Glen Waverley Activity Centre

Sustainable Transport Plan

Sustainable Transport Surveys

Glen Waverley Activity Centre

Sustainable Transport Plan

Client: Monash City Council
Reference: 13024
Report Reference: 13024REP01F01 - STP
18 September 2014

Document Control

Version	Position	Prepared by	Date
D01	Principal Traffic Engineer	James Brownlie	20 February 2014
Checked	Office Manager	Sophie Beasley	21 February 2014
FD01	Principal Traffic Engineer	James Brownlie	3 March 2013
Approved	Office Manager	Sophie Beasley	5 March 2013
Final	Director	James Brownlie	18 September 2014

Sustainable Transport Surveys
Melbourne • East Gippsland
www.stsurveys.com.au

Table of Contents

List of Tables

List of Figures

Executive Summary

Sustainable Transport Surveys (STS) has been engaged by the Monash City Council to prepare a Sustainable Transport Plan (STP) in conjunction with the development of the Glen Waverley Activity Centre (GWAC) Structure Plan prepared by Tract Consulting. The Sustainable Transport Plan seeks to provide a series of guiding principles that ensure:

- Priority is given to sustainable transport modes within the GWAC;
- There is increased integration of all modes of transport for all new development in the GWAC;
- There is improved safety and accessibility for all users of the Centre;
- A sustainable model for the provision of car parking is provided within the GWAC; and
- The profile of sustainable transport use is raised by Council.

The STP aims to increase the proportion of sustainable transport travel by modes to/from and within the GWAC including public transport, cycling and walking whilst decreasing traffic congestion caused by over dependence on the private motor vehicle.

The study area for the STP is bounded by the arterial roads of Springvale Road to the east and High Street Road to the north. Myrtle Street to the west and Kingsway and Bogong Avenue to the south from the remaining study area boundaries.

Sustainable Transport Plan

The STP sets out key elements to achieve more sustainable travel to/from and within GWAC. In order to achieve the guiding principles for the GWAC the following objectives and strategies have been identified:

1. Convenience and accessibility through the greater use of transport alternatives and an effective road/travel network that reduces traffic volumes within the Activity Centre with improved pedestrian accessibility and amenity.
    - 1.1 Improve walking and bicycle access to and within the GWAC, including providing suitable infrastructure and facilities;
    - 1.2 Promote and advocate for an efficient public transport system serving all sectors of the community and encourage increased use of this system;
    - 1.3 Develop practical sustainable transport, including alternative systems and improvements to the existing systems serving all sectors of the community; and
    - 1.4 Improve the efficiency and safety of the existing road network within and surrounding the GWAC through traffic calming measures including appropriate infrastructure and road management, that seek to reduce 'rat running'.
2. An integrated approach to transport planning within the GWAC.
    - 2.1 Link land use planning and transport planning at a strategic level and pursue a centre based approach to integrated transport planning; and
    - 2.2 Transport planning within the GWAC responds to major land use developments with a focus on sustainable transport initiatives.

The individual actions have been grouped into goals:

Goal A – Provide and advocate for the provision of ongoing improvements to the quality of sustainable transport infrastructure.

Goal B – Educate staff, residents and visitors about the value and opportunities to use sustainable transport within the GWAC and implement processes to make these opportunities more accessible.

Goal C – Increase the uptake of sustainable transport and reduce the growth in vehicle movements (traffic) within the GWAC.

Goal D – Manage parking supply to promote and encourage sustainable transport and improve accessibility and attractiveness of sustainable travel options.

Goal E – Develop road network improvements that result in traffic calming.

Goal F – Promote integrated land use and transport planning.

Road Network Improvements

The road network improvements proposed seek to maintain and further enhance the works already undertaken by Council, particularly with regards to the development of a Ring Road, by setting the future direction for road network improvements in the short, medium and long term.

It is considered that the ultimate development of a Ring Road will have significant benefits for the GWAC by reducing the through traffic volumes within the Activity Centre and by reducing the opportunities for "rat running" traffic while maintaining a good level of vehicle accessibility to the GWAC.

The key components of the ultimate road design are:

- Car Parking spaces currently provided within the Central Car Park are relocated within the GWAC;
- The introduction of a shared zone along Kingsway between Coleman Parade and Railway Parade North where vehicle speeds are significantly reduced and pedestrian priority is provided;
- The closure of Coleman Parade and Railway Parade east of Kingsway, with a new access provided to/from basement car parking under what is now the Central Car Park;
- The redevelopment of the Central Car Park site to provide opportunities to link the northern and southern sections of the GWAC;
- Improved public realm including additional streetscape/landscaping, additional bicycle parking, street furniture, improved bicycle facilities and improved walking surfaces;
- Improved on-street activity including addition outdoor dining opportunities;
- Provision of on-road bicycle lanes along Kingsway and Coleman Parade;
- Completion of the Ring Road; and
- Pedestrian priority crossings along Kingsway, Montclair Avenue and Railway Parade North.

Given the scale of the proposed road network improvements the works have been broken into 4 stages, with stages 1 and 2 considered short to medium term (5 – 10 years), Stages 3 medium term (10 years) and Stage 4 medium to long term (10 – 20+ years).

Stages 1 to 3 are associated with the pedestrianisation of Kingsway while Stage 4 is associated with the development of the Ring Road.

It is noted that there is no practical reason why the development of the Ring Road needs to be undertaken as Stage 4. Should the appropriate opportunity arise to redevelop the railway station and bus interchange precinct with the required grade separation of the Ring Road and railway line, these works could be undertaken at any time.

Parking Management Options

Overall there is currently sufficient parking within the GWAC to meet peak demands. However, the survey data indicates that parking is very highly sought after in the southern section of the GWAC. In order to address this in balance a number of options are recommended:

- Improve utilisation of underutilised parking spaces;
- Introduce dynamic signage to direct motorists to vacant parking spaces;
- Develop additional parking opportunities and improved utilisation of existing parking in the southern section of the GWAC;
- Improved parking restriction enforcement; and

- Alter the existing car parking restricts that apply, on-street and within the Central and Bogong Avenue car parks, to increase the time from 6:00pm in the evening to 10:00pm Thursday – Saturday evening.

Future Car Parking Requirements

It is considered that the statutory car parking rates currently applied to the GWAC can be reduced to promote sustainable travel alternatives while further encouraging development within the Activity Centre.

The level at which car parking rates can/should be reduced to some degree is a strategic decision based on Council's desire to encourage modal shift to alternative forms of travel.

Previously car parking generation rates have been determined based on empirical assessments of the car parking generation rates observed at the time. However this does not take into consideration Council's strategies for:

- Convenience and accessibility through the greater use of transport alternatives and an effective road/travel network that reduces traffic volumes within the Activity Centre with improved pedestrian accessibility; and
- An integrated approach to transport planning within the GWAC.

Accordingly as there is an increased range of sustainable transport options provided to access the GWAC, and with additional public transport infrastructure, improved cycle infrastructure and pedestrian access, there is the opportunity to reduce the statutory car parking requirements below those that are being observed at the time.

This will require a significant change in the way Council and the community perceive parking and ultimately access within the GWAC and should therefore not be undertaken in isolation from other actions.

1 Background

1.1 Introduction

This report is to be read in conjunction with the Glen Waverley Activity Centre – Sustainable Transport Plan, Part 2 (Background Report- Context, Survey Results and Analysis).

The Glen Waverley Activity Centre – Sustainable Transport Plan, details the findings, outcomes and recommendations of the Glen Waverley Activity Centre – Sustainable Transport Plan derived background information, survey results and analysis are detailed in the Glen Waverley Activity Centre – Sustainable Transport Plan, Part 2.

1.2 Brief

Sustainable Transport Surveys (STS) has been engaged by the Monash City Council to prepare a Sustainable Transport Plan (STP) in conjunction with the development of Glen Waverley Activity Centre (GWAC) Structure Plan and Planning Scheme Amendment being prepared by TRACT Consulting.

The STP for the GWAC reviews the current issues and opportunities regarding public transport, walking, cycling, access and parking within the centre and makes recommendations regarding the future transport and mobility needs of the centre.

The STP provides a series of guiding principles that seek to ensure:

- Priority is given to sustainable transport modes within the GWAC;
- There is increased integration of all modes of transport for all new development in the GWAC;
- There is improved safety and accessibility for all users of the Centre;
- A sustainable model for the provision of car parking is provided within the GWAC; and
- The profile of sustainable transport use is raised by Council.

The STP aims to increase the proportion of travel by sustainable transport means to/from and within the GWAC including public transport, cycling and walking whilst decreasing traffic congestion caused by over dependence on the private motor vehicle.

While significant research has been undertaken on car, cycling and pedestrian travel patterns as part of this plan the STP extends beyond private transport options. Experience suggests that private vehicle travel and car ownership only decline when alternatives are more attractive.

The challenge is to make sustainable travel use more attractive and develop a centre that is less car centric and more about people and spaces.

1.3 Glen Waverley Activity Centre

Plan Melbourne, the Metropolitan Planning Strategy released by the Victorian State Government in May 2014, identified Glen Waverley as an Activity Centre in the hierarchy of centres defined by the new plan.

The GWAC is located at the end of the Glen Waverley Railway Line with the Glen Waverley Station identified in Plan Melbourne as an area of Urban Renewal Opportunity that includes significant government lands.

