher priority for the needs of pedestrians on the road system, encouraging people to walk and raising their awareness of the environmental, economic and social benefits will contribute to ensuring more people walk to and within the area.

Broader issues such as the cost of fuel, climate change and the desire for improved health will support these walkability initiatives and their outcomes in the Kew Junction precinct both now and into the future.