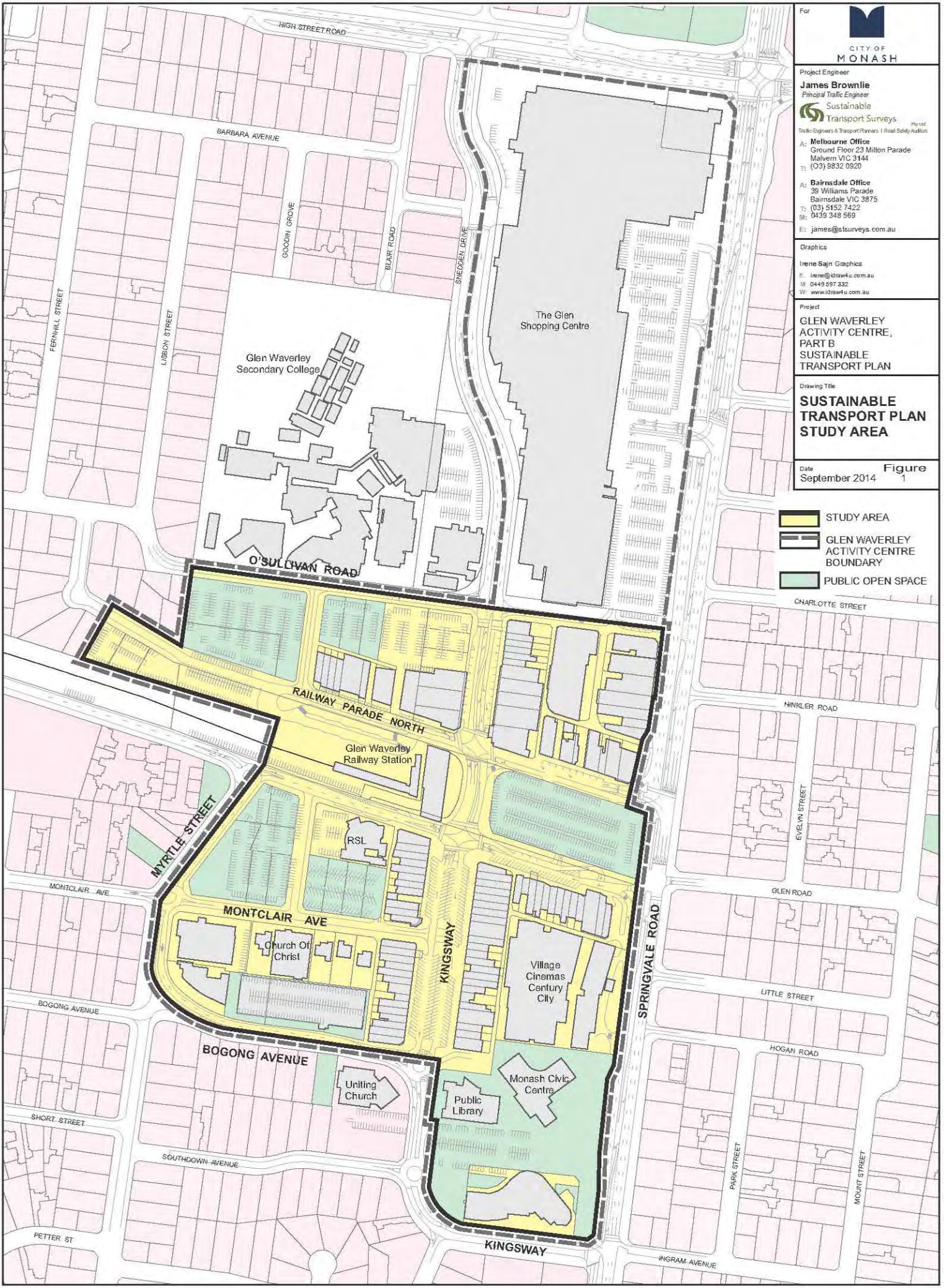
The GWAC comprises a number of significant land uses including:

- City of Monash Civic Centre (Council offices);
- City of Monash Public Library;
- Hotel Accommodation (including Novotel, Hotel Ibis and The Waverley International Hotel);
- Century City Walk (entertainment complex comprising amongst others Village Cinemas, restaurants/cafes and gaming uses);
- The Glen Shopping Centre (major shopping centre comprising Target, Woolworths, Coles and David Jones);
- Kingsway (a vibrant street comprising numerous uses including restaurants/cafes, bars, food and drink premises, retail outlets, office and other commercial land uses;
- Public on street and off-street parking both at-grade and in multi-level parking facilities;
- IKON Glen Waverley (mixed use development comprising multi-level residential dwellings with retail on the ground level);
- The Glen Waverley Secondary College;
- The Glen Waverley Railway Station; and
- The Glen Waverley Bus Interchange (a significant bus interchange servicing 10 buses (including 1 Smart Bus) which provide access to the southern and south eastern suburbs.

1.4 Study Area Boundaries

The study area for the STP is bounded by the Arterial Roads of Springvale Road to the east and High Street Road to the north. Myrtle Street to the west and Kingsway and Bogong Avenue to the south form the remaining study area boundaries.

The GWAC study area and the key land uses within the study area are shown in Figure 1.



For

CITY OF MONASH

Project Engineer

James Brownlie

Principal Traffic Engineer

Sustainable Transport Surveys Pty Ltd

Traffic Engineers & Transport Planners | Road Safety Auditors

A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920

A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569

E: james@stsurveys.com.au

Graphics

Irene Sajn Graphics

E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project

GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title

SUSTAINABLE TRANSPORT PLAN STUDY AREA

Date
September 2014

Figure
1

Approximate scale. Diagrammatic layout only.
No responsibility accepted for accuracy of details & dimensions.

2 Outcomes

2.1 Expectations for the GWAC

Following initial consultation with a limited number of community member within the GWAC in January 2014 a list of expectations was identified. These included (in no particular order) the need to:

- Offer an increased range of transport options;
- Provide an integrated transport system between the GWAC and surrounding suburbs;
- Provide better public transport infrastructure (bus interchange);
- Improved cycle infrastructure and pedestrian access; and
- Reduced traffic volumes within the GWAC and an improved public realm.

It is noted that no one specifically mentioned increasing the number of parking spaces within the Activity Centre.

2.2 Outcomes to be Achieved

In order to achieve the expectations for the GWAC the following outcomes have been identified:

1. Convenience and accessibility through the greater proportion of travel by sustainable modes of transport and an effective road/travel network that reduces traffic volumes within the Activity Centre with improved pedestrian accessibility and amenity.
2. An integrated approach to transport planning within the GWAC.

3 Strategies

1. Convenience and accessibility through the greater use of transport alternatives and an effective road/travel network that reduces traffic volumes within the Activity Centre with improved pedestrian accessibility and amenity.
   - 1.5 Improve walking and bicycle access to and within the GWAC and provide infrastructure and facilities;
   - 1.6 Promote an efficient public transport system serving all sectors of the community and encourage increased use of the system;
   - 1.7 Develop practical sustainable transport, including alternative systems and improvements to the existing systems; and
   - 1.8 Improve the efficiency and safety of the existing road network within and surrounding the GWAC through the provision of traffic calming measures including appropriate infrastructure and road management, that seek to reduce 'rat running'.
2. An integrated approach to transport planning within the GWAC.
   - 2.3 Link land use planning and transport planning at a strategic level and pursue a centre based approach to integrated transport planning; and
   - 2.4 Transport planning within the GWAC responds to major land use developments with a focus on sustainable transport initiatives.

The individual actions have been grouped into goals:

Goal A – Provide high quality sustainable transport infrastructure.

Goal B – Educate staff, residents and visitors about the value and opportunities to use sustainable transport within the GWAC.

Goal C – Increase take-up of sustainable transport options and reduce the growth in vehicle movements (traffic) within the GWAC.

Goal D – Manage parking supply to promote and encourage sustainable transport use and improve accessibility and attractiveness of sustainable travel options.

Goal E – Develop road network improvements that result in traffic calming.

Goal F – Promote integrated land use and transport planning.

Each of these goals are discussed in the following section with each goal consisting of sub goals and associated actions.

4 Sustainable Transport Strategy

4.1 Goal A – Provide High Quality Sustainable Transport Infrastructure

Overview

To be considered a sustainable transport activity centre, the GWAC must be providing high quality sustainable transport infrastructure. Some of this infrastructure is the responsibility of Council to provide. As a Council, the City of Monash provides many things of benefit to the community, however, there are too few high quality urban facilities for walking, cycling and public transport usage. If more individuals are to make voluntary behavioural changes, part of the enticement will be high quality facilities in appropriate locations.

Key Issues

- Identify key infrastructure gaps and poor standards within the GWAC and determine priorities;
- Communicating to the community the integrated nature of the proposed infrastructure upgrades;
- Continuing to build the community's understanding and appreciation of the need for improved transport options for individuals;
- Ensure planning strategies and regulatory mechanisms support strategic goals;
- Ensure that public infrastructure improvements remove or reduce physical barriers to access;
- Design an urban environment for pedestrians where they can walk with ease and with comfort;
- Design a cycle network that provides convenient and direct access and improve cyclist's perception of safety;
- Advocate for continual improvements to the public transport network and associated infrastructure, which is mostly the State Government's responsibility to provide; and
- Work with agencies, such as Public Transport Victoria and VicTrack, to strengthen partnerships and joint goals to improve the centre.

Sub Goals and Actions

Goal A.1: Walkability

- **Actions:** Enhance existing laneways and pedestrian arcades (which will lead to active surveillance) through the provision of improved street lighting, additional street furniture and active surveillance;
- Identity and work with VicRoads to provide additional or improved opportunities to cross Springvale Road along pedestrian desire lines;
- Provide shared zones and additional public open spaces facilities as outlined in Figure 3 to encourage walking;
- Provide pedestrian Way Finding signage that provides concise information for accessing a destination on foot;
- Seek to provide weather protected street furniture and other pedestrian facilities within GWAC at regular intervals;
- Reduce vehicle speeds and provide traffic calming within the GWAC as shown in Figure 2;
- In new developments provide weather protection of footpaths and encourage ground level uses and design to improve surveillance;
- Provide wider footpaths, particularly along Kingsway to promote outdoor dining as shown in Figure 2;
- Improve public open space by including additional street trees and landscaping;
- Provide additional pedestrian priority crossings along Railway Parade North, Montclair Avenue and Coleman Parade as illustrated in Figure 2;
- Review all existing pedestrian paths for DDA compliance and ensure that all new intersection upgrades are DDA compliant; and
- Ensure that new developments have active street frontages and are constructed abutting the street.

Goal A.2: Cycling

Actions:

- Provide on road bicycle lanes of sufficient width for cyclist which address the Public Transport Victoria and VicRoads requirements within the GWAC as illustrated in Figure 2 and from High Street Road to O'Sullivan Road and Kingsway to Springvale Road;
- Provide additional bicycle routes that allow access to the GWAC from various locations throughout Monash, utilising low volume roads and include Way Finding signage to provide concise information for accessing a destination on bike;
- Provide secure bicycle facilities including trip end facilities (e.g. showers, lockers and change rooms) in all new public car parks;
- Seek opportunities to provide additional bicycle facilities including trip end facilities (e.g. showers, lockers and change rooms) within all council car parks and buildings;
- Ensure that all new developments or changes in use provide bicycle facilities in accordance with Clause 52.34 of the Monash Planning Scheme. Where visitor bicycle parking cannot be provided on-site, a contribution should be made to the provision of on-street bicycle parking;
- Seek opportunities for additional Bicycle Head Start phase within the traffic signals located at the intersection of Springvale Road and Coleman Parade; and
- Encourage the provision of trip end facilities within all new developments including, lockers, showers, change rooms and clothes drying facilities.

Goal A.3: Improved Public Transport Infrastructure

Actions

- Advocate for the improvement of bus interchange facilities to address existing safety concerns;
- Advocate and encourage the redevelopment of the Glen Waverley Railway Station with the aim of providing the missing section of the Ring Road (refer Section 5);
- Provide additional taxi rank facilities at peak times (typically Friday and Saturday evenings) including the introduction of taxi ranks along Kingsway at peak times; and
- Advocate for the introduction of bus priority measures at the intersections of Springvale Road/Railway Parade North and Kingsway/Railway Parade north.

4.2 Goal B – Educate Staff, Residents and Visitors about Sustainable Transport

Overview

A primary starting point for changing behaviours and realising the vision of a sustainable transport system for the GWAC must begin with the education of those who use the centre.

The majority of messages we see are targeted at enshrining car transportation. Currently there is limited information to encourage changing the status quo or promoting the social/physical benefits of sustainable travel alternatives.

Strategies will be developed to initiate a two-way exchange of information, especially developing further understandings of why individuals do not adopt sustainable transport practices. The aim should be to provide a better community understanding of the need to reallocate road space and community resources to support the adoption of sustainable transport mode infrastructure.

Key Issues

- Communicating to individuals why there is a need to change our society's dominant 'car culture';
- Developing effective communication tools that reach all individuals and allow feedback;
- Changing negative perceptions relating to walking, cycling and public transport particularly bus travel; and
- Educating councillors, council staff, engineering consultants, perspective tenants and land developers of the benefits of a sustainable transport system.

Sub Goals and Actions

Goal B.1: Develop a Knowledge Base

- Continue to build on the established relationships with the Glen Waverley Traders Association and other stakeholders within the GWAC while expanding this network to include other key stake holders; and
- Continue to support professional education and development in the fields of sustainable transport and urban design and development.

Goal B.2: Create Information Resources for GWAC

- Support the development of a 'one stop' information resource in partnership with Council, Local Traders and State Government.

Goal B.3: Actively Promote the Need for Sustainable Transport

- Utilise community engagement opportunities to convey messages reinforcing the need to develop and provide high quality pedestrian corridors, cycling networks and public transport facilities in and around GWAC;
- Examine program opportunities with state government agencies for appropriately targeted facilities and programs, such as the reinstatement of the bike cage at the Glen Waverley Railway Station; and
- Continue to build links with, and support non-government organisations such as the Public Transport Users Group and Bicycle Network.

4.3 Goal C – Increase Take-up of Sustainable Transport Options and Reduce Traffic Volumes

Overview

This goal looks at translating physical facilities and education into outcomes.

Many Victorian Councils have dedicated Travel Smart or similar programs with a mission to assist individuals in modifying their transport behaviours.

Lack of safety is a key concern voiced by some individuals for not using nor considering sustainable transport options. For walking this may include lighting and 'feel' of an area; for cycling this may include vehicle speed; and for public transport this may include unsociable behaviour by other users.

Key Issues

- Understanding the perception, physical and social barriers that influence individuals' travel choices;
- Developing measurements to gauge effectiveness of various programs beyond simplistic "vehicles past a point";
- Expanding collection of walking, cycling and public transport data sets; and
- Separating perceived and real safety issues and addressing both.

Sub Goals and Actions

Goal C.1: Expand our knowledge Base and Measure Change

- Develop sustainable transport volunteer program to collect walking and cycling numbers within the GWAC e.g. this could include participation in the super Tuesday bike count;
- In conjunction with Bicycle Network and other stakeholders, establish a network of permanent counters (including ride to work day) for bicycle movements to and from GWAC;
- Identify significant gaps within the bicycle and pedestrian networks; and
- In conjunction with Public Transport Authority continue to develop an information set on public transport patronage split by route and time of day.

Goal C.2: Develop Local Publications

- Develop a sustainable travel publication to inform traders, residents and visitors to GWAC of the opportunities for travel behaviour change and the savings that can accrue.

Goal C.3: Develop a GWAC Travel Smart™ set of Programs

- Work with key stakeholders including the Traders Association to create green travel plans for employees of the Centre;
- Work with staff at the Monash Council to create green travel plans for all employees; and
- Undertake a scoping study to develop an active travel program for the Glen Waverley Secondary College and other large institutions in conjunction with the school and VicHealth.

Goal C.4: Improve Safety across all transport modes

- Reduce posted speed limits in the wider activity centre to 40km/h in conjunction with VicRoads. Investigate the introduction of lower speed limits within the retail core of the Activity Centre to promote the pedestrian realm in conjunction with VicRoads;
- Continue to enhance lighting and use 'Safer by Design' principles along key walking, cycling and public transport routes and in other critical public places;
- Continue to participate in community safety partnerships with Victoria Police and other key stakeholders, especially in the retail core of the GWAC; and
- Continue to source and apply for funding to improve pedestrian and cyclist safety.

4.4 Goal D – Manage Parking Supply to Promote and Support Sustainable Transport

Overview

A core tool that is available to the Monash Council to influence transport mode use is their control of vehicle parking spaces. The Council owns and operates a number of car-parking facilities and whilst private providers have a stake, the Council is in a position to use the parking under its control to encourage behavioural change.

This will be a sensitive area for the Council and GWAC stakeholders. The initial strategies have been carefully selected to produce parking strategies that encourage and begin the transition.

Compaction of parking into off-site parking facilities accessed from the Ring Road should not be seen as necessarily contrary to this goal, as in order to create 'places for people' and space for cycling, removal of on-street parking in many areas will be required.

An on-going examination of the perceived 'lack' of parking within the GWAC is required. The Melbourne CBD, for example, "is perceived to lack parking", yet the City is thriving, buses and trains are full to capacity and cycle commuting is continuing to grow.

Sustainable activity centre growth is not a function of parking availability, but rather a combination of a range of factors including ease of access and the availability access choices.

Key Issues

- Redefine the perception that the GWAC has a 'lack of parking';
- Continue to develop and review planning scheme control of parking within the GWAC;
- Develop further bicycle, scooter and motorcycle parking facilities;
- Promote the use of more sustainable vehicles including electric vehicles and small cars; and
- Continue to monitor the utilisation of parking within the GWAC and introduce measures to better utilise underutilised parking areas.

Sub Goals and Actions

Goal D.1: Motorcycle and Scooter Parking

- Expand the available parking spaces for motorcycles and scooters at a range of locations around the GWAC in line with demand.

Goal D.2: Continue Progressive Policy Reform for Council Operated Car Parking

- On a regular basis, review the implementation of a paid parking scheme with GWAC;
- Investigate parking fee reforms which favour smaller, fuel efficient vehicles;
- Continue to actively manage on-street parking, including residential parking management;
- Investigate policies that seek to remove car parking at cyclist 'pinch points' within the Activity Centre;
- Develop a policy that seeks to encourage and promote the installation of car share parking and use within the GWAC;
- Develop a policy that seeks to provide a reduced car parking provision for those office developments within the GWAC which provide a sustainable transport plan; and
- Develop a policy that allows flexibility in the allocation of residential parking within new residential developments.

Goal D.3: Alternative Car Parking

- Investigate the inclusion of electric vehicle re-charge points in new car park designs;
- Investigate Park and Ride facilities (beyond the boundaries of Monash) in conjunction with VicTrack, the Department of Transport Planning and Local Infrastructure and the Metropolitan Planning Authority, as a means to encourage more commuters to access the Glen Waverley Station by bus, ultimately reducing the number of commuter car parking spaces needed with GWAC; and
- Develop a hierarchy of parking within GWAC, to give a higher priority for particularly needs, for instance, disabled parking bays, bike parking and customer parking and a lower priority to employee parking and commuter parking.

Goal D.4: Improve utilisation of underutilised car parks

- Ensure that motorists who visit to the GWAC know how to access underutilised parking areas (Euneva Avenue Car Park) through the introduction of Dynamic Car Parking Signage;
- Evaluate opportunities to free up existing longer term car parking spaces for short term uses; and
- Concentrate urban improvement efforts on making the pedestrian experience convenient and attractive to/from the Euneva Avenue Car Park.

4.5 Goal E – Develop Road Network Improvements that Result in Traffic Calming

Overview

The GWAC currently experiences significant traffic volumes and congestion associated with vehicles "rat running' through the centre and vehicle circulating to find a parking space. Traffic calming measures seek to reduce the impacts on vehicle movements on the public realm.

A key component of the strategy is enabling the retail core of the GWAC to become primarily a pedestrian realm that people are able to access with ease and comfort.

Key Issues

- Continue to advocate for the completion of the Ring Road so that vehicles are able to access the GWAC from Springvale Road and High Street Road without the need to travel through the Activity Centre;
- Develop strategies to discourage vehicles from circulating within the activity centre to find an available parking space; and
- Discourage through traffic from accessing the GWAC while still maintaining access for visitors to the activity centre.

Sub Goals and Actions

Goal E.1: Closure of Existing Roads to reduce Through Traffic

- Develop the public realm along Kingsway between Coleman Parade and Railway Parade North to discourage vehicle traffic and enhance pedestrian priority with the ultimate development of a shared zone;
- Close Coleman Parade east of Kingsway to discourage "rat running" traffic through the GWAC as illustrated in Figure 3; (subject to discussions with Public Transport Victoria regarding access for bus services) and
- Ultimately, either close Railway Parade North to traffic, east of Kingsway or develop of a shared zone as discussed in Section 5.1.3 to discourage "rat running". Again, this will subject to discussions with Public Transport Victoria regarding access for bus services, and ensuring that alternative options for vehicles are provided.

Goal E.2: Development of a Ring Road

- Develop a Ring Road that provides access from Springvale Road via Kingsway, Myrtle Street, Glendale Street, O'Sullivan Road and Snedden Drive to High Street as illustrated in Figure 2. This is potentially a long term goal as it relies on redevelopment of the Glen Waverley Station.

Goal E.3: Improved Utilisation/Access of Parking to Reduce Traffic Volumes

- Improve parking restriction enforcement to increase the turnover of parking spaces. This will result in additional parking opportunities for users reducing the need for motorists to circulate to find a parking space;
- Review the implementation of a paid parking scheme with GWAC on a regular basis; and
- Ensure all new car parking facilities are accessible from Springvale Road via local access points or the Ring Road to decrease the need for vehicles to travel through the Activity Centre to access off-street parking facilities.

4.6 Goal F – Promote Integrated Land Use and Transport Planning.

Overview

A primary goal of town planning and transport engineers/transport planners should be to locate housing, services and industries in locations and spatial arrangements such that the need to utilise individual motor vehicles for transporting people is minimised.

Whilst more difficult in existing suburbs, this can still be applied in planning schemes by encouraging specific services in areas which allow residents to walk to local food stores, schools, doctors and the like. Creating denser populations within our existing city community, whilst increasingly difficult within gentrifying populations, should be encouraged where possible through infill housing and medium/high density redevelopment where appropriate.

At the planning scheme level, in new building developments there needs to a mechanism to actively encourage, or require, appropriate facilities that service the needs of those workers who cycle, walk, bus or scooter to work. Such facilities include showers, change rooms, lockers, clothes drying facilities and sustainable transport parking facilities (such as electric car recharge points) within the destination building.

Key Issues

- Developing a community and political understanding of the true cost of sprawl;
- Promoting rapid public transport as a realistic option for GWAC;
- Countering common misconceptions around denser urban development; and
- Linking transport, land use, infrastructure investment and future development patterns.

Sub Goals and Actions

Goal F.1: Engage with the community to promote the GWAC Structure Plan

- Support the boundaries of the Glen Waverley Structure Plan and parallel strategies that seek to provide for an intensification of development within the retail core; and
- Develop a clear understanding of the infrastructure investment priorities which will assist the realisation of the Glen Waverley Structure Plan.

Goal F.2: Continue to Reform the Monash Planning Scheme

- Continue to develop mechanisms that promote the provision of parking at rates less that the rates currently identifies within the Victorian Planning Scheme and at rates than those currently being generated, particularly when additional trip end facilities are provided;
- Explore mechanisms, such as a cash-in-lieu scheme, to fund infrastructure improvements to enable non car based transport options more viable; and
- Develop ways to support the retention or provision of key services in the GWAC within walking distance for a very high percentage of the resident population.

Goal F.3: Continue to Advocate for Improved Public Transport Facilities within GWAC

- Continue to actively engage key stake holders including VicTrack, Department of Transport Planning and Local Infrastructure, Metropolitan Planning Authority, VicRoads and bus operators to facilitate public transport improvements within the GWAC; and
- Recognise the importance of these agencies as key stakeholders in the development and implementation of the Sustainable Transport Plan, and continue to develop effective working relationships and joint project development.

Goal F.4: Actively Promote the Glen Waverley Structure Plan

- The concept behind Plan Melbourne and the identification of the Glen Waverley Station as an area of Urban Renewal Opportunity is not well understood by residents. Council will continue to promote the opportunities for well considered urban renewal within the centre.

.

5 Road Network Improvements

Based on the available data discussed in the GWAC Sustainable Transport Plan – Background report a series of road network improvements are recommended.

It is considered that these network improvements will assist in achieving Goal A and Goal E of the Sustainable Transport Plan.

These road network improvements seek to maintain and further enhance the works already undertaken by Council, particularly with regards to the development of a Ring Road, by setting the future direction for road network improvements in the short, medium and long term.

The ultimate development of a Ring Road will have significant benefits for the GWAC by reducing the traffic volumes within the Activity Centre and by reducing the opportunities for "rat running" traffic while maintaining a good level of vehicle accessibility to the GWAC.

A copy of the ultimate road network design is shown in Figure 2.

The key components of the ultimate road design are:

- Car Parking spaces currently provided within the Central Car Park are relocated within the GWAC;
- The introduction of a shared zone along Kingsway between Coleman Parade and Railway Parade North where vehicle speeds are significantly reduced and pedestrian priority is provided;
- The closure of Coleman Parade and Railway Parade east of Kingsway, with a new access provided to/from basement car parking under what is now the Central Car Park;
- The redevelopment of the Central Car Park site to provide opportunities to link the northern and southern sections of the GWAC;
- Improved public realm including additional streetscape/landscaping, additional bicycle parking, street furniture, improved bicycle facilities and improved walking surfaces;
- Improved on-street activity including addition outdoor dining opportunities;
- Provision of on-road bicycle lanes along Kingsway and Coleman Parade;
- Completion of the Ring Road; and
- Pedestrian priority crossings along Kingsway, Montclair Avenue and Railway Parade North.

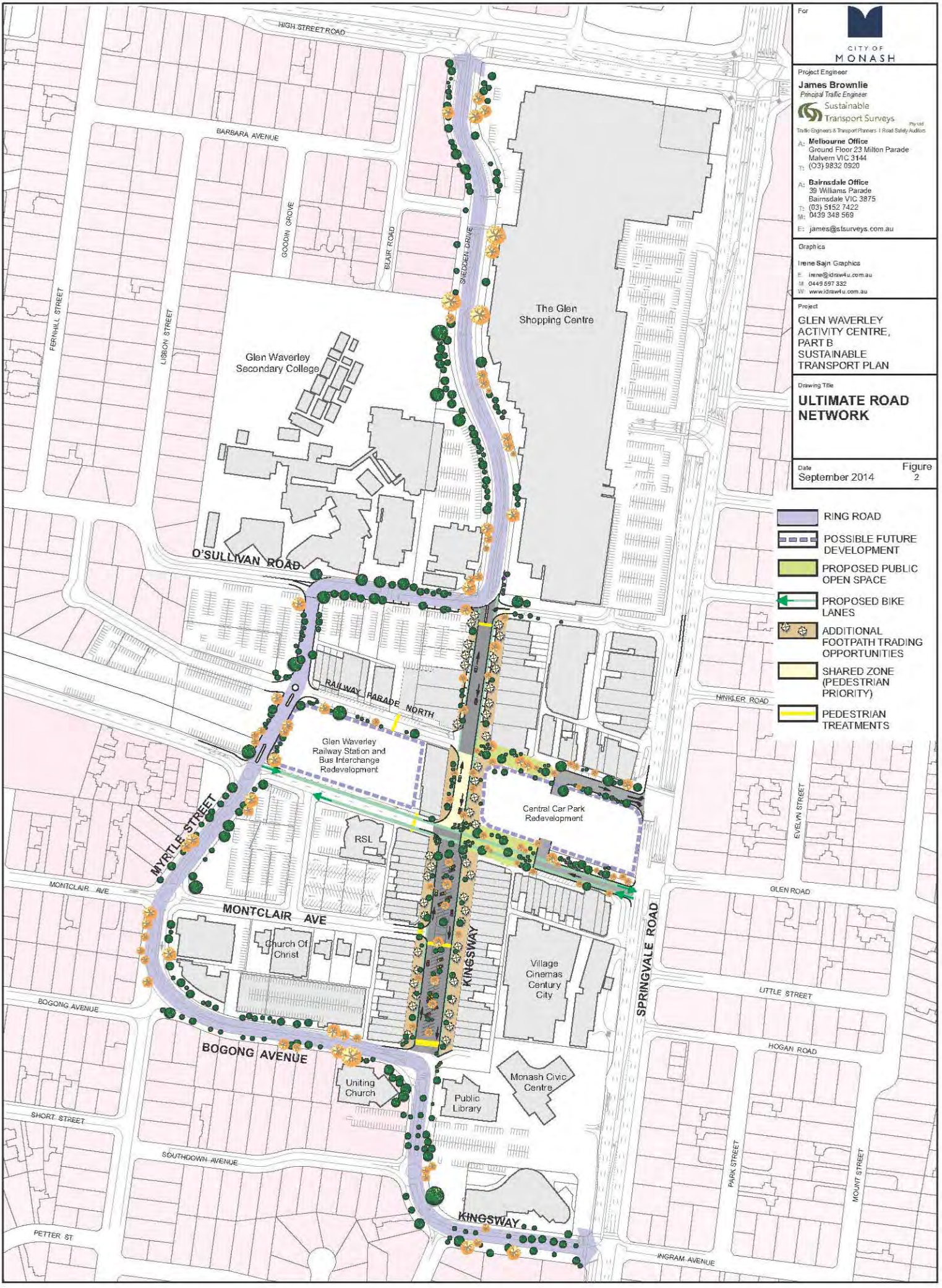
Given the scale of the proposed road network improvements the works have been broken into 4 stages, with stages 1 and 2 considered short to medium term (5 – 10 years), Stages 3 medium term (10 years) and Stage 4 medium to long term (10 – 20+ years).

Stages 1 to 3 are associated with the pedestrianisation of Kingsway while Stage 4 is associated with the development of the Ring Road.

It is recommended that the appropriateness of works associated with Stage 4 are reassessed as part of any development application associated with redevelopment of the railway station. Various components of Stages 1 to 3 require further discussion with agencies. These include discussions with Public Transport Victoria to ensure there is no negative impacts to bus service provision within the centre, and with VicRoads who are responsible for the proposed changes on declared main roads such as Springvale Road.

It is noted that there is no practical reason why the development of the Ring Road needs to be undertaken as Stage 4. Should the appropriate opportunity arise to redevelop the railway station and bus interchange precinct with the required grade separation of the Ring Road and railway line, these works could be undertaken at any time.

The works associated with the various stages are discussed in the following sections.



For

CITY OF MONASH

Project Engineer

James Brownlie

Principal Traffic Engineer

Sustainable Transport Surveys Pty Ltd

Traffic Engineers & Transport Planners | Road Safety Auditors

A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920

A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569

E: james@stsurveys.com.au

Graphics

Irene Sajn Graphics

E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project

GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title

ULTIMATE ROAD NETWORK

Date
September 2014

Figure
2

5.1 Stage One – Central Car Park

Stage One works are primarily associated with the redevelopment of the area surrounding the Central Car Park and a reduction in "rat running" traffic.

The Central Car Park is currently an at-grade parking area accommodating 255 parking spaces accessed from Coleman Parade and Railway Parade North. The location of the car park is considered to be a barrier to the integration of the northern and southern sections of the GWAC.

In order to link the two halves of the GWAC it is considered that the following works could be undertaken:

- Car parking spaces currently provided within the Central Car Park could be relocated within the GWAC;
- Coleman Parade east of Kingsway could be closed to traffic with a new access provided from Coleman Parade to Railway Parade North. It is envisaged that this access would be one way from Coleman Parade to Railway Parade North and will mostly access a new basement parking area, should development occur. Coleman Parade will become one way providing access from Springvale Road to any new access;
- Any future redevelopment of the central car park should be self-sufficient with regards to accessibility, including the provision of car parking, bicycle facilities including trip end facilities, pedestrian amenity and loading requirements;
- The area of roadway between the new access and Kingsway could be converted to public open space which will provide opportunities for "greening" the Activity Centre;
- An on-road bicycle lane could be provided along both sides of Coleman Parade that will link to the existing bicycle path, which will be sufficiently wide to provide for cyclists' needs, and consider the Public Transport Victoria requirements design guidelines;
- The width of Kingsway between Coleman Parade and Railway Parade North will be reduced and the centre median removed to discourage vehicle traffic and enhance the pedestrian realm with the ultimate goal being the development of 'Shared Zone'.

  A Shared Zone is a road or network of roads where the road space is shared by vehicles and pedestrians. A 'Shared Zone' and speed limit sign (typically 10 – 20 km/h) is installed on each entry road into the area and an end shared zone sign is displayed at each exit road. The street environment of a Shared Zone must ensure that the drivers and pedestrians are made aware that they are entering a location that has different driving conditions. Drivers must give way to pedestrians at all times while pedestrians must not cause a traffic hazard by moving into the path of a driver and must not unreasonably obstruct the path of any driver or another pedestrian. Typically in Shared Zones, any delineation, kerb and channel shall be removed to enhance the sense of equality between pedestrians and vehicles;

- The additional road reserve area reclaimed from Kingsway along the eastern side could be utilised to provide wide pedestrian footpaths which could be used for outdoor dining or other active uses;
- A raised pedestrian crossing with pedestrian priority could be provided along the western side of Kingsway across Coleman Parade and Railway Parade north;
- Right turn restrictions could be introduced at the intersection of Kingsway and Railway Parade North in peak periods to further discourage 'rat running';
- Bus priority measures should be investigated with Department of Transport Planning and Local Infrastructure at the intersections of Springvale Road/Railway Parade North and Kingsway/Railway Parade North; and
- Bicycle priority measures should be investigated at the intersection of Springvale Road and Coleman Parade with VicRoads.

A copy of the Stage One plan is shown in Figure 3.

Whilst not shown in the Stage One development plan, a review of the need for the signalised intersection at Kingsway/Coleman Parade could be undertaken prior to the works being undertaken, with a view to extending the shared zone through the intersection.

For
CITY OF MONASH

Project Engineer
James Brownlie
Principal Traffic Engineer
Sustainable Transport Surveys Pty Ltd
Traffic Engineers & Transport Planners | Road Safety Auditors
A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920
A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569
E: james@stsurveys.com.au

Graphics
Irene Sajn Graphics
E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project
GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title
STAGE 1 COLEMAN PARADE-COMMUNITY PRECINCT

Date
September 2014

Figure
3

5.1.1 Stage Two – Kingsway (Southern Section)

Stage Two works are focused on activating the street frontage along Kingsway (Southern Section) between Coleman Parade and Bogong Avenue by providing additional outdoor dining opportunities as well as other footpath related activities.

Parking is currently provided along both sides of Kingsway with two rows of angled parking provided within the centre median.

In order to facilitate additional activation of the street frontage along Kingsway between Coleman Parade and Bogong Avenue it is considered that the following works could be undertaken:

- Relocate the 75 parking spaces provided along both kerbs between Coleman Parade and Bogong Avenue to facilitate the widening of the footpath. This will provide additional opportunities for an improved public realm including outdoor dining, and improved pedestrian access.
  This can be done in stages starting with angled parking adjacent to Coleman Parade and Railway Parade North or at other strategic locations where traders seek additional footpath trading, or at one stage as part of any future parking consolidation;
- Additional street trees and landscaping could be provided along Kingsway;
- A bicycle lane, sufficiently wide to provide for cyclists' needs, and designed with consideration of the Public Transport Victoria requirements design guidelines, could be provided along both sides of Kingsway to promote bicycle travel within the GWAC and providing an additional buffer between motorists and diners;
- Car parking restrictions can be reviewed at this time to consider implementing a paid parking scheme within this section of Kingsway in order to ensure that the appropriate rate of car parking space turnover is achieved.;
- Pedestrian crossings can be provided along the western side of Kingsway across Montclair Avenue and across Kingsway at the south side of Bogong Avenue. The inclusion of pedestrian priority crossings will act as a form of traffic calming and will result in reduced vehicles speeds; and
- A review of speed limits within GWAC could be undertaken at this time with a view to introducing a reduced shopping centre speed limit, particularly along Kingsway.

A copy of the Stage Two plan is shown in Figure 4.

It may be determined, following the completion of Stage 2, that the traffic signals at the intersection of Kingsway/Coleman Parade are no longer required. These traffic signals could therefore be removed and the shared zone extended through the intersection.

For

CITY OF MONASH

Project Engineer

James Brownlie

Principal Traffic Engineer

Sustainable Transport Surveys Pty Ltd

Traffic Engineers & Transport Planners | Road Safety Auditors

A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920

A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569

E: james@stsurveys.com.au

Graphics

Irene Sajn Graphics

E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project

GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title

STAGE 2 KINGSWAY COLEMAN PARADE TO BOGONG AVE

Date
September 2014

Figure
4

Approximate scale. Diagrammatic layout only.
No responsibility accepted for accuracy of details & dimensions.

5.1.2 Stage Three – Kingsway (Northern Section)

Stage Three works are focused on activating the street frontage along Kingsway (Northern Section) between Railway Parade North and O'Sullivan Road. This will occur by reducing the road width to match the road reserve associated with Kingsway south of Railway Parade North, which will provide additional footpath trading opportunities.

Currently 22 parallel parking spaces are provided along both sides of Kingsway with two trafficable lanes in each direction and additional road widening at the intersection of O'Sullivan Road and Railway Parade North.

In order to encourage more pedestrian use of the street, in line with future development along this section of Kingsway the following works could be undertaken:

- Reduce the road reserve to match in Kingsway south of Railway Parade North and Kingsway south of Coleman Parade, while still retaining the existing parallel parking. The additional space could be utilised to prove for additional footpath trading;
- Provide a bicycle lane, sufficiently wide to provide for cyclists' needs, and designed with consideration of the Public Transport Victoria requirements design guidelines, could be provided along both sides of Kingsway. This will promote bicycle travel within the GWAC whilst providing an additional buffer between motorists and activities on the footpath;
- Retain the existing signalised pedestrian crossing to provide pedestrian access across the northern end of Kingsway; and
- If not undertaken as part of Stage Two works a review of speed limits could be undertaken at this time with a view to introducing a reduced shopping centre speed limit within the GWAC.

A copy of the Stage Three plan is shown in Figure 5.

For

CITY OF MONASH

Project Engineer
James Brownlie
Principal Traffic Engineer
Sustainable Transport Surveys Pty Ltd
Traffic Engineers & Transport Planners | Road Safety Auditors
A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920
A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569
E: james@stsurveys.com.au

Graphics
Irene Sajn Graphics
E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project
GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title
STAGE 3 KINGSWAY NORTH OF RAILWAY PARADE NORTH

Date
September 2014

Figure
5

5.1.3 Stage Four – Completion of the Ring Road

Stage Four works are associated with the development of the central section of the Ring Road which will ultimately provide access around the GWAC from High Street Road in the north to Springvale Road in the south east.

It is considered that Stage Four works could be undertaken as a standalone exercise. They do not rely on completing Stages 1 – 3. However in order to facilitate these works, changes may be required to best enable bus access to the bus interchange. Further consultation with all affected stake holders including VicTrack, Department of Transport Planning and Local Infrastructure, Metropolitan Planning Authority, VicRoads and bus operators, will be required to determine this.

A Ring Road is typically a roadway that circulates an Urban Area, in this case the GWAC, so that traffic does not need to pass through the Centre. The benefit of the Ring Road is primarily reduced traffic volumes within the Activity Centre particularly when major car parking facilities are accessed directly from the Ring Road.

The Ring Road is an important component of the ultimate development of the GWAC, but relies on the redevelopment of the Glen Waverley Railway Station and bus interchange, including the relocation of the station, as well as the development of a new road linking Railway Parade North and Coleman Parade.

The ultimate design of the Ring Road should be undertaken as part of any feasibility studies associated with redevelopment of the railway station and bus interchange.

In order to facilitate the development of the Ring Road it is proposed that the following works are undertaken:

- Remodel the intersection of O'Sullivan Road and Snedden Drive to provide priority from Snedden Drive into O'Sullivan Road west of Kingsway;
- Widen the road reserve along the frontage of the Glen Waverley Secondary College to improve / allow for the opportunity to provide parallel parking along the southern kerb. These spaces will be required as drop- off and pick-up parking for the College to provide for the loss of car parking when the Dan Murphy site is ultimately redeveloped. . This may require the acquisition of land along the southern side of O'Sullivan Road between Kingsway and Euneva Avenue, and
  It is considered that these parking spaces This Further investigation of the need for acquisition should be undertaken, and, if required, appropriate planning and other mechanisms should be introduced as soon as practical.
- Remodel the intersection of O'Sullivan Road and Euneva Avenue to provide priority from O'Sullivan Road (east of the intersection) into Euneva Avenue;
- Widen Euneva Avenue to match the existing road reserve associated with Myrtle Street south of the railway line. This may require the acquisition of land along the western side of Euneva Avenue. Further investigation of the need for acquisition should be undertaken and, if required, appropriate planning and other mechanisms should to be introduced as soon as practical. Remodel the intersection of Railway Parade North and Euneva Avenue, for instance with the inclusion of a roundabout, should be explored to ensure sufficient access is provided to a new bus interchange;
- Develop a new grade separated road between Railway Parade North and Coleman Parade; and
- Close Railway Parade North east of Kingsway to traffic and develop this area as additional public open space. This will further reduce "rat running" through the centre and will encourage utilisation of the Ring Road.
  An alternative to public open space would be the development of an additional Shared Zone. This should be reviewed in due course to ensure the appropriate option is developed. It is considered that some treatment in this location would enhance pedestrian connectivity between The Glen and the southern Sections of the GWAC;

A copy of the Stage Four plan is shown in Figure 6.

For

CITY OF MONASH

Project Engineer

James Brownlie

Principal Traffic Engineer

Sustainable Transport Surveys Pty Ltd

Traffic Engineers & Transport Planners I Road Safety Auditors

A: **Melbourne Office**
Ground Floor 23 Milton Parade
Malvern VIC 3144
T: (03) 9832 0920

A: **Bairnsdale Office**
39 Williams Parade
Bairnsdale VIC 3875
T: (03) 5152 7422
M: 0439 348 569

E: james@stsurveys.com.au

Graphics

Irene Sajn Graphics

E: irene@idraw4u.com.au
M: 0449 597 332
W: www.idraw4u.com.au

Project

GLEN WAVERLEY ACTIVITY CENTRE, PART B SUSTAINABLE TRANSPORT PLAN

Drawing Title

STAGE 4 COMPLETION OF RING ROAD

Date
September 2014

Figure
6

6 Parking Management Options

6.1 Future Car Parking Rate

Following a review of the car parking generation rates as detailed in GWAC Sustainable Transport Plan – Background report there is scope to reduce the statutory car parking rates to promote sustainable travel alternatives while further encouraging development within the GWAC.

The level at which car parking rates can/should be reduced to some degree is a strategic decision based on Council's desire to encourage modal shift to alternative forms of travel.

Previously car parking generation rates set out within PP1, PPP2 and PPP3 were determined based on empirical assessments of the car parking generation rates observed at the time the plan was prepared. However this does not take into consideration Council's strategies for:

- Convenience and accessibility through the greater use of transport alternatives and an effective road/travel network that reduces traffic volumes within the Activity Centre with improved pedestrian accessibility; and
- An integrated approach to transport planning within the GWAC.

An increased range of transport options are proposed to be provided to access the GWAC that will create an integrated transport system between the GWAC and surrounding suburbs with better public transport infrastructure, improved cycle infrastructure and pedestrian access. This provides the opportunity to reduce the statutory car parking requirements below those that are being observed at the time.

This will require a significant change in the way Council and the community perceive parking and ultimately access within the GWAC.

For example the following rates could be incorporated within a planning scheme amendment:

- Beauty Salon/Hairdresser – 5 spaces to each 100m^2 of leasable floor area;
- Dwelling – 1 space to each dwelling;
- Restaurant (Café) – 0.30 spaces to each seat available to each patron permitted;
- Shop (other than Beauty Salon/Hairdresser – 3.5 spaces to each 100m^2 of leasable floor area;
- Office – 2.5 spaces to each 100m^2 of net floor area;
- Unspecified Use – An adequate number to the satisfaction of the responsible authority.

The following initiatives could be incorporated to further promote sustainable transport within the GWAC:

- **Residential Dwellings**: Car parking is proposed to be provided at a rate of 1 per dwelling however as not every dwelling generates a demand for parking and allowing for some dwellings generating a demand for more spaces the allocation of these spaces could be more flexible. Some two or three bedroom dwellings could be allocated 2 spaces, while 1 bedroom and studio dwellings may be allocated no parking. This being said at least 70% of one bedroom and studio dwellings should be allocated a car parking space.
- **Office** developments could be incorporated into a planning scheme amendment with a reduce rate of 2.5 spaces per 100m^2 of net floor area. If a reduced car parking generation rate was incorporated for office developments, a Sustainable Travel Plan could be required by the development to promote sustainable transport choices.
  Sustainable Travel Plans encourage staff to plan their journey in advance to reduce car ownership in favour of more sustainable mode choices where possible. This could be in the form of public transport, walking, cycling or by car-pooling. Travel Plans provide incentives as well as information and solutions to encourage change.

- **Larger/ consolidated Development Sites –** all large or consolidated development sites (where it is practical to provide basement parking on-site) should be required to accommodate their peak parking demands on-site.

In adopting car parking generation rates less that those currently being observed and that reflect the future improvements to accessibility associated with GWAC it is reasonable to consider that contributions should be made to funding these access improvements (rather than the provision of car parking spaces).

Further exploration of appropriate mechanisms for achieving this are needed – for instance, would a new separate cash-in-lieu scheme to fund improved public transport infrastructure, improved cycle infrastructure, improved pedestrian access and an enhanced public realm be able to be introduced, and would it be successful in achieving its purpose? Could the existing cash-in-lieu payment scheme that is used to construct car parking be amended to develop an improved public transport infrastructure, improved cycle infrastructure, improved pedestrian access and an enhanced public realm?

6.2 Management of Existing Parking Demands

It is considered that overall there is currently sufficient parking within the GWAC to meet peak demands. However the survey data indicates that parking is very highly sought after in the southern section of the GWAC whilst parking in Precinct A is currently underutilised (mainly within the Euneva Street Multi Level Car Park).

Accordingly it is considered that the location of the parking supply is unbalanced with regards to the generators for parking. In order to address this, the following solutions could be considered:

6.2.1 Improve Utilisation of underutilised car parks

As noted, the survey data indicates that parking is very highly sought after in the southern section of the GWAC whilst parking in Precinct A is currently underutilised (mainly within the Euneva East (multi-level) Parking Area).

Accordingly it is considered that the location of the parking supply is unbalanced with regards to the generators for parking. An evaluation of opportunities to free up existing longer term car parking spaces for short term users should be undertaken.

6.2.2 Signage

The access to the Euneva Multi Level Car Park can be difficult to locate particularly for visitors that are not familiar with the GWAC.

In order to improve the utilisation of the Euneva Multi Level Car Park additional signage is required, as discussed in detail in Section 6.3.

6.2.3 Additional Parking Opportunities

Currently parking is highly sought after in the southern section of the GWAC.

In order to address this, additional car parking spaces could be provided within Precinct D, Precinct E, Precinct F or Precinct G.

PPP3 currently seeks to develop an additional 400 car parking spaces in the area generally located to the west of Kingsway and to the south of Coleman Parade.

It is considered that these spaces would be appropriately located to meet the future needs of the GWAC and provide a longer term solution to addressing the unbalanced car parking supply particularly as development occurs to the north of Coleman Parade.

6.3 Improved Signage

Currently parking signage within the GWAC is limited to static signage generally located at the entrance to car parking facilities. An example of the static signage for the Euneva East Parking Area and the directional signage at the corner of Euneva Avenue and Railway Parade North area is shown in Figure 7.

Static signage typically only works once a motorist knows where the parking area is or if the motorist is passing the directional signage looking for a parking space. This signage then highlights the access to the parking area.

In order to promote the Euneva Multi Level Car Park and increase public patronage of the car park a variable message board was located along Kingsway adjacent the Central car park in the weeks leading up to Christmas.

Figure 7: Euneva East Parking Area Signage

In order to promote the existing and future parking areas within the GWAC it is considered that the introduction of a Dynamic Car Park Signage System is warranted.

The introduction of dynamic signage alerting drivers to the number of spaces available in off-street car parks can improve their utilisation and assist drivers to locate vacant spaces prior to entering and circulating the car parking areas. This technology would be most appropriate to improve the usage of the Euneva Street Multi Level Car Park and help balance car parking patronage throughout the GWAC and reduce traffic circulation.

Dynamic signage for outdoor car parks (at grade car parks) is typically done using loop based technology (counting vehicles as they enter and exit the car parking area) or more accurately (and more expensively) using individual parking sensors.

If dynamic signage is introduced it should be implemented throughout the centre with all car parking areas within the GWAC included to ensure all available spaces are highlighted. The signage would

typically be located on the Ring Road to encourage motorists to travel to their nearest available parking area, without the need to circulate through the Activity Centre.

An example of Dynamic Car Park Signage is shown in Figure 8.

Figure 8: Example of Dynamic Car Parking Signage

6.4 Improved Parking Restriction Enforcement

A review of the duration of stay survey data indicates that of the 5,030 vehicles observed. 1,237 vehicles overstayed the parking restrictions, this equates to approximately 24.0% of all vehicles overstaying their parking restrictions.

It is considered that additional resources should be allocated to enforcing parking restrictions within the GWAC.

There are numerous benefits associated with this, including:

- Increased turnover of parking spaces resulting in more convenient parking spaces being available;
- Encourage longer term parking to within the under utilised car parks;
- Reduce the number of spaces needed to meet the demands of short and medium stay users; and
- Reduce total vehicle traffic as motorists are less likely to need to circulate to find an available parking space, which in turn reduces traffic congestion, accidents, energy consumption and pollution emissions.

One approach to improving the enforcement of parking restrictions could be to employ additional parking officers to enforce parking restrictions.

New technologies are making quite a difference to the efficiency and effectiveness of parking enforcement while also providing a major contribution to increased standards of customer service. An example of a new technology that is being used by Local Councils in Victoria is Parking Overstay Detection Systems (PODS).

PODS are a small electronic device that is installed underneath a parking bay to detect and record the time a car arrives and departs from a parking bay. PODS typically increases the detection of overstay infringements by up to 90%.

Once a vehicle has parked for longer than the maximum time permitted in a parking space (plus a grace period of approximately five minutes) the PODS sends a signal to the nearest parking officer patrolling in the area. The parking officer will then check to see if a parking offence has occurred before issuing a parking infringement.

The sensors are extremely accurate. They record the exact time that a vehicle enters and departs a parking bay. In-ground sensors offer a more consistent and accurate approach to parking management by encouraging drivers to comply with parking restrictions.

This supports the steady turnover of parking spaces and helps to make parking more readily available for all users. It also ensures the limited supply of parking is managed in a fair and equitable manner for the large number of vehicles each day.

PODS can be used in conjunction with Dynamic Car Park Signage System to provide a holistic approach to car parking management.

Other advantages associated with the use of PODS include:

- **Improved Compliance** – Compliance with parking restricts improves significantly due to the increased detection of overstay events;
- **Increased Productivity** – Parking officers walk or drive past an area once to identify overstays, making it possible to enforce areas with multiple restrictions as easily as areas with single restrictions;
- **Improved Accuracy** – PODS reduce the potential for human error. Electronic detection and timing of vehicle presence ensures that the enforcement is accurate, consistent and fair;
- **Improved Health and Safety** – Health and safety of parking officers is improved by removing the need to mark vehicles and reduce the exposure to moving traffic; and
- **Data Capture** – PODS record all overstay events whether a parking infringement is issued or not. This allows the council to monitor the effectiveness of the parking restrictions and the enforcement activities.

6.5 Parking Restrictions

The parking demand surveys and duration of stay surveys demonstrates that there is sufficient parking in the GWAC as a whole to meet the peak parking demands. The need for improved management and/or increased provision arises from the peak demand within the southern section of the Activity Centre, with motorists trying to park as close as possible to their destination.

A review of the car parking restrictions indicated that the majority of restrictions are:

On-street

- 1/2 P 8:0am – 6:00pm Monday to Saturday
- 1P 8:00am – 7:00pm Saturday to Wednesday and 8:00am – 9:00pm Thursday - Friday
- 2P 8:00am – 6:00pm Monday to Friday

Off-street

- 2P 8:00am – 6:00pm Monday – Saturday
- 3P 8:00am – 6:00pm Monday – Saturday
- 4P 8:00am – 6:00pm Monday – Saturday
- 5P 8:00am – 6:00pm Monday – Saturday

A review of the duration of stay data indicates that the majority of parking was for less than 1 – 2 hours, depending on the location.

Accordingly it is generally considered that the length of parking restrictions is appropriate for each area. However given that a secondary peak in parking demand is observed after 8:00pm, the following changes are recommended:

- On-street parking is amended to 8:00am to 7:00pm Sunday – Wednesday and 8:00am – 10:00pm Thursday – Sunday
- Central Car Park is amended to 8:00am to 7:00pm Sunday – Wednesday and 8:00am – 10:00pm Thursday – Sunday
- Bogong Avenue Car Park is amended to 8:00am to 7:00pm Sunday – Wednesday and 8:00am – 10:00pm Thursday – Sunday
- Council Car Park is amended to include 1 hour parking restricts after 5:00pm Monday - Sunday

6.6 Parking Pricing

6.6.1 Advantages and Disadvantages

Paid parking (also called parking pricing, user pay and metered parking) refers to the direct charges for using a parking space. This can include on-street and off-street parking areas. Appropriately priced parking can provide numerous benefits including:

- Increased turnover of parking spaces and the associated improvement in user convenience;
- Reduced number of spaces needed to meet demand, reducing total parking costs and allowing more compact development;
- Encouraging long-term parkers to use under-utilised parking spaces (such as off-street and fringe parking areas);
- Parking facility cost saving to Council/rate payers;
- Reduced total vehicle traffic which in turn reduces traffic congestion, accidents, energy consumption and pollution emissions; and
- Increased revenue which ultimately provides better facilities/amenities. This ensures users pay their share of municipal roads and parking costs, particularly for non-Monash residents who visit GWAC.

Car parking is never really free. The choice is really between paying directly or indirectly for parking facilities. As discussed in GWAC Sustainable Transport Plan – Background report there is a substantial subsidy provided by the City of Monash and ultimately rate payers associated with the provision of "free" parking. This means that all ratepayers within the City of Monash contribute to parking within the GWAC whether they choose to visit the centre or not.

The introduction of paid parking seeks to pass the costs associated with providing parking to the end users that utilise these spaces. However this is only one of several parking strategies which could be undertaken in conjunction with paid parking implementation. Some other options are:

- Shared Parking (the use of parking spaces by multiple users over time);
- Parking Restrictions (short term parking restrictions in high turnover areas, unrestricted parking further from the retail core);
- More accurate and flexible car parking provision rates (the preparation of Car Parking Precinct Plans PPP 2 and PPP3);
- Increasing the capacity of existing parking facilities (increase the car parking spaces on at-grade parking areas by constructing multi-level car parks;
- Additional and improved bicycle parking and trip end facilities to encourage bicycle travel);
- Improve enforcement (ensure that parking restrictions are regularly enforced as the duration of stay surveys indicate that over 24% of vehicles stayed longer than the relevant parking restriction); and
- Overspill Management (establish plans including the introduction of parking restrictions and permit zones in residential areas to address any spill over of parking that may occur).

It is worth noting that the City of Monash has been implementing some of the parking strategies listed above, and others, over many years.

Parking pricing is generally considered appropriate anywhere where the parking is congested or above the 85% occupancy level. If implemented with good user information such as signs, maps and brochures that indicate the parking location and price, motorists can choose between more convenient but costly parking or cheaper parking a short distance away. Efficient pricing is particularly important for on-street parking as it is the most visible and convenient spaces.

Various methods can be used to price parking which differ in their costs, convenience and adjustability as summarised in Table 1 on page 32.

Newer electronic systems tend to be more convenient, allow pricing adjustability and can be more efficient and equitable.

While there are many sound reasons for the introduction of paid parking schemes in areas of high parking demand, there are also a number of obstacles that need to be considered. These are briefly discussed below;

Inconvenience – Paying for parking can be inconvenient, particularly with older meters that only accept certain coins and require motorists to pre pay for a limited time period. Newer systems accommodate more payment options and some only charge for the time a vehicle is actually parked.

Cost inefficiencies – Paid parking incurs costs for equipment and administration that often absorbs a significant proportion of revenue. Newer meters typically serve multiple spaces and reduce enforcement costs compared with older meters.

Spill over Impacts – Motorists may park illegally at nearby "free" parking areas or cause congestion problems on nearby residential streets where parking is unrestricted or unpriced. This can be addressed by improving parking regulations, user information and enforcement.

Table 1 Examples of Parking Pricing Methods

Type of Paid Parking	Description	Capital Costs	Operational Costs	Convenience	Enforceability
Pass	Users purchase and display a pass	Low	Low	Medium	Good
Time-coded ticket	Users purchase a ticket for a certain period of time	Low	Medium	Medium	Good
Single Space Meters	Users prepay at a mechanical or electronic meter located at each space	High	High	Medium	Mechanical meters: poor Electronic meters: good
Smart Meters	Users prepay electronic meters which automatically reset when vehicle leaves	High	High	Medium	Good
M-Parking	Users use smart phone with associated apps to pay for parking	High	High	High	Good
Pay and Display Meters	Users prepay a meter which prints a ticket that is displayed in their vehicle	Medium	Medium	Medium	Good
Attendant	Users pay an attendant when entering or leaving a parking lot	High	High	High	Good
Controlled Access	Users pay a machine when entering or exiting a parking lot	High	Moderate	High	Good

Discourage Customers and Reduce Economic Activity – Paid parking can be perceived to discourage some customers from shopping in an area if nearby competitors offer free parking. However, user pay parking provides business benefits as well as costs. It can ensure motorists can find a convenient space, reduce delivery costs, and revenues can finance additional services with the Activity Centre. Many economically successful retail precincts (such as Chapel Street, Prahran) have priced parking while many shopping centres that promote free parking are less successful. Many customers, particularly wealthier consumers, are willing to pay for parking provided there is a benefit such as increase in convenience or a more attractive shopping environment.

Sunk Parking Costs – Where there is abundant parking supply, it may seem inefficient to impose paid parking to further reduce parking demands as this may result in even more unoccupied spaces. However, as most parking facilities have opportunity costs and unused parking can be rented, leased, or converted to other uses to overcome loss of revenue or sunk costs.

Inequity – Because most parking is unpriced many people consider it unfair to charge for parking in just a few locations and times. However, overall, user pay parking is fairer than financing parking facilities indirectly which means parking costs are borne by non-users.

Burden on Lower Income Motorists – A set parking fee represents a greater share of income to a lower income motorist than a higher-income motorist. This is a matter which required greater consideration by Council if it chooses to explore parking pricing.

6.6.2 Future Implementation within the Glen Waverley Activity Centre

A review of the car parking occupancy data indicates that the peak parking demand observed during the car parking occupancy surveys on Friday 13 December 2013 was 82.3%. This level of parking demand is getting very close to the 85% occupancy level. Beyond this motorists may start to become frustrated at finding a parking space.

A review of Precincts B to G indicates that the peak parking demands within the Precincts was 95.8% significantly above the 85% occupancy level.

Accordingly, it would appear that the introduction of paid parking could be a practical alternative to managing the existing parking patterns within precincts of the GWAC. For example, paid parking could be introduced in the highest turnover areas with free parking provided in lower turnover areas such as the Euneva Multi Level Car Park.

Furthermore the introduction of paid parking could be an alternative to the continuous cycle of additional parking spaces being provided to meet an ever increasing car parking demand. An appropriately priced paid parking scheme would encourage modal shift that can ultimately reduce peak parking demands.

Recommendation

There are a number of matters to consider prior to deciding on the introduction of paid parking across the GWAC. As such, it is not considered appropriate at this time. The Euneva Multi Level Car Park could be better utilised with the introduction of electronic parking signs to notify visitors of the number of available spaces and/or the relocation of allocated parking from the Bogong Avenue Car Park, and this would be a more appropriate approach to take at this time.

The one precinct within GWAC that could significantly benefit from the introduction of paid parking in the short term would be Kingsway between Bogong Avenue and Coleman Parade. This could be implemented as part of the Stage 2 works discussed in 5.1.1 with the possible benefits including:

- Reduced traffic congestion as motorists will no longer circulate to find a parking space;
- A higher turnover of parking spaces which will significantly assist high turnover businesses such as take-away food premises;
- Reduced emissions from vehicles as a result of reduced traffic volumes which will positively impact on the pedestrian realm (including outdoor dining)
- Encouraging long term parkers to park within more appropriate parking areas such as off-street car parks rather than seek to move their vehicle every few hours; and
- Providing an additional revenue source which can be used to further improve the public realm.

The introduction of a paid parking scheme as part of an integrated STP is an important tool that can encourage a modal shift and appropriately pricing parking reduces the burden on Council and ultimately rate payers.

The introduction of a paid parking scheme should be reviewed on a regular basis with the intent being to implement a scheme when parking within the GWAC reaches 90+% occupancy at peak times or if Council seeks to reduce the overall peak parking demands within the centre by encouraging modal shift.

7 Central Car Park Review

The development opportunities within the Central Car Park were first identified in *The Glen Waverley District Centre: the Hub Precinct – Concept Plan* prepared by Spiller Gibbins Swan Pty Ltd in 1992. The concept plan identified:

> *The development of a Town Square (Option D) would require considerable planning and consultation and it would be introduced in stages when accessibility to all parts of the Centre is resolved. It would physically unite the Hub into a single pedestrian priority area and provide public open space at a 'focal' point with commercial/retail, car parking and a soft edge at Springvale Road.*

In the preparation of the Glen Waverley Activity Centre Structure Plan 2014, Tract Consultants identified that the development of this area was integral to integrating the northern and southern sections of the GWAC.

Accordingly, Sustainable Transport Surveys was requested to review the impacts associated with the relocation of parking from the Central Car Park.

Given the significant future benefits to the GWAC as a whole, there is no practical traffic engineering reason why the car parking spaces within the Central Car Park cannot be relocated. However a number of principles that should be taken into account when relocating these spaces, including:

- Car parking spaces should be located as close as practical to the existing parking area, or be located as far south as possible; as currently the peak demand for customer parking is generated within Precinct D, Precinct F and Precinct G;
- Access to the relocated parking area should be provided from the Ring Road or from along Springvale Road to reduce traffic movements and congestion within the GWAC;
- The construction of multi-level parking facilities should allow for the future construction of additional levels of parking above the proposed structure, should they be required;
- Car parking should be generally evenly dispersed throughout the GWAC. For example, all parking facilities should not be located next to each other, accessed from the same street or location;
- Parking associated with the existing uses of land (current at-grade parking) should be included in future car parking developments; and
- Parking facilities should promote sustainable travel choices where possible, including small car spaces, motorcycle parking, bicycle facilities including trip end facilities (showers, change rooms, lockers) and the inclusion of electric vehicle recharge points.

Given the existing peak parking demands within the GWAC are nearing the 85% occupancy level at peak times; it is important that the number of spaces within the Central Car Park should be retained. However these 255 spaces could be relocated to facilitate redevelopment of the area. Furthermore, consideration should be given to providing additional parking within any future car parking structure that will compensate for the loss of parking associated with road network improvements stages 1 and 2 (75 spaces) as discussed in Section 5.

Whilst this report does not seek to find a final location for the relocation of the parking spaces the following three locations are suggested:

- Multi-level car parking over the existing at-grade car park located adjacent to the council library/offices access from Springvale Road;
- Additional levels of car parking above the existing Bogong Avenue Car Park accessed from Bogong Avenue; and
- A new Multi-level car park within the Glendale Street West Parking Area accessed from Myrtle Street.

Melbourne

Sustainable Transport Surveys Pty Ltd

ABN: 76 150 090 207

A Ground Floor 23 Milton Parade
MALVERN VIC 3144

P 9832 0920

E enquires@stsurveys.com.au

East Gippsland

Sustainable Transport Surveys Pty Ltd

ABN: 76 150 090 207

A 39 Williams Parade
BAIRNSDALE VIC 3875

P 5152 7422

E enquires@stsurveys.com.au